

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-0124

WASTE DISCHARGE REQUIREMENTS
FOR
GRIMMWAY ENTERPRISES, INC.
CAL-ORGANIC FACILITY
KERN COUNTY

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

1. Grimmway Enterprises, Inc., (GEI or Discharger), a California Corporation, submitted a Report of Waste Discharge (RWD) dated 6 June 2008 to support the discharge of fruit and vegetable processing wastewater to land generated from its Cal-Organic processing facility (Facility).
2. GEI owns and operates the Facility and is responsible for compliance with these Waste Discharge Requirements (WDRs). GEI purchased the Facility in 2001 and has operated and discharged wastewater to the surrounding agricultural fields (Land Application Areas) since that time. The Facility was constructed in 1980 and used for the same purposes (washing of produce) prior to the purchase in 2001, so wastewater has been discharged to the surrounding Land Applications for over 30 years.
3. The Facility is at 12000 Main Street between Lamont and Weedpatch, as shown on Attachment A, which is attached hereto and made part of this Order by reference. The property consists of a fruit and vegetable washing and packing facility and agricultural fields (Land Application Areas) to which the wastewater is discharged. The Facility and the Land Application Areas are within the northern half of Section 12, Township 31 S, Range 28 E and the western half of Section 7, Township 31 S, Range 29 E.

Existing Facility and Discharge

4. The Facility washes and packages a variety of produce including carrots, potatoes, onions, beans, and melons. The Facility comprises about 20 acres and includes office buildings, a produce washing and packing facility, cold storage, two wastewater storage/settling ponds, a storm water pond, and associated parking. Storm water is collected in an on-site pond and is not used for irrigation or in the packing process.
5. Water to wash and process produce is provided by the City of Lamont. Fresh water is used for the cleaning and washing of produce. The resulting wastewater is routed to the first of two unlined settling ponds designated Cells 1 and 2.

Wastewater in Cell 1 is recycled for reuse as wash water or used in soaker sheds to maintain produce quality prior to packing. Wastewater in cell 2 is recycled for the washing or cooling of produce, or used as irrigation water in the Land Application Areas. A Process Flow Diagram is shown on Attachment B, which is attached hereto and a part of this Order.

6. The Land Application Areas are comprised of 15 fields totaling 584 acres that are divided into two general areas, 298 acres adjacent to the Facility and west of Weedpatch Highway, and 286 acres east of Weedpatch Highway (Attachment A).
7. GEI provided flow data from 2007 in its 2008 RWD. The total annual volume of wastewater produced in 2007 was 136.7 million gallons. The average monthly flow rate was 11.4 million gallons with an average dally flow of 0.374 million gallons per day (mgd).
8. GEI collected wastewater samples to characterize the quality of the effluent. Effluent quality was reported as follows:

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>RESULTS</u>
pH	Standard pH Units	8.3
Electrical Conductivity	micromhos per centimeter (umhos/cm)	734
Biochemical Oxygen Demand	milligrams per liter (mg/L)	8
Total Kjeldahl Nitrogen	mg/L	< 2.5
Ammonia - Nitrogen	mg/L	0.18
Nitrate as Nitrogen	mg/L	2.12
Total Alkalinity	mg/L	188
Total Dissolved Solids	mg/L	460

9. The RWD contains a water balance that addressed both winter and summer irrigation needs. At the annual flow rate of 136.7 million gallons, GEI calculations indicate that 224 acres would be required in the winter months and 118 acres would be required in the summer. Additional irrigation water is required to make up the crop needs.
10. Solid waste generated at the Facility consists of silt removed from the produce during washing and fruit and vegetable culls. Culls are collected and shipped from the Facility daily for use as livestock feed. Silt is removed from the ponds and given away to private or government entities that use the silt as top soil or clean fill.

Proposed Discharge

11. The following design flows were proposed in the RWD to meet the projected design capacity of the Facility. The proposed design flows are within the irrigation capacity of the 584-acre Land Application Area.
 - Average monthly flow of 1.0 mgd;
 - Maximum (peak) daily flow of 2.2 mgd; and
 - Total annual flow of 365 million gallons.

12. The RWD provides a water balance for the proposed flow of 1.0 mgd. The results indicate that, during the winter months (typically October through April), all 584 acres would be required to dispose of the wastewater. Calculations indicate 11.4 inches of wastewater would be applied during this period. During the summer, a flow of 1.0 mgd will irrigate 224 acres. The year-round irrigation will apply about 42 inches of wastewater and 23 inches of fresh water annually.

13. Using 1.0 mgd, GEI estimated water and mass loadings for the discharge. The year-round total nitrogen loading would be about 44 pounds per acre per year (lbs/ac/yr) with summer loadings accounting for 32 lbs/ac/yr, and 12 lbs/ac/yr in the winter months. Supplemental nitrogen fertilizers are required for crop needs during both the winter and summer months. The average daily biochemical oxygen demand (BOD) load calculated to be 0.22 pounds per acre per day (lbs/ac/day). Annual BOD loading is estimated to range between 22 to 79 lbs/ac/yr.

Site Specific Conditions

14. Source water is obtained from the City of Lamont via two four-inch water lines. Source water quality is summarized in the following table.

