

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2017-XXXX
FOR
GRIMMWAY ENTERPRISES, INC.
WEST PLANT
KERN COUNTY

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

Background

1. WM. Bolthouse Farms Inc., (Bolthouse) owned and operated a carrot processing plant approximately five miles east of Buttonwillow in Kern County. The discharge is regulated under Waste Discharge Requirements 5-00-152 that authorize the discharge of carrot processing wastewater up to 5.3 million gallons per day (mgd) as a daily maximum to 706 acres of land application areas (LAA) owned by Bolthouse. On 6 June 2014, the Central Valley Water Board adopted Order R5-2014-0092 for an ownership change from WM. Bolthouse Farms Incorporated to Grimmway Enterprises, Inc. (Grimmway).
2. The Grimmway West Plant is at 4343 Shortcuts Lane, Buttonwillow (Section 18, Township 29 South, Range 25 East, MDB&M).
3. On 13 July 2016, Cascade Earth Sciences submitted a Report of Waste Discharge (RWD) and an amended RWD on 2 December 2016, on behalf of Grimmway, for a change in discharge location and flow limit. Grimmway proposes to discharge 0.275 mgd from April through August and 0.160 mgd from September through March of vegetable washing wastewater to a net of 89 acres of land application area.
4. The Grimmway West Plant occupies Assessor's Parcel Numbers (APN's) 104-100-05 and 104-100-12. The acreage breakdown of the 89 acres of LAA where wastewater is applied is tabulated in Table 1, below. The Facility and the LAA's are shown on Attachment A, which is incorporated by reference and considered a part of this Order.

Table 1. Land Application Area

Field Name	Acreage	Crop
West Field	24.4	Winter Forage
Center Pivot	29	Winter Forage
Pivot Corners	9.7	Winter Forage
Landscaping Area	26	Grass
Total	89	

5. WDRs 5-00-152 need to be updated to ensure that the discharge is consistent with Central Valley Water Board plans and policies and prescribe requirements that reflect changes the Discharger has made to the plant and land application areas. WDRs 5-00-152 will be rescinded and replaced with this Order.

Proposed Facility and Discharge

6. Grimmway converted the existing carrot processing infrastructure at the Grimmway West Plant into a vegetable washing facility that predominately washes potatoes and other vegetables. Grimmway will wash and pack organic and conventional potatoes. Vegetable washing will occur all year. There will be two main vegetable washing seasons during the year. The washing of organic vegetables will occur all year for 8 hours per day, 6 days per week. The washing of conventional vegetables will occur from approximately April through August for 12 hours per day, 6 days per week.
7. Source water will be used in the vegetable washing and packing processes and also added to the cooling towers as make-up water. Water from condensers in the cooling towers will be pumped to the concrete lined west floor flume pit where it will blend with a portion of the wash water from the Grimmway West Plant. The remainder wash water is split between the concrete lined east floor flume pit and the concrete washout pit. Wash water from the concrete lined east floor flume pit then goes to the concrete lined west floor flume pit prior to going into the southwest concrete pit. Condenser water volumes are estimated to range between 1,500 to 3,000 gpd depending on washing season. Wash water in the concrete washout pit can then be pumped to the six settling ponds (total storage capacity of 26.9 acre-feet). From the settling ponds the wash water will enter the concrete recycle pump pit where it can be pumped back to the concrete washout pit for reuse or pumped to the northwest concrete reservoir (storage capacity of 2.03 acre-feet). All the waste streams come together at the northwest concrete reservoir. Grimmway collects its effluent sample after the northwest concrete reservoir and prior to land application. A process flow schematic showing the Grimmway West Plant is shown in Attachment B, which is incorporated by reference and considered a part of this Order.
8. The proposed flow rates for the Grimmway West Plant as described in the RWD, are tabulated below.

Table 2. Proposed Wastewater Flow Rates

	Process Wastewater
September through March (mgd)	0.160
April through August (mgd)	0.275
Total Annual (million gallons per year (mgy))	59.22

9. Quality of comingled wastewater is shown below.

Table 3. Quality of Comingled Wastewater

Constituent/Parameter	Units	8/17/2016	8/17/2016	8/23/2016	10/4/2016	Average
Biochemical Oxygen Demand	mg/L	14	16	17	35	21
Dissolved Oxygen	mg/L	4.5	3.3	2.7	3.0	3.4
Total Suspended Solids	mg/L	45	51	210	180	122
pH	pH units	7.2	7.7	7.5	7.2	---
Electrical Conductivity	umhos/cm	848	848	874	870	860
Total Dissolved Solids	mg/L	540	510	600	760	603
Fixed Dissolved Solids	mg/L	460	400	460	600	480
Total Kjeldahl Nitrogen	mg/L	4.1	3.3	5.3	2.1	3.7
Ammonia as Nitrogen	mg/L	0.6	0.24	0.4	0.1	0.3
Nitrate as Nitrogen	mg/L	0.03	0.03	0.01	21	5.3
Total Nitrogen	mg/L	4.1	3.3	5.3	23	8.9

