

1 **Pollution Control Agency**

2 **Adopted Permanent Rules Relating to Individual Sewage Treatment Systems**

3 **CHAPTER 7080**

4 **MINNESOTA POLLUTION CONTROL AGENCY**

5 **INDIVIDUAL SEWAGE TREATMENT SYSTEMS PROGRAM**

6 **4625.1600 WASTE DISPOSAL.**

7 All liquid wastes shall be disposed of in an approved public sewerage system or in a  
8 sewerage system which is designed, constructed, and operated in accordance with the  
9 rules of the Minnesota Pollution Control Agency, chapter 7080.

10 Prior to removal, all garbage and refuse in storage shall be kept in watertight,  
11 nonabsorbent receptacles which are covered with close-fitting, fly-tight lids. All  
12 garbage, trash, and refuse shall be removed from the premises frequently to prevent  
13 nuisance and unsightly conditions, and shall be disposed of in a sanitary manner. All  
14 garbage receptacles shall be kept clean and in good repair.

15 **4658.4040 SITE; NEW CONSTRUCTION.**

16 A nursing home must be so located as to protect at all times the health, comfort, and  
17 safety of residents. The factors in selecting the site for a new nursing home must include  
18 the following:

19 [For text of items A and B, see M.R.]

20 C. Sewage and other liquid wastes must be discharged into an approved public  
21 sewer system where available. If none is available, sewage must be collected, treated,  
22 and disposed of in a sewage disposal system which is designed, located, constructed,  
23 and operated according to chapter 7080. Plans and specifications for a private sewage  
24 disposal system must be approved before construction of the system or the nursing  
25 home is started.

1 [For text of items D to J, see M.R.]

2 **7080.0010 PURPOSE AND INTENT.**

3 The improper location, design, installation, use, and maintenance of individual  
4 sewage treatment systems adversely affects the public health, safety, and general  
5 welfare by discharge of inadequately treated sewage to the ground surface, surface  
6 waters, and ground waters. In accordance with the authority granted in Minnesota  
7 Statutes, chapters 103F, 103G, 115, and 116, the Minnesota Pollution Control Agency,  
8 hereinafter referred to as the agency, does hereby provide the minimum standards and  
9 criteria for individual sewage treatment systems. The agency offers these standards to  
10 reasonably protect surface water, ground water, and promote public health, safety, and  
11 general welfare.

12 This chapter does not address facilities discharging animal waste or wastewater that  
13 may contain hazardous materials. Industrial wastewater treatment systems receiving  
14 nonhazardous wastes and systems serving facilities not classified as dwellings are  
15 regulated by the United States Environmental Protection Agency as Class V injection  
16 wells under Code of Federal Regulations, title 40, parts 144 and 146. These federal  
17 regulations along with this chapter cover systems serving other establishments and  
18 systems serving more than 20 persons.

19 It is the intent of this chapter to provide clear, reliable, and cost-effective technical  
20 standards and criteria; to provide a framework for permitting and inspection programs  
21 administered at the local level; and to describe the responsibilities, licensing, and  
22 enforcement requirements for individual sewage treatment system professionals. All  
23 counties must adopt and enforce individual sewage treatment system ordinances that  
24 comply with this chapter unless all towns and cities in the county have adopted  
25 complying ordinances. The technical portions of this chapter are based on sound  
26 research and practical field applications to achieve adequate sewage treatment. In  
27 conjunction with these minimum standards, the agency encourages the use of advanced

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1 treatment methods and waste reduction to further reduce the discharge of  
2 contaminants.

3 In addition, this chapter establishes programs for licensing businesses and training  
4 and registering ISTS professionals.

5 **7080.0020 DEFINITIONS.**

6 Subpart 1. **Certain terms.** In addition to the definitions in Minnesota Statutes, sections  
7 115.55 and 115.56, the following terms used in this chapter shall have the meanings  
8 given to them. For the purposes of these standards, certain terms or words used herein  
9 shall be interpreted as follows: the words "shall" and "must" are mandatory, the words  
10 "should" and "may" are permissive. All distances, unless otherwise specified, shall be  
11 measured horizontally.

12 Subp. 1a. **Absorption area.** "Absorption area" means the area on original soil below a  
13 mound that is designed to absorb sewage tank effluent. The absorption area for  
14 trenches, seepage beds, and at-grade systems is the area in contact with the part of the  
15 distribution medium that is designed to absorb sewage tank effluent.

16 Subp. 1b. **Additive, individual sewage treatment system.** "Additive, individual  
17 sewage treatment system" means a product added to the wastewater or to the system  
18 with the intent to improve the performance of an individual sewage treatment system.

19 Subp. 2. **Aerobic tank.** "Aerobic tank" means a sewage tank that uses the principle of  
20 oxidation to decompose sewage by introducing air into the sewage.

21 Subp. 3. **Agency.** "Agency" means the Minnesota Pollution Control Agency.

22 Subp 3a. **Alarm device.** "Alarm device" means a device which clearly alerts the  
23 system operator of malfunction by use of visual or audible methods; it is intended to  
24 prevent sewage overflows.

25 Subp. 3a. 3b. **Alternative local standards.** "Alternative local standards" means

1 individual sewage treatment system standards that are less restrictive than the technical  
2 standards and criteria in this chapter and adequately protect public health and the  
3 environment.

4 Subp. 4. **Alternative system.** "Alternative system" means an individual sewage  
5 treatment system employing methods and devices presented in part 7080.0172 or as  
6 designated by the commissioner in part 7080.0400, subpart 2.

7 Subp. 4. [~~See repealer.~~]

8 Subp. 4a. **Applicable requirements.** "Applicable requirements" means local  
9 individual sewage treatment system ordinances that comply with this chapter or, in  
10 areas without ordinances to regulate individual sewage treatment systems, the  
11 requirements of this chapter.

12 Subp. 4b. **Apprentice.** "Apprentice" means an individual who meets the requirements  
13 in part 7080.0855 by completing training, passing the examination, and having an  
14 experience plan.

15 Subp. 4c. **As-builts.** "As-builts" means drawings and documentation specifying the  
16 final in-place location, size, and type of all system components. These records identify  
17 the results of materials testing and describe conditions during construction.

18 Subp. 4d. **At-grade system.** "At-grade system" means a pressurized soil treatment  
19 system where sewage tank effluent is dosed to a drainfield rock bed that is constructed  
20 on original soil at the ground surface and covered by loamy soil materials.

21 Subp. 5. **Baffle.** "Baffle" means a device installed in a septic tank to provide retention  
22 of solids, and includes vented sanitary tees and submerged pipes.

23 Subp. 6. **Bedrock.** "Bedrock" means the layer of parent material that is composed of  
24 consolidated and or cemented rock particles or composed of interlocking mineral  
25 crystals and is either in a weathered or unweathered condition. Bedrock also includes  
26 layers of which greater than 50 percent by volume consists of unweathered in-place  
27 consolidated bedrock fragments.

1 [For text of subps 7 and 7a, see M.R.]

2 Subp. 8. **Building drain.** "Building drain" means the part of the lowest piping of the  
3 drainage system that receives the sewage discharge inside the walls of the building and  
4 conveys one foot outside the building footings.

5 Subp. 9. **Building sewer.** "Building sewer" means the part of the drainage system that  
6 extends from the end of the building drain to an individual sewage treatment system.

7 Subp. 9a. **Business.** "Business" means an individual or organization that designs,  
8 installs, maintains, repairs, pumps, or inspects individual sewage treatment systems.

9 Subp. 10a. **Certificate of compliance.** "Certificate of compliance" means a document  
10 written after a compliance inspection, certifying that a system is in compliance with  
11 applicable requirements at the time of the inspection.

12 Subp. 10b. **Certified statement.** "Certified statement" means a statement signed by a  
13 licensee or qualified employee identified by license or registration numbers certifying  
14 that the licensee or qualified employee completed work in accordance with applicable  
15 requirements.

16 Subp. 11. **Cesspool.** "Cesspool" means an underground pit, receptacle, or seepage  
17 tank that receives sewage directly from the building sewer and leaches sewage into the  
18 surrounding soil, bedrock, or other soil materials.

19 Subp. 11a. **Chambered system.** "Chambered system" means a distribution medium  
20 consisting of a structure buried in a trench to create an enclosed open space with the  
21 original soil surface to act as a surface for the infiltration of sewage tank effluent.

22 Subp. 11b. **Clean sand.** "Clean sand" means a fill material required to be used in  
23 mounds and other systems. The standards for clean sand are set out in part 7080.0170,  
24 subpart 5, item B, subitem (3).

25 Subp. 11c. **Commissioner.** "Commissioner" means the commissioner of the Minnesota  
26 Pollution Control Agency.

1 Subp. 11d. **Compliance inspection.** "Compliance inspection" means an evaluation,  
2 investigation, inspection, or other such process for the purpose of issuing a certificate of  
3 compliance or notice of noncompliance.

4 Subp. 12. **DNR.** "DNR" means the Minnesota Department of Natural Resources.

5 Subp. 12a. **Designated registered professional.** "Designated registered professional"  
6 means an individual who is included on the agency's ISTS professional register with  
7 specialty area endorsements that correspond to the license, who has been designated by  
8 the individual's employer as its representative for work to be done on an individual  
9 sewage treatment system, and who is subject to the obligations of a license.

10 Subp. 12b. **Disclosure.** "Disclosure" means any conclusions or statements regarding  
11 an ~~existing~~ ISTS or abandoned ISTS made by the owner of a property with or served by  
12 an ISTS to fulfill the requirements of Minnesota Statutes, section 115.55, subdivision 6.  
13 ISTS information provided by someone other than the property owner must meet the  
14 requirements in part 7080.0315, subpart 2, item E F.

15 Subp. 12c. **Distribution box.** "Distribution box" means a device designed to distribute  
16 sewage tank effluent concurrently and equally by gravity to a soil treatment system.

17 Subp. 12d. **Distribution device.** "Distribution device" means a device used to receive  
18 and transfer effluent from a supply pipe to distribution pipes or downslope supply  
19 pipes, or both. These devices include drop boxes, valve boxes, distribution boxes, or  
20 manifolds.

21 Subp. 12e. **Distribution medium.** "Distribution medium" the material used to  
22 distribute sewage tank effluent within a soil treatment system. This medium includes  
23 drainfield rock, gravelless drainfield pipe in a geotextile wrap, or a chambered system.

24 Subp. 13. **Distribution pipes.** "Distribution pipes" means perforated pipes that  
25 distribute effluent into a distribution medium.

26 Subp. 13a. **Distinct.** "Distinct" means a soil color that varies from another color by one  
27 or more hues, more than two units of value, or more than one unit of chroma.

1 Subp. 14. **Dosing chamber, or pump pit, or wet well, or lift station.** "Dosing  
2 chamber, or pump pit, or wet well, or lift station" means a tank or separate  
3 compartment following the sewage tank that serves as a reservoir for the dosing device.

4 Subp. 15. **Dosing device.** "Dosing device" means a pump, siphon, or other device that  
5 discharges sewage tank effluent from the dosing chamber.

6 Subp. 15a. **Drainfield rock.** "Drainfield rock" means the material that meets the  
7 requirements of part 7080.0170, subpart 2, item B, subitem (2), unit (a), and is used as  
8 distribution medium for individual sewage treatment systems, including trenches,  
9 seepage beds, and at-grade and mound systems.

10 [For text of subp 15b, see M.R.]

11 Subp. 16. **Dwelling.** "Dwelling" means any building or place used or intended to be  
12 used by human occupants as a single-family or multifamily residence with no more  
13 than nine bedrooms and producing sewage. Dwelling does not include a single-family  
14 or multifamily residence that serves as both a domicile and a place of business if the  
15 business increases the volume of sewage above what is normal for a dwelling or if  
16 liquid waste generated no longer qualifies as sewage.

17 Subp. 16a. **Effluent screen.** "Effluent screen" means a device that filters solid  
18 materials from sewage tanks before discharge to a soil treatment system.

19 ~~Subp. 16b. **Existing system.** "Existing system" means a system that was constructed~~  
20 ~~before any local permitting program existed or a system that was issued a permit and an~~  
21 ~~initial approval or certificate of compliance by the permitting authority.~~

22 Subp. 16c: 16b. **Failing system.** "Failing system" means a seepage pit, cesspool,  
23 drywell, leaching pit, other pit, a tank that obviously leaks below the designated  
24 operating depth, ~~a soil system that is loaded greater than 1.2 gallons per square foot per~~  
25 ~~day, a soil system with a pressure head no greater than 30 inches,~~ or any system with  
26 less than the required vertical separation as described in part 7080.0060, subpart 3.