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>RESULTS</u>
pH	Standard pH Units	8.2
Electrical Conductivity	umhos/cm	569
Biochemical Oxygen Demand	mg/L	< 1.0
Total Kjeldahl Nitrogen	mg/L	< 2.0
Ammonia - Nitrogen	mg/L	0.02
Nitrate as Nitrogen	mg/L	1.86
Total Alkalinity	mg/L	190
Total Dissolved Solids	mg/L	408

15. The land surface in the area of the Facility and the Land Application Areas slopes gradually to the southwest. The elevation of the Facility is about 400 feet above mean sea level, ranging from about 410 feet at the northeast corner to about 385 feet at the southwest corner.
16. According to Federal Emergency Management Agency maps (Map number 06029C2750E), the Facility and the eastern Land Application Area are located within Zone X, an area outside of the one (1) percent annual chance for flooding of less than 1 foot in depth, and areas protected by levees. The northwest portion of the western Land Application Area is within a 100-year flood plain designated Zone AO. Zone AO areas are described as having flood depths of 1 to 3 feet.
17. Soils in the vicinity of the Facility and the Land Application Areas are predominantly Kimberlina fine sandy loam, Granoso sandy loam, and Granoso loamy sand, according to the Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service.
18. The Kimberlina soil has a high available water capacity and is described as a Class I soil. Class I soils have few limitations and are suited for a wide range of irrigated crops including almonds, alfalfa, cotton and grapes.
19. The Granoso loamy sand and sandy loam soils have low available water capacity and are described as Class 3e and 3s soils, respectively. Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both. The "e" subclass indicates that the main hazard is risk of erosion unless a close growing plant cover is maintained. The "s" subclass indicates the soil is limited mainly because it is shallow, droughty, or stony.
20. The Lamont area is characterized as semi-arid with hot dry summers and cooler winters. The rainy season generally extends from November through March. Average annual precipitation and pan evaporation for the area are 6.0 inches and in excess of 84 inches, respectively. The 100-year, 24-hour maximum precipitation is about 2.9 inches, based on maps obtained from the Kern County Resource Management Agency, Engineering, Survey and Permit Services, Floodplain Management Section.

Groundwater Considerations

21. Groundwater in the area occurs in three main aquifers; a confined aquifer, an unconfined aquifer, and a perched aquifer. The Corcoran Clay is reported to underlie the Facility with the confined aquifer beneath the clay. A Department of

Water Resources (DWR) map (*Depth to the Top of the Corcoran Clay, 1981*) depicts the top of the clay at about 300 feet below the ground surface (bgs).

22. The depth to water in the unconfined aquifer is approximately 250 to 300 feet bgs, according to information in *Lines of Equal Elevation of Water in Wells in Unconfined Aquifer*, published by DWR, Spring 2004. Regional flow of the unconfined aquifer is generally to the west.
23. GEI does not monitor first encountered or perched groundwater beneath the Facility. However, several groundwater monitoring sites are nearby (within a half mile) that have depth to water information. A gasoline station (Old Joes Store) with monitoring wells is about a half mile south of the Facility at the intersection of Buena Vista Boulevard and Weedpatch Highway. Depth to water results indicates first encountered groundwater was on the order of 90 to 100 feet bgs in January 2012. Well development records from the Old Joes Store site indicate the Electrical Conductivity (EC) of the groundwater ranges from about 750 to 800 umhos/cm.
24. The City of Bakersfield monitors groundwater in eight first encountered groundwater monitoring wells about 2 miles west and northwest of the Facility. The depth to first encountered groundwater in 2011 ranged from about 65 to 75 feet bgs, and the direction of groundwater flow is variable due to mounding from regional irrigation practices and pumping of nearby irrigation wells, but the regional groundwater flow direction is interpreted to be to the east, northeast, and southeast (towards the Facility). Results for selected constituents from 2011 are summarized in the following table.

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>RESULTS</u>
pH	s.u.	7.6 – 8.3
Electrical Conductivity	umhos/cm	680 – 1500
Total Dissolved Solids	mg/L	410 – 940
Total Alkalinity	mg/L	140 - 350
Nitrate as Nitrogen	mg/L	1.3 - 23

25. Regional groundwater investigations show similar to elevated total dissolved solids (TDS) concentrations from the Lamont area and continuing to the south and southwest. Kern County Health Department prepared a March 1980 *Groundwater Pollutant Study* for the San Joaquin Valley Basin, Kern County. Plate XVIII depicts TDS concentrations for the area, and shows the Facility as being in an area with TDS concentrations that ranged from 500 to 1,000 mg/L (equivalent to EC concentrations of about 780 to 1,575 umhos/cm) in 1980. The Kern County Water agency prepares Water Supply Reports for the region. In its 1999 *Water Supply Report*, Plate 2 depicts the Facility in an area with TDS of at least 500 mg/L.

26. Comparing the water quality presented in Findings 23 through 25 to the effluent quality presented in Finding 8 illustrates that the proposed discharge has similar to lower EC levels than those reported for the first encountered groundwater of the region.

