

L. WASTEWATER

The Wastewater section was prepared based on preliminary grading and site plans provided by the applicant, and the *Engineering Geology Investigation and Preliminary Soil Engineering Report* (GeoSolutions, Inc.; December 10, 2004). These documents are available for review separately from this report at the County of San Luis Obispo Department of Planning and Building. The following section describes and analyzes the proposed collection, treatment, and disposal of the projects wastewater demands.

1. Existing Conditions

The project site is not located within a County Urban Reserve or Service Line boundary, which means that community sewer service is unavailable. The few existing residential structures within the project site boundary are currently on individual septic systems. The existing winery currently treats process wastewater in an aerated pond, followed by irrigation storage and agricultural re-use. The system is currently regulated by the Regional Water Quality Control Board (RWQCB). The project site is generally characterized by steep slopes and shallow depth to bedrock. The proposed 20.8-acre wastewater disposal area is located in the southwest corner of the project site, within an existing vineyard (refer to Figure III-16). The site is generally level, with a gentle six percent slope to the south.

2. Regulatory Setting

a. Federal Policies and Regulations

Federal standards for the quality of treated wastewater effluent would have to be met. No other Federal policies or permits relating to wastewater services or utilities would be required for the recordation of the final map for the project. Potential impacts to “Waters of the U.S.” Sections 404 and 401 of the Clean Water Act, and National Pollutant Discharge Elimination System (NPDES) are discussed in detail in Section V.F., Water, of this document.

b. State Policies and Regulations

Standards for the quality of treated effluent are established by federal and state water quality laws. Effluent is required to be treated in accordance with the applicable standards from the California Code of Regulations Title 22 (Environmental Health) and the State Water Quality Control Board, which set specific effluent discharge requirements for wastewater facilities in the County of San Luis Obispo. Standards for quality of treated effluent are set to protect present and potential beneficial uses of surface and/or groundwater that receive the treated effluent, including recreation, agriculture, and wildlife.

The use of treated effluent as recycled water is regulated by California Code of Regulations, Title 22, Division 4, Chapter 3, Recycling Criteria. This section of the code includes requirements for the impoundment and use of recycled water for irrigation. Requirements that would be imposed on this project would likely include:

- 100-foot buffer between irrigated area and domestic water supply wells;

- 100-foot buffer between recycled water impoundments (ponds) and domestic water supply wells;
- Irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency;
- Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities;
- Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff; and,
- All use areas where recycled water is used that are accessible to the public shall be posted with signs stating “recycled water, do not drink”.

In addition, the applicant would be required to comply with all application submittal requirements, including preparation, approval, and implementation of the following: engineer report for the production, distribution, and use of recycled water; contingency plan to prevent the use of inadequately treated wastewater and a description of fail safe features in the event of an emergency (i.e., power failure, heavy storm conditions, etc.); and, inspection and monitoring program.

The Central Coast RWQCB’s Water Quality Control Plan for the Central Coast Region (Basin Plan) includes various guidelines, criteria, and prohibitions for community systems that utilize subsurface methods for effluent disposal. Basin Plan standards for effluent disposal include but are not limited to: maximum allowed changes in acidity/alkalinity, temperature, dissolved oxygen, as well as maximum allowed quantities of solids, nutrients, oil and grease, coliform bacteria, and other constituents in the effluent released from the treatment plant. These regulations apply directly to the proposed treatment facility that would receive and handle effluent from the proposed development of the Laetitia Agricultural Cluster.

c. Local Regulations

San Luis Obispo County Department of Environmental Health and the Central Coast RWQCB are the local agencies responsible for effluent treatment standards and siting of wastewater treatment and disposal facilities. These agencies ensure that proposed projects conform to all applicable local standards, including the Basin Plan described above.

