

R18-9-E303. 4.03 General Permit: Composting Toilet, Less Than 3000 Gallons Per Day Design Flow

- A. A 4.03 General Permit allows a composting toilet.
1. Definition. For purposes of this Section, a “composting toilet” means a treatment technology that receives human waste from a waterless toilet directly into an aerobic composting tank where dehydration and biological activity reduce the volume and the content of nutrients and harmful microorganisms to an appropriate level for later disposal at the site or elsewhere.
 2. An applicant shall use a composting toilet system only if a wastewater system or gray water system is used to accommodate wastewater that does not originate from toilets.
 3. An applicant may use a composting toilet if:
 - a. Limited water availability prevents use of other types of on-site wastewater treatment facilities,
 - b. Environmental constraints prevent the discharge of wastewater or nutrients to a sensitive area,
 - c. Inadequate space prevents use of other systems, or
 - d. Severe site limitations exist that make other forms of treatment or disposal unacceptable.
- B. Restrictions. An applicant shall:
1. Not install a composting toilet if the composting chamber temperature cannot be maintained between 60E° F and 70E° F or for any seven day average the temperature of the chamber is less than 55E° F or greater than 80E° F, and
 2. Ensure that a composting toilet system receives only human excrement.
- C. Performance. An applicant shall ensure that a composting toilet:
1. Prevents discharge of blackwater to the native soil through containment in the composting toilet system,
 2. Manages gray water as provided in this Article or under 18 A.A.C., and
 3. Prevents vectors.
- D. Notice of Intent to Discharge. In addition to the Notice of Intent to Discharge specified in R18-9-A301(B) and R18-9-A309(B), the applicant shall submit:
1. The name and address of the composting toilet system manufacturer;
 2. A copy of the manufacturer’s warranty, installation, and operation and maintenance plans;
 3. The product model number;
 4. The rate of composting and capacity calculations.
 5. Documentation of listing by a national listing organization indicating that the composting toilet meets the stated manufacturer’s specifications for loading, treatment performance, and operation;
 6. The method of vector control; and
 7. The calculation of waste volume and planned method for disposing of the composted human excrement residue.
- E. Design requirements. An applicant shall:
1. Ensure that the composting tank is double-walled for leak protection;
 2. Ensure that the composting tank has airtight seals to prevent odor or toxic gas from escaping into the building. The system may be vented to the outside;
 3. Base the rate of composting and capacity calculations on the lowest monthly average tank temperature, unless a temperature control device is installed;
 4. Unless a temperature control device is installed, ensure that the capacity of the composting facility provides adequate storage for all waste produced during the months when the average temperature is below 55E° F, if the manufacturer allows operation at this temperature; and
 5. Dispose of the composted product at the end of the treatment process as provided under 18 A.A.C. 8 and 18 A.A.C. 13.
- F. Operation and maintenance requirements. A permittee shall:
1. Provide adequate mixing, ventilation, temperature control, moisture, and bulk to reduce fire hazard and prevent anaerobic conditions;
 2. If consistent with this Chapter, follow the manufacturer’s recommendations regarding use of an organic bulking agent to control liquid drainage, promote aeration, or provide additional carbon;
 3. If consistent with this Chapter, follow the manufacturer’s recommendations for operation, maintenance, and recordkeeping regarding rotating tines used to control the movement of material to the bottom of the composting chamber;
 4. If batch system containers are mounted on a carousel, place a new container in the toilet area if the previous one is full;
 5. Ensure that only human waste, paper approved for septic tank use, and the amount of bulking material required for proper maintenance is introduced to the composting tank. The applicant shall immediately

- remove all other materials or trash. If allowed by the manufacturer's specifications and consistent with this Chapter, other nonliquid compostable residues, such as fruit and vegetable peels, may be added to the toilet;
6. Ensure that liquid end product that does not evaporate is sprayed back onto the composting waste material or removed by a permitted or licensed waste hauler;
 7. Remove and dispose of composted waste, at least annually, using a permitted or licensed waste hauler if the waste is not placed in a disposal area for burial;
 8. Before ending use for an extended period take measures to assure that moisture is maintained to sustain bacterial activity and free liquids in the tank do not freeze; and
 9. After an extended period of non-use, empty the composting tank of solid end product and inspect all mechanical components to verify that the mechanical components are operating as designed.

Historical Note

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