

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2015-XXXX

WASTE DISCHARGE REQUIREMENTS

FOR
SUNSHINE RAISIN CORPORATION DBA NATIONAL RAISIN COMPANY
EXETER DEHYDRATING FACILITY
AND
ERNEST BEDROSIAN TRUST
TULARE COUNTY

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

1. On 4 December 2000, Sunshine Raisin Corporation, submitted a Report of Waste Discharge (RWD) to increase flows and support the discharge of process wastewater to land from its Exeter Dehydrating Facility (Facility) in Tulare County. After discussions with Central Valley Water Board staff, a revised RWD was submitted on 7 April 2015.
2. Sunshine Raisin Corporation, a California Corporation, doing business as the National Raisin Company (hereafter Discharger) owns and operates the Facility that generates the waste and is responsible for compliance with these Waste Discharge Requirements (WDRs).
3. The Facility at 26783 Road 176 in Tulare County is approximately two miles southwest of Exeter in Section 17, Township 19 South, Range 26 East, MDB&M. The Facility occupies Assessor's Parcel Number (APNs) 133-110-003. The land application area includes parcels 133-120-008 and 133-130-001, which consists of approximately 150 farmed acres of land, as shown on Attachment A, which is attached hereto and made part of this Order by reference.
4. The Ernest Bedrosian Trust owns the land application area and is named as a co-discharger in this Order.
5. The Facility was purchased by the Sunshine Raisin Corporation in 1980, and is currently regulated by WDRs Order 80-130, adopted by the Central Valley Water Board on 12 September 1980. Order 80-130 authorizes a 30-day mean daily flow of up to 30,000 gallons per day (gpd) to two on-site evaporation/percolation ponds.
6. Order 80-130 is out of date and no longer adequately describes the discharge or Central Valley Water Board plans and policies. Therefore, Order 80-130 will be rescinded and replaced with this Order.

Existing Facility and Discharge

7. The Facility takes in grapes and plums from local growers. The fruit is pre-cleaned and washed then placed on drying trays. The drying trays are rolled into the dehydrating tunnels where the fruit is dried to remove moisture to produce raisins and prunes. The Facility is a seasonal operation that operates for approximately six to eight weeks out of the year from late August through October.
8. Although dehydrators generally operate 24 hours a day seven days a week during the processing season, the majority of the cleaning and washing process occurs during normal business hours between 7:00 am and 4:00 pm.
9. Wastewater generated at the Facility is a mixture of raisin and prune wash water, and equipment wash down water. According to the RWD, a minor amount of chlorine (approximately four gallons per day) is added for sanitation reasons to the water used to rinse the drying trays. The chlorinated water is contained in an 800-gallon tank that is filled at the beginning of the shift and emptied at the end of the day. In addition, sulfur dioxide gas is added to the dehydrating tunnels to create golden raisins. According to the RWD approximately 1,920 lbs/day of sulfur dioxide may be used when the Facility is producing golden raisins.
10. Source water is provided by an on-site supply well. Samples from the well were collected in December 2000 and September 2014. Source water quality is relatively good except for nitrate, which exceeded the Maximum Contaminant Level (MCL) for nitrate as nitrogen of 10 mg/L during both sampling events. The results of the source water samples collected in 2000 and 2014 are presented in Table 1 below:

TABLE 1. Source Water Quality

Constituent	Units	26 December 2000	4 September 2014
pH	s.u.	7.4	7.9
Electrical Conductivity (EC)	umhos/cm	910	870
Total Dissolved Solids (TDS)	mg/L	530	570
Nitrate as Nitrogen (NO ₃ -N)	mg/L	12	13
Bicarbonate	mg/L	320	400
Calcium	mg/L	89	87
Magnesium	mg/L	27	29
Sodium	mg/L	60	54
Chloride	mg/L	<10	14
Sulfate	mg/L	46	78
Iron	mg/L	<0.05	0.027
Manganese	mg/L	<0.01	0.002

11. Order 80-130 sets a 30-day average flow limit of 30,000 gpd but does not require any flow monitoring. The RWD proposes to increase the average daily flow limit to 40,000 gpd with an annual limit of two million gallons per year for the processing season. Since discharge flows are not currently monitored, this Order requires the Discharger to install an appropriate flow meter prior to the 2015 processing season.
12. Order 80-130 does not require sampling. Samples of the wastewater were collected during the 2014 processing season to evaluate wastewater quality. The samples were collected from the on-site evaporation/percolation pond at the beginning, middle, and end of the season. Table 2 presents information on wastewater quality based on data collected during the 2014 season:

TABLE 2. Wastewater Quality

Constituent	Units	2014 Season			Average
		8/26/14	9/04/14	9/18/14	
Date		8/26/14	9/04/14	9/18/14	
pH	s.u.	4.8	4.0	4.0	4.3
EC	umhos/cm	1,300	1,600	1,600	1,500
Total dissolved solids (TDS)	mg/L	1,800	2,500	3,200	2,500
Fixed dissolved solids (FDS)	mg/L	800	910	930	880
Biochemical Oxygen Demand	mg/L	3,900	5,500	5,300	4,900
Bicarbonate	mg/L	na	<10	na	<10
Calcium	mg/L	120	120	130	123
Magnesium	mg/L	38	40	40	39
Sodium	mg/L	74	67	74	72
Potassium	mg/L	na	200	na	200
Chloride	mg/L	17	30	20	22
Sulfate	mg/L	na	200	na	200
Boron	mg/L	0.27	0.33	0.44	0.35
Nitrate as nitrogen	mg/L	<2	<2	<2	<2
Total Kjeldahl Nitrogen	mg/L	34	43	48	42

13. Process wastewater is collected in drains around the processing area and diverted to a central sump. From the sump the wastewater is pumped through a rotary screen and concrete settling sump to remove solids, then flows by gravity to one of the two on-site evaporation/percolation ponds. The second evaporation/percolation pond is used only intermittently during the processing season to handle overflow from the primary pond. Together the two on-site ponds have a combined storage capacity of approximately 760,000 gallons.
14. The dehydrating tunnels are cleaned and washed down on a weekly basis. Wastewater from the dehydrating tunnels is collected separately and pumped through a vibrating screen before being discharged to the evaporation/percolation ponds.

15. From the ponds the wastewater is pumped into a water truck and applied as dust control on dirt roads within the adjacent orchards controlled by the Discharger.
16. Solid waste generated at the Facility, consisting of leaves, sticks, and debris removed during the pre-cleaning process, as well as screenings and fine solids removed from the wastewater, are collected and taken to a landfill for disposal.
17. Storm water that lands on paved areas around the processing area drains to the wastewater ponds. Storm water discharged to the ponds outside of the processing season remains in the ponds, otherwise it is blended with the wastewater and applied to the land application area for dust control.
18. Domestic wastewater generated at the Facility is discharged to an on-site septic system regulated by Tulare County.

Planned Changes in the Discharge

19. Starting with the 2015 season, the Discharger plans to apply wastewater as irrigation water on approximately 150 acres of agricultural land. The land application area is owned by the Ernest Bedrosian trust and is planted with citrus, plums, and grape vines. The wastewater will be pumped to a standpipe connected to the irrigation system and blended with fresh irrigation water prior to application or as a sidedress application from a water truck between the orchard rows. In addition, a portion of the wastewater may be applied as dust control on dirt roads within the land application area on an as needed basis.
20. With nitrogen concentrations between 35 and 50 mg/L, nitrogen loading to the land application area with an annual discharge of two million gallons would be between four and seven lbs/acre/year. This is significantly below the annual nitrogen uptake for orchard crops and citrus.
21. As shown in Finding 12, the total dissolved solids (TDS) of the discharge is higher than the EC or the fixed dissolved solids (FDS), indicating that the discharge has a high concentration of volatile or organic dissolved solids. Organic dissolved solids can be broken down and biologically treated by soil microorganisms in a well managed land application system, when wastewater is not over applied. Based on the samples collected during the 2014 processing season, the concentrations of FDS in the discharge appear to be 40 to 70 percent lower than concentrations of TDS.
22. With an average BOD concentration of about 5,000 mg/L, the cycle average BOD loading rate to the 150 acre land application area at 40,000 gpd would be about 11 lbs/acre/day.

23. According to the RWD, the Discharger plans to discontinue the use of the unlined wastewater ponds to store wastewater and will either: line the ponds, store wastewater in an aboveground tank, or discharge directly to the land application area.

Site-Specific Conditions

24. The Facility and land application area are on the east side of the San Joaquin Valley. Topography in the area is generally level with an approximate elevation between 350 and 360 feet above mean sea level.
25. Federal Emergency Management Agency (FEMA) maps show that the Facility and land application areas are within Flood Zone X (shaded), areas outside of the 100-year floodplain or areas protected by levees from a 1% annual chance of flooding.
26. United States Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey maps characterize approximately the top six feet of soils. Soils within the land application area are primarily Nord fine sandy loam and Flamen loam. Nord fine sandy loam is a well drained soil with an irrigated land classification unit of 1 (no restrictions). Flamen loam is a moderately well drained soil, with an irrigated land classification unit of 2s (some limitations due to shallow rooting depth, low moisture holding capacity, or low fertility).
27. Climate in the Central Valley is characterized by hot dry summers and mild winters. The rainy season generally extends from November through April. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and pan evaporation for the area are about 11 inches and 79 inches, respectively, according to information published by the California Department of Water Resources. The maximum annual precipitation for a wet year with 100-year return period is estimated to be about 23 inches. From the California Irrigation Management System (CIMIS), the mean reference evapotranspiration rate (ET_o) for the nearby CIMIS station in Lindcove is about 53 inches per year.
28. Land use in the vicinity of the site is primarily agricultural. Primary crops grown in the vicinity of the site include hay and grain crops, grapes, and orchard crops including almonds, walnuts, peaches, plums, nectarines, and citrus. Irrigation water is supplied primarily by groundwater.

Groundwater Conditions

29. According to the Department of Water Resources Groundwater Elevation Maps for 2000 and 2010, first encountered groundwater in the vicinity of the site occurred at about 40 feet below ground surface (bgs) in Spring 2000 and at about 80 feet bgs in Spring 2010. Regional groundwater flow in the area is to the southeast. There are no monitoring wells on-site and no site specific groundwater gradient information is available.

30. The California Department of Water Resources and United States Geological Survey publish information about groundwater quality. Data that is pertinent to characterizing first-encountered groundwater prior to 1968 is limited due to the wide variability in the screened interval of the wells, sampling protocols, and constituents monitored. Table 3 compares groundwater data for three wells identified within three miles of the site, sampled prior to 1968 with groundwater data collected from the on-site supply well in 2000 and 2014.

TABLE 3. Groundwater Quality

Constituent	Units	Supply Well		19S26E20	19S26E30	19S26E08
		2000	2014	B001M	C002M	H001M
Date		2000	2014	1948	1962	1956
Depth of well	feet	unknown	unknown	unknown	225	unknown
pH	s.u.	7.4	7.9	na	7.7	7.5
EC	umhos/cm	910	870	590	372	523
TDS	mg/L	530	570	na	248	na
Nitrate as nitrogen	mg/L	12	13	1.5	2.5	5.8
Bicarbonate	mg/L	320	400	271	200	172
Calcium	mg/L	89	87	56	41	26
Magnesium	mg/L	27	29	18	14	24
Sodium	mg/L	60	54	47	17	48
Potassium	mg/L	4	3.6	3.8	1.6	3.5
Chloride	mg/L	<10	14	13	85	19
Sulfate	mg/L	46	78	19	11	49

31. Nitrate as nitrogen in the on-site supply well exceed the primary Maximum Contaminant Level (MCL) for nitrate as nitrogen of 10 mg/L in 2000 and in 2014. In addition the on-site supply well also contains elevated concentrations for EC, TDS, bicarbonate, calcium, and sulfate possibly from the discharge of wastewater to unlined ponds.