1 Subp. ~~16d.~~ 16c. **Fine sand.** "Fine sand" means a sand soil having more than 50 percent  
2 sand having a particle size range of 0.05 millimeters (sieve size 270) to 0.25 millimeters  
3 (sieve size 60).

4 Subp. ~~16e.~~ 16d. **Floodplain.** "Floodplain" means the area covered by a 100-year flood  
5 event along lakes, rivers, and streams as published in technical studies by local, state,  
6 and federal agencies, or in the absence of these studies, estimates of the 100-year flood  
7 boundaries and elevations as developed pursuant to a local unit of government's  
8 floodplain or related land use regulations.

9 Subp. ~~16f.~~ 16e. **Flood fringe.** "Flood fringe" means that portion of the floodplain  
10 outside the floodway. Flood fringe is synonymous with the term "floodway fringe" used  
11 in flood insurance studies.

12 Subp. ~~16g.~~ 16f. **Floodway.** "Floodway" means the bed of a wetland or lake, the  
13 channel of a watercourse, and those portions of the adjoining floodplain that are  
14 reasonably required to carry or store the regional flood discharge.

15 Subp. ~~16h.~~ 16g. **Flow measurement.** "Flow measurement" means any method to  
16 accurately measure water or sewage flow, including water meters, event counters,  
17 running time clocks, electronically controlled dosing, or any combination thereof.

18 Subp. ~~16i.~~ 16h. **Food, beverage, and lodging facility.** "Food, beverage, and lodging  
19 facility" means an establishment engaged in the business of conducting a food and  
20 beverage service, hotel, motel, inn, resort camp, lodge, hostel, or other similar  
21 establishment, and required to obtain a license under Minnesota Statutes, section 157.16,  
22 subdivision 1.

23 Subp. 17a. [See repealer.]

24 [For text of subps 17b and 18, see M.R.]

25 Subp. 18a. **Greywater system.** "Greywater system" means a system that receives,  
26 treats, and disposes of only greywater or other similar system as designated by the  
27 commissioner.



1 Subp. 18b. **Hazardous waste.** "Hazardous waste" means any substance that, when  
2 discarded, meets the definition of hazardous waste in part 7045.0020, subpart 33, and  
3 Minnesota Statutes, section 116.06, subdivision 11.

4 Subp. 19. **Holding tank.** "Holding tank" means a tank for storage of sewage until it  
5 can be transported to a point of treatment and disposal.

6 Subp. 19a. **Imminent threat to public health or safety.** "Imminent threat to public  
7 health or safety" means situations with the potential to immediately and adversely affect  
8 or threaten public health or safety. At a minimum, this includes ground surface or  
9 surface water discharges and sewage backup into a dwelling or other establishment.

10 Subp. 19b. **ISTS.** "ISTS" means an individual sewage treatment system as defined in  
11 subpart 21.

12 Subp. 19c. **ISTS professional.** "ISTS professional" means a person who designs,  
13 installs, alters, repairs, maintains, pumps, or inspects all or part of an individual sewage  
14 treatment system and is required to comply with applicable requirements.

15 Subp. 21. **Individual sewage treatment system.** "Individual sewage treatment  
16 system" means a sewage treatment system, or part thereof, serving a dwelling, or other  
17 establishment, or group thereof, and using sewage tanks followed by soil treatment and  
18 disposal or using advanced treatment devices that discharge below final grade.  
19 Individual sewage treatment system includes holding tanks and privies.

20 Subp. 21a. **Inner wellhead management zone.** "Inner wellhead management zone"  
21 means the drinking water supply management area for a public water supply well that  
22 does not have a delineated wellhead protection area approved by the Minnesota  
23 Department of Health under part 4720.5330.

24 ~~{For text of subps 21a and 21b, see M.R.}~~

25 [Renumber subps 21a and 21b as subps 21b and 21c]

1 Subp. ~~21e.~~ 21d. **Licensee.** "Licensee" means a person to whom a license is issued  
2 under part 7080.0705.

3 Subp. 22b. **Liquid capacity.** "Liquid capacity" means the liquid volume of a sewage  
4 tank below the invert of the outlet pipe, or for holding tanks and dosing chambers, the  
5 liquid volume below the invert of the inlet.

6 Subp. 22c. **Local ordinance.** "Local ordinance" means any ordinance that complies  
7 with this chapter adopted by a local unit of government to regulate individual sewage  
8 treatment systems, and/or any ordinance to regulate the issuance of permits or  
9 variances for the addition of a bedroom on property served by an individual sewage  
10 treatment system.

11 Subp. 22d. **Local unit of government.** "Local unit of government" means a township,  
12 statutory or home rule charter city, or county with jurisdiction over individual sewage  
13 treatment systems through a local ordinance.

14 Subp. 22e. **Lot.** "Lot" means a parcel of land in a plat recorded in the office of the  
15 county recorder or registrar of titles or a parcel of land created and conveyed, using a  
16 specific legal description, for a building site to be served by an individual sewage  
17 treatment system.

18 Subp. 22f. **Medium sands.** "Medium sands" means soil particles which range in size  
19 between 0.25 millimeters and 0.5 millimeters.

20 Subp. 22g. **Mitigation plan.** "Mitigation plan" means a planned course of action to be  
21 used in the event that a system fails to meet performance expectations established in  
22 part 7080.0310, subpart 7.

23 Subp. 22h. **Monitoring plan.** "Monitoring plan" means a plan which requires the  
24 periodic examination or testing of system performance established in part 7080.0310,  
25 subpart 7.

26 Subp. 22f. 22i. **More restrictive standards.** "More restrictive standards" means the  
7080.0020

1 modification of technical standards and criteria in a local ordinance to provide an  
2 additional measure of public health or environmental protection, additional margins of  
3 safety, or greater system longevity.

4 Subp. 23. ~~[See repealer.]~~

5 Subp. 23. **Mottling.** ~~"Mottling;" as applied to soils, means a zone of chemical and~~  
6 ~~reduction activity, appearing as splotchy patches of red, brown, or gray in the soil. In~~  
7 ~~subsoils with a color value of four or more, the term mottling also includes soil having~~  
8 ~~matrix colors with a chroma of two or less as described in "Keys to Soil Taxonomy" 5th~~  
9 ~~Edition, 1992 Soil Management Support Services, technical monograph No. 19, which is~~  
10 ~~incorporated by reference. This document is provided by the Agency for International~~  
11 ~~Development, United States Department of Agriculture Soil Conservation Service, Soil~~  
12 ~~Management Support Services. The document was printed by Pocahontas Press, Inc.,~~  
13 ~~P.O. Drawer F, Blacksburg, Virginia 24063-1020. It can be found at the Minnesota State~~  
14 ~~Law Library, Judicial Center, 25 Constitution Avenue, St. Paul, Minnesota 55155, and is~~  
15 ~~not subject to frequent change. means the same as redoximorphic features in subpart~~  
16 ~~28e.~~

17 Subp. 24. **Mound system.** "Mound system" means a soil treatment system ~~constructed~~  
18 ~~on~~ with a rock bed elevated above the original soil with clean sand to overcome soil  
19 limitations.

20 Subp. 24b. **New construction.** "New construction" means installing or constructing an  
21 entirely new individual sewage treatment system or collector system; or altering,  
22 extending, or adding capacity to a system ~~under a currently active permit and before~~  
23 ~~issuance of the~~ that has been issued an initial certificate of compliance.

24 Subp. 24c. **New technology.** "New technology" means a ~~product or design,~~  
25 ~~combination of components, component of a product, or modification to existing~~  
26 ~~components~~ treatment and disposal process that has been approved by the agency in

1 ~~accordance with this chapter and is to be considered as a standard system before~~  
2 ~~actually being included by amendment into this chapter~~ designated as such by the  
3 commissioner in part 7080.0400.

4 Subp. 24d. **Notice of noncompliance.** "Notice of noncompliance" means a document  
5 written and signed by a qualified employee or licensee after a compliance inspection  
6 that gives notice an individual sewage treatment system is not in compliance as  
7 specified under part 7080.0060.

8 Subp. 24e. **Ordinary high water level.** "Ordinary high water level" has the meaning  
9 given in Minnesota Statutes, section 103G.005, subdivision 14.

10 Subp. 24f. **Original soil.** "Original soil" means naturally occurring inorganic soil that  
11 has not been moved, smeared, compacted, or manipulated with construction  
12 equipment.

13 Subp. 25. **Other establishment.** "Other establishment" means any public or private  
14 structure other than a dwelling that generates sewage and discharges to an individual  
15 sewage treatment system.

16 Subp. 25a. **Other pit.** "Other pit" means any pit or other device which is greater than  
17 30 inches in height and used for sewage treatment or disposal.

18 Subp. 25a: 25b. **Other systems.** "Other systems" means systems described in part  
19 7080.0178 that do not meet technical standards and criteria and rely on soil treatment  
20 and disposal.

21 Subp. 25b: 25c. **Owner.** "Owner" means any person having possession of, control  
22 over, or title to property with an individual sewage treatment system.

23 Subp. 26. **Percolation rate.** "Percolation rate" means the timed rate of drop of water  
24 infiltrating into a test hole as specified in part 7080.0110, subpart 4, item E.

25 Subp. 26a. **Performance systems.** "Performance systems" means individual sewage

1 treatment systems described in part 7080.0179 designed to adequately protect the public  
2 health and the environment and to provide long-term performance.

3 Subp. 26b. **Permit.** "Permit" means a building, construction, sanitary, planning,  
4 zoning, or other such permit issued for new construction, replacement, repair,  
5 alteration, or extension of an individual sewage treatment system or collector system.  
6 Permit also means a permit issued for the addition of a bedroom on property served by  
7 an individual sewage treatment system.

8 Subp. 26c. **Permittee.** "Permittee" means a person who is named on a permit issued  
9 pursuant to local ordinance.

10 Subp. 27. [See repealer.]

11 [For text of subp 28, see M.R.]

12 Subp. 28a. **Privy.** "Privy" means an aboveground structure with an underground  
13 cavity meeting the requirements of part 7080.0172, subpart 2, that is used for the storage  
14 or treatment and disposal of toilet wastes, excluding water for flushing and greywater.

15 Subp. 28c. **Public waters.** "Public waters" means any public waters or wetlands as  
16 defined in Minnesota Statutes, section 103G.005, subdivision 15, or identified as public  
17 waters or wetlands by the inventory prepared pursuant to Minnesota Statutes, section  
18 103G.201.

19 Subp. 28d. **Qualified employee.** "Qualified employee" means a state or local  
20 government employee who designs, installs, maintains, pumps, or inspects individual  
21 sewage treatment systems as part of that person's employment duties.

22 Subp. 28e. **Redoximorphic features.** "Redoximorphic features" means features  
23 formed in saturated soil by the process of reduction, translocation, and oxidation of iron  
24 and manganese compounds, or other soil, landscape or vegetative indicators. They are  
25 described in part 7080.0110, subpart 4, item D, subitem (5). This is commonly known as  
26 "mottling."

1 Subp. ~~28f.~~ 28g. **Replacement.** "Replacement" means the removal or discontinued use  
2 and installation of a sewage tank, holding tank, dosing chamber, privy, collector system,  
3 or soil treatment system.

4 Subp. 28f. [See repealer.]

5 Subp. 29a. **Saturated soil.** "Saturated soil" means the highest elevation in the soil that  
6 is in a reduced chemical state because of soil voids being filled with water. Saturated  
7 soil is evidenced by the presence of redoximorphic features or other information.

8 Subp. 29b. **Seasonal dwelling.** "Seasonal dwelling" means a dwelling that is occupied  
9 or used for less than 180 days per year and less than 120 consecutive days.

10 Subp. 29c. **Seepage bed.** "Seepage bed" means an excavated area greater than three  
11 feet but no more than 25 feet in width that contains drainfield rock and has more than  
12 one distribution pipe.

13 Subp. 30. **Seepage pit, or leaching pit, or dry well.** "Seepage pit, or leaching pit, or  
14 dry well" means an underground pit into which a sewage tank discharges effluent and  
15 from which the liquid seeps into the surrounding soil through the bottom and openings  
16 in the side of the pit; it must meet the design requirements in part 7080.0950.

17 Subp. 31. **Septage.** "Septage" means solids and liquids removed during periodic  
18 maintenance of an individual sewage treatment system, or solids and liquids that are  
19 removed from toilet waste treatment devices.

20 Subp. 31a. **Septic tank.** "Septic tank" means any watertight, covered receptacle  
21 designed and constructed to receive the discharge of sewage from a building sewer,  
22 separate solids from liquid, digest organic matter, store liquids through a period of  
23 detention, and allow the ~~clarified liquids~~ effluent to discharge to a soil treatment system.

