

## INFORMATION SHEET

ORDER R5-xxxx-xxxx  
SYNAGRO WEST, LLC AND GARY SILVA, SR  
SILVA RANCH BIOSOLIDS LAND APPLICATION  
SACRAMENTO COUNTY

Gary Silva, Sr. owns the Silva Ranch property that receives biosolids. The biosolids application site is approximately 3,000 acres of agriculturally zoned land located on property designated as Silva Ranch I and Silva Ranch II, which consists of multiple parcels divided into a number of individual fields. Synagro West, LLC manages the application of biosolids on the Silva Ranch property and is responsible for compliance with these Waste Discharge Requirements (WDRs).

Silva Ranch I has received biosolids as a soil amendment since 1995, and at Silva Ranch II since 1998. Class A and Class B biosolids are accepted year round as a fertilizer for the production of durham wheat and sudan grass crops. Crops are grown and harvested for the production of livestock feed or used for grazing of livestock.

WDRs Order 95-064, adopted by the Central Valley Water Board on 24 March 1995, prescribes requirements for the discharge of biosolids on approximately 1,200 acres referred to as Silva Ranch I.

WDRs Order 98-023, adopted by the Central Valley Water Board on 23 January 1998, prescribes requirements for the discharge of biosolids on approximately 1,600 acres referred to as Silva Ranch II.

Monitoring and Reporting Program (MRP) R5-2007-0807, issued on 25 April 2007, prescribes requirements for monitoring biosolids and biosolids land application areas that are regulated under WDRs Order 95-064 and Order 98-023.

Silva Ranch receives biosolids from municipal wastewater treatment facilities from 16 California counties. Silva Ranch allows for 24 hour deliveries, seven days per week, 365 days per year weather permitting. Within 24 hours of arrival at the site, the biosolids are loaded from the ground into surface application equipment and spread onto the designated field. Disking is performed to incorporate the biosolids into the topsoil within 24 hours of application. During inclement weather, biosolids is stored at the Pit, a short-term biosolids storage facility, until the weather has cleared and field conditions are suitable for application.

The discharge does not qualify for coverage under the Biosolids General Order No. 2004-0012-DWQ because the biosolids application area exceeds the allowable 2,000 net acres. In addition, the Discharger prevents grazing of animals whose products are consumed by humans for one month after biosolids application, which meets the minimum standards under 40 CFR Part 503.32, but does not comply with the Discharge Specification of the Biosolids General Order. Many of the requirements of the Biosolids General Order are appropriate for this site. Therefore, the Prohibitions and Discharge Specifications of this Order are similar to those contained in the General Order.

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### **Compliance Issues**

A revised Notice of Violation (NOV) and Inspection Report for Silva Ranch I was issued on 18 January 2017 for the discharge of green waste material on the biosolids land application areas regulated under WDRs 95-064. This discharge of waste is in violation of Standard Provision A.4 of the WDRs, which states: *"Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board."* Since receipt of the NOV, no green waste material has been applied to the land application areas that receive biosolids.

Because the application of green waste on land receiving biosolids is a material change in the character and volume of discharge, the Central Valley Water Board issued Water Code 13267 Order on 24 January 2017, requiring the Discharger to submit a Report of Waste Discharge (RWD). The 1 June 2017 RWD was submitted for the application of biosolids to the designated fields within Silva Ranch I and II. Green waste material will not be applied on the same fields that receive biosolids. Therefore, this Order will regulate only the biosolids application activities and not allow overlapping application of biosolids and green waste material at Silva Ranch I and II.

### **Site-Specific Conditions**

Silva Ranch is located on moderately flat terrain, with a site elevation of 86.9 feet, and soil slopes between 0 and 20 degrees. A portion of the Ranch property falls within a 100 year flood plain. This portion is approximately 1,000 acres located at the lowest elevations of Silva Ranch I and Silva Ranch II; south of Hadseville Creek, North of Browns Creek, and West of Laguna Creek.

