

TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 9. WATER POLLUTION CONTROL
PART E. TYPE 4 GENERAL PERMITS

R18-9-E318. 4.18 General Permit: Constructed Wetland, Less Than 3000 Gallons Per Day Design Flow

- A. A 4.18 General Permit allows for the use of a constructed wetland receiving wastewater treated to a level equal to or better than that specified in R18-9-E302(B).
 - 1. Definition. "Constructed wetland" means a treatment technology 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.
 - a. As the wastewater flows through the wetland system, additional treatment is provided by filtering, settling, volatilization, and evapotranspiration.
 - b. The wetland system allows microorganisms to break down organic material and plants to take up nutrients and other pollutants.
 - c. The wastewater treated by a wetland system is discharged to a subsurface soil disposal system.
 - 2. An applicant may use a constructed wetland if further wastewater treatment is needed before disposal.
- B. Performance. An applicant shall ensure that a constructed wetland is designed so that it produces treated wastewater that meets the following criteria:
 - 1. TSS of 20 milligrams per liter, 30-day arithmetic mean;
 - 2. BOD₅ of 20 milligrams per liter, 30-day arithmetic mean;
 - 3. Total nitrogen (as nitrogen) of 45 milligrams per liter, five-month arithmetic mean; and
 - 4. Total coliform level of 100,000 ($\log_{10} 5$) colony forming units per 100 milliliters, 95th percentile.
- C. Notice of Intent to Discharge. The applicant shall comply with the Notice of Intent to Discharge requirements specified in R18-9-A301(B) and R18-9-A309(B).
- D. Design, installation, operation, and maintenance requirements. The permittee shall comply with the applicable design, installation, operation, and maintenance requirements in R18-9-A312, R18-9-A313(A), and R18-9-A313(B).
- E. Reference design.
 - 1. An applicant may use a constructed wetland that achieves the performance requirements in subsection (B) by following a reference design on file with the Department.
 - 2. The applicant shall file a form provided by the Department for supplemental information about the proposed constructed wetland with the applicant's submittal of the Notice of Intent to Discharge.