This Order sets a cycle average BOD loading limit of 100 lbs/acre/day to reduce the potential for organic overloading of the land application area, requires wastewater be applied to the land application area at agronomic rates, and requires the Discharger to line the wastewater ponds within three years or implement an acceptable alternative to ensure that the discharge will not cause or contribute to further degradation of groundwater.

Basin Plan, Beneficial Uses, and Regulatory Considerations

32. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board.

Pursuant to Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.

33. The Facility and land application area lie within the Kaweah Delta Hydraulic Area (558.1) of the South Valley Floor Hydrologic Unit, as depicted on interagency hydrologic maps prepared by the State Water Resources Control Board and the Department of Water Resources, revised in August 1986. Local drainage is by sheet flow to the southwest toward the Outside Creek and the valley floor. The beneficial uses of valley floor waters, as stated in the Basin Plan, are agricultural supply; industrial service supply; industrial process supply; water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; rare, threatened, or endangered species; and groundwater recharge.
34. The Facility and land application area are in Detailed Analysis Unit (DAU) No. 242, within the Kaweah Basin hydrologic unit. The Basin Plan identifies the beneficial uses of underlying groundwater within the DAU as municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, water contact recreation, and non-contact water recreation.
35. The Basin Plan encourages the reuse of wastewater and identifies crop irrigation as a reuse option where the opportunity exists to replace an existing or proposed use of fresh water with reused water.
36. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater.
37. The Basin Plan's narrative water quality objective for chemical constituents requires, at a minimum, waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
38. The narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.
39. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.

40. 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.
41. The list of crops in Finding 28 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.
42. 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 there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes effluent salinity limits for both municipal and industrial discharges and states that effluent limits established for municipal discharges shall generally apply to industrial discharges. Limits potentially applicable to the proposed discharge, include:
 - a. The incremental increase in salt from use and treatment must be controlled to the extent possible. The maximum electrical conductivity (EC) in the discharge shall not exceed the EC of the source water plus 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 mg/L.
43. The Basin Plan allows an exception to the incremental EC limitation of source water plus 500 $\mu\text{mhos/cm}$ for food processing industries that discharge to land, where the discharge exhibits a disproportionate increase in EC over source water due to unavoidable concentrations of organic dissolved solids, provided the Discharger implements best practicable treatment or control (BPTC) to minimize the salinity of the discharge and beneficial uses are protected.
44. As discussed in Findings 12 and 21, sampling for EC, TDS, and FDS in 2014 shows on average about a 60 percent increase in the TDS of the discharge due to concentrations of organic dissolved solids. Thus, the discharge is eligible for the Basin Plan incremental EC

exemption. Given this, it is not appropriate to generally apply the 1,000 umhos/cm EC limit cap to this industrial discharge.

This Order requires effluent monitoring for EC, TDS, and FDS to ensure the exception eligibility continues, and requires the Discharger to prepare and implement a Salinity Control Plan to minimize the salinity of its discharge to the extent practicable.

45. Many surface waters and local groundwater supplies have been degraded with salt. In some areas, the high salinity is naturally occurring, but in many areas it is due to the acts of man. In 2006, the Central Valley Water Board, the State Water Board, and stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program. Until the program culminates in Basin Plan amendments that address the region-wide salinity issues, it is not reasonable to require dischargers to take extraordinary measures to eliminate salt from wastes discharged to land. However, the Board expects that all regulated dischargers will make a concerted effort to reduce salinity through source control, containment, and conventional treatment to the maximum practical extent.

