

INFORMATION SHEET

INFORMATION SHEET - ORDER NO. R5-2018-XXXX
KERN COUNTY SHERIFF'S OFFICE
LERDO CAMPUS
WASTEWATER TREATMENT FACILITY
KERN COUNTY

Background

Provost and Pritchard Consulting Group, submitted on behalf of the Kern County Sherriff's Office (County) a Report of Waste Discharge (RWD) dated 12 August 2016 describing the then proposed upgrades to the then existing WWTF at the Kern County Lerdo Campus (Lerdo Campus) at 17824 Quality Road, which is about 10 miles northwest of Bakersfield in Kern County. The upgrades to the WWTF are generally complete, but the new Kern County Justice Facility (KCJF) is under construction. The new WWTF has been online since April 2017 and currently serves a population of approximately 2,500 inmates and a staff of about 600. The new KCJF will house an additional 822 inmates and staff.

Wastewater Generation and Disposal

Waste Discharge Requirements Order 84-148 regulates a discharge of up to 0.5 million gallons per day (mgd) and permits the reclamation of treated effluent from the WWTF to land for irrigation of fodder, fiber, and seed crops. The former WWTF was constructed in 1978 and produced non-disinfected, non-denitrified secondary-treated effluent that was discharged to a series of unlined effluent storage ponds, and then to a land application area south of the WWTF. In the 1990's, the disposal changed to a series of seepage pits on the property just south of the WWTF. Unfortunately, the capacity of the seepage pits is easily exceeded and the effluent often surfaces and flows overland. The discharge of secondary-treated effluent to the seepage pits concentrates the discharge to a small area and may have affected the underlying soils with nitrogen. Irrigation over impacted soil could mobilize nitrogen stored in the soil causing it to travel to and threaten the quality of the underlying groundwater. This Order includes Provision G.15 that requires the Discharger to submit a work plan to close/destroy the seepage pits and evaluate the underlying soil conditions..

The upgraded WWTF provides secondary treatment with nitrification/denitrification of the effluent, using an extended aeration activated sludge treatment process. The average daily treatment capacity is 0.68 mgd with a daily maximum of 1.09 mgd. Biochemical oxygen demand and total suspended solids have averaged right around 10 mg/L (well below the daily average of 40 mg/L) since the upgraded WWTF went online.

The WWTF was designed to treat total nitrogen in the effluent to less than 10 mg/L. However, the WWTF is currently producing effluent with a total nitrogen concentration of about 20 mg/L. To ensure the discharge does not threaten the quality of the underlying groundwater, this Order includes Provision G.13 that requires the County to provide a work plan that demonstrates that:

- a. Discharge at the current total nitrogen concentrations will not threaten the underlying groundwater quality;
- b. Propose a total nitrogen effluent limit that will not threaten the underlying groundwater quality;
or
- c. Submit an updated RWD and a time schedule indicating the measures the County will implement to meet a total nitrogen effluent limit of 10 mg/L.

The proposed discharge is to an approximately 90-acre land application area south of the WWTF. The County indicated in the RWD, it will recycle the treated secondary effluent on the land application area and will hire a farmer to grow fodder, fiber, and seed crops. A Title 22 Engineering Report is required for the recycling of wastewater, but at this point one has not been prepared. This Order contains

Provision G.14 that requires the County to submit a Title 22 Engineering Report to the Division of Drinking Water and the Central Valley Water Board for review and approval.

Groundwater Considerations

The RWD reviews groundwater and indicates that the current static groundwater depth is about 520 to 540 feet bgs. The data is from two supply wells (Nos. 4 and 5) completed in 2015. Both wells are 1,300 feet deep and screened from 630 to ~ 1,250 feet bgs. The depth to water is validated on the DWR's, *Lines of Equal Elevation of Water In Wells, Unconfined Aquifer, San Joaquin Valley Spring 2010* map that indicates the groundwater elevation is about 100 feet above MSL, which corresponds to a depth to groundwater of about 420 feet bgs. The general direction of groundwater flow is to the north/northwest.

The water quality results from the supply wells are good with no exceedances of water quality objectives. Nitrate and TKN were not detected and EC (averages about 350 umhos/cm) and TDS (averages about 190 mg/L) results are below the respective MCLs. All constituents have stable concentrations that do not show increasing or decreasing trends. Regional groundwater quality results from 1952 through 2015 indicate good water quality that has met water quality objectives through 2015.

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.

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.