

TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 9. WATER POLLUTION CONTROL
ARTICLE 3. AQUIFER PROTECTION PERMITS - GENERAL PERMITS
PART A. GENERAL PROVISIONS

R18-9-A312. Facility Design for Type 4 Onsite Wastewater Treatment Facilities

- A.** General design requirements. An applicant shall ensure that the person designing an on-site wastewater treatment facility:
1. Signs the design documents submitted as part of the Notice of Intent to Discharge to obtain a Construction Authorization, including plans, specifications, drawings, reports, and calculations; and
 2. Locates and designs the on-site wastewater treatment facility project using good design judgment and relies on appropriate design methods and calculations.
- B.** Design considerations and flow determination. An applicant shall ensure that the person designing the on-site wastewater treatment facility shall:
1. Design the facility to satisfy a 20-year operational life;
 2. Design the facility based on the provisions of one or more of the general permits in R18-9-E302 through R18-9-E322 for facilities with a design flow of less than 3000 gallons per day, and R18-9-E323 for facilities with a design flow of 3000 gallons per day to less than 24,000 gallons per day;
 3. Design the facility based on the facility's design flow and wastewater characteristics as specified in R18-9-A309(B)(3);
 4. For on-site wastewater treatment facilities permitted under R18-9-E303 through R18-9-E323, apply the following design requirements, as applicable:
 - a. Include the power source and power components in construction drawings if electricity or another type of power is necessary for facility operation;
 - b. If a hydraulic analysis is required under subsection (E), perform the analysis based on the location and dimensions of the bottom and sidewall surfaces of the disposal works that are identified in the design documentation;
 - c. Design components, piping, ports, seals, and appurtenances to withstand installation loads, internal and external operational loads, and buoyant forces. Design ports for resistance against movement, and cap or cover openings for protection from damage and entry by rodents, mosquitoes, flies, or other organisms capable of transporting a disease-causing organism;
 - d. Design tanks, liners, ports, seals, piping to and within the facility, and appurtenances for watertightness under all operational conditions;
 - e. Provide adequate storage capacity above high operating level to:
 - i. Accommodate a 24-hour power or pump outage, and
 - ii. Contain wastewater that is incompletely treated or cannot be released by the disposal works to the native soil;
 - f. If a fixed media process is used, provide in the construction drawings the media material, installation specification, media configuration, and wastewater loading rate of the media at the daily design flow;
 - g. Provide a fail-safe wastewater control or operational process, if required by the general permit to prevent discharge of inadequately treated wastewater; and
 - h. Reference design. If using a reference design on file with the Department, indicate the reference design within the information submitted with the Notice of Intent to Discharge.