Basin Plan, Beneficial Uses, and Water Quality Objectives

27. The Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004 (the "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.
28. The Facility and Land Application Areas are in Detailed Analysis Unit (DAU) No. 254, within the Kern County Basin hydrologic unit. The Basin Plan identifies the beneficial uses of groundwater in the DAU as municipal and domestic supply, agricultural supply, industrial service and industrial process supply, water contact and non-contact water recreation, and wildlife habitat.
29. The Facility is in the Kern Delta Hydrologic Area (No. 557.10) of the South Valley Floor Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board in August 1986.
30. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as MUN to meet the State drinking water MCLs specified in Title 22. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
31. The Basin Plan also establishes narrative water quality objectives for Tastes and Odors and Toxicity. The Tastes and Odors objective prohibits the discharge of taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

32. 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 incremental increase in salt from use and treatment must be controlled to the extent possible. The maximum electrical conductivity (EC) of the effluent discharged to land 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 good quality groundwater shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

Antidegradation

33. State Water Board Resolution No. 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.
 - d. The degradation is consistent with the maximum benefit to the people of the State.
34. Constituents of concern that have the potential to cause degradation of high quality waters include, in part, organics, nutrients, and salts.
- a. As indicated in Finding 8, the BOD concentrations in the discharge are low and the resulting organic load in the wastewater is low. The organic load in GEI's discharge is managed by the use of sprinkler irrigation to evenly distribute the wastewater over the Land Application Areas, minimizing the potential for anoxic and reducing conditions in soil. These measures are expected to prevent odor

and nuisance conditions and reduce the potential for the degradation of groundwater from organic loading. BOD loading estimates indicates the proposed discharge will add about 0.22 lbs/ac/day (Finding 13).

- b. For nitrogen and nitrates, the application of wastewater at agronomic rates for both nutrient and hydraulic loading should preclude degradation of groundwater. Nitrogen in the wastewater will be discharged to the Land Application Areas with forage crops that can utilize up to 100 to 250 lbs/ac/yr or more. Loading estimates indicate the proposed discharge will add about 12 to 44 lbs/ac/yr (Finding 13), which is much less than crop requirements.
- c. For salinity, the Basin Plan contains effluent limits of EC of source water plus 500 umhos/cm and 1,000 umhos/cm maximum for discharges to areas that may recharge to good quality groundwater. As the Tulare Lake Basin is a closed basin, these limits are designed to control the rate of groundwater degradation with respect to salinity. With a source water EC of 569 umhos/cm, the average discharge EC of 734 umhos/cm meets the Basin Plan limit of source water plus 500 umhos/cm (1,069 umhos/cm). The EC of the discharge is also less than the Basin Plan cap of 1,000 umhos/cm, less than the EC of first encountered groundwater, and is not expected to degrade groundwater with respect to EC.

35. The Facility and its storage/irrigation system provide treatment or control of the discharge that incorporates:

- a. Settling of solids and sediment from the waste stream.
- b. Sprinkler application of wastewater to the Land Application Areas that will provide even distribution of wastewater over the 584 acre Land Application Areas.
- c. Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours.
- d. At least daily inspection of the Land Application Areas during times of discharge.
- e. Appropriate solids disposal practices.

36. Based on the reported strength of the wastewater (Finding 8), the quality of the source water (Finding 14) and first encountered groundwater of the region (Findings 24 and 25), and the loading estimates for the discharge (Finding 13), the discharge from the Facility will not degrade the underlying groundwater.

Designated Waste and Title 27

37. Water Code section 13173 defines designated waste as either:
- a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.
 - b. Non-hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or could reasonably be expected to affect beneficial uses of the waters of the State contained in the appropriate water quality control plan.
38. California Code of Regulations, title 27 (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to a provision that exempts wastewater under specific conditions. This exemption, found at Title 27, section 20090(b), is below:
- (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.
39. The discharge 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 is in compliance with the Basin Plan, and;
 - c. The discharges authorized herein do not need to be managed as a hazardous waste.

CEQA

40. GEI contacted Kern County in 2008 regarding required permitting and Kern County staff indicated that no county permits were required for the application of produce

wash water to land. GEI also contacted Central Valley Water Board staff in 2008 requesting the Central valley Water Board act as the lead agency for CEQA review. However, discharge has been ongoing since at least 1984, and the irrigation system has been in place since that time. This Order imposes regulatory requirements on the discharge of waste to the Land Application Areas, and does not allow an increase in flow, and no additional construction is authorized by this Order. Therefore, the imposition of additional regulatory requirements for this existing discharge is exempt from the requirements of CEQA in accordance with California Code of Regulations, title 14, section 15301.

41. This Order includes requirements to protect water quality, including, but not limited to:
 - a. Effluent Limits B.1 that establishes numerical EC effluent limitations that are reflective of a level of treatment that is protective of existing groundwater quality.
 - b. Discharge Specification C.5, which stipulates waste constituents cannot be released or discharged in a concentration or mass that causes violation of this Order's groundwater limitations.
 - c. Provisions G.14 and G.15 that require the submittal of Salinity and Nutrient management Plans, respectfully.

General Findings

42. Based on the threat to water quality and complexity of the discharge, the facility is determined to be classified as 2-B. California Code of Regulations, title 23, section 2200 defines these categories as follows:
 - 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."
43. 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.
44. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

45. Water Code section 13267(b) states that:

In conducting an investigation ... 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 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.

46. The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2012-0124 are necessary to assure compliance with these WDRs. The Discharger owns and operates the facility that discharges the waste subject to this Order.

47. DWR sets standards for the construction and destruction of groundwater wells, as described in the *California Well Standards Bulletin 74-90 (June 1991)* and *Water Well Standards: State of California Bulletin 94-81 (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.

Public Notice

48. All of the above and the supplemental information and details in the attached Information Sheet, which is incorporated herein, were considered in establishing the following conditions of discharge.

49. The Discharger and interested agencies and persons have been notified of the intent to prescribe WDRs for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

50. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13263 and 13267, Grimmway Enterprises, Inc., and its respective 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. Bypass of untreated wastes, except as allowed by Provision E.2 of Standard Provisions and Reporting Requirements, is prohibited.
3. Discharge of hazardous wastes, as defined in California Code of Regulations, title 22, section 66261.3, is prohibited. 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. Application of wastewater in a manner or location other than that described herein is prohibited.
5. The discharge of wastewater to a domestic wastewater treatment system (septic system) is prohibited.
6. The discharge of any water softening ion exchange regeneration brine in the wastewater system is prohibited.

