

INFORMATION SHEET

WASTE DISCHARGE ORDER R5-2016-XXXX
COUNTY OF KERN
POST-CLOSURE MAINTENANCE
LOST HILLS SANITARY LANDFILL
KERN COUNTY

The County of Kern owns and maintains the Lost Hills Sanitary Landfill, located approximately five miles northwest of Lost Hills. The 537-acre facility contains one unlined waste management unit (WMU) covering 6.7 acres. The WMU started operating under solid waste facility permit in 1972. In 2001, waste disposal at the site ceased and a transfer station operated until it was closed in 2003. Construction of final cover system was completed in 2011.

On 14 June 2001, the Central Valley Water Board adopted Order No. 5-01-161 in which the landfill WMU was classified as a Class III landfill for the discharge of non-hazardous waste, municipal solid waste. This Order continues to classify the landfill unit as Class III units in accordance with Title 27, California Code of Regulations, section 20005 et seq. (Title 27). On 5 May 2006, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order No. R5-2006-0046, revising WDRs Order No. 5-01-161 and implementing Closure and Post-Closure Maintenance requirements for the facility. These WDRs update the waste discharge requirements for continued post-closure maintenance of the facility and were developed in accordance with an administrative policy of periodic review designed to incorporate revisions to Title 27 and policies adopted thereunder. The last revision of this Order was in 2006, 10 years ago.

The site is near the western edge of the San Joaquin Valley. The climate is semi-arid, with hot, dry summers and cool winters. The average annual precipitation is 5.95 inches per year and the mean pan evaporation is 57.06 inches per year. The site is not within a 100-year floodplain according to FEMA maps.

Land uses within one mile of the facility include the Class III, H.M. Holloway Surface Mine and Landfill Project to the north and Lost Hills Oil Field to the east. The remaining surrounding areas to the west and south consist of undeveloped property that is used for grazing. There are no municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the site. Groundwater monitoring wells are located within one mile of the facility to the north at the H.M. Holloway Surface Mine and Landfill Project. Petroleum production wells exist approximately one-half mile east of the facility. No surface springs or other sources of groundwater supply have been observed.

The WMU is underlain by a thick sequence of unconsolidated to poorly consolidated soils dominated by silts, clayey sand, gypsum, and low-to-medium plasticity clays. The measured hydraulic conductivity of the native soils underlying the WMU ranges between 1×10^{-6} and 1×10^{-5} centimeters per second (cm/s).

The San Andreas Fault Zone is located approximately 22 miles west of the landfill. The magnitude of the maximum probable earthquake is 8.25. The peak horizontal ground acceleration at the site would be 0.234g.

Surface drainage is toward an unnamed ephemeral creek in the Lost Hills in the Antelope Plain Hydrologic Area (558.60) of the Tulare Lake Basin. The first encountered groundwater is about 100 to 105 feet below the native ground surface. Groundwater elevations range from 314 feet to 315 feet MSL. The groundwater is unconfined. The depth to groundwater does not fluctuate significantly on a seasonal basis. Monitoring data indicates background groundwater quality has an electrical conductivity ranging between 4,500 and 6,000 micromhos/cm. Based on 2nd Semi-Annual 2015 Monitoring Report, the total dissolved solids ranged between 3,600 and 4,700 mg/l. The groundwater detection monitoring system consists of three monitoring wells. Monitoring well LH1-03 is used to collect background water quality data and monitoring wells LH1-04 and LH1-06 are used to collect water quality data at the point of compliance. The direction of groundwater flow varies seasonally and periodically flows southwest and south. Based on 2nd Semi-Annual 2015 Monitoring Report, the estimated average groundwater gradient is approximately 0.0025 feet per foot.

The Discharger proposed the methods for calculating concentration limits in the 1999 *Water Quality Protection Standard Report*. Intra-well comparison methods shall be used at all compliance wells for all monitoring parameters that are subject to data analysis under this order. The non-statistical analysis of VOCs indicated no VOCs detections in groundwater samples. No current WQPS concentration limits were exceeded in compliance wells during the 2nd semi-annual 2015 monitoring event for the routine groundwater monitoring constituents and parameters, though the concentration of chloride has exhibited a long-term increasing trend in samples from background groundwater monitoring well LH1-03.

The Discharger demonstrated that an evapo-transpirative (ET) cover utilizing soil from a nearby borrow source would be an appropriate engineered alternative to the prescriptive design. An engineered alternative final cover system for the WMU was completed in 2011 and consists of a minimum of two-foot thick ET vegetative layer. The Discharger demonstrated that the ET cover to be consistent with the performance goals of Title 27 and affords equivalent protection against water quality impairment. A pan lysimeter was constructed in the northwest area of the top deck to monitor potential percolation through the ET cover.

Pursuant to Title 27, section 21090(e)(1), a survey of the final cover was conducted for later comparison with iso-settlement surveys and required to be conducted every five years. The Discharger shall produce an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final ET cover.

The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code §21000, et seq., and the CEQA guidelines, in accordance with Title 14, CCR, §15301.