

Choosing a Wastewater Treatment System

If you're like most homeowners, you're probably unfamiliar with wastewater treatment systems. And that's not surprising. After all, how often do you ever choose one? Maybe once or twice in a lifetime?

From our headquarters near Roseburg, Oregon, we at Orenco Systems® have been educating homeowners, wholesalers, installers, operators, regulators, builders, and real estate agents about wastewater treatment systems for more than 30 years. Here are some questions that every homeowner should ask before choosing a system:

→ **NOISE**

How noisy is the system? Will it keep me awake at night?

→ **ODOR**

Does the system have a reputation for being smelly? For foaming up and out of the tank?

→ **ELECTRICITY COST**

How much will the electricity cost me, each and every month, to run the system?

→ **VISUAL IMPACT**

What am I going to see in my back yard? How much of my yard will the system take up?

→ **RELIABLE PERFORMANCE**

Will my system work properly and reliably, even when I'm using it a lot? (For example, when I'm doing laundry or entertaining guests.) How about when I'm not using it enough? (For example, when I go on vacation.)

→ **ALARMS**

If something goes wrong with the system, do I have to stop what I'm doing? Do I have to handle the alarm? What if I'm not home? Can the system automatically notify a Service Provider? Can the Service Provider handle alarms from his or her computer, without making a costly service call?

→ **ALERTS**

If I'm using more water than my system is designed to handle (for example, if a toilet valve gets stuck), does my system have some kind of a quiet "early-warning signal"?

→ **MAINTENANCE COSTS AND SERVICEABILITY**

How many service calls does the system typically require in any given year? How often will the system have to be pumped and how much will that cost? Are the system and its components easy for service providers to reach and clean?

→ **EQUIPMENT REPLACEMENT COSTS**

Are there components in the system (such as pumps, controls, blowers, or aerators) that will have to be replaced within a few years? What are the repair/replacement costs for those components? How long is the warranty for those replacement components?

→ **WARRANTIES**

How long is the warranty for the treatment system?

(Worksheet on back)

	Orengo AdvanTex® Filter	Orengo Sand Filter	Activated Sludge ATU	Fill In: <input type="text"/>
Noise	Occasional clicking from control panel, so panel should be mounted on a post, not a wall.	Occasional clicking from control panel, so panel should be mounted on a post, not a wall.	Noisy external blower or aerator runs 24 hours/day.	
Odor	Not typical	Not typical	Some is typical	
Electricity Cost	\$1.50-\$3.00/mo*	\$0.75/mo*	\$15.00-40.00/mo*	
Visual Impact	System footprint typically measures 20 ft ² -30 ft ² . Control panel on post plus four ground-level lids.	System footprint typically measures 440 ft ² . Control panel on post, three ground-level lids, and 4-15 valve box lids.	System footprint similar to AdvanTex. Control panel on post, 3-4 ground-level lids, and above-ground housing for blower or aerator.	
Reliable Performance	System can handle all normal household uses.	System can typically handle all normal household uses, depending on tankage and control panel.	System not found to work reliably with heavy use or low use. During heavy use, wastewater runs quickly through the system because of its "gravity-in, gravity-out" setup. After low use, restart can shock the system. In both cases, untreated or partially treated waste can flow to the drainfield.	
Alarms	Alarm transmitted automatically via telemetry control panel to contracted Service Provider, who can often adjust system remotely, by phone. (Non-telemetry panels available in some regions) 24-48 hour reserve capacity in tank (depending on usage), so system is still usable.	Homeowner must turn alarm off and find/call a Service Provider. 24-48 hour reserve capacity in tank (depending on usage), so system is still usable.	Homeowner must turn off alarm and call Service Provider.	
Alerts	Telemetry monitoring system quietly alerts service provider via e-mail of excessive water use, preventing future problems. (Non-telemetry panels available in some regions)	No quiet alert for excessive water use, but audible alarms available.	Not available.	
Maintenance Costs and Serviceability	Two service calls in first year. Annual service call thereafter.† 8-12 year pumping interval (assumes 3-4 occupants, 1,000-gal primary chamber). At-grade installation of treatment unit for ease of servicing all components and media.	Annual service call. 8-12 year pumping interval (assumes 3-4 occupants, 1,000-gal tank). At-grade installation of treatment unit. Easy servicing of components but not media.	Two service calls per year. 6-month servicing interval for all air filters. 3-6 month pumping interval.‡ Below-grade installation of treatment unit makes servicing of all components difficult.	
Equipment Replacement Costs	Expected pump life and controls life of 20+ years. No blowers or aerators to replace.	Expected pump life and controls life of 20+ years. No blowers or aerators to replace.	6-month life cycle on air filters. Expected 3-5 year life cycle on blower or aerator.§	
Warranties	Varies by region, but is at least 3 years on complete system.	1-year warranty on treatment system components, 3-year warranty on control panel.	Varies; typically 2-year warranty on parts.	
Value-Added Features	In addition to Treatment System, package includes: Control Panel: <input type="checkbox"/> Alarm only <input type="checkbox"/> Alarm, timers <input checked="" type="checkbox"/> Alarm, timers, and telemetry (to communicate with Service Provider) Tankage: <input type="checkbox"/> Yes (____ gal) <input type="checkbox"/> No Discharge Basin: <input type="checkbox"/> Yes <input type="checkbox"/> No	In addition to Treatment System, package includes: Control Panel: <input type="checkbox"/> Alarm only <input checked="" type="checkbox"/> Alarm, timers <input type="checkbox"/> Alarm, timers, and telemetry (to communicate with Service Provider) Tankage: <input type="checkbox"/> Yes (____ gal) <input type="checkbox"/> No Discharge Basin: <input type="checkbox"/> Yes <input type="checkbox"/> No	In addition to Treatment System, package includes: Control Panel: <input type="checkbox"/> Alarm only <input type="checkbox"/> Alarm, timers <input type="checkbox"/> Alarm, timers, and telemetry (to communicate with Service Provider) Tankage: <input type="checkbox"/> Yes (____ gal) <input type="checkbox"/> No Discharge Basin: <input type="checkbox"/> Yes <input type="checkbox"/> No	In addition to Treatment System, package includes: Control Panel: <input type="checkbox"/> Alarm only <input type="checkbox"/> Alarm, timers <input type="checkbox"/> Alarm, timers, and telemetry (to communicate with Service Provider) Tankage: <input type="checkbox"/> Yes (____ gal) <input type="checkbox"/> No Discharge Basin: <input type="checkbox"/> Yes <input type="checkbox"/> No

* Based on national averages for \$/kWh (\$0.10) and occupants (3). Assumes pump run time of 20 min/day for AdvanTex AX20, 50 min/day for AdvanTex AX-RT, 4.5 minutes per day for sand filter, and blower/aerator run time of 24 hours/day for ATUs. Assumes single pump or blower/aerator.

† For non-NSF models. NSF models have two service calls per year in first two years.

‡ Based on U.S. EPA's Onsite Wastewater Treatment Manual, TFS-2 (chart)

§ *ibid*, p. 4-55, "4.8.6. Costs"