3. **Thresholds of Significance**

For the purposes of this evaluation, significant wastewater impacts would occur if project demands exceeded proposed treatment facility capacities. A significant impact would also occur if the proposed treatment plant were to go offline due to mechanical failures or breakdown of the system causing pollution of surface and/or groundwater resources. Temporary disruption of services or overuse of proposed utilities and or disposal fields would be considered a potentially significant impact.

a. CEQA Guidelines

Appendix G of the CEQA Guidelines states that a significant wastewater impact would occur if the project:

- Violated any water quality standards or waste discharge requirements;
- Substantially degraded water quality;
- Exceeded wastewater treatment requirements of the applicable RWQCB; and,
- Required the construction of new wastewater treatment facilities, the construction of which could cause significant environmental effects.

b. County of San Luis Obispo Initial Study Checklist

The County Initial Study Checklist provides the following thresholds for determining significance with respect to water quantity and quality. Water quantity and quality impacts would be considered significant if the proposed project would:

- Violate waste discharge requirements or Central Coast Basin Plan criteria for wastewater systems;
- Change the quality of surface or groundwater (e.g., nitrogen-loading, day-lighting);
- Adversely affect community wastewater service provider.

4. Impact Assessment and Methodology

The applicant proposes to manage domestic/residential wastewater by constructing a sewage collection system, wastewater treatment and recycling facility, and an agricultural reclamation system (refer to Figures III-12 through III-19). Based on the proposed project elements, the domestic wastewater treatment system would need to treat and dispose of approximately 33,000 gallons per day (gpd) (RRM and Wallace Group, 2006).

The proposed facility would consist of the following: 1) a 10,000-square foot building shell, which would house a 5,000-square foot domestic wastewater treatment facility; 2) six storage tanks for domestic sewage, which would be located within a 4,000-square foot underground structure adjacent to the 10,000-square foot building shell; 3) a domestic sewage collection system consisting of pipes, forcemains, and lift stations; 4) two ponds to store treated domestic wastewater and one pond to store treated winery wastewater; and, 5) a 20.8-acre disposal area for treated domestic wastewater. The 10,000-square foot building shell, 4,000-square foot underground storage tank structure, domestic wastewater treatment plant, and associated collection and disposal systems would be constructed during Phase One of the proposed project.

The wastewater treatment and recycling facility would be managed by the mutual water company, which would be owned by the individual lot owners. Responsibilities of the mutual water company would include management of operations, stormwater management associated with the facility, odor control, inspections, and maintenance. The mutual water company would execute a contract with a licensed wastewater system operations company (e.g., a local civil engineering firm). Responsibilities of the company would include a daily two-hour site visit, seven days a week, including holidays. The company would also be responsible for response during emergency situations.

The proposed domestic wastewater treatment and recycling system would operate in the following manner:

1. Domestic wastewater would be collected from residences, the homeowner association facility, equestrian center, and dude ranch by an underground sewage collection system consisting of individual submersible grinder pumps, three community pump stations, and pipelines.
2. The collection system would pump domestic wastewater into underground storage tanks located adjacent to the main 10,000-square foot treatment building for primary settling.
3. Following primary settling, the wastewater would be pumped into the main 10,000-square foot building and pre-fabricated wastewater plant for tertiary-level treatment.
4. Liquid solids would be temporarily stored within the wastewater treatment building, and would be removed by a pumper truck and transported to a County-approved wastewater disposal facility (e.g., City of Santa Maria or City of Santa Clara).
5. Tertiary-treated wastewater effluent would be pumped into two outdoor, lined, storage ponds.
6. Tertiary-treated wastewater effluent would be piped and sprayed or drip-irrigated onto a proposed 20.8-acre dispersal area.

The wastewater treatment plant would have a capacity of 50,000 gallons per day (gpd). The contents would include the pre-fabricated treatment plant, associated mechanical equipment, and a sludge-holding chamber. The pre-fabricated treatment plant would include a screening and grinding system to remove solids, an aeration chamber, scum removal system, clarifier chamber, chlorination system, and liquid sludge holding chamber. The proposed domestic wastewater treatment plant process would include the following elements:

1. Flow metering and screening/grinding with automatic washing and removal of screened solids;
2. Biological treatment in a pre-engineered system including either trickling filter or extended aeration processes;
3. Filtration using microfiltration membranes or conventional sand filtration; and,
4. Disinfection with sodium hypochlorite or ultraviolet light.