Other Considerations

46. Excessive application of high organic strength wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals, as discussed below. Such groundwater degradation can be prevented or minimized through implementation of best management practices, which include planting crops to take up plant nutrients and maximizing oxidation of BOD to prevent nuisance conditions.
47. 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.
48. With regard to BOD, excessive application can deplete oxygen in the vadose zone, leading to anoxic conditions. At the ground surface, this can result in nuisance odors and fly-breeding. When insufficient oxygen is present below the ground surface, anaerobic decay of the organic matter can create reducing conditions that convert metals that are naturally present in the soil as relatively insoluble (oxidized) forms to more soluble reduced forms. This condition can be exacerbated by acidic soils and/or acidic wastewater. If the reducing conditions do not reverse as the percolate travels down through the vadose zone, these dissolved metals (primarily iron, manganese,

and arsenic) can degrade shallow groundwater quality. Many aquifers contain enough dissolved oxygen to reverse the process, but excessive BOD loading over extended periods may cause beneficial use impacts associated with these metals.

49. Typically, irrigation with high strength wastewater results in high BOD loading on the day of application. It is reasonable to expect some oxidation of BOD at the ground surface, within the evapotranspiration zone and below the root zone within the vadose (unsaturated) zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions or leaching of metals can vary significantly depending on soil conditions and operation of the land application system.
50. *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 lb/acre-day to prevent nuisance, but indicates the loading rates can be even higher under certain conditions. The studies that support this report do 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.
51. This Order sets a cycle average BOD loading limit of 100 lb/acre/day for the land application area, and requires the Discharger to prepare a Wastewater and Nutrient Management Plan to address BOD, salinity, and nutrient loading rates to the land application area.
52. Food processing wastewater may contain elevated concentrations of TDS resulting from the fruit or vegetable products or materials used for production. Typically, a percentage of the TDS is organic material, which will generally decompose into its primary component elements of carbon, hydrogen, and oxygen that can be utilized by plants and microorganisms in the soil. In contrast, the FDS, is primarily that portion of the TDS that consists of inorganic constituents, which can accumulate in soil. Excessive salts may leach to groundwater and degrade groundwater quality. Growing and harvesting crops provides a means to remove some of these constituents, particularly calcium, magnesium, potassium, phosphorus, nitrate, and ammonia.

Antidegradation Analysis

53. 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 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.
54. Constituents of concern in the discharge (those with the greatest potential to affect beneficial uses of receiving water) include organics, nitrogen, and salts. However, the discharge is not expected to cause groundwater to exceed water quality objectives because:

- a. For organics, this Order sets a cycle average BOD loading limit of 100 lbs/acre/day, which is expected to prevent odor and nuisance conditions, minimize the potential for anoxic and reducing conditions in soil, and preclude iron and manganese degradation of groundwater from organic loading. In addition, this Order requires the Discharger to cease discharging to the land application areas in the event soils become saturated, and requires weekly monitoring of the land application area to check for ponding and/or nuisance conditions, and provides a time schedule for the Discharger to line or discontinue use of the on-site wastewater ponds.

With the conditions stipulated in this Order, and depth to groundwater, the discharge is not expected to cause nuisance conditions or unreasonably degrade groundwater with constituents related to organic overloading.

- b. For nitrogen, most of the nitrogen in the process wastewater is present as TKN, which can mineralize and be converted to nitrate (with some loss via ammonia volatilization). As discussed in Finding 20, the estimated nitrogen load to the 150 acre land application area with an annual discharge of two million gallons per year would be between four and seven lbs/acre/year, which is significantly less than the annual nitrogen requirement for orchard and citrus corps.

As discussed previously in the groundwater section, the on-site supply well contains nitrate as nitrogen at concentrations that exceed the primary MCL of 10 mg/L, possibly as a result of the discharge of wastewater to unlined ponds. This Order sets a time schedule requiring the Discharger to line the wastewater ponds or implement an acceptable alternative within three years. With these conditions and the application of wastewater to crops at agronomic rates the discharge should not contribute to further groundwater degradation for nitrates.

