

62-6.008 System Size Determinations. (Formerly 64E-6.008)

(1) Minimum design flows for systems serving any structure, building or group of buildings shall be based on the estimated daily sewage flow as determined from Table I or the following:

(a) The Department shall accept, for other than residences and food operations, metered water use data in lieu of the estimated sewage flows set forth in Table I. For metered flow consideration, the applicant shall provide authenticated monthly water use data documenting water consumption for the most recent 12 month period for at least six similar establishments. Similar establishments are those like size operations engaged in the same type of business or service, which are located in the same type of geographic environment, and which have approximately the same operating hours. Metered flow values will not be considered to be a reliable indicator of typical water use where one or more of the establishments utilized in the sample has exceeded the monthly flow average for all six establishments by more than 25 percent or where the different establishments demonstrate wide variations in monthly flow totals. When metered flow data is accepted in lieu of estimated flows found in Table I, the highest flow which occurred in any month for any of the six similar establishments shall be used for system sizing purposes. Except for food operations which exceed domestic sewage waste quality parameters as defined in subsection 62-6.002(15), F.A.C., where an existing establishment which has been in continuous operation for the previous 24 months seeks to utilize its own metered flows, the applicant shall provide authenticated monthly water use data documenting water consumption for the most recent 24 month period. The highest monthly metered flow value for an existing establishment shall be used for system sizing purposes.

(b) When onsite systems use multiple strategies to reduce the total estimated sewage flow or the drainfield size, only one reduction method shall be credited.

| TABLE I For System Design ESTIMATED SEWAGE FLOWS | |
|--|--------------------|
| TYPE OF ESTABLISHMENT COMMERCIAL: | GALLONS PER DAY |
| Airports, bus terminals, train stations, port & dock facilities, Bathroom waste only | |
| (a) Per passenger | 4 |
| (b) Add per employee per 8 hour shift | 15 |
| Barber & beauty shops per service chair | 75 |
| Bowling alley bathroom waste only per lane | 50 |
| Country club | |
| (a) Per resident | 100 |
| (b) Add per member or patron | 25 |
| (c) Add per employee per 8 hour shift | 15 |
| Doctor and Dentist offices | |
| (a) Per practitioner | 250 |
| (b) Add per employee per 8 hour shift | 15 |
| Factories, exclusive of industrial wastes gallons per employee per 8 hour shift | |
| (a) No showers provided | 15 |
| (b) Showers provided | 25 |
| Flea Market open 3 or less days per week | |
| (a) Per non-food service vendor space | 15 |
| (b) Add per food service establishment using single service articles only per 100 Square feet of floor space | 50 |
| (c) Per limited food service establishment | 25 |
| (d) For flea markets open more than 3 days per week estimated flows shall be doubled | |
| Food operations | |
| (a) Restaurant operating 16 hours or less per day per seat | 40 |
| (b) Restaurant operating more than 16 hours per day per seat | 60 |
| (c) Restaurant using single service articles only and operating 16 hours or less per day per seat | 20 |
| (d) Restaurant using single service articles only and operating more than 16 hours per day per seat | 35 |

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| (e) Bar and cocktail lounge per seat | 20 |
| Add per pool table or video game | 15 |
| (f) Drive-in restaurant per car space | 50 |
| (g) Carry out only, including caterers | |
| 1. Per 100 square feet of floor space | 50 |
| 2. Add per employee per 8 hour shift | 15 |
| (h) Institutions per meal | 5 |
| (i) Food Outlets excluding deli's, bakery, or meat department per 100 square feet of floor space | 10 |
| 1. Add for deli per 100 square feet of deli floor space | 40 |
| 2. Add for bakery per 100 square feet of bakery floor space | 40 |
| 3. Add for meat department per 100 square feet of meat department floor space | 75 |
| 4. Add per water closet | 200 |
| Hotels & motels | |
| (a) Regular per room | 100 |
| (b) Resort hotels, camps, cottages per room | 200 |
| (c) Add for establishments with self service laundry facilities per machine | 750 |
| Mobile Home Park | |
| (a) Per single wide mobile home space, less than 4 single wide spaces connected to a shared onsite system | 250 |
| (b) Per single wide mobile home space, 4 or more single wide spaces are connected to a shared onsite system | 225 |
| (c) Per double wide mobile home space, less than 4 double wide mobile home spaces connected to a shared onsite system | 300 |
| (d) Per double wide mobile home space, 4 or more double wide mobile home spaces connected to a shared onsite system | 275 |
| Office building | |
| Per employee per 8 hour shift, or | 15 |
| Per 100 square feet of floor space, whichever is greater | 15 |
| Transient Recreational Vehicle Park | |
| (a) Recreational vehicle space for overnight stay, without water and sewer hookup per vehicle space | 50 |
| (b) Recreational vehicle space for overnight stay, with water and sewer hookup per vehicle space | 75 |
| Service stations per water closet | |
| (a) Open 16 hours per day or less | 250 |
| (b) Open more than 16 hours per day | 325 |
| Shopping centers without food or laundry per square foot of floor space | 0.1 |
| Stadiums, race tracks, ball parks per seat | 4 |
| Stores per bathroom | 200 |
| Swimming and bathing facilities, public per person | 10 |
| Per person | |
| Theatres and Auditoriums, per seat | 4 |
| Veterinary Clinic | |
| (a) Per practitioner | 250 |
| (b) Add per employee per 8 hour shift | 15 |
| (c) Add per kennel, stall or cage | 20 |
| Warehouse | |
| (a) Add per employee per 8 hour shift | 15 |
| (b) Add per loading bay | 100 |
| (c) Self-storage, per unit (up to 200 units) | 1 |
| Add 1 gallon for each 2 units or fraction thereof, for over 200 units, and shall be in addition to employees, offices or living quarters flow rates. | |

