

Package Treatment Plant Policy and Procedure

PURPOSE

There has been increased interest in the use of package treatment plants for new development proposals in the County. Current review procedures are not presently clearly defined.

This policy is intended to provide guidance to all staff when an application is submitted for a commercial, agricultural or industrial use which proposes the use of a package sewage treatment plant for domestic sewage disposal in cases where such plants are consistent with the General Plan. This policy will guide the environmental (CEQA) and technical review of projects which involve the use of a package treatment plant for sewage disposal.

GENERAL

A. Definition

A package treatment plant is a method of sewage treatment which uses a process involving energy and mechanical, biological, chemical or physical treatment of the wastewater to reduce Biological Oxygen Demand (BOD), suspended solids (SS), nitrogen (N), bacteria and other sewage constituents and which is of a degree of complexity that a certified wastewater treatment plant operator is required. It includes any proposal to use wastewater in a manner subject to Title 22 wastewater reclamation standards. It also includes any treatment unit other than a septic tank which processes more than 1500 gallons of wastewater per day. It does not include systems which process wastewater originating solely from agricultural uses, retail food facilities or storm water if these systems do not include any domestic wastewater component.

B. Restrictions on use

Package treatment plants cannot serve multiple uses on separate parcels under separate ownership unless the Board of Supervisors approves specific findings for multiple ownership of sewage disposal systems. (General Plan Policy PF-1i) Package treatment plants can serve multiple uses on a single parcel.

AUTHORITY

1. Policy PF-1i of the Sonoma County General Plan which states:
“Consider approval of new wastewater management systems in unincorporated areas

only when it is necessary to resolve an existing public health hazard. Avoid new small wastewater treatment systems which serve multiple uses under separate ownership on separate parcels.”

2. California Plumbing Code Section 305.2 and 713.1
3. Sonoma County Code, Chapter 7

PROCEDURES

A. Submittal requirements for permit applications (generally in conjunction with a discretionary permit application).

Note: If a discretionary project proposes the use of a package treatment plant, it must be clearly stated as part of the application and must include the following information:

1. The submittal request for a package treatment plant must be prepared by a Registered Civil Engineer with documented experience in the design of treatment plants (minimum of 5 years of experience in sewage treatment plant design or resume with 5 similar projects).
2. A full description of the collection and treatment shall be provided. This shall include a discussion of the proposed method of treatment, disinfection, filtration, and other treatment process components. A description shall be provided of the level of treatment to be obtained and shall include, without limitation, projected levels for BOD, SS, N, total and fecal coliform, phosphorous, oils and grease and other characteristics both before and after treatment of the wastewater as well as any other information required by Permit and Resource Management Department (PRMD). The description shall include the need for sludge removal (frequency and quantity of sludge removal, method of storage, method of transport and method of disposal), energy use and a detailed discussion of compliance with Title 22 standards.
3. A full description of the proposed wastewater disposal method shall be provided. This shall include an evaluation of soil conditions; groundwater conditions; groundwater movement; proximity to beneficial water uses such as wells, streams and drainage courses and consideration of contaminant travel in both ground water and surface water. The person performing this evaluation shall calculate the needed amount of wastewater storage and shall include a water balance that addresses proposed sewage volumes, rainfall, evaporation, acceptable discharge times and maintenance of freeboard in storage units. The land area necessary for the disposal system shall be calculated and identified on a site plan of the proposed development. If cut and fill is necessary, these shall be indicated on the plot plan together with identification of any off-site spoils disposal areas.

This plan shall identify routine monitoring of the structural integrity of the pond, monitoring of freeboard, control of weeds and algae and control of vectors.

B. Environmental Review of Package Plants for CEQA Compliance or for Review of Referrals from Other Agencies. Compliance with CEQA will require either an Initial Study/Negative Declaration or an Environmental Impact Report. The environmental document for the project must address all of the impacts of the project and must include any information necessary for PRMD to complete a review of the proposed package treatment plant. The following impacts are especially relevant to package treatment plants and analysis of these impacts shall be included in the environmental document:

1. Projected treatment levels need to be substantiated by an independent testing authority and documented experience under conditions similar to Sonoma County (including climate).
2. Noise. Operational noise impacts to neighboring residences with specific decibel readings submitted for equipment to be used, projections of noise levels to be expected at the property line(s) and at residences which may be impacted by increased noise levels, measurements of current night and day ambient sound levels at impacted residences and analysis of the project's compliance with the General Plan noise standards.
3. Odors and other air quality issues—including a description of wind directions, inversion conditions, likely impacts on nearby receptors and odor control methods.
4. Vectors. Control of mosquitoes and other vectors in ponds.
5. Visual. An analysis of potential visual impacts of the treatment plant, ponds and irrigation areas particularly with respect to scenic corridors.
6. Soil erosion and roiling.
7. Geological and seismic stability of the treatment and disposal areas.
8. Potential health effects including a determination of source water protection areas for public water systems.
9. Groundwater protection including contaminant movement, changes in volume or quality of groundwater and analysis of potential discharge points for treated wastewater.