- c. For salinity, as discussed in Finding 21, a large portion of the TDS of the discharge is in volatile or organic form, which can be broken down and biologically treated by microorganisms in the soil. In addition, a portion of the fixed dissolved solids will bind to soil and can be reduced by nutrient uptake by crops primarily calcium, magnesium, nitrates, phosphorus, and potassium.

With an average FDS concentration of about 900 mg/L, the salt load to the 150 acre land application area, with an annual discharge of two million gallons per year, would be about 100 lbs/acre/year, which is not expected to unreasonably degrade groundwater with respect to salinity. In addition, this Order includes a Provision requiring the Discharger to submit a Salinity Control Plan to evaluate and implement measures to control the salinity of its discharge to the extent practicable.

Treatment and Control Practices

55. The Discharger provides or will provide, as required by this Order treatment and control of the discharge that incorporates:
- a. Reuse of wastewater for irrigation of crops at agronomic rates;
 - b. A cycle average BOD loading limit of 100 lbs/acre/day;
 - c. Resting periods between wastewater applications;
 - d. Hydraulic loading rates that preclude standing water in the land application area;
 - e. Proper handling and disposal of solids;
 - f. Lining or removal of the on-site wastewater evaporation/percolation ponds;
 - g. Monitoring and reporting requirements; and
 - h. Preparation of a Salinity Control Plan and Wastewater and Nutrient Management Plan.

Antidegradation Conclusions

56. This Order establishes terms and conditions to ensure that the discharge does not unreasonably affect present and anticipated future beneficial uses of groundwater or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.
57. The treatment and control measures described above in Finding 55, in combination with the requirements of this Order represent BPTC. Adoption of this Order will result in the implementation of BPTC.
58. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State. The Discharger aids in the economic prosperity of the region by direct employment and provides a tax base for local and state governments. Provided the discharge complies with State and Central Valley Water Board plans and policies, there is sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order. In addition, the reuse of process wastewater for irrigation in place of fresh water is of further benefit to people of the State.

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

Other Regulatory Considerations

60. This is an existing Facility. Waste Discharge Requirements were first adopted for this site in September 1980. All wastewater management systems and agricultural land application areas are in use. The increase in the average daily flow limit from 30,000 gpd to 40,000 gpd will allow additional flexibility for the Facility's operations and with the annual limit cap of two million gallons per year does not represent a significant increase in operations or flows. This Order places additional requirements on the continued operation of the Facility in order to ensure the protection of waters of the State. The issuance of this Order is therefore exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with California Code of Regulations, Title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting ... of existing public or private structures, facilities, mechanical equipment, or topographical features involving negligible or no expansion" from environmental review.
61. 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 nuisance."
 - b. Category B complexity, defined as: "Any discharger not included in 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 unit."
62. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt wastewater. Title 27, section 20090 states in part:

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

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

- (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
- (2) the discharge is in compliance with the applicable water quality control plan; and
- (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

63. The discharge authorized herein, and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27 pursuant to section 20090(b) because:

1. The Central Valley Water Board is issuing WDRs.
2. The discharge is in compliance with the Basin Plan, and;
3. The treated effluent discharged to the land application areas does not need to be managed as hazardous waste.

64. On 1 April 2014, the State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities. Order 2014-0057-DWQ supersedes State Water Board Order 97-03-DWQ (NPDES General Permit CAS000001) and becomes effective 1 July 2015. Order 2014-0057-DWQ requires all applicable industrial dischargers to apply for coverage under the new General Order by the effective date. However, all storm water at the Facility is captured and contained on-site or comingled with process wastewater before being discharged to the land application area in accordance with these WDRs, which prohibits the discharge from leaving the land application area and entering waters of the United States. Therefore, the Discharger is not required to obtain coverage under the new NPDES General Permit at this time.