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| INSTITUTIONAL: | |
| Churches per seat which includes kitchen | 3 |
| Wastewater flows unless meals Prepared on a routine basis | |
| If meals served on a regular basis add per meal prepared | 5 |
| Hospitals per bed which does not include kitchen wastewater flows | 200 |
| Add per meal prepared | 5 |
| Nursing, rest homes, adult congregate living facilities per bed which does not include kitchen wastewater flows | 100 |
| Add per meal prepared | 5 |
| Parks, public picnic | |
| (a) With toilets only per person | 4 |
| (b) With bathhouse, showers & toilets per person | 10 |
| Public institutions other than schools and hospitals per person which does not include kitchen wastewater flows | 100 |
| Add per meal prepared | 5 |
| Schools per student | |
| (a) Day-type | 10 |
| (b) Add for showers | 4 |
| (c) Add for cafeteria | 4 |
| (d) Add for day school workers | 15 |
| (e) Boarding-type | 75 |
| Work/construction camps, semi-permanent per worker | 50 |
| RESIDENTIAL: | |
| Residences | |
| (a) Single or multiple family per dwelling Unit | |
| 1 Bedroom with 750 sq. ft. or less of building area | 100 |
| 2 Bedrooms with 751-1,200 sq. ft. of building area | 200 |
| 3 Bedrooms with 1,201-2,250 sq. ft. of building area | 300 |
| 4 Bedrooms with 2,251-3,300 sq. ft. of building area | 400 |
| For each additional bedroom or each additional 750 square feet of building area or fraction thereof in a dwelling unit, system sizing shall be increased by 60 gallons per dwelling unit. | |
| (b) Other per occupant | 50 |

Footnotes to Table I:

1. For food operations, kitchen wastewater flows shall normally be calculated as 66 percent of the total establishment wastewater flow.

2. Systems serving high volume establishments, such as restaurants, convenience stores and service stations located near interstate type highways and similar high-traffic areas, require special sizing consideration due to expected above average sewage volume. Minimum estimated flows for these facilities shall be 3.0 times the volumes determined from the Table I figures.

3. For residences, the volume of wastewater shall be calculated as 50 percent blackwater and 50 percent graywater.

4. Where the number of bedrooms indicated on the floor plan and the corresponding building area of a dwelling unit in Table I do not coincide, the criteria which will result in the greatest estimated sewage flow shall apply.

5. Convenience store estimated sewage flows shall be determined by adding flows for food outlets and service stations as appropriate to the products and services offered.

6. Estimated flows for residential systems assumes a maximum occupancy of two persons per bedroom. Where residential care facilities will house more than two persons in any bedroom, estimated flows shall be increased by 50 gallons per each additional occupant.

(2) Minimum effective septic tank capacity and total dosing tank capacity shall be determined from Table II. However, where multiple family dwelling units are jointly connected to a septic tank system, minimum effective septic tank capacities specified in the table shall be increased 75 gallons for each dwelling unit connected to the system. With the exception noted in paragraph 62-6.013(2)(a), F.A.C., all septic tanks shall be multiple chambered or shall be placed in series to achieve the required effective capacity. The use of an approved outlet filter device shall be required. Outlet filters shall be installed within or following the last septic tank or septic tank compartment before distribution to the drainfield. The outlet filter device requirement includes blackwater tanks, but does not include graywater tanks or grease interceptors or laundry tanks. Outlet filter devices shall be placed to allow accessibility for routine maintenance. Utilization and sizing of outlet filter devices shall be in accordance with the manufacturers' recommendations. The approved outlet filter device shall be installed in accordance with the manufacturers' recommendations. The Division of Water Resource Management, Onsite Sewage Program shall approve outlet filter devices per the Department's Policy on Approval Standards For Onsite Sewage Treatment And Disposal Systems Outlet Filter Devices, November 2008, (formerly from Department of Health) which is herein incorporated by reference.