10. Limited amounts of chemicals are used at the Grimmway West Plant for sanitation, general cleaning, and to prevent scaling in the cooling towers. Chemicals used at the Grimmway West Plant include: an alkaline general cleaners, general cleaner degreaser, chlorine sanitizer, chlorinated alkaline foam, and quat sanitizer.
11. Domestic wastewater is discharged separately to an existing on-site septic tank/leachfield.

Land Application Area Practices

12. Excessive application of food processing wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater by overloading the soil profile and causing waste constituents (i.e., organic carbon, nitrates, other salts, and metals) to percolate below the root zone. Irrigation with high-strength wastewater can result in high BOD loading on the day of application, which can deplete oxygen in the soil and lead to anoxic conditions. When insufficient oxygen is present below the ground surface, anaerobic decay of organic matter can create reducing conditions that convert metals 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 reducing conditions do not reverse as the percolate travels through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade shallow groundwater quality. Excessive organic loading can also increase groundwater bicarbonate concentrations, which cause increases in groundwater EC and total dissolved solids.
13. 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 causing unreasonable degradation of groundwater can vary significantly depending on soil conditions and operation of the land application system.

14. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency, cites BOD loading rates associated with crop irrigation in the range of 36 to 100 lbs/acre/day to prevent nuisance, but indicates that loading rates can be even higher under certain conditions. The studies that support this report did not evaluate actual or potential groundwater degradation associated with those loading rates. There are few studies that have attempted to determine maximum BOD loading rates for protection of groundwater quality. Those that have are not readily adapted to varying soil, groundwater, and climate conditions that are prevalent throughout the region.
15. The California League of Food Processors *Manual of Good Practice for Land Application for 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. The *Manual of Good Practice* also states that the use of surface irrigation (boarder check method) makes uniform application difficult, especially for coarse textured soils.

16. 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, may be considered management practices to prevent groundwater degradation due to reduced metals.
17. The 89 acres of LAA's will be sprinkler irrigated. The RWD does not describe an irrigation cycle. The cycle average BOD loading rates over the two seasons based on: 1) 26 acres from April through August with average daily flows of 0.275 mgd and 2) 89 acres from September through March with average daily flows of 0.160 mgd with an effluent BOD concentration of 21 mg/L (2016 data), and an assumed irrigation period of 1 day, and rest periods of 3, 5, and 7 days are shown below in Table 4.

Table 4. Cycle Average BOD Loading Rates to the Land Application Areas

Assumed Irrigation Period (Days)	Assumed Rest Period (Days)	April - August Cycle Average BOD (lbs/acre-day)	September - March Cycle Average BOD (lbs/acre-day)
1	3	0.463	0.079
1	5	0.309	0.053
1	7	0.232	0.039

18. The hydraulic loading from April through August based on 26 acres and a flow of 0.275 mgd is approximately 0.39 inches per day. The hydraulic loading rate from September through March based on 89 acres and a flow of 0.160 mgd is 0.07 inches per day.
19. The annual total nitrogen loading rate to the 89 acres based on a total nitrogen concentration of 9 mg/L and an annual flow of 59.22 million gallons is 50 lbs/acre-year. Nitrogen uptake rates for forage crops range from 150 to 480 lbs/acre-year, according to the *Western Fertilizer Handbook*, Eighth Edition. The annual total nitrogen loading to the LAA's is less than the nitrogen uptake rate of forage crops (includes alfalfa, brome grass, clover grass, orchard grass, sorghum sudan, Timothy, and vetch).

Source Water

20. The Grimmway West Plant obtains its source water from one existing onsite well (South Well). The quality of supply water is shown below.

Table 5. Source Water Quality

Constituent/Parameter	Units	12/26/2013	5/21/2014	8/17/2016	8/23/2016	9/1/2016	10/4/2016	Average
pH	pH units	6.6	8.2	7.6	7.7	7.5	8.1	---
Electrical Conductivity	umhos/cm	293	439	461	451	438	445	421
Total Dissolved Solids	mg/L	173	254	270	290	310	300	266
Nitrate as Nitrogen	mg/L	<2.2	<4.2	4.2	5.1	4.3	4.3	4.5
Calcium	mg/L	19	33	35	36	34	38	33
Magnesium	mg/L	1	1	0.24	0.22	0.24	0.25	0.49
Sodium	mg/L	36	46	56	54	51	54	50
Potassium	mg/L	1	1	1.4	1.2	1.5	1.5	1.3
Chloride	mg/L	35	56	62	62	62	60	56
Sulfate	mg/L	32	60	54	55	54	55	52
Bicarbonate as CaCO ₃	mg/L	40	40	53	52	50	52	48
Carbonate as CaCO ₃	mg/L	<10	<10	<2.5	<2.5	<2.5	<2.5	---
Total Alkalinity CaCO ₃	mg/L	<50	<50	<56	<55	41	43	42
Iron	mg/L	0.19	0.05	0.042	0.039	0.055	0.057	0.07

