Regional Water Quality Control Board
Central Valley Region
Board Meeting – 6/7 December 2012

Response to Written Comments for Tentative Waste Discharge Requirements, Grimmway Enterprises, Inc., Cal-Organic Facility Kern County

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At a public hearing scheduled for 6/7 December 2012, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) will consider adoption of Waste Discharge Requirements for the discharge of vegetable processing wastewater from the Grimmway Enterprises, Inc., (GEI or Discharger) Cal-Organic facility (Facility) near Lamont, to an adjacent 584-acre land application area owned in part by GEI. This document contains responses to written comments received from interested parties regarding the Tentative Waste Discharge Requirements (TWDRs), draft Monitoring and Reporting Program (MRP), and draft Information Sheet circulated on 15 September 2012. Written comments from interested parties were required by public notice to be received by the Central Valley Water Board by 15 October 2012 to receive full consideration.

Written comments were received on behalf of GEI from Dan Burgard, Principal Soil Scientist, Cascade Earth Sciences.

The written comments are summarized below, followed by Central Valley Water Board staff responses.

CASCADE – Comments to the TWDRs

CASCADE – GENERAL COMMENT 1: Cascade provided the following suggestion. "*To reflect the character and use of the water, we have made a point to refer to the "wastewater" as "wash water". Please consider making that revision throughout the WDR."*

> **RESPONSE:** No changes were made to the TWDRs. While Central Valley Water Board staff acknowledges the low strength of the wastewater in question, the wash water is wastewater. It is potable water used to wash and clean produce and hence contains residuals from the materials being washed. Therefore, it is waste under Water Code section 13050.

CASCADE – TWDR, COMMENT 1: TWDR, page 1, Finding 2. Cascade notes errors in the text of Finding 2 and provides the following information for Finding 2. "*GEI completed the purchase of the Cal-Organic processing facility on 5 May 2001. Prior to that date it was owned and operated by others. The Facility was constructed in 1980 and, as far as we are aware, the wash water has been land applied since the Facility began productions."* Cascade recommended changing the wording as shown in the following response to Finding 2:

> **RESPONSE:** The TWDRs and associated documents have been modified to reflect the 2001 date of ownership. Additions are shown in bold, deletions are shown in bold strikeout. Finding 2 has been modified as follows:

*GEI purchased the facility in ~~**1984**~~ **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 has been** used for the same purposes (washing of produce) prior to purchase in **2001**, so wastewater has been discharged to the surrounding Land Application Areas for over ~~**28**~~ **30** years.*

CASCADE – TWDR, COMMENT 2: TWDR, page 3, Finding 11. Cascade indicates the first sentence of Finding 11 is incorrect. The first sentence of Finding 11 states: *The following design flows were proposed in the RWD to meet the irrigation demands of the 584 acre Land Application Area*. Rather, Cascade indicates the design flows were based on the capacity of the Facility, not the capacity of 584 acre Land Application Areas.

RESPONSE: Finding 11 of the TWDRs and associated documents have been modified as follows to reflect the design capacity of the Facility.

*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** ~~**irrigation demands of**~~ the 584 acre Land Application Area.*

CASCADE – TWDR, COMMENT 3: TWDR, page 4, Findings 17 and 19. Cascade comments that there is a third soil type in the vicinity off the Facility, the Granoso sandy loam, and that it has a land capability class of 3e.

RESPONSE: Findings 17 and 19 of the TWDRs and associated documents have been modified as follows to reflect the additional soil type present

*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*.

*19 The Granoso loamy sand **and Granoso sandy loam soils have** ~~**has a**~~ low available water capacity and **are** ~~**is**~~ described as ~~**a**~~ Class **3e and** 3s soil**s**, **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.*

CASCADE – TWDR, COMMENT 4: TWDR, page 7, Finding 34.a. Cascade comments that the wording in Finding 34.a is incorrect in stating that the ponds reduce the organic load by the settling of solids. Cascade recommends revising the text to highlight the low BOD concentrations and the use of sprinklers to evenly distribute the wastewater.

RESPONSE: Finding 34.a of the TWDRs and associated documents have been modified as follows to reflect the requested changes.

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*** ~~**To reduce the organic load of its discharge, the Facility settles solids from the waste stream and**~~ *use* ***of*** *sprinkler irrigation to evenly distribute the wastewater over the Land Application Areas* ~~***reducing the organic load to the Land Application Areas and***~~ *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).*

CASCADE – TWDR, COMMENT 5: TWDR, page 7, Finding 34.b. Cascade requests the range of nitrogen loading estimates included in the RWD to be included in Finding 34.b.

RESPONSE: Finding 34.b of the TWDRs and associated documents have been modified as follows to reflect the requested changes.

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.

CASCADE – TWDR, COMMENT 6: TWDR, page 11, Finding 48; Page 10, Cascade requests that Finding 48 be removed as there are no monitoring wells at the Facility.

RESPONSE: No changes were made to the TWDRs. While no groundwater monitoring wells are currently present in or around the Facility, groundwater monitoring wells could be required in the future. The data set used to evaluate the effluent is small (four samples, one sample in May 2003, and one from June, July, and August 2004) and over 8 years old. Should effluent concentrations be significantly different than the data set, groundwater monitoring could be required.

CASCADE – TWDR, COMMENT 7: TWDR, page 18, Provision G.11. Cascade points out the Provision incorrectly list Discharge Specification C.17, when it should be Discharge Specification C.13.

