

**567—69.1 (455B) General.**

**69.1(1) Applicability.** These rules are applicable only to private sewage disposal systems.

**69.1(2) Definitions.**

*“Administrative authority”* means the department and the local board of health as authorized by Iowa Code section 455B.172 and Iowa Code chapter 137.

*“Aerobic treatment unit”* means a disposal system employing bacterial action which is maintained by the utilization of air or oxygen and includes the aeration plant and equipment and the method of final effluent disposal.

*“Approved”* means accepted or acceptable under an applicable specification stated or cited in these rules or accepted by the administrative authority as suitable for the proposed use.

*“Area drain”* means a drain installed to collect surface or storm water from an open area of a building or property.

*“Building drain”* means that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of any building and conveys the same to the building sewer.

*“Building sewer”* means that part of the horizontal piping from the building wall to its connection with the main sewer or the primary treatment portion of a private sewage disposal system conveying the drainage of a building site.

*“Chamber system”* means a buried structure, typically with a domed or arched top, providing at least a 6-inch height of sidewall soil exposure below the invert of the inlet and creating a covered open space above a buried soil infiltrative surface.

*“Conventional,”* when used in reference to sewage treatment, means a soil absorption system involving a series of 2- to 3-foot-wide trenches filled with gravel 1 foot deep, containing a 4-inch-diameter rigid pipe or other alternative trench technologies to convey the sewage effluent.

*“Distribution box”* means a structure designed to accomplish the equal distribution of wastewater to two or more soil absorption trenches.

*“Domestic sewage”* or *“domestic wastewater”* means the water-carried waste products from residences, public buildings, institutions, or other buildings, including bodily discharges from human beings together with groundwater infiltration and surface water as may be present.

*“Drip irrigation”* means a form of subsurface soil absorption using shallow pressure distribution with low-pressure drip emitters.

*“Drop box”* means a structure used to divert wastewater flow into a soil absorption trench. When the trench is filled to a set level, the drop box then allows any additional wastewater not absorbed by that trench to flow to the next drop box or soil absorption trench.

*“Dwelling”* means any house or place used or intended to be used by humans as a place of residence.

*“Expanded polystyrene (EPS) aggregate systems”* means cylinders comprised of expanded polystyrene (EPS) synthetic aggregate contained in high-strength polyethylene netting. The cylinders

are 12 inches in diameter and are produced both with and without a distribution pipe. Cylinders may be configured in a trench, bed, at-grade and mound applications to obtain the desired width, height and length. Cylinders containing a distribution pipe shall be connected end-to-end with an internal coupling device.

*“Fill soil”* means clean soil, free of debris or large organic material, which has been mechanically moved onto a site and has been in place for less than one year.

*“Foundation drain”* means that portion of a building drainage system which is provided to drain groundwater, not including any wastewater, from the outside of the foundation or over or under the basement floor and which is not connected to the building drain.

*“Free access filter”* means an intermittent sand filter constructed within the natural soil or above the ground surface, with access to the distributor pipes and top of the filter media for maintenance and media replacement.

*“Gravel”* means stone screened from river sand or quarried and washed free of clay and clay coatings. Concrete aggregate designated as Class II by the department of transportation is acceptable.

*“Gravelless pipe system”* means a soil absorption system comprised of 10-inch-diameter corrugated plastic pipe, perforated with holes on a 120-degree arc centered on the bottom, wrapped in a sheath of geotextile filter wrap, and installed level in a trench without gravel bedding or cover.

*“Grease interceptor”* means a watertight device designed to intercept and retain or remove grease and fatty substances. The device may be located inside (grease separator) or outside (grease tank or grease trap) a facility.

*“Intermittent sand filter”* means a bed of granular materials 24 to 36 inches deep underlain by graded gravel and collecting tile. Wastewater is applied intermittently to the surface of the bed through distribution pipes, and the bed is underdrained to collect and discharge the final effluent. Uniform distribution is normally obtained by dosing so as to utilize the entire surface of the bed. Filters may be designed to provide free access (open filters) or may be buried in the ground (buried filters or subsurface sand filters).

*“Lake”* means a natural or man-made impoundment of water with more than one acre of water surface area at the high water level.

*“Limiting layer”* means bedrock, seasonally high groundwater level, or any layer of soil with a stabilized percolation rate exceeding 60 minutes for the water to fall one inch.

*“Mound system”* means an aboveground soil absorption system used to disperse effluent from septic tanks in cases in which a seasonally high water table, high bedrock conditions, slowly permeable soils, or limited land areas prevent conventional subsurface soil absorption systems.

*“Packed bed media filter”* means a watertight structure filled with uniformly sized media that is normally placed over an underdrain system. The wastewater is dosed onto the surface of the media through a distribution network and is allowed to percolate through the media to the underdrain system. The underdrain collects the filtrate and discharges the final effluent.

*“Percolation test”* means a falling water level procedure used to determine the ability of soils to absorb primary treated wastewater. (See Appendix B.)

“*Pond*” means a natural or man-made impoundment of water with a water surface area of one acre or less at the high water level.

“*Pretreated effluent*” means septic tank effluent treated through aeration or other methods that, upon laboratory analysis, meets or exceeds a monthly average for biochemical oxygen demand (BOD) of 30 mg/L and total suspended solids (TSS) of 30 mg/L.