Constituent/Parameter	Units	12/26/2013	5/21/2014	8/17/2016	8/23/2016	9/1/2016	10/4/2016	Average
Manganese	mg/L	<0.01	<0.01	0.24	0.22	<0.004	<0.001	0.23
Fluoride	mg/L	---	<0.1	---	---	---	---	---
Zinc	mg/L	<0.02	<0.01	0.014	0.025	0.003	0.002	0.011
Boron	mg/L	<0.1	0.1	---	---	---	---	---
Copper	mg/L	0.01	<0.01	<0.001	<0.001	<0.001	<0.001	---

Site-Specific Conditions

21. Land uses in the vicinity of the Facility and LAA's are primarily agricultural. Crops grown in the area includes sudan, corn, and cotton, according to the Kern County 2006 Land Use Maps published by the Department of Water Resources.
22. The Facility and LAA's are in an arid climate characterized by dry summers and mild winters. The rainy season generally extends from November through April. Average annual pan evaporation is about 84 inches in Bakersfield (approximately 20 miles southwest of Buttonwillow) according to data in the *National Oceanic and Atmospheric Administration Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States*, published by the U.S. Department of Commerce National Oceanic and Atmospheric Administration. The average annual precipitation is about 6 inches in Buttonwillow according to data obtained from the Western Regional Climate Center.
23. The predominant soil below the Facility and LAA's is Calflax Clay Loam, according to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service. Calflax Clay Loam has a land capacity classification of 2s. Soils with "Class 2" have moderate limitations that restrict the choice of plants or require moderate conservation practices. The subclass "s" shows that the soil has limitations within the root zone, such as shallowness of the root zone, a high content of stones, a low available water capacity, low fertility, and excessive salinity or sodicity. Overcoming these limitations is difficult.
24. According to the September 2008 Federal Emergency Management Agency maps (Map Number 06029C1775E). The Grimmway West Plant and LAA's are in Zone X. This area is outside the 500-year floodplain.

Basin Plan, Beneficial Uses, and Water Quality Objectives

25. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2015* (hereafter "Basin Plan") designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference plans and policies of the State Water Board. In accordance with Water Code section 13263 (a), these waste discharge requirements implement the Basin Plan.

26. The Grimmway West Plant and LAA's are all in Detailed Analysis Unit (DAU) No. 255, within the Kern County Basin hydrologic unit. The Basin Plan identifies the beneficial uses of groundwater in the DAU as municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and wildlife habitat (WILD).
27. The Grimmway West Plant and LAA's are in the Semitropic Hydrologic Area No. 558.70 of the South Valley Floor Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board in August 1986. As indicated in the Basin Plan, the beneficial uses of Valley Floor Waters are: agricultural supply (AGR), industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1), non-water contact recreation (REC-2), warm freshwater habitat (WARM), wildlife habitat (WILD), rare, threatened, or endangered species (RARE) and groundwater recharge (GWR).
28. The Basin Plan includes narrative water quality objectives for chemical constituents that, at a minimum, require water designated as domestic or municipal supply to meet the Maximum Contaminant Levels (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.
29. The Basin Plan establishes narrative water quality objectives for chemical constituents, taste and odors, and toxicity in groundwater. The narrative 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.
30. 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 a numerical limitation in order to implement the narrative objective.
31. 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 several salt management requirements, including:
 - a. The maximum EC in the discharge shall not exceed the EC of the source water plus 500 umhos/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 to good quality groundwater, shall not exceed an EC of 1,000 umhos/cm, a chloride of 175 mg/L, or a boron content of 1.0 mg/L. The Basin Plan generally applies these limits to industrial discharges to land.

32. The Basin Plan authorizes an exemption to the incremental EC increase limit in Finding 31.a for food processing industries that discharge to land and 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, provided that beneficial uses are protected. Exceptions must be based on demonstration of best available technology and best management practices that control inorganic dissolved solids to the maximum extent feasible.