| TABLE II SEPTIC TANK AND PUMP TANK CAPACITY | | | |
|--|---|-------------------------------------|------------|
| AVERAGE SEWAGE FLOW | SEPTIC TANK MINIMUM EFFECTIVE CAPACITY | PUMP TANK MINIMUM TOTAL CAPACITY | |
| GALLONS/DAY | GALLONS | GALLONS | |
| | | Residential | Commercial |
| 0-200 | 900 | 150 | 225 |
| 201-300 | 900 | 225 | 375 |
| 301-400 | 1,050 | 300 | 450 |
| 401-500 | 1,200 | 375 | 600 |
| 501-600 | 1,350 | 450 | 600 |
| 601-700 | 1,500 | 525 | 750 |
| 701-800 | 1,650 | 600 | 900 |
| 801-1,000 | 1,900 | 750 | 1,050 |
| 1,001-1,250 | 2,200 | 900 | 1,200 |
| 1,251-1,750 | 2,700 | 1,350 | 1,900 |
| 1,751-2,500 | 3,200 | 1,650 | 2,700 |
| 2,501-3,000 | 3,700 | 1,900 | 3,000 |
| 3,001-3,500 | 4,300 | 2,200 | 3,000 |
| 3,501-4,000 | 4,800 | 2,700 | 3,000 |
| 4,001-4,500 | 5,300 | 2,700 | 3,000 |
| 4,501-5,000 | 5,800 | 3,000 | 3,000 |

(3) Where a separate graywater tank and drainfield system is used, the minimum effective capacity of the graywater tank shall be 250 gallons with such system receiving not more than 75 gallons of flow per day. For graywater systems receiving flows greater than 75 gallons per day, minimum effective tank capacity shall be based on the average daily sewage flow plus 200 gallons for sludge storage. Design requirements for graywater tanks are described in subsection 62-6.013(2), F.A.C. Where separate graywater and blackwater systems are utilized, the size of the blackwater system can be reduced, but in no case shall the blackwater system be reduced by more than 25 percent. However, the minimum capacity for septic tanks disposing of blackwater shall be 900 gallons.

(4) Where building codes allow separation of discharge pipes of the residence to separate stubouts and where lot sizes and setbacks allow system construction, the applicant may request a separate laundry waste tank and drainfield system. Where an aerobic treatment unit is used, all blackwater, graywater and laundry waste flows shall be consolidated and treated by the aerobic treatment unit. Where a residential laundry waste tank and drainfield system is used:

(a) The minimum laundry waste trench drainfield absorption area for slightly limited soil shall be 75 square feet for a one or two bedroom residence with an additional 25 square feet for each additional bedroom. If an absorption bed drainfield is used the minimum drainfield area shall be 100 square feet with an additional 50 square feet for each additional bedroom over two bedrooms. The Department shall require additional drainfield area based on moderately limited soils and other site specific conditions, which

shall not exceed twice the required amount of drainfield for a slightly limited soil.

(b) The laundry waste interceptor shall meet requirements of subsections 62-6.013(2) and (8), F.A.C.

(c) The drainfield absorption area serving the remaining wastewater fixtures in the residence shall be reduced by 25 percent.

(5) The minimum absorption area for standard subsurface drainfield systems, graywater drainfield systems, and filled systems shall be based on estimated sewage flows and Table III so long as estimated sewage flows are 200 gallons per day or higher. When estimated sewage flows are less than 200 gallons per day, system size shall be based on a minimum of 200 gallons per day.