24 Subp. 31b. **Serial distribution.** "Serial distribution" means distribution of sewage by  
25 gravity flow that progressively loads one section of a soil treatment system to a  
26 predetermined level before overflowing to the succeeding section. This progressive

1 loading does not place a dynamic head on lower section of the soil treatment system,  
2 nor does the distribution medium function as a conveyance medium to the next section.

3 Subp. 32. **Setback.** "Setback" means a separation distance measured horizontally.

4 Subp. 33. **Sewage.** "Sewage" means waste produced by toilets, bathing, laundry, or  
5 culinary operations, and or the floor drains associated with these sources. Household  
6 cleaners in sewage are restricted to amounts normally used for domestic purposes.

7 Subp. 35. **Sewage tank.** "Sewage tank" means a receptacle used in the treatment of  
8 sewage, and includes septic tanks and aerobic tanks. Requirements for sewage tanks are  
9 set out in part 7080.0130.

10 [For text of subp. 36, see M.R.]

11 Subp. 37. [See repealer.]

12 Subp. 38. **Shoreland.** "Shoreland" means land adjacent to public waters that has been  
13 designated and delineated as shoreland by local ordinance as approved by the  
14 Department of Natural Resources.

15 Subp. 39. **Site.** "Site" means the area bounded by the dimensions required for the  
16 proper location of the individual sewage treatment system.

17 Subp. 40. **Slope.** "Slope" means the ratio of vertical rise or fall to horizontal distance.

18 ~~Subp. 41a. **Soil dispersal system.** "Soil dispersal system" means a system whose main~~  
19 ~~function is to dispose of effluent while providing some unsaturated treatment to protect~~  
20 ~~the public health and the environment.~~

21 Subp. 42. **Soil textural classification.** "Soil textural classification" means the soil  
22 particle size classification and particle size distribution classification as specified in the  
23 Soil Survey Manual, Handbook No. 18, United States Department of Agriculture, 1993,  
24 incorporated by reference in part 7080.0110, subpart 4, item D, subitem (3).

25 Subp. 43. **Soil treatment area.** "Soil treatment area" means the area required for the  
26 soil treatment system including spacing between individual units.

1 [For text of subp 44, see M.R.]

2 Subp. 44. **Soil treatment system.** "Soil treatment system" means a system where  
3 sewage tank effluent is treated and disposed of into the soil by percolation and  
4 filtration, and includes trenches, seepage beds, drainfields, at-grade systems, and  
5 mound systems.

6 Subp. 45. **Standard system.** "Standard system" means an individual sewage treatment  
7 system specified in parts ~~7080.0020, 7080.0060 to 7080.0176,~~ 7080.0065 to 7080.0170, and  
8 7080.0600 and as designated by the commissioner under part 7080.0400, subpart 4.

9 [For text of subp 45a, see M.R.]

10 Subp. 45b. **Subsoil.** "Subsoil" means a soil layer that has a moist color value of 3.5 or  
11 greater.

12 Subp. 45c. **Supply pipe.** "Supply pipe" means a nonperforated pipe whose purpose is  
13 to transport sewage tank effluent.

14 Subp. 46. [See repealer.]

15 Subp. 46a. **SWF.** "SWF" means the following three categories of systems: systems  
16 constructed in shoreland areas; systems constructed in wellhead protection areas  
17 regulated under Minnesota Statutes, chapter 103I; and systems serving food, beverage,  
18 and lodging establishments, including manufactured home parks and recreational  
19 camping areas licensed according to Minnesota Statutes, chapter 327.

20 Subp. 46b. **Technical standards and criteria.** "Technical standards and criteria" means  
21 parts 7080.0020, 7080.0060 to 7080.0176, and 7080.0600.

22 Subp. 47. [See repealer.]

23 Subp. 48. **Toilet waste.** "Toilet waste" means waste commonly disposed of in toilets,  
24 including fecal matter, urine, toilet paper, and water used for flushing. Toilet waste does  
25 not include sanitary napkins, tampons, and disposable diapers unless the system is  
26 specifically designed to treat and dispose of these types of waste.



1 Subp. 48a. **Toilet waste treatment devices.** "Toilet waste treatment devices" means  
2 other toilet waste apparatuses including incinerating, composting, biological, chemical,  
3 recirculating, or holding toilets or portable restrooms.

4 Subp. 48b. **Topsoil.** "Topsoil" means the natural in-place soil layer with a color value  
5 of less than 3.5.

6 Subp. 48c. **Topsoil borrow.** "Topsoil borrow" means a loamy soil material having:

7 A. less than five percent material larger than 2.0 mm (#10 sieve);

8 B. no material larger than 2.5 cm;

9 C. a moist color value of 3.5 or less; and

10 D. adequate nutrients and pH to sustain healthy plant growth.

11 Subp. 48d. **Trench.** "Trench" means an area excavated from 18 to 36 inches in width  
12 that contains drainfield rock or other distribution medium.

13 [For text of subp 49, see M.R.]

14 Subp. 49a. [See repealer.]

15 Subp. 49b. **Vertical separation.** "Vertical separation" means the vertical measurement  
16 of unsaturated soil or sand between the bottom of the distribution medium and the  
17 saturated soil level or bedrock.

18 Subp. 51a. **Warrantied system.** "Warrantied system" means an individual sewage  
19 treatment system product or design on the warrantied system's list under part  
20 7080.0450.

21 [For text of subp 52, see M.R.]

22 Subp. 53. [See repealer.]

23 Subp. 54. **Wellhead protection area.** "Wellhead protection area" means the surface  
24 and subsurface area surrounding a well or well field that supplies a public water  
25 system, through which contaminants are likely to move toward and reach the well or

1 well field as regulated under chapter 4720. For the purposes of this rule, wellhead  
2 protection area shall be that area bounded by the drinking water supply management  
3 area as regulated under chapter 4720.

4 **7080.0025 ADVISORY COMMITTEE.**

5 [For text of subps 1 and 2, see M.R.]

6 Subp. 3. **Membership.** The committee shall consist of the following voting members.  
7 Of the voting members:

8 A. one shall be a citizen of Minnesota, representative of the public;

9 B. one shall be from the Minnesota Extension Service of the University of  
10 Minnesota;

11 C. six shall be county administrators, such as zoning administrators, sanitarians,  
12 and environmental health specialists, representing all of the agency's six geographic  
13 areas of the state;

14 D. one shall be a municipal building inspector;

15 E. six shall be sewage treatment contractors, representing all of the agency's six  
16 geographic areas of the state;

17 F. one shall be a water well contractor;

18 G. one shall be a township official;

19 H. three shall be elected public officials, one from each of the three agency districts;

20 I. one shall be from the Minnesota Department of Natural Resources; and

21 J. one shall be from the Department of Health.

22 Subp. 4. **Nonvoting members.** The following agencies and associations shall each  
23 have at least one nonvoting member to assist the advisory committee and to be advised,  
24 in turn, on matters relating to ISTS: the agency, ~~Minnesota Department of Health,~~  
25 United States Department of Agriculture Natural Resource Conservation Service-Soil

1 Survey Program, Minnesota Association of Professional Soil Scientists, Metropolitan  
2 Council, Association of Minnesota Counties, Minnesota Association of Townships,  
3 League of Minnesota Cities, Minnesota Society of Engineers, Association of Small Cities,  
4 Minnesota Association of Campground Operators, Inc., Minnesota Association of  
5 Realtors, Minnesota County Recorders' Association, Minnesota Environmental Health  
6 Association, ISTS supplier representative, Minnesota On-site Sewage Treatment  
7 Contractor's Association, ~~and the~~ American Society of Home Inspectors, and the  
8 Minnesota Lakes Association.

9 Subp. 5. **Appointment; terms.** All members shall be appointed by the commissioner  
10 from recommendations by the named entities or organizations. All members shall serve  
11 four-year terms, with terms staggered to maintain continuity. Voting members  
12 appointed to the committee after the effective date of this part may serve a maximum of  
13 two consecutive terms, except by virtue of their office. Voting members on the  
14 committee prior to the effective date of this part may serve a maximum of two  
15 additional consecutive terms, beginning at the end of their current terms. If the voting  
16 member misses three consecutive meetings or the member's attendance falls below 50  
17 percent during the term, the appointed member shall lose membership status for a  
18 minimum of one year. The commissioner shall then appoint a replacement member for  
19 the remainder of the term from the recommendation offered by the affected entity,  
20 group, or organization. In the case of a vacancy, an appointment shall be made for the  
21 unexpired balance of the term. Administrators, inspectors, elected officials, and  
22 contractors must be bona fide residents of this state for at least three years before  
23 appointment, and shall have at least three years' experience in their respective  
24 businesses or offices.

25 Subp. 6. **Procedural rules.** "Robert's Rules of Order Newly Revised," 1991, which is  
26 incorporated by reference, shall prevail at all meetings of the advisory committee. It is  
27 issued by Scott, Foresman and Company and is available through Harper Collins

1 Publishers, P.O. Box 588, Dunmore, PA 18512. It can be found at the Minnesota State  
2 Law Library, Judicial Center, 25 Constitution Avenue, St. Paul, MN 55155, and is not  
3 subject to frequent change.

4 Subp. 7. **Quorum.** A quorum shall consist of nine voting members.

5 **7080.0030 ADMINISTRATION BY STATE AND FEDERAL AGENCIES.**

6 Subpart 1. **Federal regulation.** All ~~new or existing~~ subsurface ~~or surface~~ discharging  
7 systems that are designed to receive a flow from a dwelling or group of dwellings with  
8 ten or more bedrooms, or to receive any substance not included in the definition of  
9 sewage in part 7080.0020, subpart 33, and any other establishment are regulated under  
10 Title 40 of the Code of Federal Regulations, parts 144 and 146, and minimum state  
11 requirements described in part 7080.0600.

12 Subp. 1a. **SDS and NPDES permits required.** The agency issues State Disposal  
13 System (SDS) and National Pollutant Discharge Elimination System (NPDES) permits.  
14 All ~~new or existing~~ systems that discharge to surface waters or above the ground surface  
15 must obtain either an NPDES/SDS or an SDS permit from the agency and shall comply  
16 with all permit requirements.

17 Subp. 2. [See repealer.]

18 Subp. 3. **Variance procedures.** In certain cases, the owner or other person responsible  
19 for an ISTS which requires a variance by the agency may submit a request for a variance  
20 from the standards in this chapter as described in items A to D.

21 A. Variances to the minimum requirements in parts 7080.0305 to 7080.0315 must be  
22 submitted to and approved by the commissioner prior to implementation.

23 B. Variances to separation distances from wells and water supply pipes may only  
24 be issued by the Minnesota Department of Health. In areas where the Minnesota  
25 Department of Health has designated the well program to a local governmental unit, a  
26 variance is required from the local delegated program. Variances to separation distances

1 from water supply pipes may only be issued by the Minnesota Department of Health or  
2 Plumbing Code administrative authority.

3 C. Before granting a requested variance, the commissioner or agency must find  
4 that by reason of exceptional circumstances the strict enforcement or strict conformity  
5 with parts 7080.0305 to 7080.0315 would be unreasonable, impractical, or not feasible  
6 under the circumstances, ~~or not reasonable due to proximity of systems.~~ The agency  
7 may permit a variance under part 7000.7000 upon conditions as it may prescribe for  
8 prevention, control, or abatement of pollution in harmony with the general purpose of  
9 this chapter and the intent of applicable state and federal laws. ~~Variances to separation~~  
10 ~~distances from wells and water supply pipes can only be issued by the Minnesota~~  
11 ~~Department of Health.~~ The variance request must contain, as applicable:

12 (1) the specific language in the rule or rules from which the variance is  
13 requested;

14 (2) the reasons why the rule is difficult or inappropriate;

15 (3) a description of the hardship that prevents compliance with the rule;

16 (4) the alternative measures that will be taken to ensure a comparable degree of  
17 protection to public health or the environment if the variance is granted;

18 (5) the length of time for which the variance is requested;

19 (6) a statement that the party applying for the variance will comply with the  
20 terms of the variance, if granted;

21 (7) cost considerations; and

22 (8) proximity of system to other systems.

23 D. In addition to the variance information required in item C, the commissioner  
24 may also ask the requesting party for other relevant information as necessary to  
25 properly evaluate the variance request.