Groundwater Considerations

33. The Discharger does not have a groundwater monitoring well network in the vicinity of the LAA's. Groundwater in the area is approximately 230 feet below ground surface (bgs) and flows in the northeast direction, according to the *Lines of Equal Depth to Water in Wells Unconfined Aquifer* map published by the Department of Water Resources in 2010. The Corcoran Clay layer is found below the Grimmway West Plant and LAA's at 350 feet bgs according to *Depth to Top of Corcoran Clay* map published by the Department of Water Resources in 1981.
34. The quality of groundwater in the area based on nearby wells according to the Water Data Library, published by the Department of Water Resources, is shown in Table 6 below.

Table 6. Groundwater Quality from Nearby Wells

Constituent/Parameter	Units	29S24E24H001M		29S24E24F001M				
		Well Depth: 318 ft bgs		Well Depth: 336 ft bgs				
		12/22/1952	6/9/1975	2/6/1953	3/7/1961	6/24/1964	9/26/1969	6/9/1975
Total Alkalinity as CaCO ₃	mg/L	51	55	59	56	60	51	49
Boron	mg/L	0.25	0.13	0.05	0.13	0.1	0.1	0.18
Calcium	mg/L	34	25	8	11	30	31	12
Chloride	mg/L	50	50	18	11	27	32	22.4
Electrical Conductivity	umhos/cm	376	480	198	211	474	503	250
Total Hardness as CaCO ₃	mg/L	105	64	21	28	77	78	30
Magnesium	mg/L	5	0.3	---	0.1	---	---	0.1
Nitrate	mg/L	6	4.4	---	2	14	28	15.5
Potassium	mg/L	---	1.9	---	0.5	1	1	1
Sodium	mg/L	33	67	45	32	62	74	52
Total Dissolved Solids	mg/L	206	285	141	---	292	323	188
Dissolved Sulfate	mg/L	54	103	33	27	102	110	55
pH	pH Units	8	7.4	8.5	7.2	8.3	7.9	7.5

35. Water quality maps in the *Groundwater Pollution Study* published by the Kern County Health Department in 1980 shows nitrate concentrations in the unconfined aquifer in excess of 40 mg/L based on data from 1973 through 1979.

Antidegradation Analysis

36. The *Statement of Policy With Respect to Maintaining High Quality of Waters in California*, SWRCB Order WQ 68-16 (hereinafter "Antidegradation Policy") was adopted by the State Water Board in October 1968. Antidegradation Policy limits the Board's discretion to authorize the degradation of "high-quality waters." This policy has been incorporated into the Board's Basin Plans. "High-quality waters" are defined as those waters where water quality is more than sufficient to support beneficial uses designated in the Board's Basin Plan. Whether or not a water is a high-quality water is established on a constituent- by-constituent basis, which means that an aquifer can be considered a high-quality water with respect to one constituent, but not for others. (SWRCB Order No. WQ 91-10.)
37. The Antidegradation Policy applies when an activity discharges to high quality waters and will result in some degradation of such high quality waters. When it applies, the Policy requires that WDRs reflect best practicable treatment or control (BPTC) of wastes and that any degradation of high quality waters (a) will be consistent with the maximum benefit to the people of the State, and (b) will not result in an exceedance of water quality objectives. If the activity will not result in the degradation of high quality waters, the Antidegradation Policy does not apply, and the Discharger need only demonstrate that it will use "best efforts" to control the discharge of waste.
38. Constituents of concern that have the potential to degrade and pollute groundwater include organics, nutrients, and salts.
 - a. For Nitrogen, this Order limits the application of wastewater to agronomic rates for both nutrient and hydraulic loading. Total nitrogen loading estimates indicate the discharge will add about 50 lbs/acre-year to the 89 acres of LAA's. Nitrogen uptake for forage crops range from 150 to 480 lbs/acre-year, according to the Western Fertilizer Handbook, Eighth Edition. The low wastewater flows, significant depth of vadose zone, and application of wastewater at agronomic rates should preclude unreasonable degradation of groundwater for nitrogen.
 - b. For salinity, the Basin Plan contains effluent limits of EC of source water plus 500 umhos/cm. With a source water EC of 421 umhos/cm, the average EC of the discharge (886 umhos/cm) does not exceed the Basin Plan limit of source water plus 500 umhos/cm of 921 umhos/cm and is not expected to degrade groundwater with respect to EC.
39. The Dischargers provide control of the discharge, or will provide control of the discharge, as required by this Order, that incorporates:
 - a. Pre-cleaning to remove sand and silt;
 - b. Concrete lined "southwest concrete pit", "northwest concrete wash water reservoir", "concrete recycle pump pit", and "concrete washout pit";

- c. Even distribution of wastewater to the LAA's; and
- d. Source water, effluent, pond, and land application area monitoring.

These control practices are reflective of BPTC of the discharge.