RESPONSE: Provision G.11 of the TWDRs and associated documents have been modified as follows to reflect the requested change.

11. As a means of discerning compliance with Discharge Specification **C.13~~7~~**, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive weekly sampling events.

CASCADE – TWDR, COMMENT 8: TWDR, page 18, Provision G.14. Cascade states that a Salinity Management Plan is not required due to the TDS of the wastewater being slightly higher in concentration than the source water.

RESPONSE: No changes were made to the TWDRs. The Central Valley Water Board is requiring Salinity Management Plans for all new and updated discharges to land. While the opportunity to improve the GEI discharge may be minimal, it is still a good practice that requires GEI to evaluate its discharge and look for areas/opportunities where the amount of salts present in the discharge can be reduced.

CASCADE – TWDR, COMMENT 9: TWDR, page 18, Provision G.15. Cascade notes that Provision G.15 should use the term salts in place of EC and questions the use of lbs/ac/day (pounds per acre per day) as the appropriate unit of measure.

RESPONSE: Provision G.15 of the TWDRs and associated documents has been modified as follows to reflect the requested change.

By (6 months following adoption of this Order), 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 ~~EC~~** 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.

CASCADE – Comments to the MRP

CASCADE – MRP, COMMENT 1: MRP, page 2, Effluent Monitoring. Cascade comments that the low nutrient strength of the wash water does not require the intensive weekly sampling and analysis required by the Tentative WDR, and notes that GEI recommended quarterly sampling in the RWD.

> **RESPONSE:** No changes were made to the MRP. Quarterly monitoring is not sufficient at this point to assess if there are significant seasonal or operational changes in GEI's discharge. The frequency can be reduced as indicated on page 1 (fifth paragraph) of the MRP, if monitoring shows no significant variation in magnitude after a statistically significant number of sampling events. The results presented in the RWD and the ranges discussed Cascade's response letter are from four samples collected in 2003 and 2004. A larger data set is required to assess the effluent quality of the discharge.

CASCADE – MRP, COMMENT 2: MRP, page 3, Source Water Monitoring. Cascade requests the frequency of source water monitoring be reduced from semi-annually to annually.

> **RESPONSE:** The frequency of Source Water Monitoring listed in the table on page 3 of the MRP has been modified as follows to reflect the requested change.

Frequency	Constituent/Parameter	Units	Sample Type
~~**Semi-a**~~Annually	EC	umhos/cm	Grab
~~**Semi-a**~~Annually	Nitrate as N	mg/L	Grab
~~**Semi-a**~~Annually	TDS	mg/L	Grab
~~**Semi-a**~~Annually	TKN	mg/L	Grab
~~**Semi-a**~~Annually	Total Nitrogen (equals TKN + Nitrate as N)	mg/L	Calculated
Annually	General Minerals	mg/L	Grab

1. ~~**Semi-a**~~Annually is **once** ~~**twice**~~ a year, with samples collected in the ~~**first quarter (January through March) of the year and the**~~ third quarter (July through September) of each year.

CASCADE – MRP, COMMENT 3: MRP, pages 4 and 5, Land Application Area Monitoring. Cascade comments that not all of the 584-acre Land Application Areas will be used as indicated in Finding 9. Cascade states that the Land Application Area Monitoring should clearly state that monitoring and reporting is required for only those fields that are part of the area planned for irrigation.

> **RESPONSE:** No changes were made to the MRP. The areas that need to be reported are clearly stated in the first paragraph of the Land Application Area Monitoring section and in the Hydraulic and Waste Constituent Loading Monitoring sub-section of the MRP as shown below.

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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:

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CASCADE – MRP, COMMENT 4: MRP, page 6, Reporting, A. Quarterly Monitoring Reports. Due to the anticipated low potential loading rates, Cascade requests the frequency for reporting the hydraulic, nutrient, and salt loads be changed from quarterly to annually and that quarterly reports be limited to effluent and pond monitoring results.

RESPONSE: No changes were made to the MRP. Monthly compilation of loading calculations and quarterly reporting is not excessive for a site just beginning to monitor its effluent and the potential loadings from its discharge. The existing data set is small and quarterly reporting allows for a closer evaluation of the new data as it is obtained.

CASCADE – MRP, COMMENT 5: MRP, page 6, Reporting, second paragraph. Cascade does not think the following signatory requirements statement included in the Reporting section of the MRP is applicable.

> 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.

Cascade states that none of the monitoring, salinity management, and nutrient management plan reports require the interpretation of engineering or geologic sciences as required in the TWDRs and that "most" professional engineers, geologists, and geophysicist are not typically trained to develop land application projects. Cascade requests additional language allowing the reports to be prepared under the direction of a Certified Professional Soil Scientist, Certified Professional Agronomist, or an "appropriately" experienced Certified Crop Advisor.

RESPONSE: No changes were made to the MRP. Standard Provision B.3 lists the signatory requirements for the submittal of reports, which concerns the authority of the person who signs the document, not the expertise. Signature by registered professionals is required where, as the provision states, there is "…*planning, investigation, evaluation, or design, or other work* ***requiring***…," signatures pursuant to the California Business and Professions Code. If these types of activities are not performed in compiling the reports,

then the monitoring reports need only be signed by the proper signatory as defined by Standard Provision B.3.