

**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-E318. 4.18 General Permit: Constructed Wetland, 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).
- _____ Constructed wetland is characterized by a lined excavation, filled with a medium for growing plants and planted with marsh vegetation. The treated wastewater flows horizontally through the medium in contact with the aquatic plants.
 - As the wastewater flows through the wetland system, additional treatment is provided by filtering, settling, volatilization, and evapotranspiration.
 - The wetland system allows microorganisms to break down organic material and plants to take up nutrients and other pollutants.
 - The wastewater treated by a wetland system is discharged to a subsurface soil disposal system.
- _____ A constructed wetland may be used if further wastewater treatment is needed before disposal.

Performance

- _____ Ensure that a constructed wetland is designed so that it produces treated wastewater that meets the following criteria:
 - TSS of 20 milligrams per liter, 30-day arithmetic mean;
 - BOD₅ of 20 milligrams per liter, 30-day arithmetic mean;
 - Total nitrogen (as nitrogen) of 45 milligrams per liter, five-month arithmetic mean; and
 - Total coliform level of 100,000 (Log₁₀ 5) colony forming units per 100 milliliters, 95th percentile.

Notice of Intent to Discharge

- _____ Comply with the requirements specified in R18-9-A301(B) and R18-9-A309(B).

Design, installation, operation, and maintenance requirements

- _____ Comply with the applicable design, installation, operation, and maintenance requirements in R18-9-A312, R18-9-A313(A), and R18-9-A313(B).

Reference design

- _____ A constructed wetland may be used that achieves the performance requirements above by following a reference design on file with the Department.
- _____ File a form provided by the Department for supplemental information about the proposed constructed wetland with the submittal of the Notice of Intent to Discharge.

Prepared by:

Date: