

public buildings and places of employment shall be based on one or more of the following:

(a) Measured daily wastewater flow over a period of time representative of the facility's use or occupancy.

(b) A detailed estimate of wastewater flow based upon per capita occupancy or usage of the facility or per function occurrence within the facility.

Note: See appendix for further information.

(7) ESTIMATING CONTAMINANT LOADS. Estimates of contaminant loads from dwellings and public facilities shall be based on a detailed analysis including all contaminants listed in s. SPS 383.44 (2) (a).

Note: See appendix for further information.

Note: See Note under s. SPS 383.32 (3) for information relative to industrial wastes.

(8) GENERAL DESIGN REQUIREMENTS. (a) *Flow velocity.* 1. Piping within a POWTS shall be designed and installed to supply wastewater to POWTS treatment and dispersal components while maintaining the velocity required to ensure operation of the POWTS.

2. Gravity flow piping between POWTS components shall be installed at a pitch that produces a computed flow velocity of at least one foot per second when flowing half full.

3. Pressurization equipment or devices and piping to be utilized upstream of a POWTS treatment or dispersal component consisting in part of in situ soil shall be designed and installed to produce a computed velocity of at least 2 feet per second.

4. Gravity piping within a POWTS treatment or dispersal component consisting in part of in situ soil shall be installed level or pitched downstream a maximum 4 inches per 100 feet.

(b) *Distribution and drain pipe sizing.* The piping within a POWTS shall be of a diameter to permit the operation of the POWTS.

(c) *Frost protection.* All POWTS components shall be protected from freezing temperatures that could detrimentally affect component operation to provide wastewater conveyance, treatment or dispersal.

(d) *Component placement.* The orientation of a POWTS treatment or dispersal component consisting in part of in situ soil shall take into account landscape variations in elevation, slope orientation, and other conditions that could affect component performance relative to dispersal or aeration.

(e) *Alarms or warning systems.* 1. a. A POWTS component utilizing a mechanical device to treat wastewater or to distribute

effluent shall be provided with an automatic visual or audible means of notifying the user of the POWTS of the failure of the mechanical device.

Note: In accordance with s. SPS 316.300 (1) (a), an alarm that is electrically powered is to be on a separate circuit from the circuit supplying power to the mechanical device.

b. An alarm indicating the failure of a pump shall remain audible or visible until manually turned off.

c. Where duplex pumping equipment is employed to provide continuous component operation in the event that one pump fails, the pumps shall be installed in such a manner so as to provide the continuous operation automatically.

2. A POWTS holding tank shall be provided with an automatic visual or audible means of notifying the user of the POWTS of the necessity for servicing.

(f) *Accessibility.* The design of a POWTS shall include provisions to provide access to all components that require maintenance or observation.

(g) *Anchoring system components.* An exterior subsurface POWTS treatment tank or POWTS holding component to be installed in an area subject to saturated conditions shall be installed so as to prevent flotation of the tank or component.

Note: See appendix for further information.

(h) *Treatment byproducts.* 1. All treatment byproducts discharged from or as a result of operating a POWTS shall be disposed of so as not to create a human health hazard.

Note: The disposal of the contents of holding tanks and the sludge, scum, and contaminated liquids from treatment tanks and components is regulated by the department of natural resources under chs. NR 113 and NR 204.

2. Deleterious or hazardous materials segregated out from effluent flows shall be disposed of in a manner conforming with the rules of the state agency having jurisdiction.

3. Effluent from a POWTS shall be dispersed so as not to create a human health hazard.

4. All POWTS components within a building or structure shall be gas tight unless provisions are made assuring the safety of individuals entering the building or structure.

(i) *Site parameters and limitations.* POWTS treatment, holding and dispersal components shall be located so as to provide the minimum horizontal setback distances as outlined in Table 383.43-1 as safety factors for public health, waters of the state and structures in the event of component failure.

Note: Chapter NR 812 establishes upslope location criteria for wells relative to contamination sources.

Table 383.43-1

Horizontal Setback Parameters

Physical Feature	POWTS Treatment Component Consisting in Part of In Situ Soil or Dispersal Component	Exterior Subsurface Treatment Tank or Holding Tank Component	Servicing, Suction Lines and Pump Discharge Lines
Building	10 feet	5 feet <sup>a</sup>	none <sup>b</sup>
Property Line <sup>c</sup>	5 feet	2 feet	2 feet
Swimming Pool	15 feet	none <sup>b</sup>	none <sup>b</sup>
OHW <sup>d</sup> M of Navigable Waters	50 feet	10 feet	10 feet
Water Service and Private Water Main	10 feet	10 feet	10 feet
Public Water Main	chs. NR 811	chs. NR 811	chs. NR 811
Well	chs. NR 811 & 812	chs. NR 811 & 812	chs. NR 811 & 812

OHW<sup>d</sup>M = Ordinary High-Water Mark

<sup>a</sup> Except camping unit transfer containers.

<sup>b</sup> See s. SPS 383.43 (8) (f) relative to accessibility.

<sup>c</sup> Road-right-of-way lines may be more restrictive than property lines.

Note: See s. SPS 382.365, Table 382.365-4 relative to horizontal setback distances to subsurface infiltrative systems.

Note: The department of transportation under s. Trans 233.08 establishes setback limits from the centerline of state trunk highways or connecting highways to structures and improvements which include septic systems.