1 Subp. 4. **Administration by all state agencies.** Individual sewage treatment systems  
2 serving establishments licensed or otherwise regulated by Minnesota shall conform to  
3 the requirements of this chapter. Use of systems designed under part 7080.0172,  
4 7080.0178, or 7080.0179 for new construction or replacement of systems that serve  
5 establishments licensed or otherwise regulated by the ~~state of Minnesota~~ is Department  
6 of Health are allowed only in areas where a standard system cannot be installed or is  
7 not the most suitable treatment and only where allowed and enforced under ordinance  
8 and permit of the local unit of government. Any individual sewage treatment systems  
9 requiring approval by the state shall also comply with applicable local codes and  
10 ordinances. Plans and specifications must receive the appropriate state and local  
11 approval before construction is initiated.

12 **7080.0060 COMPLIANCE CRITERIA.**

13 Subpart 1. **Treatment required.** All sewage generated from a dwelling or other  
14 establishment not served by a system issued a permit by the agency shall be treated in  
15 accordance with this chapter.

16 Subp. 2. **Primitive dwellings.** Greywater from dwellings served with a hand pump  
17 or greywater from dwellings served by hand carried water shall not be discharged  
18 directly to surface waters, drainageways or poorly drained soils, or in a manner or  
19 volume harmful to the environment or public health or that creates a nuisance.

20 Subp. 3. **Compliance criteria.** Individual sewage treatment systems shall be  
21 considered in compliance if the provisions in items A to E are satisfied.

22 A. General:

- 23 (1) the system is not an imminent threat to public health or safety;  
24 (2) the system is not a failing system; and  
25 (3) the system meets the performance expectations of any applicable monitoring  
26 plan; and as required under parts 7080.0178 and 7080.0179.

1           (4) B. (1) all ~~existing~~ systems built after ~~April 1,~~ March 31, 1996, shall have a  
2 three-foot vertical separation as measured outside the area of system influence in an  
3 area of similar soil; and

4           B: (2) all systems built before April 1, 1996, in non-SWF areas must have at least  
5 two feet of vertical separation as measured outside the area of system influence in an  
6 area of similar soil.

7           C. All new construction or replacement not designed under part 7080.0178 or  
8 7080.0179 must meet technical standards and criteria. The vertical separation distance  
9 shall be measured in the soil treatment area.

10           D. Performance systems designed under part 7080.0179 must also meet ~~the~~  
11 ~~performance~~ all requirements of the operating permit specified in part 7080.0310,  
12 subpart 6.

13           E. Other systems designed under part 7080.0178 must also meet the requirements  
14 of the monitoring and mitigation plans specified in part 7080.0310, subpart 7.

15           Subp. 4. [See repealer.]

16           **7080.0065 ACCEPTABLE AND PROHIBITED DISCHARGES.**

17           Subpart 1. **Sewage.** Only sewage may be discharged to systems described under this  
18 chapter.

19           Subp. 2. **Wells and excavations.** Sewage, sewage tank effluent, or seepage from a soil  
20 treatment system shall not be discharged into any well or boring as defined in chapter  
21 4725, or any other excavation in the ground not in compliance with this chapter.

22           Subp. 3. **System influent.** Footing or roof drainage, ~~clear water,~~ and chemically  
23 treated hot tub and pool water shall not enter any part of a system. Products containing  
24 hazardous waste and hazardous substances must not be discharged to a system other  
25 than in normal amounts of household products and cleaners designed for household

1 use. Substances not intended for use in household cleaning, including solvents,  
 2 pesticides, flammables, photo finishing chemicals, and dry cleaning chemicals, must not  
 3 be discharged to the system.

4 Subp. 4. **Surface discharge.** Unless specifically permitted by the agency, a system  
 5 shall not discharge sewage or sewage tank effluent, to the ground surface or to surface  
 6 water. In addition, systems shall not seep to the ground surface.

7 **7080.0110 DESIGN PHASE I: SITE EVALUATION.**

8 Subp. 1a. **Necessity of design phase I: site evaluation.** Site evaluations consisting of  
 9 preliminary and field evaluations shall be conducted for all proposed sites for  
 10 individual sewage treatment systems. The site evaluation report shall include the results  
 11 of the preliminary and field evaluations and is considered the first phase of individual  
 12 sewage treatment system design.

13 Subp. 2a. **Preliminary evaluation.** A preliminary evaluation shall include:

14 A. flow determination for the dwelling or other establishment;

15 B. location of proposed or existing:

16 (1)(a) water supply wells within 100 feet of the proposed individual sewage  
 17 treatment system;

18 (b) noncommunity transient public water supply wells within 200 feet of the  
 19 proposed individual sewage treatment system if alternative local standards are in effect;

20 or

21 (c) community or noncommunity nontransient water supply in a drinking  
 22 water supply management area if alternative local standards are in effect;

23 (2) buildings or improvements on the lot; and

24 (3) buried water pipes within 50 feet of the proposed system;

25 C. easements on the lot;



1 D. ordinary high water level of public waters;

2 E. floodplain designation and flooding elevation from published data or data that  
3 is acceptable to and approved by the ~~permitting authority~~ local unit of government or  
4 the DNR;

5 F. property lines;

6 G. all required setbacks from the system;

7 H. soil classifications and applicable characteristics at the proposed soil treatment  
8 areas. The soil survey report, if available, shall be consulted. Justification shall be made  
9 of the soils characteristics identified on the site which substantially differ from the  
10 characteristics identified in the soil survey report;

11 I. legal description and lot dimensions; ~~and~~

12 J. names of property owners; and

13 K. inner wellhead management zone or wellhead protection area of a public water  
14 supply.

15 Subp. 4. **Field evaluation.** A field evaluation shall consist of the items described in  
16 items A to F.

17 A. Identifying lot lines, lot improvements, required setbacks, and easements.

18 B. Describing the following surface features:

19 (1) percent and direction of the slope at the proposed system location;

20 (2) vegetation type;

21 (3) any evidence of disturbed or compacted soil or flooding or run-on potential;

22 and

23 (4) landscape position.

24 C. Soil observations. The number of soil observations required is based on the

1 professional judgment of the individual conducting the site evaluation or the permitting  
2 authority with a minimum of one observation per soil treatment area. Soil observations  
3 shall be performed in an exposed pit, or by hand augering, or by probing. Underground  
4 utilities must be located before soil observations are undertaken. Required safety  
5 precautions must be taken before entering soil pits. Flite augers ~~that are noncontinuous~~  
6 ~~or that disturb extracted soil samples must not~~ allowed to be used for soil observation.  
7 Soil observations shall be conducted prior to any required percolation tests to determine  
8 whether the soils are suitable to warrant percolation tests and, if suitable, at what depths  
9 percolation tests shall be conducted. The depth of the soil boring shall be to the  
10 seasonally saturated layer, the bedrock, or three feet below the proposed depth of the  
11 system, whichever is less.

12 D. Soil description. Each soil observed at the proposed soil treatment area shall be  
13 evaluated under adequate light conditions with the soil in a moist state for the  
14 characteristics in subitems (1) to (8).

15 (1) The depth of each soil horizon measured from the ground surface. Soil  
16 horizons are differentiated by changes in soil texture, soil color, redoximorphic features,  
17 bedrock, consistence, and any other characteristic that may affect water percolation or  
18 treatment of effluent.

19 (2) The soil matrix and mottled color described per horizon by the Munsell Soil  
20 Color Charts, 1992 Revised Edition or equivalent, which is incorporated by reference.  
21 This document is available from Macbeth Division, Kollmorgen Instruments  
22 Corporation, 405 Little Britain Road, New Windsor, New York 12553. It can be found at  
23 the Minnesota State Law Library, Judicial Center, 25 Constitution Avenue, St. Paul,  
24 Minnesota 55155 and is not subject to frequent change.

25 (3) A description of the soil texture and consistence using the United States  
26 Department of Agriculture (USDA) soil classification system as specified in the Soil

1 Survey Manual, Agricultural Handbook No. 18 (October 1993), which is incorporated by  
 2 reference. The manual is issued by the United States Department of Agriculture and is  
 3 available through the Superintendent of Documents, United States Government Printing  
 4 Office, Washington, D.C. It can be found at the Minnesota State Law Library, Judicial  
 5 Center, 25 Constitution Avenue, St. Paul, Minnesota 55155, and is not subject to frequent  
 6 change.

7 (4) Depth to the bedrock.

8 (5) Depth to the seasonally saturated soil for new construction or replacement as  
 9 determined by redoximorphic features:

10 (a) in subsoils redoximorphic features include:

11 i. distinct iron accumulations as described in part ~~7080.0029~~ 7080.0020,  
 12 subpart 13a, or distinct iron depletions;

13 ii. soil colors having a chroma of two or less; or

14 iii. soil colors having a hue of 5Y and a chroma of three or less;

15 (b) in lower topsoils, immediately followed by saturated subsoils,  
 16 redoximorphic features include:

17 i. soil colors with a chroma of two or less; or

18 ii. redoximorphic accumulations or depletions;

19 (c) in upper topsoils immediately followed by saturated lower topsoil,  
 20 redoximorphic features include:

21 i. soil colors with a chroma of zero;

22 ii. accumulation of high levels of organic material;

23 iii. dominance of hydrophilic vegetation; or

24 iv. the soil treatment area at or near the elevation of the ordinary high

1 water level of a surface water or the soil treatment area in a depressional landscape  
2 position; and

3 (6) Depth to the seasonally saturated soil for all existing systems is determined  
4 by redoximorphic features in subitem (5), except for unit (b), subunit i; and unit (c),  
5 subunits i and iv as measured outside the area of system influence in an area of similar  
6 soil.

7 (7) Depth of standing water in the hole measured from the soil surface, if  
8 observed.

9 (8) Any other soil characteristic that may need to be described to properly  
10 design a system such as hardpans or restrictive layers must be classified in accordance  
11 with chapter 3 of the Soil Survey Manual, Agricultural Handbook No. 18, which is  
12 incorporated by reference in subitem (3).

13 E. Percolation test procedures. Percolation tests, where required, shall be made as  
14 described in subitems (1) to (8).

15 (1) Each test hole shall be six to eight inches in diameter, have vertical sides, and  
16 be located in the soil treatment area with the bottom of the test hole at the proposed  
17 depth of the soil treatment system. For mounds and at-grade systems, the bottom of  
18 each test hole shall be in the upper 12 inches of the original soil. For trenches and  
19 seepage beds, the bottom of each test hole shall be at the design depth.

20 (2) Soil texture descriptions shall note the depths from the ground surface where  
21 texture changes occur.

22 [For text of subitems (3) and (4), see M.R.]

23 (5) The hole shall be carefully filled with clear water to a minimum depth of 12  
24 inches from the bottom of the test hole and maintained for no less than four hours for  
25 saturation to occur.

26 The soil shall then be allowed to swell for at least 16, but no more than 30 hours. In

1 sandy soils, the saturation and swelling procedure shall not be required and the test  
2 may proceed if the initial filling of the hole with 12 inches of water seeps away in less  
3 than ten minutes.

4 [For text of subitems (6) and (7), see M.R.]

5 (8) Frost. A percolation test shall not be run where frost exists below the depth  
6 of the proposed soil treatment system.

7 F. The phase I site evaluation report shall include how the proposed soil treatment  
8 areas will be protected from compaction and disturbance.

9 Subp. 5a. **Phase I: site evaluation reporting.** A written report on the site evaluation  
10 shall be prepared and include the following:

11 A. preliminary and field evaluation results from subpart 2a, items A to G and I to J  
12 K, and 4, items A to F;

13 B. dates of preliminary and field evaluations;

14 C. a map drawn to scale or dimension, with a north arrow, and including:

15 (1) horizontal and vertical reference point of the proposed soil treatment area or  
16 areas, soil ~~observation~~ observations and percolation tests and distance from the  
17 proposed ISTS to all required setbacks, lot improvements, easements, ordinary high  
18 water mark of public waters, property lines, direction, and percent slope;

19 (2) the location of any unsuitable, disturbed or compacted areas; and

20 (3) the access route for tank maintenance;

21 D. estimated depth of seasonally saturated layer, bedrock, or flood elevation, if  
22 appropriate;

23 E. proposed elevation of the bottom of the soil treatment system;

24 F. final soil sizing factor;

25 G. anticipated construction-related issues; and

1 H. name, address, telephone number, and certified statement of the individual  
2 conducting the site evaluation.

3 **7080.0115 DESIGN PHASE II.**

4 Subpart 1. **Design report.** A completed design report shall be considered the second  
5 phase for an individual sewage treatment system design. ~~Design requirements are~~  
6 ~~stated in the technical standards and criteria.~~ Phase II design reports shall include  
7 drawings, design flows, system component sizings and calculations, hydraulic and  
8 organic loading rates, setbacks, construction considerations, and, as applicable,  
9 maintenance contracts, operational requirements, monitoring, and mitigation plans.