B. Effluent Limitations

1. The annual flow-weighted average EC of the discharge shall not exceed the flow weighted average EC of the source water plus 500 $\mu\text{mhos/cm}$ or a maximum of 1,000 $\mu\text{mhos/cm}$, whichever is less. The flow-weighted average of the source water shall be a moving average for the most recent 12 months.

C. Discharge Specifications

1. The monthly average discharge flow shall not exceed 1.0 mgd. The annual discharge flow shall not exceed 365 million gallons.
2. The Discharger shall operate all systems and equipment to optimize treatment of wastewater and the quality of the discharge.
3. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
4. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.

5. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of groundwater limitations.
6. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
7. 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.
8. 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.
9. 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.

10. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.
11. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.
12. The Discharger shall monitor solids accumulation in the wastewater treatment/storage ponds at least every year beginning in 2013, and shall periodically remove solids as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of solids in the reservoir exceeds **five percent** of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within **12 months** after the date of the estimate.
13. Objectionable odors shall not be perceivable beyond the limits of the Facility and/or the Land Application Areas at an intensity that creates or threatens to create nuisance conditions.

D. Land Application Area Specifications

1. Application of waste constituents to the Land Application Areas shall be at reasonable agronomic rates to preclude creation of a nuisance or degradation of groundwater, considering the 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.
2. Wastewater shall not be discharged to the Land Application Area in a manner that causes wastewater to stand for greater than 48 hours.
3. Any irrigation runoff shall be confined to the Land Application Area and shall not enter any surface water drainage course or storm water drainage system unless the runoff does not pose a public health threat and is authorized by the appropriate regulatory agencies.
4. The perimeter of the Land Application Areas shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties not owned or controlled by the Discharger.
5. With the exception of retained storm water, the volume of wastewater applied to the Land Application Areas on any single day shall not exceed reasonable agronomic rates based on the vegetation grown, pre-discharge soil moisture conditions, and weather conditions.

6. Hydraulic loading of wastewater and supplemental irrigation water shall be at reasonable agronomic rates designed to:
 - a. Maximize crop nutrient uptake;
 - b. Maximize breakdown of organic waste constituents in the root zone; and
 - c. Minimize the percolation of waste constituents below the root zone.
7. The irrigation with wastewater shall be managed to minimize erosion within the Land Application Areas.
8. The Land Application Area shall be managed to prevent breeding of mosquitoes. In particular:
 - a. There shall be no standing water 48 hours after irrigation ceases;
 - b. Tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store wastewater.
9. No physical connection shall exist between wastewater and any domestic water supply or domestic well, or between wastewater piping and any irrigation well that does not have an air gap or reduce pressure principle device.

E. Groundwater Limitations

1. Release of waste constituents from any treatment, storage, or land disposal component associated with the Facility shall not cause or contribute to groundwater:
 - a. Containing concentrations of constituents identified below, or natural background quality, whichever is greater.
 - (i) Nitrate as nitrogen of 10 mg/L.
 - (ii) TDS of 500 μ mhos/cm.
 - (iii) Total Coliform Organisms of 2.2 MPN/100 mL.
 - (iv) For constituents identified in Title 22, the Primary and Secondary MCLs quantified therein.

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

F. Solids Specifications

1. Any handling and storage of solids and sludge shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.
2. Collected screenings, sludge, and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. 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. Screenings may be land applied to the disposal area provided that, at least 60 days prior to application, the Discharger submits a loading analysis that demonstrates the land application of solids will not cause an exceedance of any specification or groundwater limitation of this Order.

G. Provisions

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions), which are a part of this Order.
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) R5-2012-0124, 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. The Discharger shall keep at the Facility office copies of this Order including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The Discharger must at all times properly operate and maintain its respective facilities and systems of treatment and control (and related appurtenances) that are installed or used to achieve compliance with the conditions of this Order.

Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed only when the operation is necessary to achieve compliance with the conditions of the Order.

5. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of a person registered to practice in California pursuant to California Business and Professions Code Sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to Water Code section 13267.
6. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
7. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.
8. To assume operation 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 California 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.

9. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate.
10. The Discharger shall maintain and operate all ponds sufficient to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California 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). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain permanent markers with calibration that indicates the water level at design capacity and enables determination of available operational freeboard.
11. As a means of discerning compliance with Discharge Specification C.13, 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 weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.
12. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
13. **By 7 June 2013**, the Discharger shall submit a Salinity Management Plan, with salinity source reduction goals and an implementation time schedule for Executive Officer approval. The control plan should identify any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible, include an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan. The Discharger shall implement the plan in accordance with the approved schedule.

14. **By 7 June 2013**, the Discharger shall submit a Nutrient and Wastewater Management Plan for the Land Application Areas for Executive Officer approval. The Plan shall determine the amount of salt and nutrients that crops grown in the Land Application Areas will take up. The objective of this Plan shall be to identify and utilize site specific data to determine the appropriate amount of process wastewater that may be applied to the Land Application Area.
15. If the Central Valley Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, this Order may be reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the problem constituents.
16. 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.
17. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order 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 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 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 7 December 2012.

