

R18-9-E320. 4.20 General Permit: Disinfection Devices, Less Than 3000 Gallons Per Day Design Flow

- A. A 4.20 General Permit allows a disinfection device that receives wastewater from a septic tank or other treatment device of an on-site wastewater treatment facility, authorized by a general permit, and reduces the level of harmful microorganisms in the wastewater during passage through the device.
1. The disinfection device kills the microorganisms by exposing the wastewater to heat, radiation, or a chemical disinfectant.
 2. Some means of disinfection require detention before discharge.
 3. A disinfection device is considered if a reduction in harmful microorganisms, as measured by the total coliform level, is needed for surface or near surface disposal of the wastewater or if reduction of the minimum vertical separation distance specified in R18-9-A312(E) is desired.
- B. Restrictions.
1. Unless designed to operate without electricity, an applicant shall not install a disinfection device if electricity is not permanently available at the site.
 2. This general permit does not authorize a disinfection device that releases chemical disinfectants or disinfection byproducts harmful to plants or wildlife in the discharge area or causes a violation of an Aquifer Water Quality Standard.
- C. Performance. An applicant shall ensure that:
1. The required performance of a disinfection device is dependent on the level of disinfection needed for a particular type of disposal; and
 2. For an on-site device wastewater treatment facility with discharge to the land surface, the disinfection device in conjunction with all preceding treatment processes produces treated wastewater that meets the following criteria:
 - a. A total coliform level of Log₁₀ 0 colony forming units per 100 milliliters, 99th percentile;
 - b. Dissolved oxygen content of at least six milligrams per liter;
 - c. Clear and odorless appearance.
- D. Operation and maintenance. A permittee shall:
1. If the disinfection device relies on the addition of chemicals for disinfection, ensure that the device is operated to minimize the discharge of disinfection chemicals while achieving the required level of disinfection; and
 2. Incorporate a fail-safe mechanism to prevent inadequately treated wastewater from being discharged.
- E. Reference design.
1. An applicant may design and install a disinfection device that achieves the performance requirements in subsection (C) 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 system with the applicant's submittal of the Notice of Intent to Discharge.
- F. Alternative design. A permittee may submit an alternative to the reference design for a disinfection device if, following the requirements in R18-9-A312(G), the design achieves the performance requirements in subsection (C).
1. The Department shall consider the submittal of an alternative design as one design change to establish the applicable fee under 18 A.A.C. 14.
 2. The applicant shall file a form provided by the Department for supplemental information about the proposed system with the applicant's submittal of the Notice of Intent to Discharge.

Historical Note

New Section adopted by final rulemaking at 7 A.A.R. 235, effective January 1, 2001 (Supp. 00-4).