“*Primary treatment unit*” means a unit or system used to separate the floating and settleable solids from the wastewater before the partially treated effluent is discharged for secondary treatment.

“*Private sewage disposal system*” means a system which provides for the treatment or disposal of domestic sewage from four or fewer dwelling units or the equivalent of less than 16 individuals on a continuing basis. This includes domestic waste, whether residential or nonresidential, but does not include industrial waste of any flow rate.

“*Professional soil analysis*” means an alternative to the percolation test which depends upon a knowledgeable person evaluating the soil characteristics, such as color, texture, and structure, in order to determine an equivalent percolation or loading rate. A person performing a professional soil analysis shall demonstrate training and experience in soil morphology, such as testing absorption qualities of soil by the physical examination of the soil’s color, mottling, texture, structure, topography, and hillslope position.

“*Qualified sampler*,” for the purposes of collecting compliance effluent samples required under NPDES General Permit No. 4, means one of the following persons: a city or county environmental health staff person; an Iowa-certified wastewater treatment operator; or an individual who has received training approved by the department to conduct effluent sampling.

“*Roof drain*” means a drain installed to receive water collecting on the surface of a roof and discharging into an area or storm drain system.

“*Secondary treatment system*” means a system which provides biological treatment of the effluent from septic tanks or other primary treatment units to meet minimum effluent standards as required in these rules and NPDES General Permit No. 4. Examples include soil absorption systems, media filters, aerobic treatment units, or other systems providing equivalent treatment.

“*Septage*” means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or from a holding tank, when the system is cleaned or maintained.

“*Septic tank*” means a watertight structure into which wastewater is discharged for solids separation and digestion (referred to as part of the closed portion of the treatment system).

“*Sewage sludge*” means any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. “Sewage sludge” includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum septage, portable toilet pumpings, Type III marine device pumpings as defined in 33 CFR Part 159, and sewage sludge products. “Sewage sludge” does not include grit, screenings, or ash generated during the incineration of sewage sludge.

“*Stream*” means any watercourse listed as a “designated use segment” in rule 567—61.3(455B) which includes any watercourse that maintains flow throughout the year or contains sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community.

“*Subsurface sand filter*” means a system in which the effluent from the primary treatment unit is discharged into perforated pipes, filtered through a layer of sand, and collected by lower perforated pipes for discharge to the surface or to a subsurface soil absorption system. A subsurface sand filter is an intermittent sand filter that is placed within the ground and provided with a natural topsoil cover over the crown of the distribution pipes.

“*Subsurface soil absorption system*” means a system of perforated conduits connected to a distribution system, forming a series of subsurface, water-carrying channels into which the primary treated effluent is discharged for direct absorption into the soil (referred to as part of the open portion of the treatment system).

**69.1(3) General regulations.**

*a. Connections to approved sewer system.*

(1) No private sewage disposal system shall be installed, repaired, or rehabilitated where a publicly owned treatment works (POTW) is available or where a local ordinance requires connection to a POTW. The POTW may be considered as unavailable when such POTW, or any building or any exterior drainage facility connected thereto, is located more than 200 feet from any proposed building or exterior drainage facility on any lot or premises which abuts and is served by such POTW. Final determination of availability shall be made by the administrative authority.

(2) When a POTW becomes available within 200 feet, any building then served by a private sewage disposal system shall be connected to said POTW within a time frame or under conditions set by the administrative authority.

(3) When a POTW is not available, every building wherein persons reside, congregate, or are employed shall be provided with an approved private sewage disposal system.

(4) If a building is to be connected to an existing private sewage disposal system, that existing system shall meet the standards of these rules and be appropriately sized.

*b. Discharge restrictions.* It is prohibited to discharge any wastewater from private sewage disposal systems (except as permitted in this chapter) to any ditch, stream, pond, lake, natural or artificial waterway, county drain tile, surface water drain tile, or land drain tile, to the groundwater, or to the surface of the ground. Under no conditions shall effluent from private sewage disposal systems be discharged to any abandoned well, agricultural drainage well or sinkhole. Existing discharges to any of the above-listed locations or structures shall be eliminated by the construction of a system in compliance with the requirements of these rules.

*c. Construction or alteration.* All private sewage disposal systems constructed or altered after March 18, 2009, shall comply with this chapter. Alteration includes any changes that affect the treatment or disposal of the waste. Repair of existing components that does not change the treatment or disposal of the waste is exempt. However, the discharge restrictions in paragraph “b” above apply.

*d. Abandonment.* Private sewage disposal systems that are abandoned shall have the septic tank pumped, the tank lid crushed into the tank, and the tank filled with sand or soil.

**69.1(4) Construction permit required.** No private sewage disposal system shall be installed or altered as described in paragraph 69.1(3) “c” unless a construction permit issued by the administrative authority has been obtained. The installation shall be in accordance with these rules.

**69.1(5) Permit by rule.** This chapter is intended to act as a permit by rule for private sewage disposal systems. Activities in compliance with this chapter are permitted by the director for purposes of compliance with sections 455B.183 and 455B.186 of the Code of Iowa.