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Non-dwelling Facility Fact Sheet

[Title 124 - Onsite Wastewater Treatment Systems](#) defines a non-dwelling facility as a building, structure, place of business, place of gathering or waste collection system that is not a dwelling and which generates wastewater. If any portion of the wastewater generated at a building, structure or place is a non-domestic wastewater, the facility is also considered a non-dwelling facility. Non-domestic wastewater includes drainage from roofs; footing or foundation drains; process waste from any industrial, agricultural, or commercial establishment; automotive or industrial chemicals or petroleum products; kitchen waste or wastewater from a restaurant or food preparation facility; water carrying animal waste or commercial process water or wastewater; or similar waste. A non-dwelling facility that generates wastewater must have an onsite wastewater treatment system in accordance with Title 124 or be connected to a wastewater works.

The owner of a non-dwelling facility with a design flow of domestic wastewater of 1,000 gallons per day or less is [authorized by general permits](#) through the services of a [professional engineer, registered environmental health specialist, or certified professional](#) to construct, reconstruct, alter, modify, or [close](#) an onsite wastewater treatment system provided such system does not endanger human health or cause pollution and meets all the provisions for design, setback distances and reserve area prescribed in the regulations. Examples include restrooms (no floor drains or shop or laboratory type sinks) for a small rural business office, storage facility, or garage or workshop. As a reminder, both [Title 124](#) and [Title 122 - Rules and Regulations for Underground Injection and Mineral Production Wells](#) prohibit the discharge of [motor vehicle wastes](#) or maintenance shop wastes to a septic system or to a soil absorption system. In addition, the connection of a floor drain from a maintenance shop to a septic system or soil absorption system is prohibited.

The owner of a non-dwelling facility proposing to construct, reconstruct, alter or modify an onsite wastewater treatment system for a domestic wastewater design flow of more than 1,000 gallons per day or for a design flow that includes wastewater other than domestic wastewater, or proposing to construct, reconstruct, alter, or modify an onsite wastewater treatment system not covered by "Authorization by Rule", must apply for and obtain a [construction/operating permit](#) from the Department. When an application for a construction/operating permit is required, the owner must obtain a construction permit from the Department prior to the start of the work and an operating permit from the Department prior to use of the system.

To determine the capacity of the [septic tank](#) and the minimum required square footage of drain field for an onsite wastewater treatment system for a non-dwelling facility, you will need to know the design flow or the maximum volume of wastewater estimated to be generated in a twenty-four hour period. This includes both a typical operating capacity and a surge capacity for the system during periodic heavy use events. The design flow must not be less than the highest daily wastewater flow that is calculated to be generated based on the characteristics of the occupancy and use of the facility. For non-dwelling facilities, the quantity of flow generated for various occupancy and uses must also be consistent with nationally recognized data published by the United States Environmental Protection Agency ([USEPA Onsite Wastewater Treatment System Manual, Chapter 3: Establishing Treatment System Performance Requirements](#)), state onsite wastewater regulatory agencies, or nationally recognized plumbing codes. If use of a non-dwelling facility includes residential occupancy, the estimated flow from the non-residential use must be added to a residential design flow of 100 gallons per day plus 100 gallons per day per bedroom.

Septic Tank Capacity

For a non-dwelling facility with a design flow of over 1,500 gallons per day (gpd), the liquid capacity of a septic tank must be at least equal to 1,125 gallons plus 0.75 times the design flow. For flows of 1,500 gpd or less, 1.5 times the design flow may be used, but a minimum of a 1,000-gallon tank is required. For a non-dwelling facility served by multiple septic systems, the minimum septic tank capacity for each system must be 1,000 gallons. If the non-dwelling has a design flow greater than 2,000 gallons per day, it must have a tank with at least 2 compartments or have two septic tanks installed in series.

A [holding tank](#) serving a non-dwelling facility must have a minimum capacity at least five times the daily flow, but not less than 1,000 gallons unless approved by the Department in a [construction permit](#) and operated in compliance with the operating permit.

Drain Field Trench Square Footage

The required square footage of drain field trench for a non-dwelling facility can be determined using the appropriate wastewater flow rate in Table 5, located in General Permit GTS220000 Septic Tank and Subsurface Leach Field, or by use of the following equation: The daily design flow multiplied by (0.20 multiplied by the square root of the percolation rate).

$$\text{sq. ft.} = \text{design.flow (gpd)} \times 0.20 \times \sqrt{\text{percolation rate (min/in)}}$$

For example, if you have a non-dwelling with a percolation rate of 40 min/in and a design flow of 750 gpd, the minimum square footage of drain field required is:

The square root of the percolation rate 40 is 6.32

$$750 \text{ (design flow)} \times 0.20 = 150$$

$$150 \times 6.32 \text{ (square root of percolation rate)} = \mathbf{948 \text{ square feet}} \text{ of drain field}$$