Original signed by:

PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A Location Map
- B Process Flow Diagram

Monitoring and Reporting Program No. R5-2012-0124

Information Sheet

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

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-0124
FOR
GRIMMWAY ENTERPRISES, INC.
CAL-ORGANIC FACILITY
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) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

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

A glossary of terms used within this MRP is included on page 7 and a list of the constituents required for the monitoring of Priority Pollutants is included in Table 1, which is on page 8.

EFFLUENT MONITORING

Effluent samples shall be representative of the volume and nature of the discharges. Time of collection of the samples shall be recorded. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed below, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge.

Effluent samples shall be collected from the discharge point from just prior to discharge to the Land Application Areas from Pond 2 (Cell 2). Effluent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	EC	umhos/cm	Grab
Weekly	TDS	mg/L	24-hour composite
Weekly	BOD ₅	mg/L	24-hour composite
Weekly	TSS	mg/L	24-hour composite
Weekly	Nitrate as N	mg/L	24-hour composite
Weekly	TKN	mg/L	Grab
Weekly	Ammonia	mg/L	Grab
Weekly	Total Nitrogen	mg/L	Computed
Weekly	Chloride	mg/L	24-hour composite
Weekly	Sodium	mg/L	24-hour composite
Quarterly	General Minerals	mg/L	24-hour composite

POND MONITORING

Effluent storage ponds monitoring shall include at least the following:

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

¹ To nearest tenth of a foot

² 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 the affected ponds until the problem has been resolved

Permanent markers (e.g., staff gauges) shall be placed in the effluent storage ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard. The Discharger shall inspect the condition of the effluent storage ponds once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the effluent storage pond surface and their location; whether burrowing animals or insects are present; and the color of the pond water (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.).

SOURCE WATER MONITORING

The Discharger shall collect samples from its supply and analyze them for the constituents shown in the following table.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Annually ¹	EC	umhos/cm	Grab
Annually ¹	Nitrate as N	mg/L	Grab
Annually ¹	TDS	mg/L	Grab
Annually ¹	TKN	mg/L	Grab
Annually ¹	Total Nitrogen (equals TKN + Nitrate as N)	mg/L	Calculated
Annually ¹	General Minerals	mg/L	Grab

1. Annually is once a year, with samples collected in the third quarter (July through September) of each year.

LAND APPLICATION AREA MONITORING

The Discharger shall monitor the effluent and irrigation water applied to each Land Application Area parcel for the constituents and at the frequency as specified below. This information will be used to evaluate the hydraulic, nutrient, and salt loadings to each individual Land Application Area parcel.

Hydraulic and Waste Constituent Loading Monitoring

Land Application Area parcels receiving wastewater, and/or freshwater (i.e., groundwater or canal water) shall be monitored for the following:

1. Crop Information
 - a. Crop type (e.g., silage corn, wheat, oats).
 - b. Crop planting or harvesting information (e.g., harvested tonnage in tons/acre).

2. Hydraulic Loading

- a. Individual estimated monthly volumes (in million gallons) of wastewater and , freshwater applied.
- b. Combined estimated monthly volume (in million gallons) of wastewater and, freshwater applied.
- c. Monthly hydraulic loading rate (in inches) based on the combined estimated volume of wastewater and freshwater applied.
- d. Monthly total precipitation (in inches) from either an onsite precipitation gage station or through published sources (cite data source(s)).

3. BOD₅ Loading

- a. Quantity of BOD₅ (in lbs) applied based on the total volume of water from any source applied to the parcel and the monthly average value for effluent BOD₅
- b. Monthly average daily BOD₅ loading rate (lbs/acre-day) based on the quantity of BOD₅ applied during the month and number of days in the month

4. Nitrogen Loading

- a. Monthly quantity of Total Nitrogen (in lbs) from wastewater applied based on the total volume of wastewater applied to the parcel and the monthly average value for effluent total nitrogen.
- b. Monthly quantity of Total Nitrogen (in lbs) from fertilizer applied based on the total volume of fertilizer applied to the parcel and the estimated value for fertilizer Total Nitrogen concentration.
- c. Monthly quantity of Total Nitrogen (in lbs) applied from all sources of nitrogen.
- d. Monthly Total Nitrogen loading rate (in lbs/acre-month) based on all sources of applied nitrogen.
- e. Annual Cumulative Total Nitrogen loading rate (in lbs/acre-year) on a calendar year basis.

5. TDS Loading

- a. Monthly quantity of TDS (in lbs) from wastewater applied based on the total volume of wastewater applied to the parcel and the monthly average value for effluent TDS.
- b. Monthly Total TDS loading rate (in lbs/acre-month) based on TDS loadings from reused water.
- c. Annual Cumulative TDS loading rate (in lbs/acre-year) on a calendar year basis.

At least daily, the Discharger shall make visual observations regarding the discharge, standing water (indicate approximate depth), presence or absence of objectionable odors or vectors, and general compliance with Discharge Prohibitions and Land Application Area Specifications.

REPORTING

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

- First Quarter Monitoring Report: **1 May**
- Second Quarter Monitoring Report: **1 August**
- Third Quarter Monitoring Report: **1 November**
- Fourth Quarter Monitoring Report: **1 February.**

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory. Reports shall be submitted whether or not there is a discharge.

The following information is to be included on all monitoring reports, as well as report transmittal letters:

Grimmway Enterprises, Inc.
Cal-Organic Facility
MRP R5-2012-0124
Contact Information (telephone and email)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements.

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.

If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the

calculation and reporting of the values required in the Discharge Monitoring Report Form. Such increased frequency shall be indicated on the Discharge Monitoring Report Form.

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.

