

**Pima County Department of Environmental Quality
Alternative Wastewater On-Site Residential Treatment System Checklist
for Engineers, Designers, and Site Evaluators**

per Arizona Administrative Code Title 18, Chapter 9

R18-9-E312. 4.12 General Permit: Textile Filter, Less Than 3000 Gallons Per Day Design Flow

General Permit

- _____ Wastewater treated to a level equal to or better than that specified in R18-9-E302 (B).
- _____ Textile filter is characterized by:
 - The flow of wastewater into a packed bed filter in a containment structure or structures. The packed bed filter uses a textile filter medium with high porosity and surface area; and
 - The textile filter medium provides further treatment by removing suspended material from the wastewater by physical straining, and reducing nutrients by microbial action.
- _____ A textile filter may be used in conjunction with a two-compartment septic tank or a two-tank system if the second compartment or tank is used as a recirculation and blending tank.
 - Divert a portion of the wastewater flow from the textile filter back into the second tank for further treatment.
- _____ A textile filter may use if:
 - Nitrogen reduction is desired,
 - The native soil is excessively permeable,
 - There is little native soil overlying fractured or excessively permeable rock, or
 - A reduction in setback distances or minimum vertical separation is desired.

Performance

- _____ Ensure that a textile filter is designed so that it produces treated wastewater that meets the following criteria:
 - TSS of 15 milligrams per liter, 30-day arithmetic mean;
 - BOD₅ of 15 milligrams per liter, 30-day arithmetic mean;
 - Total nitrogen (as nitrogen) of 30 milligrams per liter, or 15 milligrams, five-month arithmetic mean per liter if documented;
 - Total coliform level of 100,000 (Log₁₀ 5) colony forming units per 100 milliliters, 95th percentile.

Notice of Intent to Discharge

- _____ Meet the requirements specified in R18-9-A301 (B) and R18-9-A309 (B), and
- _____ Submit:
 - The name and address of the filter manufacturer;
 - The filter model number;
 - A copy of the manufacturer's filter warranty;
 - If the system is for nitrogen reduction to 15 milligrams per liter, five-month arithmetic mean, specifications on the nitrogen reduction performance of the filter system and corroborating third-party test data;
 - The manufacturer's operation and maintenance recommendations to achieve a 20-year operational life; and
 - If a pump or aerator is required for proper operation, the pump or aerator model number and a copy of the manufacturer's warranty.

Design requirements

- _____ Meet the applicable requirements in R18-9-A312, and
- _____ Ensure that the textile medium has a porosity of greater than 80 percent;
- _____ Ensure that the wastewater is delivered to the textile filter by gravity flow or a pump;
- _____ If a pump is used to dose the textile filter, the pump and appurtenances meet following criteria:
 - The textile media loading rate and wastewater recirculation rate are based on calculations that conform with performance data listed in the reviewed product list maintained by the Department as required under R18-9-A309(E),
 - The tank and recirculation components are sized to contain the dose volume and a reserve volume above the high water level alarm that will contain the volume of daily design flow, and
 - A control panel with a programmable timer is used to dose the textile media at the applicable loading rate and wastewater recirculation rate.

Installation requirements

- _____ Meet the applicable requirements in R18-9-A313 (A)
- _____ Before placing the filter modules, slope the bottom of the excavation for the modules toward the discharge point to minimize ponding;
- _____ Ensure that the bottom of all excavations for the filter modules, pump, aerator, or other components is level and free of debris, rocks, and sharp objects.
 - If the excavation is uneven or rocky, use a bed of sand or pea gravel to create an even, smooth surface;
- _____ Provide the modules and other components with anti-buoyancy devices to ensure they remain in place in the event of high water table conditions; and
- _____ Provide a mechanism for draining the filter module inlet line

Operation and maintenance requirements

- _____ Meet the applicable requirements in R18-9-A313, and
- _____ Not flush corrosives or other materials known to damage the textile material into any drain that transmits wastewater to the on-site wastewater treatment facility.

Prepared by:	Date:
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