
Central Valley Regional Water Quality Control Board

9 September 2016

Mr. Ryan West
USA Waste of California, Inc.
2569 Scott Avenue
Chico, CA 95928

NOTICE OF APPLICABILITY

**WATER QUALITY ORDER 2015-0121-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMPOSTING OPERATIONS
CITY OF CHICO
CHICO GREENWASTE COMPOSTING FACILITY
BUTTE COUNTY**

On 4 August 2016, City of Chico (Discharger) submitted a Report of Waste Discharge (ROWD) for the Chico Greenwaste Composting Facility (Facility). The ROWD includes a Technical Report, Notice of Intent (NOI), and a Filing Fee, to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order), for composting operations at the above-referenced site. The complete General Order can be accessed at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2015/wqo2015_0121_dwq.pdf

This Notice of Applicability (NOA) was developed after the review of your NOI and Technical Report as described in the attached Staff Memorandum which is a part of this NOA. Based on staff's review, the Site meets the conditions of the General Order, and is hereby covered under General Order **2015-0121-DWQ-R5R004** as a **Tier I** composting operation. The Discharger must comply with all Tier I requirements of the General Order.

The filing fee for the Chico Greenwaste Composting Facility is based on a Threat to Water Quality and Complexity rating of 3C. The submitted \$2,088 filing fee covers the first year permitted by this NOA. The Discharger shall submit the required annual fee (as specified in the annual billing issued by the State Water Resources Control Board) until the NOA is officially terminated.

To fully comply with this NOA, please familiarize yourself with the contents of this NOA, the enclosed Staff Memorandum and all of the requirements of the General Order. The Discharger is responsible for implementing all operations in a manner that complies with the General Order. Any noncompliance with the General Order constitutes a violation of the Water Code, and is grounds for enforcement action, and/or termination of enrollment under the General Order.

Conditions of the Composting General Order include but are not limited to:

- **By 31 October 2016**, submit a revised Technical Report that includes the site percolation test, the water balance calculations, and a demonstration that proposed improvements will adequately protect water quality.
- Based on the water balance calculations, complete improvements to the existing wastewater conveyance by **October 2018**.
- Based on the water balance calculations, complete improvements to the detention ponds by **October 2019**
- The Site must be brought into to full compliance with the General Order no later than **4 August 2022**, which is six years from submittal of the NOI.
- Technical reports must be submitted 90 days prior to each construction activity, while post-construction reports must be submitted 60 days after the completion of each construction activity.
- A revised NOI is required at least 90 days prior to: adding a new feedstock, additive, or amendment; changing material or construction specifications; changing a monitoring program; or changing an operation or activity not described in the approved NOI and technical report.

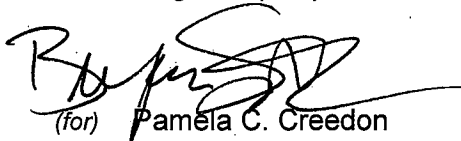
Attachment B of the General Order includes specific monitoring and reporting requirements that you must comply with, including routine monitoring with reporting to the Central Valley Regional Water Quality Control Board. The first year Annual Monitoring and Maintenance Report as identified in the General Order must be submitted to the Central Valley Water Board no later than **1 April 2017**.

All monitoring and technical reports submitted to this Office must be converted to searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MB are to be emailed to: centralvalleyredding@waterboards.ca.gov. Documents that are 50 MB or larger are to be transferred to a portable data storage device and mailed to this office at the address provided on the cover page, Attention: ECM Mailroom.

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or any documentation submitted to the mailing address for this office:

Central Valley Water Board
Attention: Melissa Buciak
364 Knollcrest Drive, Suite 205
Redding, CA 96002

If you have any questions regarding this letter or the attached Staff Memorandum, please contact Melissa Buciak at (530) 224-4854 or by email at Melissa.Buciak@waterboards.ca.gov or Kate Burger at (530) 223-2081 or by email at Kate.Burger@waterboards.ca.gov.


(for) Pamela C. Creedon
Executive Officer

MB:reb

cc by email: Ms. Leslie Graves, State Water Resources Control Board, Sacramento
Ms. Kim Haas, Butte County, Division of Environmental Health, Oroville
Mr. Eric Kiruja, CalRecycle, Permitting and Assistance Branch, Sacramento
Ms. Linda Herman, City of Chico
Ms. Maura Dougherty, Cornerstone Environmental, Dublin

Central Valley Regional Water Quality Control Board

STAFF MEMORANDUM

TO: Kate Burger, P.G., PhD
Senior Engineering Geologist

FROM: Melissa Buciak, P.G.
Engineering Geologist

Katie Gilman
Student Engineering Assistant

DATE: 9 September 2016

SUBJECT: **APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER 2015-0121-DWQ, CHICO GREENWASTE COMPOSTING FACILITY, BUTTE COUNTY**

REPORT OF WASTE DISCHARGE

On 4 August 2016, City of Chico (Discharger) submitted a Report of Waste Discharge (ROWD) for the Chico Greenwaste Composting Facility (Facility). The ROWD includes a Technical Report, Notice of Intent (NOI), and a Filing Fee, to obtain coverage under Water Quality Order 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations (hereafter General Order), for composting operations at the above-referenced site.