A. All Quarterly Monitoring Reports shall include the following:

Effluent Reporting:

1. The results of effluent and settling pond monitoring specified on pages 2 and 3.
2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flow.
3. For each month of the quarter, calculation of the 12-month rolling average EC of the discharge using the EC value for that month averaged with the EC values for the previous 11 months.
4. A summary of the notations made in the effluent storage pond monitoring log during each quarter. The entire contents of the log do not need to be submitted.

Pond Monitoring Reporting

1. The results of the monitoring specified on page 2.

Land Application Area Reporting

1. The results of the routine monitoring and reporting and loading calculations specified on pages 3 and 4.
2. For each month of the quarter, calculation of the monthly hydraulic load for wastewater and supplemental irrigation water in millions of gallons to each discrete irrigation area.
3. A summary of the notations made in the Land Application Area log during each quarter. The entire contents of the log do not need to be submitted.

B. Fourth Quarter Monitoring Reports, in addition to the above, by **1 February** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

Source Water Reporting

1. The results of the semi-annual monitoring for the constituents specified on page 3. Results must include supporting calculations.

Facility Information:

1. The names and general responsibilities of all persons employed to operate the produced water treatment systems.
2. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations.
3. A statement certifying when the flow meters and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration (Standard Provision C.4).
4. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the Facility as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

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

Ordered by:

Original signed by:

PAMELA C. CREEDON, Executive Officer

7 December 2012

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Unless otherwise specified or approved, samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
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	

General Minerals analyses shall be accompanied by documentation of cation/anion balance.

INFORMATION SHEET

ORDER R5-2012-0124
GRIMMWAY ENTERPRISES, INC.
CAL ORGANIC FACILITY
KERN COUNTY

Background

Grimmway Enterprises, Inc. (GEI) owns and operates an organic fruit and vegetable processing facility (Facility) in southern Kern County. GEI processes fruits and vegetables at the Facility and submitted a June 2008 Report of Waste Discharge (RWD) in order to obtain Waste Discharge Requirements (WDRs) for its discharge of process wash water to adjacent farmlands. Currently, the GEI facility has not been issued WDRs and there is no Monitoring and Reporting Program in place.

The GEI facility is at 12,000 Main Street (Weed Patch Highway) between the communities of Lamont and Weedpatch in Kern County as shown in Attachment A (Site Location Map). The GEI facility is on about 20 acres of land and consists of office buildings, a produce washing and packing facility, a cold storage facility, truck and equipment staging areas, and parking. The property contains two wastewater storage/settling ponds (designated Cell 1 and Cell 2) and a storm water retention pond as shown in Attachment B (Site Plan). Wastewater is generated from the washing of fruits and vegetables. Wastewater in Cell 1 is used to cool or wash more produce. Wastewater in Cell 2 is recycled for cooling or washing, or used for irrigation on adjacent Land Application Areas.

The Land Application Areas are comprised of 15 fields totaling 584 acres both east and west of the Lamont Facility. GEI owns a portion of the Land Application Areas and leases the remaining acres. The Weed Patch Highway divides the Land Application Areas into two general areas, with 298 acres west and 286 acres to the east of the highway and the Facility. Wastewater is used to irrigate forage crops year round.

Existing Discharge

The Facility currently discharges about 140 million gallons of wastewater annually (about 374,000 gallons per day) for irrigation on the adjacent 584 acre Land Application Areas. The average analytical results for source water and effluent are summarized in the table below.

<u>Parameter</u>	<u>Source Water</u>	<u>Effluent</u>
EC, micromhos per centimeter	569	734
TDS, milligrams per liter	408	460
pH, standard units	8.2	8.3
BOD, milligrams per liter	<1	8
Ammonia, milligrams per liter	0.02	0.18
NO ₃ as N, milligrams per liter	1.86	2.12
Total N, milligrams per liter	1.9	4.6

Groundwater Conditions

Groundwater in the vicinity of the Facility is present in three aquifers: a confined aquifer, an unconfined aquifer, and a perched aquifer. The Corcoran Clay is reported to underlie the Facility with the confined aquifer beneath the clay, which according to Department of Water Resources (DWR) maps (*Depth to the Top of the Corcoran Clay, 1981*), is at about 300 feet below the ground surface (bgs) beneath the Facility. DWR information indicates the depth to water in the unconfined aquifer is approximately 250 to 300 feet bgs and the direction of flow is generally to the west.

GEI does not monitor the first encountered groundwater beneath the Facility, but groundwater monitoring of the first encountered groundwater is conducted at several facilities within a few miles of the facility (from 0.5 to 3.5 miles). Depth to water results indicates first encountered groundwater was on the order of 90 to 100 feet bgs in January 2012.

A gasoline station, Old Joes Store, is present about a half mile south of the Facility. Well development records from the Old Joes Store site indicate the depth to groundwater is about 90 to 100 feet bgs. Electrical Conductivity (EC) of the groundwater ranges from about 750 to 800 micromhos per centimeter (umhos/cm). The City of Bakersfield conducts groundwater monitoring of eight first encountered groundwater monitoring wells that are west and northwest of the Facility. The closest of these wells is about two miles to the west of the Facility. The depth to groundwater in 2011 was about 65 to 75 feet bgs. Water quality is moderate with EC results ranging from about 680 to 1,500 umhos/cm, TDS results ranging from about 410 to 900 (mg/L), and nitrate as nitrogen results ranging from about 1.3 to 23 mg/L.