10 Subp. 2. **Compliance.** Designs shall comply with all applicable ordinances, codes,  
11 rules, laws, and include other items necessary to comply with this chapter.

12 **7080.0120 BUILDING SEWERS.**

13 Subpart 1. **Plumbing and well codes.** The design, construction, and location of, ~~and~~  
14 ~~the materials for use in,~~ building sewers shall comply with the Minnesota Plumbing  
15 Code, chapter 4715, and Minnesota rules relating to wells and borings, chapter 4725.  
16 Only polyvinyl chloride (PVC) plastic pipe meeting the specification methods and  
17 testing protocol described in parts 4715.0530 and 4715.2820 shall be used.

18 **7080.0125 SEWAGE FLOW DETERMINATION FOR DWELLINGS.**

19 Subpart 1. **System sizing.** If construction of additional bedrooms, the installation of  
20 water-using devices, or other factors likely to affect the operation of the system can be  
21 reasonably anticipated, the system shall be designed to accommodate this additional  
22 capacity.

23 Subp. 2. **Design flow.** Average design flow shall be used to size soil treatment  
24 systems. The estimated average design flow for any dwelling shall provide for at least  
25 two bedrooms. For multifamily dwellings, the average design flow shall consist of the  
26 sum of the average design flows for each individual unit.

Table I

Average Design Flow (gallons per day)

Number of Bedrooms	Classification of Dwelling			
	I	II	III	IV
2 or less	300	225	180	*
3	450	300	218	*
4	600	375	256	*
5	750	450	294	*
6	900	525	332	*

\* Flows for Classification IV dwellings shall be 60 percent of the values as determined for Classification I, II, or III systems.

Table I is based on the following formulas:

Classification I: Classification I dwellings are those with more than 800 square feet per bedroom, when the dwelling's total floor area is divided by the number of bedrooms, or more than two of the following water-use appliances are installed or anticipated: automatic washer, dishwasher, water conditioning unit, whirlpool bath, garbage disposal, or self-cleaning humidifier in furnace. The average design flow for classification I dwellings is determined by multiplying 150 by the number of bedrooms.

Classification II: Classification II dwellings are those with 500 to 800 square feet per bedroom, when the dwelling's total floor area is divided by the number of bedrooms, and no more than two of the water-use appliances are installed or anticipated as listed in Classification I. The average design flow for classification II dwellings is determined by adding one to the number of bedrooms and multiplying this result by 75.

Classification III: Classification III dwellings are those with less than 500 square feet per bedroom, when the dwelling's total floor area is divided by the number of bedrooms, and no more than two of the water-use appliances are installed or anticipated as listed in Classification I. The average design flow for classification III dwellings is determined by adding one to the number of bedrooms, multiplying this result by 38, then adding 66.

1 Classification IV: Classification IV dwellings are dwellings designed under part  
2 ~~7080.0172~~ 7080.0170, subpart 4 7.

3 Subp. 3. [See repealer.]

4 Subp. 4. [See repealer.]

5 **7080.0130 SEWAGE TANKS.**

6 Subpart 1. **General.** All tanks, regardless of material or method of construction, must:

7 A. be watertight, including at all tank and riser joints, riser connections, and pipe  
8 connections;

9 B. be designed and constructed to withstand all lateral earth pressures under  
10 saturated soil conditions when empty, including risers;

11 C. be designed and constructed with adequate tensile and compressive strength to  
12 withstand a minimum of seven feet of saturated earth cover above the tank top and  
13 maintenance hole cover;

14 D. not be subject to corrosion or decay, including risers and maintenance hole  
15 covers;

16 [For text of items E and F, see M.R.]

17 G. be protected against flotation under high water table conditions;

18 H. have a written and graphic label affixed to maintenance hole covers of sewage  
19 tanks warning of the hazardous conditions inside the tanks; and

20 I. not be constructed out of blocks, bricks, or similar materials that do not create a  
21 watertight tank, including risers and maintenance hole covers.

22 Subp. 2. **Design of septic tanks.** All tanks, regardless of material or method of  
23 construction, shall meet the criteria in items A to P.

24 A. The liquid depth of any septic tank or compartment must be at least 30 inches.



1 B. No tank or compartment shall have an inside horizontal dimension less than 24  
2 inches.

3 [For text of items C to E, see M.R.]

4 F. Baffles must be integrally cast with the tank, affixed with a permanent  
5 waterproof adhesive, or affixed at the top and bottom with connectors that are not  
6 subject to corrosion or decay. Sanitary tees used as baffles shall be affixed to the inlet or  
7 outlet pipes with a permanent waterproof adhesive.

8 [For text of item G, see M.R.]

9 H. The outlet baffle and the baffles between compartments shall extend below the  
10 liquid surface a distance equal to 40 percent of the liquid depth except that the  
11 penetration of the indicated baffles or sanitary tees for horizontal cylindrical tanks shall  
12 be 35 percent of the total liquid depth. They shall also extend above the liquid surface as  
13 required in item D. In no case shall these baffles extend less than six inches above the  
14 liquid surface. ~~A gas-deflecting baffle or effluent screen shall be installed at the outlet of  
15 the final septic tank.~~

16 I. There shall be at least one inch between the underside of the top of the tank and  
17 the highest point of the inlet and outlet devices.

18 [For text of items J and K, see M.R.]

19 L. The nearest point on the inlet baffles other than sanitary tees, shall be no less  
20 than six inches and no more than 12 inches from the end of the inlet pipe. The nearest  
21 point on the ~~outlet baffle~~ outlet baffle, other than sanitary tees, shall be no closer than six  
22 inches and no more than 12 inches from the beginning of the outlet pipe to the baffle.  
23 Sanitary tees used as inlet or outlet baffles shall be at least four inches in diameter.

24 M. Access to the septic tank:

25 (1) There shall be one or more maintenance holes, at a minimum of 20 inches  
26 (least dimension), and placed so access can be gained within six feet of all walls. All

1 maintenance holes shall extend through the tank cover to a point within 12 inches of  
2 finished grade. If maintenance holes are covered with less than six inches of soil, the  
3 cover must be secured to prevent unauthorized access.

4 [For text of subitem (2), see M.R.]

5 (3) An inspection pipe at least four inches in diameter must be located between  
6 the inlet and outlet baffles for the purpose of evaluating scum and sludge  
7 accumulations. The inspection pipe must extend through either the tank cover or  
8 maintenance hole cover and must be capped flush with or above finished grade.

9 (4) Maintenance holes extending to grade or above and located over the inlet  
10 baffle, outlet baffle, or located between the baffles shall be considered an inspection pipe  
11 for the purposes of subitems (2) and (3).

12 N. Compartmentation of single tanks:

13 (1) When a septic tank is divided into two compartments, the volume of the first  
14 compartment shall be between one-half and two-thirds of the total tank volume.

15 (2) When a septic tank is divided into three or more compartments, one-half of  
16 the total volume shall be in the first compartment and the other half equally divided  
17 between the other compartments.

18 (3) Connections between compartments shall be baffled to obtain effective  
19 retention of scum and sludge. The submergence of the inlet and outlet baffles of each  
20 compartment shall be as specified in items G and H.

21 (4) Adequate venting shall be provided between compartments by baffles or by  
22 an opening of at least 50 square inches near the top of the compartment wall.

23 (5) Adequate access to each compartment shall be provided by one or more  
24 maintenance holes, at least 20 inches (least dimension), with the maintenance hole or  
25 holes placed so access can be gained within six feet of all walls. The maintenance hole  
26 shall extend through the top of the tank compartment cover to a point between zero and

1 12 inches below finished grade. If the maintenance hole is between zero and six inches  
2 below finished grade, the maintenance hole cover must be secured to prevent  
3 unauthorized access.

4 O. Multiple tanks:

5 (1) Where more than one tank is used to obtain the required liquid volume, the  
6 tanks shall be connected in series.

7 (2) No tank in the series shall have a capacity of less than one-fourth of the  
8 required total liquid capacity.

9 (3) For new construction, the first tank shall be equal to or larger than any  
10 subsequent tank in the series.

11 P. Outlet pipe from septic tank:

12 (1) ~~The outlet pipe from the septic tank must not be cast iron.~~

13 (2) ~~The outlet pipe extending from the septic tank must be of sound and durable~~  
14 ~~construction and not subject to corrosion or decay.~~ design, construction, and location  
15 shall comply with the Minnesota Plumbing Code, chapter 4715. Only polyvinyl chloride  
16 (PVC) plastic pipe meeting the specification methods and testing protocol described in  
17 parts 4715.0530 and 4715.2820 shall be used.

18 (3) (2) The outlet pipe extending from the septic tank to the undisturbed soil  
19 beyond the tank must meet the strength requirements of American Society for Testing  
20 and Materials (ASTM), schedule 40 plastic pipe and must be supported so there is no  
21 deflection during the backfilling and subsequent settling of the soil between the edge of  
22 the septic tank and the edge of the excavation.

23 (4) (3) The soil around the pipe extending from the septic tank must be  
24 compacted to at least original density for a distance of three feet beyond the edge of the  
25 tank excavation.

1 Subp. 3. **Liquid capacity of septic tanks.** Any liquid depth that is greater than 78  
 2 inches shall not be used when calculating the septic tank liquid capacity. Liquid  
 3 capacity of septic tanks is described in items A to D.

4 A. Dwellings. The liquid capacity of a septic tank serving a dwelling shall be based  
 5 on the number of bedrooms and shall be at least as large as the liquid capacities given in  
 6 Table II.

7 Table II

Number of Bedrooms	Septic Tank Liquid Capacities (gallons)
2 or less	750
3 or 4	1,000
5 or 6	1,500
7, 8 or 9	2,000

15  
 16 B. Garbage disposals. If a garbage disposal unit is anticipated or installed in a  
 17 dwelling, the septic tank capacity must be at least 50 percent greater than that required  
 18 in item A and must include either multiple compartments, or multiple tanks, ~~or an~~  
 19 ~~effluent screen at the outlet end of the last septic tank~~ must be provided.

20 C. Pumping of sewage. If sewage is pumped from the dwelling to a septic tank,  
 21 either subitem (1), or (2), ~~or (3)~~, must be used.

22 (1) If the liquid capacity is determined by item A, the dosing volume to the tank  
 23 shall not exceed one percent of the liquid volume capacity of the tank. If multiple tanks  
 24 or compartments are used, the dose volume shall not exceed one percent of the first  
 25 compartment or tank.

26 (2) A dosing volume up to five percent of the liquid capacity of the first tank or  
 27 compartment is allowed if multiple tanks or compartments are used with the total  
 28 liquid capacity being twice that required under item A.

29 ~~(3) A dosing volume of up to five percent of the liquid capacity required under~~

1 ~~item A of the first tank or compartment of multiple tanks or compartment installations~~  
2 ~~is allowed if an effluent screen is installed at the outlet end of the last septic tank.~~

3 D. Garbage disposal and pumping of sewage. ISTS designed for dwellings with  
4 garbage disposals and that pump sewage from the dwelling must:

5 (1) provide for multiple tanks or compartments or install an effluent screen at  
6 the outlet end of the last septic tank;

7 (2) have twice the liquid capacity required under item A; and

8 (3) meet the requirements of item C.

9 Subp. 4. **Location of sewage tanks.** A sewage tank shall be placed so that it is easily  
10 accessible for the removal of liquids and accumulated solids.

11 A sewage tank shall be placed on firm and settled soil capable of bearing the weight  
12 of the tank and its contents.

13 Sewage tanks shall be set back as specified in part 7080.0170, subpart 1, item F, Table  
14 IV.

15 A tank's final cover shall be crowned or sloped to shed surface water. Sewage tanks  
16 shall not be placed in floodways. Sewage tanks may be installed in flood fringes in  
17 accordance with part 7080.0172, subpart 1.

18 Subp. 6. **Aerobic tanks.** Aerobic tank treatment systems shall comply with subparts 1  
19 and 4, and with items A to E.

20 A. Each individual unit or compartment of the aerobic tank shall be easily  
21 accessible for inspection and maintenance and shall have secured covers.

22 B. Aerobic tanks shall comply with the ~~most recent~~ 1999 version of the National  
23 Sanitation Foundation International Standard (NSF International), No. 40, which is  
24 incorporated by reference. The publication is available through the National Sanitation  
25 Foundation International, P.O. Box 130140, Ann Arbor, Michigan 48113. The publication

1 can be found at the Minnesota State Law Library, Judicial Center, 25 Constitution  
2 Avenue, St. Paul, Minnesota 55155 and is not subject to frequent change. Effluent  
3 quality shall meet or exceed NSF International No. 40 class II standards.

