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CONSULTING ENGINEERS

Wastewater Treatment System Fact Sheet

How to Select the Best Onsite Wastewater Treatment System for Your Site

Determining which onsite wastewater treatment or disposal system is right for you can be very time-consuming and expensive. Here are some tips that make the decision-making process easier.

1. Identify the goal of your onsite wastewater treatment system based on the intended use of the property

Onsite wastewater treatment system designs are based on the estimated daily sewage flow generated on a site. The flow estimate is based on state regulations and the property use. Daily sewage flows for residential properties are calculated based on the number of bedrooms. Daily sewage flows for commercial and industrial land uses are based on other factors, such as the number of parking spaces, number of seats, etc. As a result, your onsite wastewater treatment system will be custom designed for the use of your particular property.

2. Conduct a thorough soil suitability evaluation

Choose a licensed soil scientist to conduct a soil suitability evaluation for your site. The soil scientist will examine your property to assess the ability of the soil to assimilate and treat wastewater. Based on your soil type, the soil scientist may recommend a particular type of wastewater treatment system.

3. Identify which types of onsite wastewater treatment systems to

consider for your site

Hire a qualified professional engineer to review the soil scientist's findings and recommend an appropriate system for your site. Some systems may require a formal design plan for submittal to a regulatory agency for review. However, for simple systems, the County Health Department may allow a contractor to perform a field installation without formal submittal of plans for review.

4. Identify relevant regulatory requirements and/or constraints

Some types of treatment systems are permitted through the County Health Department, while others are permitted through the State. The permitting process can vary from a few weeks for a County permit, to as much as twelve months for a State permit. The soils evaluation will determine which type of permit your site requires. If possible, it is recommended to get an initial soil evaluation prior to purchase of the property. The engineer should be able to identify the regulatory pitfalls for each type of system, and assist you by pointing out the advantages and disadvantages of each.

5. Evaluate systems based on goals, long-term cost, O&M considerations and other relevant factors

Both the initial costs and the long-

term operation and maintenance costs should be taken into consideration when evaluating the cost-effectiveness of a particular system. Depending on the type of system, all of the following factors may not be relevant:

- Initial capital costs, including design, permitting and system construction.
- Long-term energy consumption and/or energy savings.
- Solids management (such as having septic tank or aerobic unit pumped periodically).
- System component repair and/or replacement costs (such as pumps and other mechanical and electrical system components).
- On-going maintenance contract costs (for systems needing regular checks or maintenance to ensure proper performance).
- Savings from water conservation, reuse, or recycle, if a feature of the system under consideration.

6. Select the most suitable option

Work with the engineer to select the wastewater treatment system that is the most appropriate for your site and consistent with the goals you identified for your system.

Just follow these simple steps and you will be on your way to selecting the best onsite wastewater treatment system for your needs.