10. Alternative methods of sewage disposal. Complete description of all alternatives for the project including development of an on-site septic system, other types of treatment methods, development of off-site sewage disposal systems and connection to a public sewer system.
11. The size of the proposed package treatment plant must be considered in relation to potential growth inducing impacts.
12. Aerosols. Droplet sizes that will be generated, distance of travel of droplets, wind speed and wind direction.
13. Hazardous materials. Materials to be used in the treatment process and cleaning of treatment equipment including proper handling, storage and disposal.
14. Sludge disposal. Volume of sludge generated, location of on-site storage, frequency of removal, haul routes and volume to be hauled off-site.
15. Cumulative impacts.
16. Impacts on flood plains including the Flood Prone Urban Area.
17. Biological impacts including bird attraction.
18. Consultation with other affected agencies including Regional Water Quality Control Boards, Fish and Game, Coastal Commission, and nearby cities shall be described in the environmental document. The environmental document shall include sufficient analysis of impacts and mitigation measures to allow the other agencies to use it for CEQA compliance when they issue their permits for the project.

C. Typical Conditions of Approval for a Package Treatment Plant.

1. Plans for the treatment and disposal facilities shall be prepared by a Civil Engineer registered in the State of California. An independent engineering consultant acceptable to PRMD shall perform peer review of the plans at the applicant's expense. The design engineer shall inspect the construction and shall verify that construction was completed according to plans. Prior to any use of the treatment plant, a final letter shall be submitted to the County from the design engineer approving use of the treatment plant and verifying that it is in compliance with all State and local requirements.

2. The wastewater collection system shall be constructed in accordance with Sonoma County requirements for public sewage collection systems (County of Sonoma Sewage System Standards as adopted by Chapter 24, Sonoma County Code). A permit to construct the collection system shall be obtained from PRMD prior to the start of any construction of the collection system.
3. All applicable county permits shall be obtained for the treatment and disposal facilities including grading, electrical, and plumbing permits.
4. Prior to obtaining building permits for any portion of the project, Waste Discharge Requirements shall be obtained from the appropriate Regional Water Quality Control Board.
5. The long term managerial and financial needs for the package treatment plant shall be fully determined. This shall include characterizing the persons responsible for maintenance and monitoring, their qualifications, training requirements and the expected costs of these activities. A 10-year financial plan for operation, maintenance and repair of the treatment plant shall be prepared and submitted to PRMD which includes depreciation of equipment, expected replacement times for equipment components and the financial reserves necessary to meet these operational issues.

Prior to issuance of building permits, deed restrictions shall be recorded specifying the conditions under which the package treatment plant was approved including the maintenance, management and financial obligations outlined in the 10-year financial plan.

6. No permanent occupancy of any phase of the project shall occur until all of the wastewater treatment plant and disposal facilities have been constructed, approved by the design engineer, accepted by the Regional Water Quality Control Board, approved by Sonoma County PRMD and properly trained and licensed staff are available for operation.
7. The package treatment plant shall be operated under a valid Sonoma County Operational Permit in accordance with an approved monitoring plan.
8. Use of the facility shall cease if either the Waste Discharge Requirements or the Sonoma County Operational Permit is revoked.
9. Prior to issuance of building permits, an emergency plan shall be developed that addresses the availability of back-up personnel and actions to be taken in the event of treatment plant failure, pond rupture or overflow, effects of seismic events, unusual

climatic conditions, and other similar events.

10. A pond maintenance plan shall be submitted, if ponds are provided.
11. All mitigation measures specified in the environmental study shall be implemented as conditions of the project.
12. A covenant shall be recorded with the deed to the property stating the conditions of approval of the package treatment plant and the long-term technical, managerial, and financial requirements for operation of the plant.
13. Connection shall be made to public sewer if and when it becomes available. Public sewer will be considered as being available if: (1) the parcel is in a sewer service area or the connection to the sewer is otherwise determined to be consistent with the General Plan and (2) public sewer collection facilities have been constructed in a right of way or thoroughfare abutting the premises and (3) the collection system is located within 200 feet of any building served by the package treatment plant or within 200 feet of any part of the sewage treatment/disposal system, and (4) the public sewer system has capacity for the discharge from the premises.
14. Any other conditions determined by staff or the decision making body as being appropriate to the specific project.

ATTACHMENTS

None

Approved by:

/s/ Pete Parkinson

Pete Parkinson, Director

Lead Author: Rich Holmer

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