Regional studies by Kern County (March 1980 *Groundwater Pollutant Study* for the San Joaquin Valley Basin, Kern County) and the Kern County Water Agency (1999 *Water Supply Report*) indicate TDS results are elevated in the region. The 1980 report by Kern County depicts the Facility within an area with TDS concentrations ranging from 500 to 1,000 mg/L. The 1999 report by the Kern County Water Agency depicts the facility as being in an area with TDS results of 500 mg/L or greater. These studies are substantiated by the nearby groundwater monitoring results and indicate the fair to poor water quality of the regions with respect to salts.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan identifies the greatest long-term water quality problem facing the entire Tulare Lake Basin as increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including the following limits:

- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC of the effluent discharged to land 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 good quality groundwater shall not exceed and EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

The *Water Quality Control Plan for the Tulare Lake Basin*, Second Edition, revised January 2004 (Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan designates the following beneficial uses for the underlying groundwater: municipal and domestic supply (MUN), AGR, industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1), non-contact water recreation (REC-2), and wildlife habitat (WILD).

Antidegradation

Constituents of concern in the discharge that have the potential to degrade groundwater include salts and nutrients. Ambient water quality in the vicinity of the Facility is of fair to good quality, but the wastewater quality is similar or lower in concentration to that of the nearby ambient water quality.

The Basin Plan incorporates the State's Antidegradation Policy. The Antidegradation Policy requires the Regional Water Board, in regulating discharges of waste, to maintain high-quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 requires that the constituents contributing to degradation be regulated to meet best practicable treatment or control (BPTC) to assure that pollution or nuisance will not occur and that the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

CEQA

The application of produce wash water or wastewater to the Land Application Areas has been occurring since at least 1980. This Order does not increase the discharge volume, the irrigated acreage, and does not authorize any additional construction activities. The Order imposes regulatory requirements that are protective of the underlying groundwater quality; therefore, the existing discharge is exempt from the requirements of CEQA in accordance with California Code of Regulations, title 14, section 15301.

Title 27

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

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

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

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

The discharge from the GEI Facility will not degrade groundwater and none of the waste regulated by the proposed Order is hazardous waste nor required to be treated as hazardous waste. The discharge is therefore exempt from Title 27.

Monitoring Requirements

Water Code section 13267 authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Water Code section 13268 authorizes assessment of civil administrative liability where appropriate.

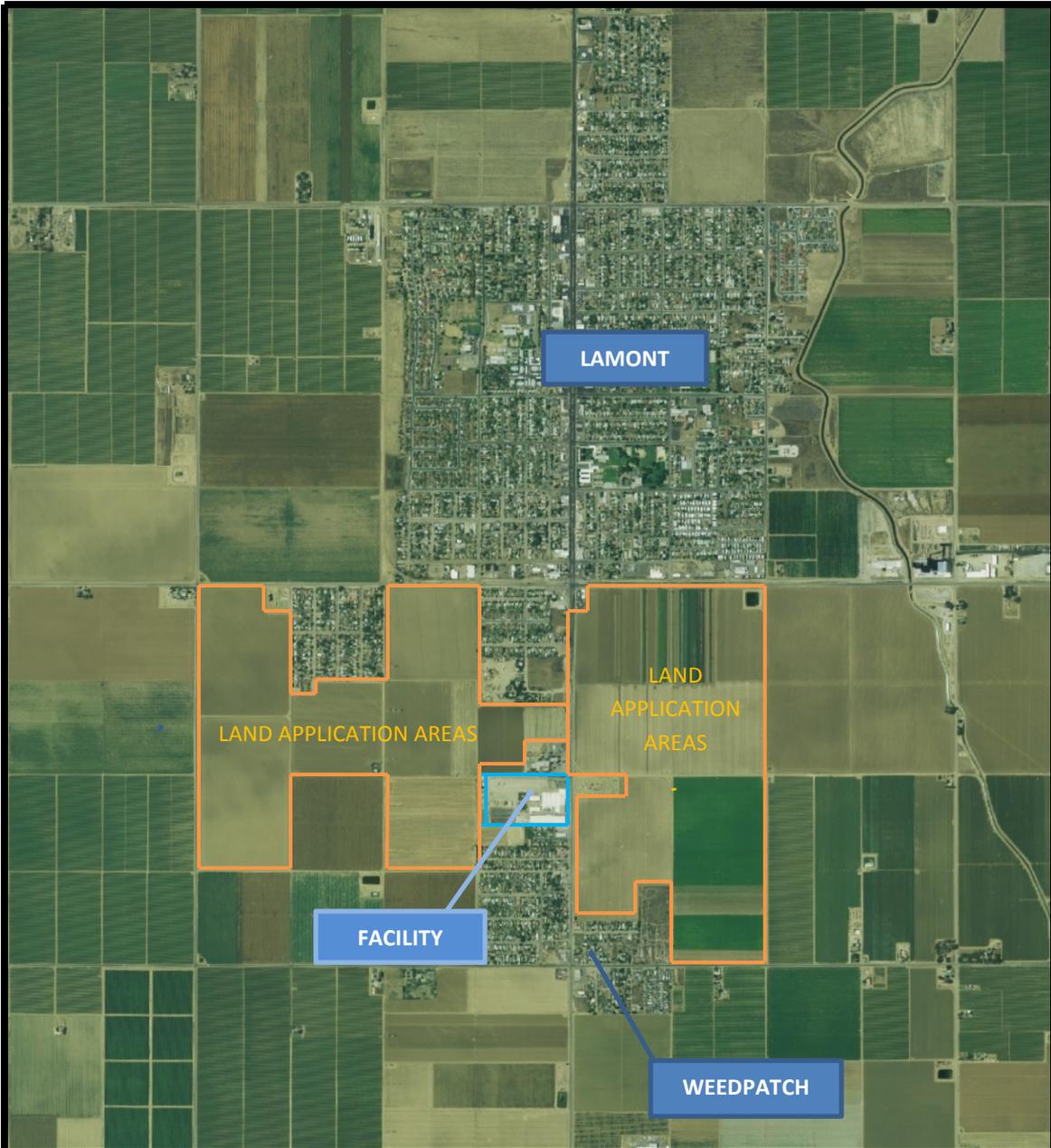
The proposed Order includes effluent, pond, and source water monitoring. The monitoring requires GEI to report on the overall quality of the effluent discharged by GEI and the quality of the source water provided to the Facility.