- 40. The Dischargers aid in the economic prosperity of the region by the direct employment of about 150 to 175 full time employees in the Buttonwillow area and will provide 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 exists to accommodate growth and limited groundwater degradation around the Grimmway West Plant, provided that the terms of the Basin Plan are met.
- 41. 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 worse than background or the water quality objectives set forth in the Basin Plan.
- 42. This Order is consistent with the Anti-Degradation Policy since: (a) the Discharger has or will implement BPTC to minimize degradation, (b) the limited degradation allowed by this Order will not unreasonably affect present and anticipated future beneficial uses of groundwater, or result in water quality less than water quality objectives, and (c) the limited degradation is of maximum benefit to the people of the State.

Other Regulatory Considerations

- 43. 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.
- 44. 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: "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 units."
- 45. California Code of Regulations, Title 27 ("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. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt wastewater discharges. The 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 regional water quality control board has issued WDRs, reclamation requirements, or waived such issuance;
- (2) The discharge is in compliance with 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.

46. The discharge of potato process wastewater authorized herein is exempt from the requirements of Title 27 in accordance with Title 27, section 20090(b) because:
 - a. The Central Valley Water Board is issuing WDRs,
 - b. The discharge authorized herein will comply with the Basin Plan, and;
 - c. The wastewater discharged to the LAA's does not need to be managed as hazardous waste.
47. 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 became 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. Storm water generated by the Grimmway West Plant does not discharge to waters of the U.S. Coverage under Order 2014-0057-DWQ is not required at this time.
48. Water Code section 13267(b)(1) states that:

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 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.

49. The technical reports required by this Order and monitoring reports required by the attached MRP R5-2017-XXXX are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the Facility that discharges the waste subject to this Order.
50. The issuance of this Order is exempt from the provisions of California Environmental Quality Act ("CEQA")(Pub. Resources Code, § 21000 et seq.) 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" from environmental review. This action may also be considered exempt because it is an action by a regulatory agency for the protection of natural resources (Cal. Code Regs., tit. 14, § 15307.) and an action by a regulatory agency for the protection of the environment (Cal. Code Regs., tit. 14, § 15308.).
51. 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

52. 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 conditions of discharge of this Order.
53. The Discharger(s) and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.
54. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that Waste Discharge Requirements Order 5-00-152 is rescinded and Grimmway Enterprises, Inc., its 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 waste to surface waters or surface water drainage courses is prohibited.

2. Discharge of waste classified as 'hazardous', as defined in California Code of Regulations, title 23, section 66261.1 et seq., is prohibited.
3. Discharge of waste classified as 'designated', as defined in Water Code section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Treatment system bypass or overflow of untreated wastes is prohibited, except as allowed by Standard Provisions E.2 in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991.
5. Discharge of wastewater in a manner or location other than that described herein or in the RWD is prohibited.
6. Discharge of domestic wastewater to the process wastewater treatment system is prohibited.
7. Discharge of process wastewater to the septic system is prohibited.
8. Discharge of domestic wastewater to the process wastewater ponds, land application areas or any surface waters is prohibited.

B. Effluent Limitations

1. The discharge from the Grimmway West Plant shall not exceed the following: average daily flow of 0.275 mgd from April through August and 0.160 mgd from September through March. **[Compliance shall be determined at EFF-001¹]**

C. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of 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.

¹ Monitoring location EFF-001 is described in Monitoring and Reporting Program R5-2017-XXXX

5. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
6. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.
7. As a means of discerning compliance with Discharge Specification C.6, 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 Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.
8. The Discharger shall 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.
9. The treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
10. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Effluent Limitation B.1.
11. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
 - a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

- d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
12. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within the pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

D. Groundwater Limitations

Release of waste constituents from any component of any treatment, storage, delivery system, or land application area 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, whichever is greater:

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

E. Land Application Area Specifications

1. Land application of wastewater shall be managed to minimize erosion.
2. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.
3. LAA's shall be inspected periodically to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop irrigation with process wastewater immediately and implement corrective actions to ensure compliance with this Order.
4. Spray irrigation with wastewater is prohibited when wind speed (including gusts) exceed 30 mph.
5. Any runoff of wastewater (tailwater) shall be confined to the LAA's and shall not enter any surface water drainage course or storm water drainage system.
6. The Discharger may not discharge process wastewater to the LAA during rainfall or when soils are saturated.
7. Crops and/or landscape shall be grown in the LAA. Crops and/or landscape shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize crop and/or landscape uptake of water and nutrients.
8. Application of waste constituents to the LAA's 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 LAA's, including the nutritive value of organic and chemical fertilizers and of the wastewater shall not exceed the annual crop demand.

