

CALCULATING DAILY FLOW

8



OBJECTIVES

The purpose of this chapter is to:

- Calculate the daily flow for a residential establishment.
- Calculate the daily flow for a commercial or institutional establishment.



Sections 73.16 & 73.17

Peak Daily Flow



What does peak daily flow represent?



Why do you think a peak daily flow is used instead of an average flow?

Calculating Daily Flows



EXERCISE 8-1



Sections 73.16 & 73.17

Use Sections 73.16 and 73.17 of the regulations to answer the following questions for both residential and commercial/institutional establishments.

RESIDENTIAL ESTABLISHMENTS

1) What is the daily flow in gpd (gallons per day) for a single-family residence with three bedrooms?

2) What is the daily flow for a single-family residence with seven bedrooms?

3) What is the daily flow for a single-family residence with four bedrooms?

4) What is the daily flow for a single-family residence with two bedrooms?



NOTES

COMMERCIAL & INSTITUTIONAL ESTABLISHMENTS



NOTES

1) What is the daily flow for an airport with 300 employees where the sewage facility is only used by employees?

2) What is the daily flow for a church that seats 200 (no meals)?

3) What is the daily flow for an office with 10 employees?

4) What is the daily flow for a mobile home park with six spaces?

5) What is the daily flow for a swimming pool with a maximum capacity of 88 people?

CALCULATING A SEWAGE FLOW FOR A NONRESIDENTIAL ESTABLISHMENT



Section 73.17(c)



NOTES

ACTUAL PEAK FLOW

This section allows the developer of a nonresidential establishment to size an absorption area by measuring the actual peak daily flow for an existing or new establishment to determine the peak daily sewage flow.

Existing nonresidential establishment: For example, school officials may take daily flow measurements for a year to establish a peak daily flow. If the school is proposing to add 100 students, this recorded actual peak daily flow can be used rather than the number in the regulations. The actual measured peak daily flow may be used to size or expand the existing onlot sewage disposal system.

New nonresidential establishment: For example, the developer of a store could take daily flow measurements for a year from a similar existing store and use the actual peak daily flow to size its onlot sewage disposal system.

CALCULATING DAILY PEAK FLOW USING THE ACTUAL AVERAGE DAILY FLOW



NOTES

If the owner of a nonresidential establishment does not want to take flow readings every day to determine the peak daily sewage flow, the total flow could be measured for a year and then divided by the number of days of operation in a year.

If the average actual daily flow is used, the peak daily flow must be calculated by multiplying the actual average daily flow by two.

Care must be exercised when dealing with a facility that has irregular sewage flows.

INDUSTRIAL WASTE

Call DEP if you are dealing with an industrial waste. An SEO cannot permit a site for industrial waste.

Some Examples Of Industrial Waste:

- Slaughterhouses
- Funeral homes
- Pharmacies
- Beauty salons (more than one operator)
- Car washes
- Pet kennels



KEY POINTS

- There are minimum daily flows:
 - ✓ Single-family residence – _____ gpd
 - ✓ Commercial or institutional establishment – _____ gpd
- The daily flow will affect the size of a system's absorption area.



NOTES