

3.3 Wastewater Flows

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Assigning wastewater flow projections to a proposed subsurface sewage disposal system is necessary to adequately design the system and is required as part of the permit application by IDAPA 58.01.03.005.04.j. The term *wastewater flow* refers to the amount of wastewater a structure will generate in gallons per day (GPD). These flow estimates provide the basis for determining the minimum septic tank volume and subsurface disposal system sizing (IDAPA 58.01.03.007.07.b and 58.01.03.008.03.a). For most proposed projects, IDAPA 58.01.03.007.08 is used for providing the quantitative daily wastewater flow estimates necessary to design the proposed subsurface sewage disposal system.

Due to the limited number of commercial/industrial establishments and flow scenarios provided in IDAPA 58.01.03.007.08, not all proposed commercial or industrial projects will be capable of proposing daily wastewater flows based on this rule. IDAPA 58.01.03.005.04.d provides the applicant the allowance to propose wastewater flows through other appropriate measures to adequately size the subsurface sewage disposal facility. Daily wastewater flow projections may be provided from other sources when a proposed residential, commercial, or industrial project is not covered by IDAPA 58.01.03.007.08, or when an applicant feels that the daily wastewater flow projections for a commercial or industrial facility provided in IDAPA 58.01.03.007.08 are higher or lower than actual daily peak wastewater use for similar facilities.

Other appropriate measures for daily wastewater flow estimation as described in IDAPA 58.01.03.005.04.d must include the nature and quantity of wastewater the system will receive. Adequate documentation must be submitted with the permit application detailing the basis for the estimate of the quantity of wastewater and its nature (IDAPA 58.01.03.005.04.j). Included in the adequate documentation, should be a description of the commercial or industrial facility's proposed operation, referred to as a Letter of Intended Use. Letter of Intended Use elements are described in section 3.3.1. Appropriate measures and documentation for the provision of empirical wastewater flow data not provided in IDAPA 58.01.03.007.08 are described in section 3.3.2.

3.3.1 Letter of Intended Use

As part of the permit application, the applicant must provide information regarding the type of establishment served (IDAPA 58.01.03.005.04.c), nature and quantity of wastewater the system will receive (IDAPA 58.01.03.005.04.j), and documentation that substantiates that the proposed system will comply with IDAPA 58.01.03 (IDAPA 58.01.03.005.04.o). This information should be included in a Letter of Intended Use that contains the following minimum elements:

- Description of the commercial/industrial processes that are occurring within the facility.
 - Type of business that will be discharging to the subsurface sewage disposal system and the processes involved in its operations.
 - Maximum number of employees and customers within the facility at any given time now or in the future if expansion is to occur later.
 - Estimated daily wastewater flow that may be produced by the domestic, commercial, and industrial uses occurring within the facility. Estimated daily wastewater flow

projections must either be supported by IDAPA 58.01.03.007.08 or follow the guidance regarding empirical wastewater flow data as provided in section 3.3.2.

- Completed copy of the nondomestic wastewater application checklist. Characteristics of the nondomestic wastewater should be supported with adequate documentation.

3.3.2 Empirical Wastewater Flow Data

Empirical wastewater flow data is collected from facilities similar to the one proposed in the subsurface sewage disposal permit application. Wastewater flow data is typically collected from facilities connected to a public water system or other water source that can provide water meter data for daily, weekly, or monthly water use by the facility. The daily wastewater flow is estimated based upon the potable water used by the facility as determined by water meter data. The data obtained often needs to be converted into GPD as most utilities and public water systems do not meter water by the gallon. The volume of water provided in a water usage history should be verified for the correct meter units.

Evaluated facilities should be located within Idaho if possible and may be from any region within the state. Unique facilities that may not be found elsewhere in the state may use similar facilities from other states. Facilities should be able to be compared to the proposed facility and capable of assigning a daily wastewater flow estimate on a per unit basis. Units may include employees, meals, visitors, or any other quantifiable unit applicable to the proposed facility. If the proposed facility will produce nondomestic wastewater (i.e., wastewater from sources other than hand sinks, toilets, showers/bathtubs, noncommercial kitchens, and washing machines), the wastewater data must also include characterization of the proposed commercial or industrial wastewater to be discharged to the subsurface sewage disposal system in addition to the daily wastewater flow data.

The time of year that water usage data is collected and evaluated should represent the proposed facility's peak usage time frame. If possible, DEQ recommends that water consumption data devoid of irrigation flows be provided. To accomplish this, locate facilities that do not have landscaping to irrigate or eliminate the irrigation season from the evaluation. Eliminating the irrigation season from the water data evaluation should only be used for facilities that do not have peak facility use occur over this time frame. Water usage data that does not include the irrigation season typically occurs from November through February.

Adequate documentation of daily wastewater flows may vary on a case-by-case basis. The following list of water usage data will be considered adequate for most circumstances:

- Water usage data from a minimum of three facilities of similar operation should be provided for review.
 - Facilities should be connected to a public or private water system for which monthly water use records are kept that can be readily converted to average GPD flows. Water usage data should be provided in writing by the water system operator.
 - Statistics should be provided on each facility's operation that are pertinent to the wastewater flow estimation (e.g., number of employees, number of children attending a childcare, number of meals served per day for restaurants, and occupancy per day of a hotel or RV park). Statistical data for each facility should be provided in writing by the facility providing the data.

- Water usage data should occur over an adequate time frame to provide data that is applicable to the design flows for subsurface sewage disposal permit issuance.
- Wastewater characterization for nondomestic wastewater sources (including the nondomestic wastewater application checklist found on DEQ's website).
- Other facility specific data the Director feels is reasonable and necessary for daily wastewater flow estimation evaluation.

The Director shall evaluate the data provided to determine an acceptable flow. If the Director determines that any data provided is inadequate for assessment, the facility that the data applies to will not be included in the evaluation process. The provision of empirical wastewater flow data in lieu of using the wastewater flows provided in IDAPA 58.01.03.007.08 does not guarantee that the daily wastewater flow projection will be less than what is provided by IDAPA 58.01.03.007.08.

3.4 References

EPA (United States Environmental Protection Agency). 2002. *Onsite Wastewater Treatment Systems Manual*. Washington, DC: EPA. EPA/625/R-00/008.