

## INFORMATION SHEET

ORDER NO. R5-2007-\_\_\_\_\_  
PACIFIC US REAL ESTATE GROUP  
SILVERTIP RESORT VILLAGE WASTEWATER TREATMENT FACILITY  
MARIPOSA COUNTY

### **Background**

The PacificUS Real Estate Group (Discharger) proposes to construct and operate a wastewater collection, treatment, and disposal facility (WWTF) at the proposed SilverTip Resort Village in Fish Camp, Mariposa County (Resort). The WWTF was designed and constructed to process all of the wastewater generated from the Resort. No outside sewer mains will be connected to the Resort WWTF. The WWTF will be designed to have a monthly average daily flow of 33,500 gallons per day (gpd) and a peak daily flow of 74,000 gpd.

A portion of the property previously contained the original SilverTip Resort, which included a hotel and restaurant. The hotel burned down in 1981 and the restaurant has been vacant since. The Regional Water Board issued a Clean Up and Abatement order in August 1980 to the then property owner Mr. Robert Keller in response to the surfacing of sewage in the adjacent meadow due to septic tank overflow. BSK and Associates evaluated the then existing septic system and prepared a report in January 1981 indicating the existing septic system was undersized for the load it was sustaining and provided plans for enlarging the system. The work was not completed due to the fire that destroyed the hotel. The former septic system is not an issue with the proposed Resort as wastewater will now be tertiary treated before disposal either in a new leachfield or spray field areas.

The Discharger submitted a report of waste discharge (RWD) dated 25 August 2004, for a new WWTF to serve the proposed Resort. The proposed WWTF will consist of a septic tank effluent wastewater collection system and a tertiary wastewater treatment system. The treatment process will include flow equalization, trickling filter secondary treatment with interstage clarification, denitrification, microfiltration, and ultraviolet light disinfection. The effluent quality will comply with DHS Title 22 CCR standards for "disinfected tertiary recycled water."

The Discharger proposes to discharge tertiary treated wastewater to a leachfield during the winter months (approximately November through April) and will be used for landscape irrigation and toilet flushing during the summer months (typically from May through October). Recycled water will also be used to fill a 510,000 to 750,000 gallon effluent storage tank. The tank allows wastewater to be applied at controlled rates to the leachfield and spray fields and allows use of wastewater for fire suppression activities.

### **Solids and Biosolids Disposal**

The accumulated solids in the septic tanks will require periodic removal and disposal. Septage will be removed by a conventional septic tank vacuum truck and disposed of at a regional septage disposal facility approved by Mariposa County. Screenings from the microfiltration process are estimated to generate about 3,000 to 6,000 gallons per month of total liquid solids including septage removal. Disposal options include liquid disposal by tanker truck and/or

dewatered residual disposal by solid waste transport. The final method has not been determined at this time and will require approval from Mariposa County.

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

One of the greatest long-term problem facing California's groundwater is increasing salinity. The Tulare Lake Basin Plan's salt management requirements have been successfully implemented for several decades. Widespread and long-term compliance with these requirements justify them as appropriate best practicable control measures for salinity applicable to discharges in the Sacramento River and San Joaquin River Basins. The Regional Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental electrical conductivity (EC) limitation of 500 umhos/cm as the measure of the maximum permissible addition of salt constituents through use. A more restrictive limitation on salt constituents added through use is appropriate where necessary to assure compliance with a groundwater limitation for any constituent established by the Regional Water Board.

### **Antidegradation**

The antidegradation directives of State Water Board 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.

Certain domestic wastewater constituents are not fully amenable to waste treatment and control and it is reasonable to expect some impact on groundwater. The Order acknowledges that some degradation may occur as a result of the application of tertiary treated wastewater to land. Mariposa County adopted a Statement of Overriding Considerations that concluded that the benefits of the project were sufficient to override any unmitigated impacts. The overriding considerations include: the high quality, historic architectural style of the buildings; reinforcement of Fish Camp as a community center in furtherance of the County General Plan; lack of feasible alternative sites; generation of substantial revenue; and evidence that market forces support such a project. Based on the analyses in Mariposa County's EIR and its Statement of Overriding Considerations, and the state-of-the-art treatment and control practices described below, such degradation is consistent with maximum benefit to the people of the State and consistent with the Antidegradation Policy.

### **Treatment Technology and Control**

**The Discharger provides treatment and control of the discharge that incorporates:**

- a. Alarm and automatic flow diversion systems to prevent system bypass or overflow;
- b. A nitrogen removal treatment process;

- c. Microfiltration of treated effluent;
- d. UV Disinfection of treated effluent;
- e. Recycled water application at plant uptake (for nitrogen and water) rates;
- f. Appropriate biosolids storage and disposal practices;
- g. An Operation and Maintenance (O&M) manual; and
- h. Certified operators (minimum Grade III) to insure proper operation and maintenance.