The treatment facilities would include automatic high liquid level alarms that would alert operations staff in the event of system failure. The wastewater treatment facility would be equipped with a permanent, standby, diesel generator and automatic power transfer switch, to be utilized in the event of a power outage.

The estimated flowrate from each residence would be approximately 300 gpd. The average flow is estimated to be 33,000 gpd, with a concentration of both suspended solids and biochemical oxygen demand of 300 to 350 milligrams/liter (mg/l). The domestic wastewater facility would generate approximately 385 gallons of liquid solids per day. A maximum of 50,000 gallons of liquid solids would be stored in the wastewater treatment plant building within enclosed tanks. Liquid solids would be collected onsite by a pumper truck service, and solids would be disposed at a County-approved wastewater facility. Pumper truck capacity would be 3,500 to 5,000 gallons each, and one trip per week would be required to transport solids offsite.

Two lined wet weather storage ponds are proposed to facilitate management of the treated domestic effluent (refer to Figures III-13 and III-14). Proposed Ponds 1 and 2 will be used for domestic recycled water, and would store four acre-feet each. All treated effluent generated would be recycled for agricultural re-use. The system will include an agricultural application area 20.8 acres in size, located 100 feet west of Ponds 2 and 3, within an existing vineyard, and approximately 200 feet west of Los Berros Creek (refer to Figure III-14). All of the proposed project's treated wastewater (approximately 37 acre-feet per year) would be applied to the disposal area. The average daily application rate would be 33,000 gpd, with a maximum application rate of 200,000 gpd during the peak irrigation months. Effluent generated during winter months would be stored in the ponds for use during the irrigation season. The applicant proposes to implement a 100-foot setback between the treated wastewater application area and nearest well and outer perimeter of vineyards.

Rainfall would be allowed to collect within the ponds; however, stormwater that falls outside of the ponds would be directed away from the ponds. The applicant proposes to avoid pond overflow by providing a minimum of two feet of freeboard above the maximum anticipated water level within each pond. The ponds would be equipped with alarms to notify the mutual water company in the event of high waters.

Wastewater impacts of the proposed development were evaluated based on assessment of impacts on utilities and service systems, as well as an assessment of site activities based on the intended land uses. The proposed project was reviewed to determine whether full development on the project site would affect existing agricultural activities, introduce land-use conflicts, and, if so, what actions could be taken to minimize the potential for disruption of service, damage, or over-use of utility systems. Impacts have been analyzed using a reasonable "worst-case" analysis approach for wastewater delivery/treatment resources. The specifics of each "worst-case" approach are described within the following section of each project component heading, as applicable.

5. Project-specific Impacts and Mitigation Measures

a. Project-wide

1) Discharge to Surface Waters

Surface waters near the proposed disposal field include Los Berros Creek, which is located approximately 200 feet south of the proposed disposal area. Los Berros Creek flows in a southerly direction along the south/east edge of the disposal area, and has been designated as having multiple beneficial uses in the Central Coast Basin Plan. There are also small, spring-fed tributaries feeding Los Berros Creek along Upper Los Berros Road. The proposed disposal area is located outside of the 100-year flood plain and maintains a 100-foot setback from all springs and creeks. No direct impacts to surface water bodies are anticipated based on the project design.

Since the proposed sewage collection system, wastewater treatment plant, and disposal area are located immediately upslope from Los Berros Creek and its tributaries, the potential exists that an accidental spill, mechanical failure, or other unforeseen event could release raw or partially treated effluent into the creek, exposing wildlife and downstream users to the effluent. This

would be of special concern to on and off-site water local purveyors and homeowners because the wells within the Los Berros Creek watershed obtain all or part of their domestic water supply downstream of the project site from underflow extractions of Los Berros Creek.

WW Impact 1 The proposed wastewater treatment system could potentially release raw or partially treated effluent into Los Berros Creek due to system failure or mechanical breakdown.

