

## OSCAR II

An OSCAR system is like a subsurface drip system except that the drip tubing comes in prefabricated coils (either 5'x5' or 7'x7') that must be installed in a line over a shallow bed of imported sand.

This system consists of a trash/dose combo tank, an aerobic treatment tank, and an OSCAR drip coil field. The tanks must be placed accordingly so that they are downhill from the home/building's plumbing. Waste enters one of two separate compartments in the trash/dose tank. As the compartment fills, waste flows through the outlet to the aerobic treatment tank. Here, an aeration pump constantly pumps air into the effluent to speed up the bio-microbial treatment process. Then the effluent is transported back to the trash/dose tank, where it enters the second chamber (pump chamber). Further settling occurs in the pump chamber, ensuring that the pump does not send solid material to the drain field.

The pump chamber contains two floats: a low level/off float (lower) and a high-water alarm float (higher). Time dosing is set upon installation. The system will turn the pump on a set number of times each day for a set amount of time. If the system pumps too much effluent out of the pump chamber, the low level/off float will turn the pump off automatically until its next dose time. If the effluent level in the pump chamber rises too high between doses, the high-water alarm float will trigger an alarm which indicates that something is wrong with the system or that dose times need to be adjusted to occur more frequently.

After leaving the pump chamber, effluent is sent through a series of valves and pressure gauges in the OSCAR Headworks (a specialized valve box), and then on to the drip coil field. **The system must use a pump even if gravity flow can be achieved from the pump chamber to the OSCAR drip coil field.** This is to ensure that the drip lines are pressurized, and all parts receive the same amount of effluent. Prefabricated coils of drip tubing that have been installed in a line then disperse the effluent into a bed of sand using tiny dripline emitters. Frequent, small doses keep the sand constantly filtering effluent which allows the receiving soil underneath the sand to disperse more within a smaller amount of space.

Not all effluent pumped to the coils escapes through the emitters. Effluent that circulates through the coils without dripping into the sand is returned through return pipes to the pump chamber where it will be pumped back through the coils until it does drip into the sand.

If the water level in the pump chamber ever reaches the high-water alarm float, the alarm will go off, indicating that there is something wrong with the system.

OSCAR systems should have an operation and maintenance inspection done once every year of operation. Concurring reports may need to be turned in to the county.

Septic systems are sized according to the amount of waste they will be treating, usually estimated by the number of bedrooms in the home. For non-residential buildings, water usage usually determines the size.

Upon installation, the only parts of the system that will be visible from above ground are 24-inch riser lids above the tanks, access ports above the tanks and a valve box lid. Each of these lids will be flush with the final grade and can be walked on, mowed over, or disguised to lessen noticeability.

Drip fields should be treated as fragile to increase their longevity. Animals such as livestock should not be kept on drip coils, and vehicles should not be driven over them. Vegetation with intrusive roots should not be planted near them. Finally, a homeowner should be mindful of what is going into the system.