### **Groundwater Conditions**

Regional groundwater is contained in both fractured bedrock and to a lesser extent in alluvial deposits overlying the bedrock. The Discharger has indicated the direction of groundwater flow is to the north/northeast near the leachfield. The depth to shallow groundwater is about 10 to 45 feet bgs with groundwater being closer to the surface in the meadow area and greater beneath the forested slope areas. This uppermost groundwater layer is reported to be separated from the underlying bedrock aquifer by unfractured bedrock that acts as a semi-confining layer or aquitard. Depth to groundwater data for the SilverTip resort bedrock wells (STR1 through STR5) indicates the deeper fractured bedrock wells have groundwater depths ranging from about 60 to 115 feet bgs.

Analytical results for samples of both the shallow and deeper aquifers indicate excellent water quality. A surface water sample from Big Creek was reported to have electrical conductivity (EC) concentration of 119 micromhos per centimeter (umhos/cm), total dissolved solids (TDS) concentrations of about 87 milligrams per liter (mg/L), a pH of 7.59 standard pH units (su), and a chloride concentration of 1.7 mg/L. Bedrock water samples indicate similar concentrations with EC concentrations between 157 and 188 umhos/cm, TDS concentrations of 111 to 123 mg/L, pH values of 6.99 to 7.31, and chloride concentrations from non-detect to 3.5 mg/L.

### **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 County of Mariposa circulated a Draft Environmental Impact Report (EIR) in July 2001. The Public review period was from July 1 to October 1, 2001. Comments to the Draft EIR by various agencies and citizens resulted in the preparation of an *Antidegradation Analysis* (September 2001) and a *Hydrogeologic Conditions and Wastewater Management Plan Supplemental Report* (March 2002). The Draft EIR identified several potential significant effects that were subject of the information presented in the two previously mentioned reports. Due to comments received, the County of Mariposa recirculated Section 3.4 of the Draft EIR. Due to new information provided following the initial circulation of the Draft EIR, Mariposa County prepared a revised Draft EIR in September 2002.

The County of Mariposa certified a Final EIR in February 2003 in accordance with 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). The project was then challenged under provisions of the California Environmental Quality Act (CEQA). A hearing on the Writ of Mandate was held in December 2004 and denied. That result was subsequently appealed and that appeal was denied in December 2005.

## **Proposed Order Terms and Conditions**

### **Discharge Prohibitions, Specifications and Provisions**

The proposed Order prohibits discharge to surface waters and water drainage courses and cross connection between potable water and well water piping with recycled water piping. The discharge specification regarding EC is consistent with Regional Water Board policy for effluent salinity limitation of the monthly flow-weighted average EC of the source water plus 500 umhos/cm.

The effluent limits prescribed in the proposed Order for total settleable solids (TSS) and BOD<sub>5</sub> are based on the predicted water quality as stated in the RWD. The proposed Order's [Discharge Specification C.1](#) requires the Discharger provide a reduction to a concentration of 10 mg/L of both 5-day BOD and TSS. In order to protect public health and safety, the proposed Order requires the Discharger to comply with the provisions of Title 22 and to implement best management practices with respect to recycled water application (application at reasonable rates considering the crop, soil, and climate).

### **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 influent and effluent monitoring requirements, recycled water storage, pond monitoring, recycled water land application area monitoring, groundwater monitoring, surface water monitoring, sludge monitoring, and water supply monitoring. The monitoring is necessary to evaluate groundwater quality and the extent of the potential degradation and pollution from the discharge. The proposed Order includes monitoring of recycling activities to check compliance with Title 22 and the terms and conditions of the proposed Order.

The Discharger does not yet have an adequate groundwater or surface water monitoring networks. Work Plans detailing the proposed monitoring networks are required under [Provision H.11](#). The discharger must monitor groundwater and surface water for constituents present in the discharge that are capable of reaching groundwater and violating groundwater limitations if its treatment and control, and any dependency of the process on sustained environmental attenuation, proves inadequate. For constituents listed in [Section G, Groundwater Limitations](#), of the WDR, the Discharger must, as a part of each monitoring event, compare concentrations of constituents found in each monitoring well (or similar type of groundwater monitoring device) to the background concentrations or to prescribed numerical limitations to determine compliance.

### **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. It may be appropriate to reopen the Order if applicable laws and regulations change.

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