



POWTS FACTSHEET

HIGH-STRENGTH FACILITIES

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RESOURCES

[SPS 383.42\(2\)](#)
[SPS 383.43\(7\)](#)
[SPS 383.44\(2\)](#)
Table A-383.43-1
[SPS 383.44\(2\)\(b\)](#)
[SPS 383.54\(2\)\(b\)](#)
[DPS POWTS Website](#)

SUMMARY

SPS 383 as a performance code, and SPS 383.44(2) sets the parameters for the quality of influent discharged into a POWTS treatment or dispersal component. These include a monthly average of 30 mg/L fats, oil and grease (FOG), 220 mg/L BOD₅, and 150 mg/L TSS. This means that if the wastewater discharged to a soil based system exceeds these parameters, it is considered high strength. The averages described above are a calculation of the sum of all measurements taken over 30 consecutive days, with at least 6 measurements occurring on 6 separate days and divided by the number of measurements taken during the period. (SPS 383.44(2)(b))

WHICH FACILITIES ARE HIGH STRENGTH

Wastewater that meets the influent parameters set in the code is considered residential quality but any dwelling or public facility can be high strength depending on the uses in the structure served. SPS 383.42(2) requires that for any situation where it is known that the wastewater contaminant load exceeds the parameter of this subchapter, the POWTS shall be designed in relation to the known flow or load. SPS 383.43(7) specifies that the estimates of contaminate loads from dwellings and public facilities shall be based on a detailed analysis including all contaminants described above. Per Table A-383.43-1, these uses are considered high strength unless shown otherwise:

- Bars (with or without meals served)
- Bowling alley with a bar
- Campground sanitary dump station
- Dining halls
- Drive-in restaurants
- Hospitals
- Schools (with meals or showers)
- Restaurants (which include coffee shops, ice cream shops, sandwich shops, etc).

WHAT DOES THIS MEAN FOR POWTS DESIGN

If any of these types of uses are proposing a new POWTS, the design of the system must adequately address the high strength waste. This is usually by the means of an approved pretreatment component. There may be other alternatives to this, including separating high strength wastes into a holding tank, mass loading, or installing a holding tank and sampling the wastewater loads after start-up. If sampling reveals that parameters are below code

requirements, no pretreatment is necessary and a dispersal component can be installed. If sampling reveals that parameters are above parameters, pretreatment would be installed ahead of any dispersal.

If a use considered high strength is proposing a replacement POWTS, the design can include some type of pretreatment or the current waste stream can be sampled and a design can be done based on the results of that sampling. If a replacement system is difficult to sample, a facility may need to install pretreatment or resort to options described above.

NOTE that per SPS 383.44(5) (a), when treating wastewater to ≤ 30 mg/L BOD₅, ≤ 30 mg/L TSS or $< 10^4$ cfu/100mL Fecal Coliform, the distribution of effluent shall be by means of pressure distribution as specified in Tables 383.44-2 and 383.44-3.

The Department may require the metering or monitoring of any POWTS to evaluate the operation of the POWTS per SPS 383.54(2)(b).