WW/mm-1 Prior to issuance of construction permits for the wastewater treatment plant and associated collection, storage, and disposal facilities, the applicant shall prepare and submit an emergency contingency plan including health and safety procedures, and specific operation and maintenance instructions for all system components and equipment during normal operation and in case of reasonable emergency situations. The plan shall also identify emergency notification procedures for alerting onsite and downstream users whenever an unauthorized release of project-generated effluent occurs. Emergency notification should be given as soon as the release is discovered so that downstream well users have adequate response time to take any appropriate measures.

Residual Impact With implementation of the above mitigation measures, impacts would be considered *less than significant with mitigation, Class II*.

2) Exposure to Untreated Wastewater and Treated Recycled Wastewater

As proposed, the development plan contains provisions to reuse the tertiary-treated disinfected wastewater to partially subsidize the irrigation water demand for agricultural crops (i.e., vineyards). Due to the steep slopes adjacent to the proposed disposal area, and the pressurized nature of the irrigation distribution pipes, effluent irrigation water could daylight from a potential pipe rupture or over-watering (due to mechanical failure), exposing the public (i.e., onsite and adjacent landowners and vineyard staff) to treated wastewater. In addition, pipe rupture or mechanical failure in the sewer collection system would require maintenance and repair of the sewer system, potentially exposing guests, staff, and maintenance personnel to raw wastewater.

Farming operations, or use of heavy vehicles and equipment in the growing fields or the adjacent road, could damage the underlying disposal facilities, causing system failure and possibly exposing workers, guests, or other individuals to treated effluent wastewater. The RWQCB indicates that piping must be located at least 36 inches below ground to minimize damage from plowing and heavy vehicles and equipment, or the disposal area must not be used for agricultural purposes. The applicant would be required to obtain a waste discharge permit from the RWQCB prior to construction and operation of the treatment and discharge facilities.

WW Impact 2 Farming practices or the use of heavy vehicles and equipment may damage the underlying disposal facilities causing short-term failure and a short-term, direct impact from exposure to treated wastewater and disruption of normal operation of the system.

WW/mm-2 Prior to issuance of construction permits for the wastewater treatment plant and associated storage and disposal facilities, the applicant shall demonstrate that the design of the disposal facilities is adequate to withstand traffic loading and disturbance by agricultural uses, pursuant to a wastewater discharge permit issued by the Regional Water Quality Control Board.

Residual Impact With implementation of the above mitigation measure, impacts would be considered *less than significant with mitigation, Class II*.

3) Disposal Area Requirements

Based on consultation with the RWQCB, the applicant would be required to identify a margin of safety and develop a contingency plan in the event the recycled wastewater cannot be used for irrigation due to wet weather conditions or soil saturation (Sorrel Marks, 2007). The applicant currently proposes to use the storage ponds during wet weather conditions; however, additional measures for disposal may be necessary during high rainfall years. Alternative methods of disposal may include, but not be limited to: supplemental holding capacity; disposal of recycled water within alternative areas of the vineyard (provided the location meets standard regulatory criteria); disposal within common areas or landscaping; and, percolation into underlying soils. The applicant is required to identify the alternative disposal area as part of the Report of Waste Discharge application with the RWQCB. Operation of the proposed facility and disposal area(s) would be subject to an on-going maintenance and monitoring program, which would be overseen by the RWQCB.

WW Impact 3 **The proposed plan for treated wastewater disposal does not provide for an alternative area in the event of high rainfall, which may result in soil saturation and unauthorized runoff of treated effluent.**

WW/mm-3 Prior to recordation of the final map, the applicant shall submit evidence of RWQCB-approval of the proposed effluent disposal area(s), including a method for alternative disposal.

Secondary Impact As discussed in Section V.C. (Biological Resources), natural habitats located within and immediately adjacent to the project site include Los Berros Creek and its tributaries, oak woodland, scrub, and grassland. Operation of alternative disposal areas may result in the discharge of treated effluent within natural habitats. The applicant is required to demonstrate compliance with the Basin Plan, and RWQCB requirements specific to the use of recycled wastewater to avoid unauthorized discharge.

Implement BIO/mm-1.

Secondary Impact As discussed in Section V.D. (Archaeological Resources), the use of the proposed effluent area may adversely affect significant archaeological resources, and mitigation measures include relocation of the proposed disposal site. Relocation of the effluent site shall include consideration

and avoidance of known archaeological resources, in addition to ensuring compliance with the Basin Plan and RWQCB requirements.