4 C. No additional reduction in trench or bed bottom area or absorption area shall be  
5 allowed with the use of an aerobic tank except for systems meeting the requirements in  
6 part 7080.0178, 7080.0179, ~~or 7080.0400~~, or 7080.0450.

7 D. Aerobic tanks constructed with the top of the tank at or above grade shall meet  
8 the requirements of subpart 1 and must be designed and constructed with adequate  
9 tensile and compressive strength to withstand the pressure encountered during  
10 operation and maintenance.

11 E. Owners of an aerobic tank shall maintain an effective maintenance service  
12 contract, acceptable to the ~~permitting authority~~ local unit of government at all times.

13 **7080.0150 DISTRIBUTION OF EFFLUENT.**

14 Subpart 1. **General.**

15 A. Supply pipes must be designed, installed, and protected so that effluent will not  
16 freeze in the pipe.

17 B. Supply pipes and distribution pipes must meet the strength requirements of  
18 American Society for Testing and Materials (ASTM) schedule 40 plastic pipe, and be  
19 supported in a manner so that there is no deflection or longitudinal bending during the  
20 backfilling and subsequent settling of the soil.

21 Subp. 2. **Gravity distribution.**

22 A. Serial distribution must be used to distribute effluent to individual trenches in a  
23 soil treatment system. If the necessary elevation differences between trenches for serial  
24 distribution cannot be achieved by natural topography or by varying the excavation  
25 depths, parallel distribution may be used. Serial distribution shall not create a pressure  
26 head on trenches at lower elevations.

1 B. If drop boxes are used for serial distribution, subitems (1) to (6) apply:

2 (1) The drop box shall be watertight and constructed of durable materials not  
3 subject to corrosion or decay.

4 (2) The invert of the inlet pipe shall be at least one inch higher than the invert of  
5 the outlet pipe to the next drop box.

6 (3) The invert of the outlet pipe to the next drop box shall be no greater than two  
7 inches higher than the crown of the outlet pipe of the trench in which the box is located.

8 (4) When sewage tank effluent is delivered to the drop box by a pump, the  
9 pump discharge shall be directed against a wall or side of the box on which there is no  
10 outlet or directed against a deflection wall, baffle, or other energy ~~dissipator~~ dissipater.

11 (5) The drop box shall be covered by a minimum of six inches of soil. If the top  
12 of the box is deeper than six inches, access must be provided above, at, or within six  
13 inches of finished grade.

14 (6) The drop box shall be placed on firm and settled soil.

15 C. Systems using valve boxes shall comply with the requirements in part  
16 7080.0170, subpart 3. If valve boxes are used, subitems (1) to (5) apply.

17 (1) The valve boxes shall be watertight and constructed of durable materials not  
18 subject to corrosion or decay.

19 (2) The invert of the inlet pipe shall be at least one inch higher than the inverts of  
20 the outlet pipes to the trenches.

21 (3) When sewage tank effluent is pumped to a valve box, either a baffle wall  
22 must be installed in the valve box or the pump discharge must be directed against a wall  
23 ~~or~~, side of the box on which there is no outlet, or directed against a deflection wall,  
24 baffle, or other energy dissipater. The baffle must be secured to the box and extend at  
25 least one inch above the crown of the inlet pipe.

1 (4) The valve box shall be covered by a minimum of six inches of soil. If the top  
2 of the box is deeper than six inches, access must be provided above, at, or within six  
3 inches of finished grade.

4 (5) The valve box shall be placed on firm and settled soil.

5 D. Distribution boxes must meet the standards in subitems (1) to (6).

6 (1) The box must be watertight and must be constructed of durable materials not  
7 subject to corrosion or decay.

8 (2) The distribution box shall be covered by a minimum of six inches of soil. If  
9 the top of the box is deeper than six inches, access must be provided above, at, or within  
10 six inches of the finished grade.

11 (3) The inverts of all outlets must be set and maintained at the same elevation.

12 (4) The inlet invert must be either at least one inch above the outlet inverts or  
13 sloped such that an equivalent elevation above the outlet invert is obtained within the  
14 last eight feet of the inlet pipe.

15 (5) Each trench line must be connected separately to the distribution box and  
16 must not be subdivided. Distribution boxes must not be connected to one another if  
17 each box has distribution pipes.

18 (6) When sewage tank effluent is delivered by pump, either a baffle wall must  
19 be installed in the distribution box or the pump discharge must be directed against a  
20 wall, baffle, ~~or~~ side of the box on which there is no outlet, or directed against a  
21 deflection wall, baffle, or other energy dissipater. The baffle must be secured to the box  
22 and must extend at least one inch above the crown of the inlet pipe.

23 E. Distribution pipes.

24 (1) Distribution pipes used in trenches or beds for gravity distribution must be  
25 at least four inches in diameter and must be constructed of sound and durable material



1 not subject to corrosion or decay or to loss of strength under continuously wet  
2 conditions. Distribution pipes must have a load-bearing capacity of not less than 1,000  
3 pounds per lineal foot.

4 (2) Distribution pipes used for gravity distribution must have one or more rows  
5 of holes of no less than one-half inch in diameter spaced no more than 40 inches apart.  
6 Holes must be spaced to prevent failure due to loads.

7 (3) The distribution pipes for gravity distribution must be laid level or on a  
8 uniform slope away from the distribution device of no more than four inches per 100  
9 feet.

10 (4) Gravity distribution pipes in seepage beds must be uniformly spaced no  
11 more than five feet apart and not more than 30 inches from the side walls of the seepage  
12 bed.

13 Subp. 3. **Pressure distribution.**

14 A. Pressure distribution must be used for:

15 (1) mound systems;

16 (2) at-grade systems;

17 (3) ~~systems where the soil percolation rate is 0.1 to five minutes per inch, where~~  
18 ~~the soil has a medium sand texture or coarser, or where the effluent is pumped to a~~  
19 ~~seepage bed or to trenches that are all at the same elevation~~ all seepage beds where the  
20 soil percolation rate is 0.1 to five minutes per inch or where the soil has a medium sand  
21 texture or coarser, and all trench systems if the trenches are at the same elevation and  
22 placed in soils where the percolation rate is 0.1 to five minutes per inch or where the soil  
23 has a medium sand texture or coarser; and

24 (4) soil treatment systems that will not create a biological clogging mat.

25 [For text of items B to D, see M.R.]

1 E. Perforation holes must be drilled straight into the pipe and not at an angle. The  
2 perforated pipe laterals must be installed level with the perforations downward.  
3 Perforation holes must be free of burrs. Holes shall be spaced no ~~further~~ more than five  
4 feet apart. ~~One perforation must be drilled into the upper portion of the end cap to~~  
5 ~~allow for the introduction of~~ A method to introduce air into the pipe after dosing must  
6 be provided.

7 F. Laterals must be spaced no further than 60 inches apart in seepage beds and  
8 mound rock beds and no further than 30 inches from the outside edge of a drainfield  
9 rock layer.

10 [For text of item G, see M.R.]

11 H. Perforated laterals must not be installed closer than 12 inches from the edges of  
12 the rock bed and perforations must not be installed closer than 12 inches from the ends  
13 of the drainfield rock.

#### 14 **7080.0160 DOSING OF EFFLUENT.**

15 Subpart 1. **General.** Where dosing is necessary, it shall comply with the requirements  
16 in this part.

##### 17 Subp. 1a. **Dosing chamber, pump pit, wet well, or lift station.**

18 A. The dosing chamber shall meet or exceed the requirements of part 7080.0130,  
19 subparts 1 and 4, and be vented.

20 B. There shall be one or more maintenance holes, at least 20 inches in least  
21 dimension and located directly above the dosing device. The maintenance hole shall  
22 extend through the dosing chamber cover to final grade and shall be constructed to  
23 prevent unauthorized entry.

24 [For text of item C, see M.R.]

25 D. A dosing device must employ an alarm device to warn of failure.

1 E. The inlet of pumps shall be elevated at least ~~three~~ four inches from the bottom of  
2 the dosing chamber or protected in some other manner to prevent the pump from  
3 drawing excessive settled solids. The pump, pump controls, and pump discharge line  
4 shall be installed to allow access for servicing without entering the dosing chamber.

5 F. Electrical installations shall comply with applicable laws and ordinances  
6 including the latest codes, rules, and regulations of public authorities having  
7 jurisdiction and with part 1315.0200, which incorporates the National Electrical Code.

8 Subp. 2. **Dosing devices for gravity distribution.** Dosing devices for gravity  
9 distribution:

10 A. Where a dosing device is employed, a pump or siphon shall deliver the dose to  
11 the soil treatment system.

12 B. For dwellings, the dosing device shall discharge at least ten gallons per minute  
13 but no more than 45 gallons per minute.

14 C. If the dosing device is a siphon, a maintenance inspection shall be made every  
15 six months by the owner or the owner's agent. The siphon shall be maintained in proper  
16 operating condition.

17 D. If the dosing device is a pump, it shall be constructed and fitted with sound,  
18 durable, and corrosion-resistant materials.

19 E. Where the soil treatment system is at a higher elevation than the pump,  
20 sufficient dynamic head shall be provided for both the elevation difference and friction  
21 loss.

22 Subp. 3. **Dosing devices for pressure distribution.** Dosing devices for pressure  
23 distribution:

24 A. Pumps shall be constructed and fitted with sound, durable, and  
25 corrosion-resistant materials.

1 B. The pump discharge capacity shall be based upon the perforation discharges for  
2 a minimum average head of 1.0 foot. Perforation discharge will be determined by the  
3 following formula:

$$4 \quad Q = 19.65 \text{ cd}^2\text{h}^{1/2}$$

5 where: Q = discharge in gallons per minute

6 c = 0.60 = coefficient of discharge

7 d = perforation diameter in inches

8 h = head in feet.

9 [For text of items C and D, see M.R.]

10 E. A siphon will not be allowed as a dosing device to pressurize a system.

#### 11 **7080.0170 FINAL TREATMENT AND DISPOSAL.**

##### 12 Subpart 1. In general.

13 A. Final treatment and disposal of all sewage tank effluent shall be by discharge  
14 into the soil treatment system.

15 B. Distribution shall be made in accordance with all applicable requirements of  
16 part 7080.0150.

17 C. Soil treatment systems shall not be placed in floodways. Soil treatment systems  
18 ~~may be installed in flood fringes in accordance with~~ must meet the requirements in part  
19 7080.0172, subpart 1. Soil treatment systems should not be placed in areas subject to  
20 excessive run-on. All soil treatment systems located on slopes greater than one percent  
21 must have a diversion constructed immediately upslope from the system to intercept  
22 and direct runoff.

23 D. Before discharge to a soil treatment system designed under this part, the  
24 pretreated effluent shall have a biochemical oxygen demand of ~~175~~ 220 or less and a  
25 total suspended solids concentration of 65 mg/l or less and an oil and grease  
26 concentration of 30 mg/l or less.

1 E. A durable nonwoven geotextile fabric must be used to cover distribution rock  
 2 medium. The fabric must be of sufficient strength to undergo installation without  
 3 rupture. In addition, the fabric must permit passage of water without passage of  
 4 overlying soil material into the rock medium.

5 F. Individual sewage treatment systems shall be set back as specified in Table IV.

6 Table IV. Minimum setback distances (feet).

Feature	Sewage Tank, Holding Tank, or Sealed Privy	Absorption Area or Unsealed Privy	Building Sewer or Supply Pipes
Water supply <u>wells</u>	*	*	*
Wells	*	*	*
Buried water lines	*	*	*
Buildings**	10	20	
Property lines***	10	10	
The ordinary high water level of public waters	****	****	

27  
 28 \*Setbacks from buried water pipes and water supply wells are governed by chapters  
 29 4715 and 4725, respectively.

30 \*\*For structures other than buildings, these setbacks may be reduced if necessary due  
 31 to site conditions, but in no case shall any part of the individual sewage treatment  
 32 system be located under or within the structure.

33 \*\*\*Infringement on property line setbacks shall be made through accepted local  
 34 procedures.

35 \*\*\*\*Setbacks from lakes, rivers, and streams are governed by chapters 6105 and 6120.



1           i. The pipes must be marked with an alignment stripe visible through the  
2 geotextile wrap and installed with this stripe at top center.

3           ii. The pipes shall contain a row or rows of cleanly cut three-eighths inch to  
4 one-half inch diameter holes located in such a manner to provide storage of solids. Each  
5 row shall contain a hole in every other corrugation valley, staggered such that every  
6 corrugation valley contains one hole.

