

The Use of the Xerolet Eco-System In One and Two Family Dwellings

**Environmental Public Health Division
Public Health and Preparedness Commission
Indiana State Department of Health
2 North Meridian Street
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Purpose:

The purpose of this document is to provide guidance for the use of the Xerolet Eco-System in one and two family dwellings. The proposed use of the Xerolet Eco-System in commercial facilities is handled by the state department of health (department) on a case-by-case basis.

Background:

The department sets minimum standards for residential (one and two family dwellings) onsite sewage systems. In accordance with 410 IAC 6-8.1-30, *Residential Sewage Disposal Systems, Administrative Authority*, the rule is administered by local boards of health through their health officer and his/her authorized representatives. The rule addresses onsite system equipment and devices located outside of the dwelling. Therefore, indoor appurtenances such as the Xerolet Eco-System are not addressed.

Discussion:

The Xerolet Eco-System is a device that treats residential strength wastewater. It has a proprietary toilet, a dehydrator with the option to operate on electricity, propane or solar, and requires a central house vacuum system or an optional internal vacuum system. The remaining equipment of the system can be installed in a basement, garage, crawlspace or attic, and includes a small digestion (settling) tank and an infusion tank (the system requires larger tanks if the house has a garbage disposal). The infusion tank has several adjunct devices including an ozone generator and UV light (both for sanitation), heat exchanger, vent, and overflow port for excess effluent to flow to an onsite sewage system either by gravity or with the assistance of a pump. The Xerolet Eco-System also has a self diagnostic system that can report failures to a Xerolet Pro-Dealer, the health department with jurisdiction, and the homeowner. The manufacturer states that the capacity of the system is 140,000 gallons per year, (an average daily flow of 384 gallons); the system has no provision for flow equalization. The Xerolet Eco-System is not currently certified by the National Sanitation Foundation (NSF).

The use of a Xerolet Eco-System in a residence is not a substitute for an onsite sewage system. The use of a Xerolet Eco-System reduces, but does not eliminate, the wastewater volume generated by household activities. Wastewater commonly known as gray water (wastewater from bathing, laundry, dish-washing, etc.) is partially treated by the system and must be disposed of in compliance with all applicable laws, rules and ordinances. Therefore, the installation and maintenance of the Xerolet Eco-System is in addition to the onsite sewage system designed and installed in accordance with 410 IAC 6-8.1.

Decision:

The local health officer may allow the use of a Xerolet Eco-System in a single-family dwelling when an onsite sewage system has been designed and installed in accordance with *410 IAC 6-8.1* and the installation of the Xerolet Eco-System will comply with all applicable ordinances, and building, plumbing and electrical codes. The following guidance is provided to local health departments concerning the use of the Xerolet Eco-System:

1. The use of a proprietary product (i.e., Xerolet Eco-System) is not a substitute for an onsite sewage system that is designed and installed in accordance with *410 IAC 6-8.1*.
2. The number of Xerolet Eco-System digestion (settling) tank(s), infusion tank(s), ozone generator(s) and UV light(s) should be based on the number of bedrooms in the residence, not on the number of occupants.
3. The Xerolet Eco-System should be installed, operated and maintained according to the specifications of the manufacturer in a manner that will preclude any potential pollution or health hazards.
4. The homeowner should maintain a service contract with a Xerolet Pro-Dealer.
5. The disposal of partially treated wastewater from a Xerolet Eco-System should be to either a sanitary sewer system or an approved onsite sewage system and not used in vegetable or ornamental gardens, or on a lawn.
6. The disposal of dry powder from a Xerolet Eco-System should be at an approved landfill and not used in vegetable or ornamental gardens, or on a lawn.