Implement AR/mm-8.

Residual Impact With implementation of the above mitigation measure, impacts would be considered *less than significant with mitigation, Class II*.

4) Groundwater

The project site is located within the Oceano Hydrologic Sub-area (HSA), which is outside of the Santa Maria Groundwater Basin, as defined by the Santa Clara Superior Court (Case CV 770214). The Tri-Cities Mesa Arroyo Grande Plain and Nipomo Mesa HSA are located to the west and southwest of the project site (refer to Section V.B., Water Resources, Figure V.B.-1). Surface drainage, which would indicate the presence of higher groundwater, occurs along local drainages toward Los Berros Creek. Pond 1 will be sited adjacent to one of these drainages, which at the time of the EIR fieldwork, was dry. Per the previously prepared GeoSolutions report for the proposed project, the depth to groundwater on the project site varies depending upon location; near Los Berros Creek, groundwater is within several feet of the ground surface, while in upslope areas, groundwater is deep. No borings drilled by GeoSolutions encountered groundwater; however, there were no borings drilled in the proposed pond or disposal areas. Subsequently, the depth to groundwater in these areas is unknown.

When recycled water is used for irrigation, the salts in the effluent are concentrated in the percolate that flows from the surface of the irrigated area to the groundwater, because during evapotranspiration, the salts remain in the soil. Based on the water sample analysis documented in the water resources studies provided by the applicant (Cleath; 2005), the total hardness of water measured in the wells proposed for domestic use range from 340 to 470 mg/l, and would likely require water softeners, which is a typical source of salts in wastewater. Over-application of recycled water may result in increased salt in the soil, and underlying groundwater. Build-up of salts can be avoided by implementing control measures at the well source (as opposed to at each residence), or removal of salts at the wastewater treatment facility. The applicant is required to ensure that the recycled water meets effluent standards required by the Basin Plan.

WW Impact 4 **Over-application of recycled water may result in salt loading in the underlying soils, and increased concentrations of salt in the underlying groundwater.**

Implement WW/mm-3.

Residual Impact With implementation of the above mitigation measure, impacts would be considered *less than significant with mitigation, Class II*.

5) Operation and Maintenance

The onsite wastewater treatment and disposal plan prepared by the applicant states that the facility would be a design-build customized facility that would be operated, maintained, and managed by a qualified private wastewater operations contractor, under a services agreement

with the Homeowners Association. The current proposal is that operation and maintenance would not be full-time, but conducted two hours a day under the guidelines of the final operation and maintenance manual prepared prior to completion of wastewater facilities installation and start-up.

Under Resolution No. 69-1, the RWQCB prohibits the development of the any project such as the one proposed that will use its own community system for sewage disposal unless the project:

“...is within or has access to a pre-existing governmental entity (city or district) that has authority to and has stated its intent to assume responsibility for the planning, construction, operation, and maintenance of the sewerage system or has authority to and has stated its intent to review plans and construction and assume operation and maintenance of the sewerage system upon certification by the appropriate health officer that the system is failing...”

WW Impact 5 The proposed privately operated wastewater treatment and disposal system could potentially be operated inadequately or fall into disrepair resulting in a long-term direct impact.

WW/mm-4 Prior to issuance of building permits, the applicant shall provide a letter from an appropriate governmental entity stating its intent to assume responsibility for the sewerage system, as required by Central Coast RWQCB Resolution No. 69-1.

Residual Impact With implementation of the above mitigation measure, impacts would be considered *less than significant with mitigation, Class II*.

6. Cumulative Impacts

Development of the proposed project would not rely on a publicly owned wastewater treatment facility to dispose of the project generated wastewater flow. In addition, the area surrounding the project site is rural and agricultural, and does not contain an excessive amount of development using individual septic systems. Therefore, the cumulative impacts related to wastewater disposal issues and mitigation measures that have been previously identified for the project would apply cumulatively as well. No additional impacts are anticipated and no additional mitigation measures are necessary.

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