SITE DESCRIPTION

The Facility is an approximately 24-acre site located in Section 3, Township 23 North and Range 1 East from the Mount Diablo Base and Meridian Line. The Assessor Parcel number is 047-550-001.

The Facility is permitted under Enforcement Agency Notification 04-AC-0020 and has an operational capacity of 10,000 cubic yards. The land use within a mile of the Facility consists of the Chico Municipal Airport adjacent to the west and north, and an open space to the south. A Manufacturing and Warehousing zone is located east of Cohasset Road, and a Very Low Density Housing zone is located east of the Manufacturing and Warehousing zone. Water is supplied by California Water Service. Site features, including locations and sizes of the working surfaces, ponds, berms and drainage pipes are shown in Attachment A.

According to the Technical Report, the underlying geology of the Facility is primarily alluvial deposits. Based on borehole data from state well 142917, the deposits consist of washed gravel and coarse sand at depths of approximately 80 to 125 feet below ground surface (bgs). These deposits are overlain by a gravel and fine sand mix from approximate depths of 30 to 80 feet bgs. Clay lenses are found throughout these depths. The uppermost layer consists of light and

dark brown clay from approximate depths of 5 to 30 feet bgs with soil from ground surface to five feet bgs.

The annual precipitation was calculated using the National Oceanic & Atmospheric Administration (NOAA) Annual Climatological Summary from years 1991 through 2010 (2011 through 2015 data unavailable) for the Chico University Farm, located approximately eight miles from the Facility. The maximum, minimum and average annual precipitations for this location are 44.76, 4.35, and 26.33 inches, respectively. The mean annual wind velocity is from 4 to 12 miles per hour with winds coming from the northwest or southeast. The mean evaporation was calculated using data from the West Regional Climate Center from years 1906 through 2005 and was calculated as 47.83 inches per year. Based on "Point Precipitation Frequency Estimates" presented in the NOAA Atlas 14, a 25-year, 24-hour event would generate 4.9 inches of rainfall.

The Facility is located in the Sacramento River Hydrologic Region, in the Vina Subbasin. Groundwater elevation data from surrounding wells indicate the groundwater at the Facility flows from the northeast to the southwest towards the Sacramento River and the river's tributaries.

The nearest water supply well is well 22N01E02P001M and is located to the southeast of the Facility, approximately 3,000 feet away, which is greater than the General Order setback requirement of 100 feet. The groundwater in this area is separated into two zones, a lower confined aquifer and an upper semi-confined aquifer. A low permeability layer of Corcoran Clay approximately 1,000 feet from the surface creates this delineation. Based on GeoTracker Groundwater Ambient Monitoring & Assessment GAMA data, the water level in the area of the Facility has an average depth of 60.6 feet bgs and an average groundwater elevation of 142.7 feet above mean sea level. According to the Technical Report, a site-specific percolation test is scheduled for the Facility and will be completed by 31 September 2016. The results from the percolation test will be used to confirm the in-place hydraulic conductivity of the working surfaces; the results will be provided in a revised Technical Report by 31 October 2016.

The Facility contains two detention ponds on site separated by a berm. The nearest surface water (Sheep Hollow Creek) is located adjacent to the site to the south. Additionally, drainage ditches are located approximately 100 feet to the east and southwest of the Facility. Per the General Order, composting operations shall be setback at least 100 feet from the nearest surface water body.

According to the Federal Emergency Management Agency, the detention ponds are located in a 100-year flood plain, due to an unaccredited levee located to the south between the detention ponds and Sheep Hollow Creek. The elevation of the top of the levee is higher than both the design water surface elevation of the ponds and the 100-year flood water surface elevation in Sheep Hollow Creek. Per the General Order, composting operations located within a 100-year floodplain may be subject to state and/or local land use restrictions and permits.

COMPOSTING OPERATIONS

According to the Technical Report, the Facility processes approximately 8,900 tons of feedstock each year with a maximum annual processing capacity of 13,000 tons. Feedstock includes municipal green waste and wood collected from curbside recycling as well as through public drop-off programs. It is estimated that no more than 10,000 cubic yards of green waste and wood waste are on site at any one time.

Materials are received in an approximate one acre area located in the center of the Facility. Incoming feedstock is typically stored for initial inspection for one to two days. Additives are not currently used by the Facility. A chipping and grinding area is located adjacent to the receiving area to the east. About 10% of the feedstock is woodchips which is taken to the chipping/grinding area and is ground every 2 months. Active composting by windrows takes place on a finished, graded approximately 7.5-acre pad located in the northwest portion of the Facility. Compost remains in the active area for approximately 12 to 16 weeks. The Facility utilizes a Trommel Screen to screen the finished product and remove residuals. The finished compost is stored in an approximate 1.5 acre area adjacent to and along the east side of the active composting area. The finished compost is stored for approximately 3 to 8 months before being sold for offsite use. Composting operations are shown in Attachment A

The storm water/wastewater handling system is currently comprised of a pad underlying the compost operation area (9-acres), drainage channels at the perimeter of the pad, detention ponds, and down-chutes to convey wastewater from the pad to the detention ponds. The pad has been graded to control and manage runoff and precipitation from operational and storage areas; minimize ponding; and convey runoff to the perimeter drainage channels and ultimately to the detention ponds. The pipe discharges into the detention ponds located in the southern portion of the Facility. The two detention ponds are separated by a low berm. Each pond is approximately 0.5-acre in size. The ponds appear to have been used for storage and drying of biosolids, and currently discharge to the city sewer system to prevent overtopping. According to the Technical Report, water balance calculations will be prepared for the Facility by 31 September 2016. Based on the water balance results, improvements to existing wastewater conveyance system and detention ponds may be required. The Discharger anticipates completing improvements to the wastewater conveyance system by October 2016 and improvements to the detention ponds by October 2018.

Quench water for the incoming feedstock will be supplied by California Water Services. The quench water is utilized for moisture conditioning of feedstock, prior to the processed material being placed in the active composting piles. Moisture conditioning is used for processing of the feedstock material to prevent drying out of the feedstock, which could lead to the microbes going dormant.

Other than rainfall, quench water is generally not added to the feedstock during the winter months depending on the rainfall frequency. During the warmer summer and fall months, contact pond water is used on an as-needed basis for the composting materials handling operations (loading, unloading, stockpiling, and mixing), and moisture content management during feedstock processing. Quench water is distributed on the feedstock by spraying.

Fresh water will be utilized as irrigation water for maintaining moisture content within the compost piles, as necessary. Irrigation is conducted with the use of a water truck to moisture condition the compost piles. Irrigation water runoff from the active compost area, if any, will be directed to the detention pond via the drainage pipe as previously described.

TIMELINE FOR COMPLIANCE

Full compliance with Order 2015-0121-DWQ must be completed by **4 August 2022**, which is six years from submittal of the NOI.

The table below shows the proposed improvement plan schedule which incorporates time to prepare a design, procure materials and construct. The proposed improvement plan includes a

soil percolation test and preparation of water balance calculations. Depending on the soil percolation test and water balance results, improvements to the existing wastewater conveyance system and detention ponds may be required. The Discharger must comply with the proposed timeline.

| Improvement | Completion Date |
|--|--------------------------|
| Conduct Site Percolation Test | 31 September 2016 |
| Water Balance Calculations | 31 September 2016 |
| Revised Technical Report - including percolation test results and water balance calculations | 31 October 2016 |
| Waste Water Conveyance - based on the water balance calculations | October 2018 |
| Detention Ponds - based on the water balance calculations | October 2019 |

MONITORING AND REPORTING

The Discharger will regularly inspect and maintain all containment, control, monitoring structures, and monitoring systems pursuant to the submitted Technical Report and the Attachment B of General Order Monitoring and Reporting requirements. The frequency of inspections will be sufficient to prevent discharges of feedstocks, additives, amendments, compost (active, curing, or final product), or wastewater from creating, threatening to create, or contributing to conditions of contamination, pollution, or nuisance.

The Discharger will conduct a monitoring program as prescribed in the Attachment B of General Order Monitoring and Reporting requirements. Sections that apply are A.1., A.2., A.5., B and C. Results of monitoring will be reported annually in the Annual Monitoring and Maintenance Report which will be submitted by **1 April** of each year as long as the Notice of Applicability is in effect.

SITE CLOSURE

At least 90 days prior to ceasing composting operations, the Facility shall submit a Site Closure Plan to the Central Valley Regional Water Board for approval. The site restoration shall include work necessary to protect public health, safety, and the environment.

DISCUSSION

The Technical Report reveals that composting operations on native surfaces may not be compliance with the requirements of the General Order. Detention ponds on site need to be constructed following pond designs identified in the General Order and much achieve a hydraulic conductivity of 1×10^{-5} centimeters per second or less. Composting operations on unimproved surfaces and discharges to unlined ponds without an appropriate waste water

management system may have impacted and can continue to impact water quality at and near the Facility. Furthermore, siting restrictions specified in this General Order prohibit composting operations within 100 feet of the nearest surface water body. Sheep Hallow Creek is located adjacent to the Facility. A lesser setback distance may be allowed by the Regional Water Board if the Discharger can demonstrate that the groundwater, geologic, topographic, and well construction conditions at the site are adequate to protect water quality. The Discharger should make this demonstration as part of the planned improvements, such as providing additional rationale in the revised Technical Report.

RECOMMENDATION

Based on staff review of the Technical Report and supporting documents, the Facility meets the minimum requirements of the General Order. The Notice of Applicability can be issued and stay in effect as long as the Discharger implements all operations in a manner that complies with the requirements of the General Order, and the Discharger demonstrates that site conditions adequately protect water quality.

ATTACHMENT A