9. Hydraulic loading of wastewater and supplemental irrigation water shall be at reasonable agronomic rates.
10. The Discharger shall ensure that water, BOD, and nitrogen are applied and distributed uniformly across each LAA field. The Discharger shall implement changes to the irrigation system and/or operation practices as needed to ensure compliance with this specification.
11. The LAA's shall be managed to prevent breeding of mosquitos. In particular:
 - a. All applied irrigation water must infiltrate within 48 hours;
 - 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 wastewater.

F. Solids Specifications

Solids generated at the Grimmway West Plant consist of silt, sand, and other debris removed during the pre-cleaning process and culled vegetable scraps.

1. Any drying, handling and storage of solids at the Plant 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 constituent into soils in a mass or concentration that will violate groundwater limitations of this Order.
2. Collected screenings and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.
3. Any proposed change in solids use or disposal practice shall be reported 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 part of this Order.

2. The Discharger shall comply with MRP R5-2017-XXXX, 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 its MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the Grimmway West Plant for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. 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 documents 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.
5. 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 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 by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
6. 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.
7. 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.
8. In the event of any change in control or ownership of the Plant, 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.
9. To assume operation as a 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 address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the

signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

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 dues dates specified.
11. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans for investigations and studies, that describe the conduct of investigations and studies or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.
12. 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 are different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.
13. 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 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, section 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 filling 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 the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A. Plant Map
 - B. Process Flow Schematic
- Monitoring and Reporting Program R5-2017-XXXX
Information Sheet
Standard Provisions (1 March 1991)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2017-XXXX
FOR
GRIMMWAY ENTERPRISES, INC.
WEST PLANT
KERN COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to Water Code section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts or the Executive Officer issues a revised MRP. 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 and electrical conductivity) 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 and 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 the requested reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 9.

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

Monitoring Location Name	Monitoring Location Description
EFF-001	The location after the northwest concrete reservoir and before wastewater is discharged to the LAA's.
PND-001 through PND-006	Settling Ponds No. 1 through 6
SPL-001	Source water from the onsite supply well
LAA-001, LAA-002, LAA-003, and LAA-004	West Field (LAA-001), Landscaping Area (LAA-002), Center Pivot (LAA-003), and Pivot Corners (LAA-004)

EFFLUENT MONITORING

Effluent samples shall be collected at EFF-001. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Effluent Flow	mgd	Meter
Monthly	pH	pH Units	Grab
Monthly	Electrical Conductivity	umhos/cm	24-hour composite
Monthly	Biochemical Oxygen Demand ¹	mg/L	24-hour composite
Monthly	Total Suspended Solids	mg/L	24-hour composite
Monthly	Total Organic Carbon	mg/L	24-hour composite
Monthly	Total Dissolved Solids	mg/L	24-hour composite
Monthly	Fixed Dissolved Solids	mg/L	24-hour composite
Monthly	Total Kjeldahl Nitrogen	mg/L	24-hour composite
Monthly	Nitrate as Nitrogen	mg/L	24-hour composite
Monthly	Nitrite as Nitrogen	mg/L	24-hour composite
Monthly	Ammonia as Nitrogen	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	Computed
Quarterly	General Minerals ^{2,3}	mg/L	24-hour composite

¹ Five-day, 20°C biochemical oxygen demand (BOD)

² With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

³ See glossary on page 9 for list of general mineral constituents

POND MONITORING

A permanent marker (e.g., staff gages) shall be placed in the settling ponds. The marker shall have calibrations indicating water level at the design capacity and available operational freeboard. Effluent storage pond monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	DO ¹	mg/L	Grab ²
Weekly	Freeboard	Feet ³	Observation

- 1 Should the DO be below 1.0 mg/L during a weekly sampling event, the Discharger shall take all reasonable steps to correct the problem and commence daily DO monitoring in affected ponds until the problem has been resolved.
- 2 DO shall be measured between 8:00 am and 10:00 am and shall be taken opposite the pond inlet at a depth of approximately one-foot.
- 3 To the nearest tenth of a foot.

The Discharger shall inspect the condition of the storage pond weekly and record 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 grease, 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.). A summary of the entries made in the log shall be included in the subsequent monitoring report.

SOURCE WATER MONITORING

The Dischargers shall monitor source water SPL-001. For each source (either well or surface water supply), the Dischargers shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Flow-Weighted Electrical Conductivity	umhos/cm	Grab
Annually	General Minerals ^{1,2}	mg/L	Grab

- 1 With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.
- 2 See glossary on page 9 for list of general mineral constituents.