Provisions

Provision G. 2 requires GEI to comply with the requirements contained in the attached Monitoring and Reporting Program Order R5-2012-0124 (MRP). Provisions G. 6 and G. 9 require the submittal of technical reports to monitor effluent and to note compliance with the requirements of the MRP.

Reopener

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

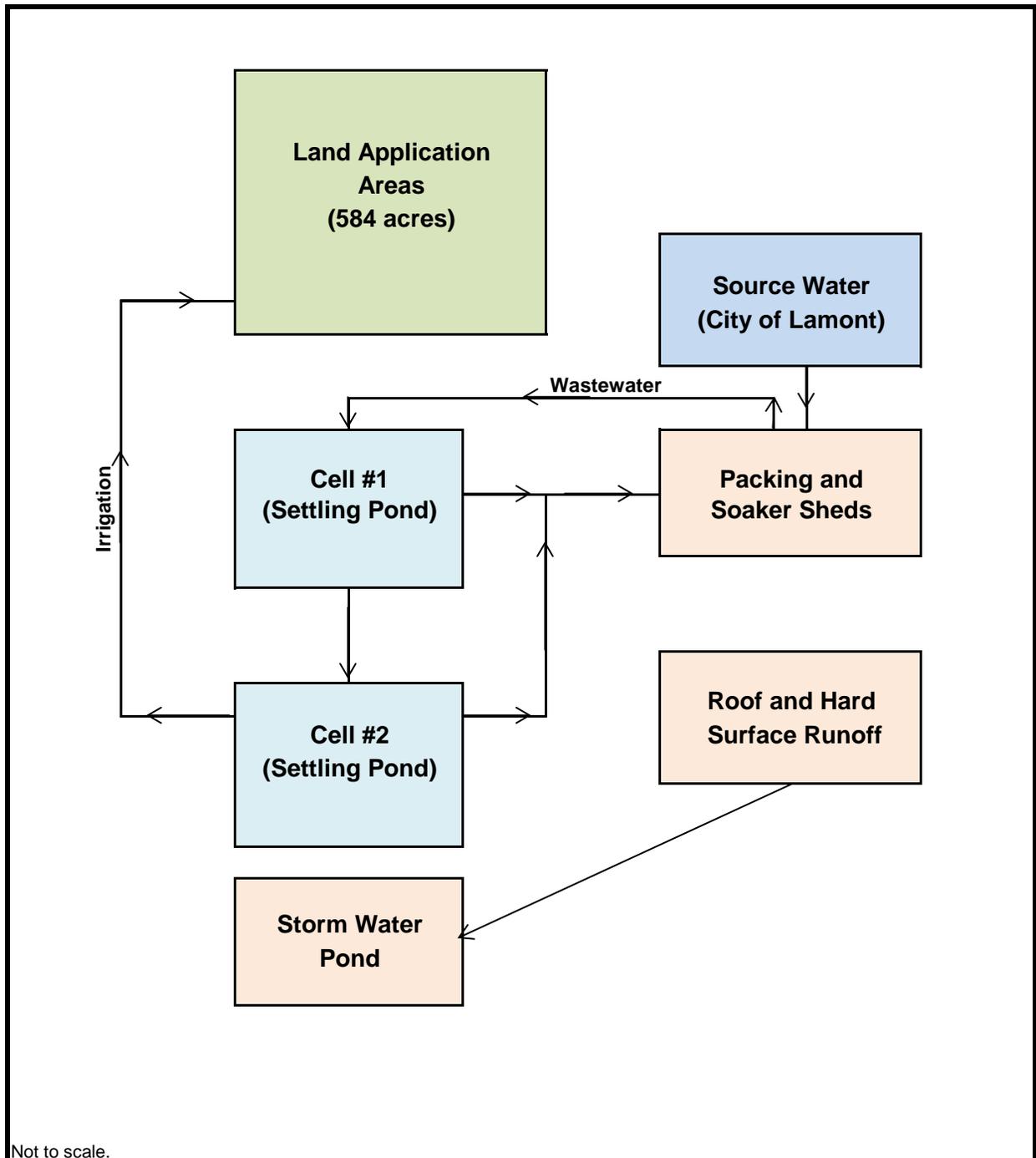


LOCATION MAP

ORDER R5-2012-0124
WASTE DISCHARGE REQUIREMENTS
FOR
GRIMMWAY ENTERPRISES, INC.
CAL- ORGANIC FACILITY
KERN COUNTY



ATTACHMENT A



Not to scale.

PROCESS FLOW DIAGRAM

ORDER R5-2012-0124
 WASTE DISCHARGE REQUIREMENTS
 FOR
 GRIMMWAY ENTERPRISES, INC.
 CAL- ORGANIC FACILITY
 KERN COUNTY

