

**3701-29-11 Flow estimation and waste strength.**

- (A) The owner or owner's agent shall provide information to the board of health and/or the system designer on the sources of sewage from the dwelling or structures to be served by a STS to document system design flow and waste strength in accordance with these rules. The board of health may require submission of building and plumbing plans including plumbing fixture details and other information as needed.
- (B) The daily design flow estimate for a STS shall comply with the following general provisions unless otherwise specified:
  - (1) Except as provided in paragraphs (B)(4) and (B)(5) of this rule, the daily design flow for a HSTS shall be one hundred twenty gallons per day per bedroom with a minimum design flow of two hundred forty gallons per day.
  - (2) For a SFOSTS with periodic large daily flow, effluent may be stored to avoid exceeding the one thousand gallon per day treatment limit provided the peak design flow does not exceed three thousand five hundred gallons per day. When effluent is stored to avoid exceeding the one thousand gallon per day treatment limit, the design shall use time dosing and the appropriate tank capacity to store effluent during peak flows.
  - (3) The daily design flow for a SFOSTS shall be determined in accordance with table A-1 of rule 3745-42-05 of the Administrative Code or alternative daily design flow as established by the director of health. The board of health may consider flow monitoring data in addition to or in place of the minimum design flow requirement in table A-1. If flow monitoring is used as the method of determining daily design flows, then daily design flow shall be at least one and a half to two times the measured average daily flows.
  - (4) An increase in the daily design flow estimate for a STS shall be required by the board of health when there is an indication that the flows established in accordance with paragraph (B)(1) or (B)(2) of this rule may be exceeded. Any required increase in daily design flow shall be documented on the installation permit and operation permit.
  - (5) A reduction in daily design flow for a STS may be approved by the board of health when information submitted indicates conditions that justify reduced flow such as low-flow fixtures, alternative toilets, or other circumstances that may warrant a reduction in daily design flow. Justification for a proposed reduction in daily design flow shall be included in the site review application and, if approved, shall be documented on the installation permit and operation permit. When actions are taken to reduce the flow to a STS, the design shall address increased waste strength due to the reduced flows.
- (C) The waste strength estimate for a STS shall be determined for design purposes. Waste strength for sewage received by a HSTS shall be considered typical residential sewage strength when, after primary treatment, the waste strength does not regularly exceed the TSS content of three hundred thirty milligrams per liter, the BOD<sub>5</sub> content of two hundred fifty milligrams per liter, or the fats, oils, and grease content of twenty five milligrams per liter. Waste strength estimates for SFOSTS shall be determined from the waste strength ranges in table A-1 of rule

3745-42-05 of the Administrative Code.

- (D) Any waste prohibited by UIC regulations for introduction into a SFOSTS shall be source separated and regulated by Ohio EPA.
- (E) When the waste strength for a STS is expected to exceed or has exceeded the typical residential sewage strength:
- (1) The use of additional treatment components that are approved by the director of health shall be included in the STS design prior to soil treatment and/or dispersal or a pretreatment component approved by the director for meeting specified effluent quality standards. The method of treatment to reduce waste strength shall be justified in the design, reviewed by the board of health for compliance with this chapter, and if approved, shall be documented on the installation permit and operation permit.
  - (2) Alternative soil loading rate values that vary from these rules may be used to address concerns of increased CBOD<sub>5</sub> loading from a STS. These alternative soil loading rates shall be documented and justified in the design including waste strength characterization information. Board of health approval for any increase in loading estimates shall be documented on the installation permit and operation permit.
- (F) A grease interceptor or automatic grease removal devices located inside buildings shall meet the requirements of rule 4101:3-10-01 of the Administrative Code. A sewage tank approved under rule 3701-29-12 of the Administrative Code may be used as an external gravity grease interceptor to reduce fats, oils and grease loading from a STS. The external grease interceptor shall be located, designed, and installed in a manner that will allow access for inspection and maintenance, including the following:
- (1) A source segregated inlet line, when feasible;
  - (2) The tank shall be sized to allow for a minimum of thirty minutes of retention time based on the peak flow from fixtures contributing fats, oils and grease; and
  - (3) Watertight access risers extended to grade with secure covers.
- (G) Removal of a garbage disposal may be used to address concerns of increased nutrient, total suspended solids, and biochemical oxygen demand loading and concerns with an increased frequency of septage removal.

Replaces: 3701-29-08, 3701-29-21

Effective: 01/01/2015

Five Year Review (FYR Dates): 01/01/2020

CERTIFIED ELECTRONICALLY

---

Certification

09/29/2014

---

Date

Promulgated Under: 119.03  
Statutory Authority: 3718.02  
Rule Amplifies: 3718.02  
Prior Effective Dates: 7/1/1974, 7/1/77, 7/2/07, 7/30/07