7           (c) the pipes must be wrapped in geotextile fabric specifically designed and  
8 tested for use with gravelless pipe and for installation and use in individual sewage  
9 treatment systems and designed to transmit sewage at a long-term acceptance rate that  
10 corresponds to the sizing factor prescribed in item C, subitem (2); and

11           (d) protected from heat and ultraviolet rays prior to installation.

12           (4) Chambered systems. Chamber media including all piping and  
13 appurtenances shall be constructed:

14           (a) of commercially fabricated materials specific to this purpose;

15           (b) of materials resistant to sewage;

16           (c) with an open bottom;

17           (d) to support the load of overburden and sidewall soil;

18           (e) with slotted or perforated sides to allow sewage to move laterally into the  
19 soil and prevent soil penetration into the chamber;

20           (f) no greater than three feet in width; and

21           (g) with vertical outside dimensions less than 30 inches.

22           C. Sizing of trenches and seepage beds.

23           (1) Drainfield rock media.

24           (a) Table V and Table Va specify the soil sizing factors used to calculate  
25 trench bottom area assuming six inches of drainfield rock below the distribution pipe.

1 Incorporation by reference of this chapter does not include adoption of Table Va. If a  
 2 local unit of government chooses to adopt Table Va, it must do so expressly. The local  
 3 unit of government may use the following format: "Minnesota Rules, Table Va, is  
 4 incorporated by reference into Ordinance ....." If there is a discrepancy between the soil  
 5 texture and the percolation rate in Table V, the larger soil sizing factor should be used,  
 6 or a justification for a smaller sizing shall be submitted in the design report. Soil sizing  
 7 determined using Table Va must be based on an undisturbed soil sample from which an  
 8 evaluation of the soil structure can be made. The trench bottom area is calculated by  
 9 multiplying the average design flow by the appropriate soil sizing factor. If gravity  
 10 distribution is used in seepage beds, the seepage bed bottom area is calculated by  
 11 multiplying the average design flow by the soil sizing factor (Table V or Va) multiplied  
 12 by 1.5. If pressure distribution is used in seepage beds, the seepage bed bottom area is  
 13 determined by multiplying the soil sizing factor in Table V or Va by the average design  
 14 flow.

15 (b) The bottom area may be reduced, for trenches only, by 20 percent for 12  
 16 inches of drainfield rock below the distribution pipe; 34 percent for 18 inches; and 40  
 17 percent for 24 inches. Reductions may be interpolated for other depths of rock.

Table V

18  
 19 Soil Sizing Factors for Determining Bottom Area for  
 20 Trenches and Seepage Beds Using Percolation Tests

21 Percolation Rate	22 Soil Texture	23 (Square Feet of
24 (Minutes per		25 Trench Bottom per
26 Inch)		27 Gallon of Average
		28 Design Flow per
		29 Day)
30 Faster than 0.1*	31 Coarse sand	0.83
0.1 to 5**	Medium Sand, Loamy Sand	0.83****
0.1 to 5	Find Sand	1.67



1			
2	6 to 15	Sandy Loam	1.27
3			
4	16 to 30	Loam	1.67
5			
6	31 to 45	Silt Loam, Silt	2.0
7			
8			
9	46 to 60	Sandy Clay Loam, Silty Clay Loam, Clay Loam	2.2
10			
11			
12			
13			
14	61 to 120***	Silty Clay, Sandy Clay, Clay	4.2
15			
16			
17	Slower than 120****x		
18			

Table Va

Soil Sizing Factors for Determining Bottom Area for  
Trenches and Seepage Beds Using Detailed Soil Descriptions  
and  
Absorption Ratios for Determining Mound Absorption

## Areas Using Detailed Soil Descriptions

Soil Texture	Soil Structure	(Square feet of Trench or Seepage Bed Bottom per Gallon of Average Design Flow per Day)	Absorption Ratio for Mounds
Coarse sand*	Single grain	.83	1.0
Medium sand** <sub>z</sub>	Single grain	.83	1.0
loamy sand**			
Loamy sand**	Single grain	.83	1.0
Fine sand <sub>z</sub>	Single grain	1.67	1.0
loamy fine sand			
Loamy fine sand	Single grain	1.67	1.0
Very fine sand	Single grain	2.0	1.0
Loamy very fine			

1	sand	Single grain	2.0	1.0
2	Sandy loam	Moderate <u>Weak</u>	1.27	1.5
3		to strong		
4	Sandy loam	<u>Weak Massive</u>	1.67	2.0
5		or platy		
6	Sandy loam	Massive	2.0	2.4
7	Loam	Moderate to	1.67	2.0
8		strong		
9	Loam	Weak or platy	2.0	2.4
10	Loam	Massive	2.5	3.0
11	Silt loam	Moderate to	2.0	2.4
12		strong		
13	Silt loam	Weak or platy	2.5	3.0
14	Silt loam	Massive	3.0	3.6
15	Sandy clay	Moderate to	2.2	2.6
16	loam <sup>***</sup> ,	strong		
17	<u>clay loam<sup>***</sup>,</u>			
18	<u>silty clay</u>			
19	<u>loam<sup>***</sup></u>			
20	Sandy clay	Weak or platy	3.2	3.8
21	loam <sup>***</sup> ,			
22	<u>clay loam<sup>***</sup>,</u>			
23	<u>silty clay</u>			
24	<u>loam<sup>***</sup></u>			
25	Sandy clay	Massive	-	-
26	loam, <u>clay</u>			
27	<u>loam, silty</u>			
28	<u>clay loam</u>			
29	Clay loam	<del>Moderate to</del>	2.2	2.6
30		strong		
31	Clay loam <sup>***</sup>	Weak or platy	3.2	3.8
32	Clay loam <sup>***</sup>	Massive	-	-
33	Silty clay	Moderate to	2.2	2.6
34	loam <sup>***</sup>	strong		
35	Silty clay	Weak or platy	3.2	3.8
36	loam <sup>***</sup>			
37	Silty clay	Massive	-	-
38	loam <sup>****</sup>			
39	Sandy clay <sup>***</sup> ,	Moderate to	4.2	5.0
40	<u>clay<sup>***</sup>,</u>	Strong		
41	<u>silty clay<sup>***</sup></u>			
42	Sandy clay <sup>****</sup> ,	Massive, Weak	-	-
43	<u>clay<sup>****</sup>,</u>	to moderate,		
44	<u>silty clay<sup>****</sup></u>	massive,		
45		or platy		
46	Clay <sup>***</sup>	Moderate to	4.2	5.0

1		<del>strong</del>		
2	Clay****	Massive, weak	-	-
3		or platy		
4	Silty clay***	Moderate to	4.2	5.0
5		strong		
6	Silty	Massive, weak	-	-
7	clay****	or platy		

9 \*See subpart 4, item B, for soil treatment systems that are suitable for these soils.

10 \*\*See subpart 4, item A, for soil treatment systems that are suitable for these soils.

11 \*\*\*See subpart 5 for soil treatment systems that are suitable for these soils.

12 \*\*\*\*Systems with these soils must meet installed into or on these soils are not  
13 standard systems and must be designed in accordance with the requirements in part  
14 7080.0178 or 7080.0179.

15 (2) Gravelless drainfield pipe media. Sizing shall be based on subitem (1), except  
16 no reduction specified in subitem (1) shall be allowed. An eight-inch inside diameter  
17 pipe shall be equivalent to a two-foot wide rock filled trench with six inches of  
18 drainfield rock below the distribution pipe and a ten-inch inside diameter pipe shall be  
19 equivalent to a three-foot wide rock filled trench with six inches of drainfield rock below  
20 the distribution pipe.

21 (3) Chambered media. Sizing shall be based on subitem (1) with the depth of  
22 slatted sidewalls being equivalent to the corresponding depth of rock below the  
23 distribution pipe.

24 D. Design and construction of trenches and seepage beds:

25 (1) The absorption area of trenches and seepage beds shall be in original soils  
26 and designed and constructed with at least three feet of vertical separation above  
27 saturated soil or bedrock. In no case shall the bottom of the distribution medium be  
28 deeper than 48 inches from the final grade. If effluent is distributed by gravity it shall  
29 not be loaded above the natural ground surface and must meet the following  
30 requirements:

1 (a) for drainfield rock trenches, the rock below the pipe must be in contact  
2 with original soil and gravity distribution must be designed to load effluent the entire  
3 depth of the rock below the pipe;

4 (b) for gravelless drainfield pipe, the entire pipe must be below the original  
5 grade and gravelless drainfield pipe with gravity distribution must be designed to fill  
6 the entire pipe; and

7 (c) for chambered media, the entire slatted sidewall must be below the  
8 original grade, and effluent must be loaded the entire depth of the slatted sidewall.

9 (2) Trenches shall not be less than 18 inches and no more than 36 inches wide.  
10 Any excavation wider than 36 inches shall be considered a seepage bed. No seepage bed  
11 may be wider than 25 feet and parallel beds must be at least ten feet apart. The width of  
12 the excavation for gravelless drainfield pipe and chambered systems shall be  
13 constructed in accordance with manufacturer's recommendation.

14 (3) Drainfield rock must be used as the distribution medium in seepage beds.

15 (4) The bottom and sides of the soil treatment system to the top of the  
16 distribution medium shall be excavated in such a manner as to expose the original soil  
17 structure in an unsmearred and uncompacted condition. Excavation into the absorption  
18 area is only allowed when the soil moisture content is at or less than the plastic limit.

19 (5) Excavation equipment or other vehicles must not be driven on the excavated  
20 trench or seepage bed bottom. Once the trench or seepage bed is excavated, it shall not  
21 be exposed to rainfall prior to placement of the final backfill.

22 [For text of subitems (6) and (7), see M.R.]

23 (8) Drainfield rock must be covered with a durable nonwoven geotextile cover  
24 meeting or exceeding the requirements of subpart 1, item E.

25 (9) The minimum depth of cover over the distribution medium shall be at least  
26 six inches.

1 (10) The trenches or seepage beds shall be backfilled and crowned above  
2 finished grade to allow for settling. The top six inches of soil shall have the same texture  
3 as the adjacent soil.

4 [For text of subitems (11) to (13), see M.R.]

5 Subp. 3. **Dual field systems.**

6 A. Dual field systems shall be used only where the ~~percolation rate is slower than~~  
7 ~~five minutes per inch or the~~ soil sizing factor is greater than 0.83 square feet per gallon  
8 per day in Table V or Va, unless the provisions of subpart 4 are employed.

9 [For text of item B, see M.R.]

10 C. No part of a soil treatment area shall be used more than one year unless the  
11 effluent level indicates that a longer duration is feasible.

12 Subp. 4. **Rapidly permeable soils.**

13 A. Three feet of soil with a texture of medium sand or finer must exist below the  
14 distribution medium. Soil absorption areas with a soil percolation rate of 0.1 to five  
15 minutes per inch that is not a fine sand (Table V) or soil absorption areas with a soil  
16 texture of medium sand or loamy sand (Table Va) must use at least one of the following  
17 treatment techniques:

18 (1) distribute the sewage tank effluent by pressure flow over the absorption area  
19 as specified in part 7080.0150, subpart 3; or

20 (2) divide the total soil treatment system into at least four parts with no part  
21 larger than 25 percent of the area required by subpart 2, item C, and the parts  
22 constructed for serial application.

23 B. Soil treatment systems placed in soils with percolation rates of less than  
24 one-tenth minute per inch or in a soil texture of coarse sand must provide at least one of  
25 the following treatment techniques:

1 (1) a mound system; or

2 (2) a trench system with at least one foot of clean sand placed between the  
3 distribution medium and the coarse soil along the excavation bottom and sidewalls that  
4 satisfies the requirements of item A, subitem (1) or (2).

5 Subp. 5. **Mounds.**

6 A. Location of mounds.

7 (1) Mounds must be constructed on original soils and provide at least 36 inches  
8 of vertical separation between the bottom of the drainfield rock bed and saturated soil  
9 or bedrock.

10 (2) There must be at least 12 inches of original soil with a percolation rate faster  
11 than 120 minutes per inch or have a numerical absorption ratio listed in Table Va below  
12 the absorption area.

13 (3) Setbacks shall be in accordance with subpart 1, item F, Table IV. Setbacks  
14 shall be measured from the absorption area.

15 (4) On slopes of one percent or greater, and where the percolation rate in the top  
16 foot of original soil is in the 61 to 120 minutes per inch range, mounds must not be  
17 located where the ground surface contour lines directly below the long axis of the rock  
18 bed represent a swale or draw, unless the contour lines have a radius of curvature  
19 greater than 100 feet. Mounds must never be located in swales or draws where the  
20 radius of curvature of the contour lines is less than 50 feet.

21 B. Mound design and construction.

22 (1) Drainfield rock must be used as the distribution medium in mounds. The  
23 bottom area of the rock bed shall be calculated by multiplying the average design flow  
24 by 0.83 square feet per gallon per day.