Silva Ranch is located in rural, remote areas of southern Sacramento County. The surrounding land uses are agricultural, typically consisting of fields planted with Durham wheat and Sudan grass and grazing of cattle. Rancho Seco Nuclear Generating Station and the Rancho Seco Regional Park are located southeast of the Silva Ranch property.

Soil types in the area classified by the Natural Resource Conservation Service (formerly known as the Soil Conservation Service) include Capay Clay Loam, Corning Complex, Hadselville-Pentx Complex, Hicksville Loam, Redding Gravelly Loam, and San Joaquin-Xerarents.

### **Groundwater Conditions**

There is no groundwater monitoring network at the Silva Ranch property. Based on data from the California Department of Water Resources, nearest weather station Clay 1NW, elevation is 96 feet above sea level and depth to groundwater is approximately 150 feet.

### **Antidegradation Analysis**

Degradation of groundwater by some of the typical waste constituents associated with the application of biosolids as a soil amendment, when applied at agronomic rates and using best management practices, is consistent with the maximum benefit to the people of the state. The economic prosperity of valley communities and associated industry is of

maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

Constituents of concern that have the potential to degrade groundwater include pathogens, heavy metals, and nitrogen, which can be present in the biosolids.

- a. Pathogens can cause water quality problems that could result in public health problems. Public access control; crop use restrictions; and buffer zones around water supply wells, surface water drainage courses, and public areas are control measures to prevent and reduce the threat to water quality and transmission of pathogens to the public.
- b. Over-application of heavy metals can cause water quality and/or public health problems. Establishing application rates for specific metals will prevent and reduce the threat to water quality.
- c. Biosolids are a significant source of nitrogen. Over-application of nitrogen can result in the buildup of nitrogen in the soils. Excess nitrogen will eventually be converted to nitrate, which can migrate to groundwater causing degradation and/or pollution. Establishing application rates that meet the agronomic rates of the crops to be grown will prevent and reduce the threat to water quality.

This Order establishes biosolids quality limitations and groundwater limitations for the application areas that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. Based on the depth to shallow groundwater, biosolids character, and application loading rate, the discharge of biosolids does not pose a threat to groundwater quality. The requirements of this Order do not allow any degradation to occur.

The Discharger provides the following biosolids operation and control measures:

- a. Biosolids meet the EPA 40 CFR Part 503 Rule criteria for land application.
- b. Biosolids application area is on private property and secured by various fencing and gates to prevent public access.
- c. Approximately 3,000 acres is available for biosolids application.
- d. Nutrient loading from the biosolids is a calculated rate, specific to the nitrogen uptake for the crop to be planted. The rate is determined based on agronomic recommendations for proper crop production and residual nutrients from previous applications.
- e. Application areas within the 100 year flood plain will not receive biosolids during the months of October through April.
- f. The Discharger maintains setback distances for the staging, storage, and biosolids application areas as defined in the Discharge Specifications of this Order.
- g. Biosolids application area includes berms and 22 storm water runoff retention ponds to collect any runoff from the application fields. Routine storm water monitoring is performed when water is present in the ponds.

- h. The Discharger maintains the biosolids storage area (Pit) in accordance with their *Short-Term Biosolids Storage Plan*. The Pit is clay-lined and surrounded by 5 to 10 foot high concrete and soil berms to prevent run-off and run-on into the area.
- i. The Discharger maintains a *Biosolids Management Plan* that describes the operational procedures regarding biosolids application and storage activities, including procedures for spill prevention and responses and for adverse weather plans.
- j. Discharger maintains a *Biosolids Spill Response Plan* and a copy of the plan is maintained in all transport vehicles carrying biosolids.

### **Other Regulatory Considerations**

The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge*, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.

The Central Valley Water Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Central Valley Water Board is not the implementing agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the EPA.

### **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.

### **Monitoring and Reporting Program**

The Monitoring and Reporting Program is designed to verify compliance with mass loading limitations and operational requirements of the WDRs.