

## INFORMATION SHEET

ORDER NO. R5-2007-\_\_\_\_\_  
FIVE AND FORTY SIX PROPERTY OWNERS ASSOCIATION WWTF  
KERN COUNTY

### **Background**

The Five and Forty Six Property Owners Association (Association) operates a wastewater collection, treatment, and disposal facility (WWTF) to provide sewerage services to several service stations, convenience stores, a KOA campground, several restaurants, and motel at the junction of Interstate Five and Highway 46. The property on which the WWTF resides (APN No. 069-370-37) is owned by the Association. The land on which lift station 1 (APN No. 058 330 28) resides is owned by Harminder Momi. The land on which lift station 2 (APN No. 069-370-18) resides is owned by System Capital Real Property Corp. The Association and the above named owners are collectively referred to as Discharger. The WWTF has an average daily flow of 0.13 million gallons per day (mgd).

Waste Discharge Requirements (WDRs) Order No. 92-035 adopted by the Regional Water Board on 28 February 1992, limits the discharge to 0.3 mgd. The WDRs establish effluent limits on a monthly basis for 5-day biochemical oxygen demand (BOD<sub>5</sub>), and settleable solids (SS). WDRs Order No. 92-035 describes the Discharger's plans to upgrade the WWTF to 0.3 mgd by installing a 0.2 mgd contact stabilization package treatment plant parallel to the two 0.05 mgd contact stabilization package treatment plants. The Discharger changed its plans and abandoned most of the WWTF, which is just northwest of the WWTF. In 1996, the Discharger constructed a new 0.3 mgd package WWTF, as described in a November 1993 Engineering Report prepared by Cuesta Engineering.

The WWTF consists of the wastewater collection system, influent pump station (part of the former WWTF), headworks with manual bar screen, a Biolac<sup>®</sup> activated sludge system equipped with floating fine bubble diffusers, a secondary clarifier, a Parshall flume flow meter, and two evaporation and percolation ponds (Ponds 1 and 2).

The Discharger is not increasing discharge flow or changing the nature and character of the discharge, but the WDRs need to be updated to reflect its current WWTF and Regional Water Board plans and policies.

### **Solids and Biosolids Disposal**

Screenings from the headworks are placed in a dumpster prior to disposal at an offsite landfill. Wasted sludge from the secondary clarifier is pumped into a tanker truck and hauled offsite for disposal at an authorized facility. The Discharger does not remove accumulated solids from Ponds 1 and 2, but instead dries the ponds and disks the accumulated sludge and weeds in the pond bottom soils. The WWTF also has 1-acre of abandoned sludge drying beds, which are not maintained and therefore not suitable for use.

### **Groundwater Conditions**

Regional groundwater is approximately 50 to 100 feet below ground surface and flows generally north to northeasterly, with a perched groundwater table at about 20 feet bgs. In the discharge vicinity, the "modified E-clay" layer occurs about 350 to 400 feet bgs and is about 20 feet thick. Shallow groundwater in the discharge vicinity is characterized by high salinity

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(i.e., EC concentrations of 1,400 to 3,500  $\mu\text{mhos/cm}$ ), according to information in the Water Supply Report. In addition, regional groundwater data from DWR wells show quality of first encountered groundwater ranging for EC from 3700 to 7000  $\mu\text{mhos/cm}$  and nitrate as N from <0.2 to 1.2 mg/L.

Generally, water quality is better in the confined aquifer below the E-clay with the exception of arsenic, which is approaching the primary maximum contaminant levels (MCL) specified in Title 22 of California Code of Regulations (CCR) of 50  $\mu\text{g/L}$ . It exceeds the Federal primary MCL of 10  $\mu\text{g/L}$ . Wells in the area are likely perforated above and below the E-clay.

The Discharger is currently not required to monitor groundwater, so water quality data within the immediate vicinity of the WWTF in the uppermost groundwater and groundwater just above the E-clay layer is limited.

**Compliance History**

The Discharger consistently complies with the effluent limits in the WDRs, but frequently submits late SMRs. A 5 July 2007 Regional Water Board letter directed the Discharger to submit timely SMRs.

**Basin Plan, Beneficial Uses, and Regulatory Considerations**

The Basin Plan indicates that the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man’s activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Regional Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500  $\mu\text{mhos/cm}$  plus source water or a maximum of 1,000  $\mu\text{mhos/cm}$ , as the measure of the maximum permissible addition of salt constituents through use.

Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

**Antidegradation**

The antidegradation directives of State Water Board Resolution No. 68-16 (Resolution No. 68-16), “Statement of Policy With Respect to Maintaining High Quality Waters in California,” or “Antidegradation Policy” require that waters of the State that are better in quality than established water quality objectives be maintained “consistent with the maximum benefit to the people of the State.” Waters can be of high quality for some constituents or beneficial uses and not others. Policy and procedures for complying with this directive are set forth in the basin plan.

The discharge is an existing discharge and will not change in character or volume from that allowed by WDRs Order No. 92-035. The overall mass of constituents, and therefore, the potential to impact water quality, remain unchanged.

The WWTF provides treatment and control by incorporating: low salinity source water; secondary treatment of the wastewater; appropriate biosolids storage and disposal practices; and an Operation and Maintenance (O&M) manual.

**Title 27**

Title 27, CCR, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27. Treatment and storage facilities for sludge that are part of the WWTF are considered exempt from Title 27 under section 20090(a), provided that the facilities not result in a violation of any water quality objective. However, residual sludge (for the purposes of the proposed Order, sludge that will not be subjected to further treatment by the WWTF) is not exempt from Title 27. Solid waste (e.g., grit and screenings) that results from treatment of domestic sewage and industrial waste also is not exempt from Title 27. This residual sludge and solid waste are subject to the provisions of Title 27.

Accordingly, the municipal discharge of effluent and the operation of treatment or storage facilities associated with a municipal wastewater treatment plant can be allowed without requiring compliance with Title 27, but only if resulting degradation of groundwater is in accordance with the Basin Plan.

**CEQA**

The Discharger is not increasing discharge flow or changing the nature and character of the discharge, therefore the issuance of this Order is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the State CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended).

**Proposed Order Terms and Conditions**

**Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions**

The proposed Order prohibits discharge to surface waters and water drainage courses.

The proposed Order would carry over the current Order's monthly average daily discharge flow limitation. The proposed Order would carry over the previous Order's effluent limit for BOD<sub>5</sub> and add an effluent limit for total suspended solids (TSS). The Basin Plan specifies varying levels or treatment based on site-specific conditions. The proposed Order does not include the Basin Plan's 80 percent removal standard for BOD and TSS, each, as the discharge is a privately owned treatment facility and in an isolated area that poses little risk of nuisance. A

minimum BOD and TSS limit of 40 mg/L, each is sufficient to prevent nuisance and, if appropriate, for use as an irrigation water on certain types of crops. The secondary treatment technology being implemented will result in an effluent of at least that quality, and will likely be higher than that reflected in the effluent limitations.

The proposed Order would establish an effluent limitation for EC that reflects the Regional Water Board policy for managing the salts within the Tulare Lake Basin. The EC of the effluent (995  $\mu\text{mhos/cm}$ ) is less than the receiving water (3700 to 7000  $\mu\text{mhos/cm}$ ), but slightly greater than source water (410  $\mu\text{mhos/cm}$ ) plus 500  $\mu\text{mhos/cm}$ . Although the discharge is primarily domestic wastewater, it is a commercial discharge, and therefore does not have the same elements of a municipal wastewater treatment facility. As a non-municipal WWTF, it should not be expected to meet the salinity standard of 500  $\mu\text{mhos/cm}$  plus source water EC. The proposed annual average EC limit of 1,000  $\mu\text{mhos/cm}$  would protect existing beneficial uses. In addition, if the Discharger proceeds with water recycling, the effluent could be used as supplemental irrigation supply on fiber and fodder crops.

The discharge requirements regarding dissolved oxygen and freeboard are consistent with Regional Water Board policy for the prevention of nuisance conditions, and are applied to all such facilities.

The proposed WDRs would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedances of these objectives or natural background water quality, whichever is greater.

If the Discharger intends to use the sludge drying beds in the future, the WDRs would require the Discharger submit a report demonstrating that the sludge beds will be adequately operated and maintained.

### **Monitoring Requirements**

Section 13267 of the CWC authorizes the Regional Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes monitoring of the effluent, ponds, sludge, and water supply. The monitoring is necessary to evaluate the water quality impacts from the discharge.

### **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

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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.

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