65. Water Code section 13267(b) states:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges or is suspected of having discharged or discharging, or proposes to discharge waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring

program reports which the regional board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

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

66. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.
67. 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.
68. 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

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

IT IS HEREBY ORDERED that Waste Discharge Requirements Order 80-130 is rescinded and that the Sunshine Raisin Corporation, and Ernest Bedrosian Trust, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 23, section 2510 et seq., is prohibited.
3. Bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*.
4. Discharge of wastewater in a manner or location other than that described herein or in the RWD is prohibited.
5. Discharge of wastewater to unlined ponds is prohibited. The Discharger will comply with this prohibition in accordance with the conditions in Provision G.17.
6. Application of residual solids and screenings to the land application area is prohibited.
7. Discharge of domestic wastewater to the process wastewater treatment system or land application area is prohibited.

B. Flow Limitations

1. During the processing season from August through October, the discharge shall not exceed a 30-day average daily flow of 40,000 gpd or an annual flow of 2 million gallons per year. [Monitored at EFF-001]

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. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

3. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.
4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
5. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
6. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or stored and discharged at an intensity that creates or threatens to create nuisance conditions.
7. Irrigation pipelines, sprinklers, and/or drip irrigation lines used to convey wastewater to the land application area shall be flushed with fresh water after application of wastewater, as needed, to ensure compliance with Discharge Specification C.6.
8. 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.
 - e. Vegetation management operations in areas where nesting birds have been observed shall be carried out either before or after, but not during, the April 1 to 30 June nesting season.

D. Land Application Area Specifications

1. The Discharger shall grow crops within the land application area. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize crop uptake of water and nutrients.

2. The cycle average BOD loading rate shall not exceed 100 lbs/acre/day. The cycle average BOD loading rate shall be calculated as determined by the method described in the attached Monitoring and Reporting Program.
3. The pH of the discharge shall not exceed the buffering capacity of the soil.
4. The discharge shall be distributed uniformly on adequate acreage within the land application area to preclude the creation of nuisance conditions or unreasonable degradation of groundwater.
5. The Discharger shall maximize use of the available land application area to minimize waste constituent loadings.
6. Hydraulic loading of wastewater and irrigation water to the land application area shall be at reasonable agronomic rates.
7. Application of waste constituents to the land application area shall be at reasonable agronomic rates to preclude creation of a nuisance or unreasonable degradation of groundwater, considering crop, soil, climate, and irrigation management system. The annual nutritive loading of the land application area, including the nutritive value of organic and chemical fertilizers, and of the wastewater shall not exceed the annual crop demand.
8. The Discharger shall not discharge process wastewater to the land application area when soils are saturated.
9. Wastewater applied as dust control shall be applied only in quantities necessary to control dust and during periods when dust is being generated (e.g., not during or immediately after storm events, or while the ground is moist). The use of wastewater for dust control shall be minimized and must comply with the conditions established as part of the Wastewater and Nutrient Management Plan required by Provision G.16.
10. Land application of wastewater shall be managed to minimize erosion.
11. The land application area shall be managed to prevent breeding of mosquitoes. In particular:
 - a. All applied irrigation water must infiltrate completely within 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. The land application area shall be inspected as frequently as necessary to ensure continuous compliance with the requirements of this Order.
13. No physical connection shall exist between the wastewater and any domestic water supply or domestic well, or between piping used to carry wastewater and any irrigation well that does not have an air gap or reduced pressure principle device.
14. Any runoff of wastewater or irrigation water shall be confined to the land application area and shall not enter any surface water drainage course or storm water drainage systems.
15. The perimeter of the land application area 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.

E. Solids Disposal Specifications

Solids as used in this document, means the leaves, twigs, and debris removed during the pre-cleaning process. Residual solids refers to screenings and fine solids removed from wastewater and settling pond.