LAND APPLICATION AREA MONITORING

The Dischargers shall perform the following routine monitoring and loading calculations for West Field (LAA-001), Landscaping Area (LAA-002), Center Pivot (LAA-003), and Pivot Corners (LAA-004) LAA's. In addition the Dischargers shall keep a log of routine monitoring observations (e.g. areas of ponding, broken irrigation pipes, odors and/or flies within the LAA's, etc.). Data shall be collected and presented in tabular format and shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Application Location	n/a	n/a
Daily	Application Area	acres	n/a
Daily	Wastewater Flow	gallons	Metered
Daily	Wastewater Loading	inches/day ¹	Calculated
Daily	Supplemental Irrigation	inches/day ¹	Calculated
Daily	Precipitation ²	inches/day ¹	Rain gage ²

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
<u>BOD Loading Rates:</u>			
Daily	On Day of Application ³	lbs/acre	Calculated
Daily	Cycle Average ⁴	lbs/acre-day	Calculated
<u>Nitrogen Loading Rates:</u>			
Monthly	From Wastewater ⁵	lbs/acre	Calculated
Monthly	From Fertilizer ⁶	lbs/acre	Calculated
<u>Salt Loading Rates:</u>			
Monthly	From Wastewater ⁵	lbs/acre	Calculated
Annually	Cumulative Salt Loading	lbs/acre-year	Calculated

- 1 Report to the nearest 0.01 inch.
- 2 National Weather Service data from the nearest weather station is acceptable.
- 3 Loading rates to be calculated using the applied volume of wastewater, applied acreage, and average of the three most recent concentrations for BOD.
- 4 The cycle average BOD loading rates shall be calculated using applied volume of wastewater, applied acreage, and average of the three most recent concentrations for BOD and divided by the number of days between applications.
- 5 Nitrogen and salt shall be calculated using the applied volume of wastewater, applied acreage, and average of the three most recent concentrations for total nitrogen and Fixed Dissolved Solids.
- 6 Additional nitrogen loading to the land application area from other sources (i.e. organic matter and manure).

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 Dischargers 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: 5D152211001, Facility Name: Grimmway West Plant, Order: R5-2017-XXXX

In reporting monitoring data, the Dischargers 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 Dischargers 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 Dischargers have 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 and Pond Monitoring specified on pages 2 and 3.
2. For each month of the processing season, calculation of the maximum daily flow, monthly average flow, and cumulative annual flow.
3. A summary of the notations made in the pond monitoring log during each quarter. Copies of log pages covering the quarterly reporting period shall not be submitted unless requested by Central Valley Water Board staff.

Source Water Reporting

1. The results of Source Water Monitoring specified on page 3.

Land Application Area Reporting

1. The results of the routine monitoring and loading calculations specified on page 3 and 4.
2. Provide a Site Map of the LAA's showing predominant features, and include field numbers (if applicable) and acreage where wastewater was applied.
3. For each month that wastewater is applied to the LAA's, calculation of the monthly hydraulic load for wastewater and supplemental irrigation water (in million gallons) to each discrete irrigation area.
4. A summary of the notations made in the LAA's monitoring log during routine observations. The entire contents of the log do not need be submitted.

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 management.
2. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

Solids Reporting

1. Annual production total 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 beneficial reuse at locations and by entities not operating under a WDRs, and as approved by the Executive Officer, include: the name and location of the site where the beneficial reuse occurs and/or solids are sent for beneficial reuse.

Land Application Area Reporting

- 1. The type of crop(s) grown in the LAA's, planting and harvest dates, and the quantified nitrogen and fixed dissolved solids uptakes (as estimated by technical references or, preferably, determined by representative plant tissue analysis).
- 2. The monthly and annual discharge volume during the reporting year expressed in million gallons and inches.
- 3. A monthly balance for the reporting year that includes:
 - a. 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.
 - (a) Monthly average precipitation – this data is available at
<http://www.cimis.water.ca.gov/> or at <http://www.ncdc.noaa.gov>
 - (b) Monthly average and annual average discharge flow rates.
 - (c) Monthly estimates of the amount of wastewater percolating below the root zone (i.e., amount of wastewater applied in excess of crop requirements).
- 4. A summary of average and cycle BOD loading rates.

5. The total pounds of nitrogen applied to the LAA's, as calculated from the sum of the monthly loadings, and the total annual nitrogen loading to the LAA's in lbs/acre-year.
6. The total pounds of fixed dissolved solids that have been applied to the LAA's in lbs/acre-year, as calculated from the sum of the monthly loadings.

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

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(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	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.		
Daily	Samples shall be collected at least 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		
ug/L	Micrograms per liter		
umhos/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	Nitrate

General Minerals analyses shall be accompanied by documentation of cation/anion balance. With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

INFORMATION SHEET

INFORMATION SHEET-ORDER R5-2017-XXXX
GRIMMWAY ENTERPRISES, INC.
WEST PLANT
KERN COUNTY

Background

Waste Discharge Requirements (WDRs) Order 5-00-152 regulates the discharge of wastewater from a carrot processing plant in Buttonwillow. The Plant and a total of 706 acres of land application areas (LAA) were owned and operated by WM Bolthouse Farms Incorporated (Bolthouse).