| TABLE III For Sizing of Drainfields Other Than Mounds | | | |
|--|---|---|------|
| U.S. DEPARTMENT OF AGRICULTURE SOIL TEXTURAL CLASSIFICATION | SOIL TEXTURE LIMITATION (PERCOLATION RATE) | MAXIMUM SEWAGE LOADING RATE TO TRENCH & BED ABSORPTION SURFACE INGALLONS PER SQUARE FOOT PER DAY | |
| | | TRENCH | BED |
| Sand; Coarse Sand not associated with a seasonal water table of less than 48 inches; and Loamy Coarse Sand | Slightly limited (Less than 2 min/inch) | 0.80 | 0.60 |
| Loamy Sand; Sandy Loam; Coarse Sandy Loam; and Fine Sand; | Slightly limited (2-4 min/inch) | 0.80 | 0.60 |
| Loam; Fine Sandy Loam; Silt Loam; Very Fine Sand; Very Fine Sandy Loam; Loamy Fine Sand; Loamy Very Fine Sand; and Sandy Clay Loam | Moderately limited (5-10 min/inch) | 0.65 | 0.35 |
| Clay Loam; Silty Clay Loam; Sandy Clay; Silty Clay; and Silt | Moderately limited (Greater than 15 min/inch but not exceeding 30 min/inch) | 0.35 | 0.20 |
| Clay; Organic Soils; Hardpan; and Bedrock | Severely limited (Greater than 30 min/inch) | Unsatisfactory for standard subsurface system | |
| Coarse Sand with an estimated wet season high water table within 48 inches of the bottom of the proposed drainfield; Gravel or Fractured Rock or Oolitic Limestone | Severely limited (Less than 1 min/inch and a water table less than 4 feet below the drainfield) | Unsatisfactory for standard subsurface system | |

Footnotes to Table III:

1. U.S. Department of Agriculture major soil textural classification groupings and methods of field identification are explained in Rule 62-6.016, F.A.C. Laboratory sieve analysis of soil samples may be necessary to confirm field evaluation of specific soil textural classifications. The USDA Soil Conservation Service "Soil Textural Triangle" shall be used to classify soil groupings based on the proportion of sand, silt and clay size particles.

2. The permeability or percolation rate of a soil within a specific textural classification may be affected by such factors as soil structure, cementation and mineralogy. Where a percolation rate is determined using the falling head percolation test procedure described in the United States Environmental Protection Agency Design Manual for Onsite Wastewater Treatment and Disposal Systems, October, 1980, incorporated by reference into this rule, the calculated percolation test rate shall be used with Table III and evaluated by the Department with other factors such as history of performance of systems in the area in determining the minimum sizing for the drainfield area.

3. When all other site conditions are favorable, horizons or strata of moderately or severely limited soil may be replaced with slightly limited soil or soil of the same texture as the satisfactory slightly limited permeable layer lying below the replaced layer. The slightly limited permeable layer below the replaced layer shall be identified within the soil profile which was submitted as part of the permit application. The resulting soil profile must show complete removal of the moderately or severely limited soil layer being replaced and must be satisfactory to a minimum depth of 54 inches beneath the bottom surface of the proposed drainfield. The

width of the replacement area shall be at least 2 feet wider and longer than the drain trench and for absorption beds shall include an area at least 2 feet wider and longer than the proposed bed. Drainfields shall be centered in the replaced area. Where at least 33 percent of the moderately limited soils at depths greater than 54 inches below the bottom of the drainfield have been removed to the depth of slightly limited soil, drainfield sizing shall be based on the following sewage loading rates. Where severely limited soils are being removed at depths greater than 54 inches below the bottom of the drainfield, 100 percent of the severely limited soils at depths greater than 54 inches shall be removed down to the depth of an underlying slightly limited soil. Maximum sewage loading rates for standard subsurface systems installed in replacement areas shall be 0.80 gallons per square foot per day for trench systems and 0.60 gallons per square foot per day for absorption beds in slightly limited soil textures. Where moderately limited soil materials are found beneath the proposed drainfield, and where system sizing is based on that moderately limited soil, soil replacements of less than 33% may be permitted.

4. Where coarse sand, gravel, or oolitic limestone directly underlies the drainfield area, the site shall be approved provided a minimum depth of 42 inches of the rapidly percolating soil beneath the bottom absorption surface of the drainfield and a minimum 12 inches of rapidly percolating soil contiguous to the drainfield sidewall absorption surfaces, is replaced with slightly limited soil material. Where such replacement method is utilized, the drainfield size shall be determined using a maximum sewage application rate of 0.80 gallons per square foot per day of drainfield in trenches and 0.60 gallon per square foot per day for drainfield absorption beds.

5. Where more than one soil texture classification is encountered within a soil profile and it is not removed as part of a replacement, drainfield sizing for standard subsurface drainfield systems and fill drainfield systems shall be based on the most restrictive soil texture encountered within 24 inches of the bottom of the drainfield absorption surface.

(6) All materials incorporated herein may be obtained from the Department of Environmental Protection, Onsite Sewage Program at www.floridadep.gov or 2600 Blair Stone Road, MS 3596, Tallahassee, Florida 32399-2400.

Rulemaking Authority 381.0065(3)(a) FS. Law Implemented 381.0065 FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.48, Amended 3-17-92, 1-3-95, Formerly 10D-6.048, Amended 11-19-97, 3-22-00, 9-5-00, 11-26-06, 6-25-09, 7-16-13, Formerly 64E-6.008.