1. Any handling and storage of solids and residual solids at the Facility shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes the development of odor nuisance conditions and infiltration of waste constituents in a mass or concentration that will violate the groundwater limitations of this Order.
2. Solids collected during the pre-cleaning process shall be removed and disposed of off-site.
3. Collected screenings and other residual solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at sites (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.

F. Groundwater Limitations

Release of waste constituents associated with the discharge shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or natural background quality for the specified constituents, whichever is greater:

1. Nitrate as nitrogen of 10 mg/L.
2. For constituents identified in Title 22 of the California Code of Regulations, the MCLs quantified therein.

G. Provisions

1. The Discharger shall comply with Monitoring and Reporting Program R5-2015-XXXX, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.
2. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
3. 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.
4. 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.
5. 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.
6. 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.

7. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.
8. As a means of discerning compliance with Discharge Specification C.6, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond or irrigation reservoir containing wastewater 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 finding to the Central Valley Water Board in writing within 10 days and include a specific plan to resolve the low DO issues within 30 days.
9. The Discharger shall operate and maintain all wastewater ponds and irrigation reservoirs sufficiently to protect the integrity of containment dams and berms to 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 containing wastewater shall never be less than two feet (measured vertically from the lowest possible point of overflow).
10. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
11. 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 following provisions by the due dates specified.

12. 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.
13. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
14. **By 17 August 2015**, the Discharger shall install an appropriate flow meter to monitor wastewater discharges from the Facility.
15. **By <6 months following adoption of the Order>**, the Discharger shall submit a Salinity Control Plan, with salinity source reduction goals and an implementation schedule for Executive Officer approval. The control plan shall identify existing salinity control measures as well as any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible, include:
(a) estimates of load reductions that may be obtained, and (b) provide a description of the tasks, cost, and time required to investigate and implement various elements in the Salinity Control Plan.
16. **By <9 months following adoption of the Order>**, the Discharger shall submit a Wastewater and Nutrient Management Plan for Executive Officer approval. At a minimum, the Plan must include: (a) procedures for monitoring Facility operations and discharge; (b) measures to ensure even application of wastewater; and (c) an action plan to deal with objectionable odors and/or nuisance conditions. The Plan shall also include (i) supporting data and calculations for monthly and annual water and nutrient balances, and management practices that will ensure wastewater, irrigation water, and fertilizers are applied at agronomic rates to the land application area; and (ii) evaluate the loading conditions associated with the application of wastewater for dust control around the Facility and land application area to ensure that the discharge will not cause or contribute to nuisance conditions or groundwater degradation.

17. The Discharger shall eliminate the discharge of wastewater to unlined ponds in accordance with the following time schedule:

<u>Task</u>		<u>Report Date</u>
a.	Submit a Work Plan and implementation schedule to line the wastewater ponds or provide an alternative method subject to Executive Officer approval to eliminate the discharge of wastewater to unlined ponds. If the Discharger proposes to line the ponds, the Work Plan needs to include details on the proposed liner, design criteria, and a construction quality assurance plan describing testing and observations needed to ensure installation in conformance with the design criteria.	<1 year> following adoption of this Order
b.	Begin implementation of the approved Work Plan and schedule.	<60 days> following approval of the Work Plan
c.	Submit a technical report demonstrating complete implementation of the approved Work Plan. Upon written concurrence by the Executive Officer, this task shall be considered complete.	In accordance with the approved schedule, but no later than 3 years from adoption of this Order

18. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.

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

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

WASTE DISCHARGE REQUIREMENTS ORDER R5-2015-XXXX
SUNSHINE RAISIN CORPORATION DBA NATIONAL RAISIN COMPANY
EXETER DEHYDRATING FACILITY AND
ERNEST BEDROSIAN TRUST
TULARE COUNTY

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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 _____.

PAMELA C. CREEDON, Executive Officer

Order Attachments:

A Site Location Map

Monitoring and Reporting Program R5-2015-XXXX
Information Sheet
Standard Provisions (1 March 1991)