In October 2013, Grimmway Enterprises Inc. (Grimmway) purchased the carrot processing plant from Bolthouse. The entire Grimmway site occupies 155 acres that consist of a vegetable receiving area, conveyors for initial sorting and dry dirt removal, equipment and buildings for washing, drying, bagging, cold storage, shipping and receiving. Approximately 93 acres of the 155-acre site are available for land application areas and settling pond capacity.

On 6 June 2014, the Central Valley Water Board adopted Order R5-2014-0092 for an ownership change from WM. Bolthouse Farms Incorporated to Grimmway.

On 13 July 2016, Cascade Earth Sciences submitted a Report of Waste Discharge (RWD) and amended RWD on 2 December 2016 on behalf of Grimmway for a change in discharge location and flow limit. Grimmway proposes to discharge 0.275 mgd from April through August and 0.160 mgd from September through March of vegetable washing wastewater to a net of 89 acres of land application area.

The Plant and LAA's are in section 18 of Township 29 South, Range 25 East, Mount Diablo Base and Meridian (MDB&M).

Discharge

Grimmway will predominantly wash organic and conventionally produced potatoes but it also has the ability to wash and package other vegetables. Vegetable washing will occur year-round and will depend on demand and raw product supply. Washing of organic vegetables will occur all year. Washing of conventional vegetables will occur from approximately April through August.

Quality of the comingled wastewater (wash water and condenser water) based on samples collected from 17 August 2016 through 4 October 2016 is shown in Table 1.

Table 1. Quality of Comingled Wastewater

Constituent/Parameter	Units	8/17/2016	8/17/2016	8/23/2016	10/4/2016	Average
Biochemical Oxygen Demand	mg/L	14	16	17	35	21
Dissolved Oxygen	mg/L	4.5	3.3	2.7	3.0	3.4
Total Suspended Solids	mg/L	45	51	210	180	122

Constituent/Parameter	Units	8/17/2016	8/17/2016	8/23/2016	10/4/2016	Average
pH	pH units	7.2	7.7	7.5	7.2	7.4
Electrical Conductivity	umhos/cm	848	848	874	870	860
Total Dissolved Solids	mg/L	540	510	600	760	603
Fixed Dissolved Solids	mg/L	460	400	460	600	480
Total Kjeldahl Nitrogen	mg/L	4.1	3.3	5.3	2.1	3.7
Ammonia as Nitrogen	mg/L	0.6	0.24	0.4	0.1	0.3
Nitrate as Nitrogen	mg/L	0.03	0.03	0.01	21	5.27
Total Nitrogen	mg/L	4.1	3.3	5.3	23	8.9

The West Field (24.4 acres) and the Pivot Corners (9.7 acres) will be irrigated using hand line solid-set sprinkler irrigation. The landscape area (26 acres) will be irrigated with pop-up sprinklers. The Center Pivot (29 acres) will be irrigated with the center pivot or hand line sprinklers.

The BOD loading rates to the LAA's are minimal, less than 1 lb/acre-day. Grimmway's primary choice is to irrigate the landscape areas along Highway 58. Based on the proposed project, Grimmway will not generate sufficient flows to keep the landscape areas green. There is no concern that the irrigation practices proposed by Grimmway will result in BOD overloading and nuisance conditions at the Plant.

Soil and Groundwater Conditions

Soils below the Facility and LAA are predominately Calflax Clay Loam, according to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service.

The Dischargers does not have a groundwater monitoring well network in the vicinity of the LAA's. Groundwater in the area is approximately 230 feet below ground surface (bgs) and flows in the northeast direction, according to the *Lines of Equal Depth to Water in Wells Unconfined Aquifer* map published by the Department of Water Resources in 2010. The Corcoran Clay layer is found below the Grimmway West Plant and LAA's at 350 feet bgs according to *Depth to Top of Corcoran Clay* map published by the Department of Water Resources in 1981.

Water quality maps in the *Groundwater Pollution Study* published by the Kern County Health Department in 1980 shows nitrate concentrations in the unconfined aquifer in excess of 40 mg/L based on data from 1973 through 1979.

Groundwater below the Plant and LAA's is of good quality with respect to EC, TDS, and chloride and meets the water quality objectives for municipal and domestic supply with EC ranging from 198 to 503 umhos/cm, TDS ranging from 141 to 323 mg/L, and chloride ranging from 11 to 50 mg/L.

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.

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. It may be appropriate to reopen the Order if new technical information is received or if applicable laws and regulations change.