25 ~~(2) The system should be as long and narrow as practical and the width of the~~

1 ~~rock bed must not exceed ten feet. If the soil within the upper foot of the absorption area~~  
 2 ~~has a soil sizing factor of 3.2 square feet per gallon per day or greater as described in~~  
 3 ~~subpart 2, item C, Table Va, or has a percolation rate slower than 60 minutes per inch,~~  
 4 ~~the rock bed length shall be determined by dividing the average design flow by 4.5 and~~  
 5 ~~the rock bed width determined by dividing the bottom area by the rock bed length. The~~  
 6 ~~rock bed width shall be calculated by multiplying the linear loading rate by 0.83. The~~  
 7 ~~linear loading rate shall not exceed 12 gallons per lineal foot per day. The linear loading~~  
 8 ~~rate shall be determined by the relationship between the vertical and horizontal water~~  
 9 ~~movement in the original soil of the absorption area.~~

10 (3) ~~A minimum of 12 inches of clean sand must be placed where the rock bed is~~  
 11 ~~to be located.~~ Clean sand shall consist of sound, durable material that conforms to the  
 12 following requirements:

13 Sieve Size	Percent Passing
14 No. 4	95-100
15 No. 8	80-100
16 No. 10	0-100
17 No. 40	0-100
18 No. 60	0-40
19 No. 200	0-5

22 Clean sand shall also contain less than three percent deleterious substances and be  
 23 free of organic impurities.

24 (4) The absorption area is determined by multiplying the rock bed length by the  
 25 absorption width. The absorption width is calculated by multiplying the rock bed width  
 26 by the absorption ratio. The absorption ratio shall be determined according to Table VI  
 27 using the percolation rate or Table Va if using soil characteristics of the upper 12 inches  
 28 of soil in the proposed absorption area.

29 Table VI

30 Percolation rate of	Absorption ratio
31	

1	original soil under	
2	sand layer, minutes	
3	per inch	
4	Faster than 5	1.00
5	6 to 15	1.50
6	16 to 30	2.00
7	31 to 45	2.40
8	46 to 60	2.67
9	61 to 120	5.00
10	120 plus	These systems must
11		be designed under
12		part 7080.0178 or
13		7080.0179
14		

15 (5) The side slopes on the mound must not be steeper than three horizontal units  
 16 to one vertical unit and shall extend beyond the required absorption area, if necessary.

17 (6) Distribution of effluent over the rock bed must be by level perforated pipe  
 18 under pressure in accordance with parts 7080.0150, subparts 1 and 3, and 7080.0160,  
 19 ~~subparts 2 and 4~~ subpart 3.

20 (7) The supply pipe from the pump to the mound area must be installed before  
 21 mound soil surface preparation. The trench excavated for the supply pipe must be  
 22 carefully backfilled and compacted to prevent seepage of effluent.

23 (8) Vegetation in excess of two inches in length and all dead organic debris must  
 24 be removed from the absorption area. Trees must be cut nearly flush with the ground  
 25 and stumps should not be removed.

26 (9) All surface preparation must take place when the upper 12 inches of soil has  
 27 a moisture content of less than the plastic limit and soil conditions allow field testing of  
 28 soil properties and these properties are maintained throughout installation.

29 (10) The absorption area must be roughened by backhoe teeth or moldboard, or  
 30 chisel plowed to a depth of eight inches. Discing is allowed if the upper eight inches of  
 31 soil has a texture of sandy loam or coarser. If plowed, furrows must be thrown uphill  
 32 and there must not be a dead furrow in the absorption area. A rubber-tired tractor may



1 be used for plowing or discing. Rototilling or pulverizing the soil is not allowed. The  
2 original soil must not be excavated or moved more than one foot from its original  
3 location during soil surface preparation.

4 (11) Prior to placement of six inches of clean sand, no vehicle shall be driven on  
5 the absorption area after the surface preparation is completed. If rainfall occurs on the  
6 prepared surface, the site must be allowed to dry below the plastic limit and roughened  
7 as specified in subitem (10).

8 (12) The required absorption width for mounds constructed on slopes from zero  
9 to one percent shall be centered under the rock bed width. The required absorption  
10 width for mounds constructed on slopes greater than one percent shall be measured  
11 downslope from the upslope edge of the rock bed width and measured in the direction  
12 of the original land slope and perpendicular to the original contours.

13 (13) The clean sand must be placed by using a construction technique that  
14 minimizes compaction. If the clean sand is driven on for construction, a crawler or  
15 track-type tractor must be used. At least six inches of sand must be kept beneath  
16 equipment to minimize compaction of the prepared surface.

17 (14) ~~Clean sand must come into contact with the bottom of the rock bed and~~ A  
18 minimum of 12 inches of clean sand must be placed where the rock bed is to be located  
19 and must cover the entire absorption area.

20 (15) The sand layer upon which the rock bed is placed must be level in all  
21 directions.

22 (16) A vertical inspection pipe at least 1-1/2 inches in diameter shall be installed  
23 and secured at each rock bed/sand interface of every mound. The inspection pipe must  
24 have three-eighths inch or larger perforations spaced vertically no more than six inches  
25 apart. At least two perforations must be located in the rock bed. No perforation shall be  
26 located above the permeable synthetic fabric. The inspection pipe must extend to the  
27 bottom of the rock bed and must be capped flush with or above finished grade.

1 (17) On slopes of one percent or greater, the upslope edge of the level drainfield  
2 rock bed must be placed on the contour.

3 (18) The rock bed shall completely encase the top and sides of the distribution  
4 pipes to a depth of at least two inches above the pipe. The rock bed shall extend nine  
5 inches below the pipe.

6 (19) The top of the rock bed must be level in all directions.

7 (20) Construction vehicles must not be allowed on the rock bed until backfill is  
8 placed.

9 (21) The rock bed must be covered with a durable nonwoven geotextile fabric  
10 designed for this purpose. The fabric must be of sufficient strength to undergo  
11 installation without rupture. In addition, the fabric must permit passage of water  
12 without passage of overlying soil material into the drainfield rock bed.

13 (22) Sandy to loamy soil material must be placed on the rock bed to a depth of  
14 one foot in the center of the mound and to a depth of six inches at the sides.

15 (23) Six inches of topsoil borrow must be placed over the entire mound.

16 ~~(24) Whenever mounds are located on slopes greater than one percent, a~~  
17 ~~diversion must be constructed immediately upslope from the mound to intercept and~~  
18 ~~direct runoff.~~

19 (25) A vegetative cover must be established over the entire area of the mound.  
20 The mound shall be protected against erosion and freezing until a vegetative cover is  
21 established. The vegetative cover shall not interfere with the hydraulic performance of  
22 the system and shall provide adequate frost and erosion protection.

23 ~~(26)~~ (25) Shrubs, deep-rooted plants, or hydrophilic plants must not be planted  
24 on the top or sideslopes of the mound.

25 Subp. 6. **At-grade systems.**

1 A. Location of at-grade systems.

2 (1) At-grade systems must be constructed on original soils with at least 36 inches  
3 of vertical separation.

4 (2) There must be at least 12 inches of original soil with a percolation rate faster  
5 than 61 minutes per inch below the absorption area or have a soil sizing factor of 2.2  
6 square feet per gallon per day or less as shown in Table Va.

7 (3) At-grade systems shall not be installed in areas with slopes greater than 25  
8 percent.

9 (4) Setbacks must be in accordance with subpart 1, item F, Table IV. Setbacks  
10 shall be measured from the edge of the ~~rock bed~~ absorption area.

11 B. Design of at-grade systems.

12 (1) ~~The bottom area of the rock bed shall be calculated by multiplying the~~  
13 ~~average design flow~~ Rock bed absorption width shall be calculated by multiplying the  
14 linear loading rate by the soil sizing factor identified in subpart 2, item C, Table V, ~~or~~  
15 ~~using the percolation rate or soil sizing factors in subpart 2, item C, Table Va of the~~  
16 ~~upper 12 inches of soil in the proposed absorption area. The system should be as long~~  
17 ~~and narrow as practical but the rock bed absorption width shall be no greater than ten~~  
18 ~~feet. If the soil within the upper foot of the absorption area has a soil sizing factor of 3.2~~  
19 ~~square feet per gallon per day or greater as described in subpart 2, item C, Table Va, or~~  
20 ~~has a percolation rate slower than 60 minutes per inch, the rock bed length shall be~~  
21 ~~determined by dividing the average design flow by 4.5 and the rock bed width~~  
22 ~~determined by dividing the bottom area by the rock bed length. The linear loading rate~~  
23 shall be as determined by the relationship between vertical and horizontal water  
24 movement in the soil and shall not exceed a linear loading rate of 12 gallons per foot per  
25 day. The total rock bed width for sloping ground shall consist of the rock bed  
26 absorption width plus enough rock on the upslope side to provide stability.

1 (2) Rock bed length shall be calculated by multiplying the soil sizing factor by  
2 the average design flow and dividing by the rock bed width.

3 (3) At-grade systems shall be pressurized in accordance with parts 7080.0150,  
4 subparts 1 and 3, and 7080.0160, ~~subparts 2 and 4~~ subpart 3. Distribution pipe shall be  
5 installed in the center of the rock bed on slopes less than one percent and on the upslope  
6 edge at the rock bed absorption width on slopes one percent or greater.

7 C. Construction of at-grade systems.

8 (1) Surface preparation for at-grade systems shall be in accordance with subpart  
9 5, item B, subitems (8) to (11).

10 (2) Drainfield rock must be used as the distribution medium in at-grade  
11 systems.

12 (3) The upslope edge of an at-grade system shall be installed along the natural  
13 contour.

14 (4) The rock bed shall completely encase the top and sides of the distribution  
15 pipe to a depth of at least two inches above the pipe. There shall be at least nine inches  
16 of rock below the distribution pipe.

17 (5) The entire rock bed shall be covered with a durable nonwoven geotextile  
18 cover meeting or exceeding the requirements of subpart 1, item E.

19 (6) One foot of loamy or sandy cover material shall be installed over the rock  
20 bed. Cover shall extend at least five feet from the ends of the rock bed and be sloped to  
21 divert surface water. Side slopes shall not be steeper than four horizontal units to one  
22 vertical unit. The upper six inches of the loamy soil cover must be topsoil borrow.  
23 Topsoil borrow must be of a quality that provides a good vegetative cover on the  
24 at-grade system and excludes peaty material.

25 [For text of subitem (7), see M.R.]

1 (8) A vegetative cover must be established over the entire area of the at-grade  
2 system. The soil treatment at-grade system shall be protected until a vegetative cover is  
3 established. The vegetative cover shall not interfere with the hydraulic performance of  
4 the system and shall provide adequate frost and erosion protection.

5 ~~(9) Whenever at-grade systems are located on slopes greater than one percent, a~~  
6 ~~diversion must be constructed immediately upslope from the at-grade system to~~  
7 ~~intercept and direct runoff.~~

8 Subp. 7. Greywater systems.

9 A. Toilets. A toilet waste treatment device or privy shall be used in conjunction  
10 with a greywater system. Greywater or garbage shall not be discharged to any toilet  
11 waste treatment device except as specifically recommended by a manufacturer.

12 B. Greywater system plumbing. The drainage system in a dwelling or other  
13 establishments served by a greywater system shall be based on a pipe diameter of two  
14 inches to prevent installation of a water flush toilet. There shall be no openings or  
15 connections to the drainage system, including floor drains, larger than two inches in  
16 diameter. The existing drainage system may be used if a greywater system is to be  
17 installed for an existing dwelling. Garbage disposals shall not be connected to the  
18 greywater system.

19 C. Building sewer. The building sewer shall meet all requirements of part  
20 7080.0120, except that the building sewer for a greywater system shall be no greater than  
21 two inches in diameter.

22 D. Sewage tank. Greywater septic tanks shall meet all requirements of part  
23 7080.0130, subparts 1 to 4, except that the liquid capacity of a greywater septic tank  
24 serving a dwelling shall be based on the number of bedrooms existing and anticipated  
25 in the dwelling served and shall be at least as large as the capacities given in Table Vb.

26 TABLE Vb

1	<u>Number of Bedrooms</u>	<u>Tank Liquid Capacity</u>
2		<u>(gallons)</u>
3	<u>2 or less</u>	<u>300</u>
4	<u>3 or 4</u>	<u>500</u>
5	<u>5 or 6</u>	<u>750</u>
6	<u>7, 8, or 9</u>	<u>1,000</u>

7

8 For ten or more bedrooms or other establishments, the greywater septic tank shall be  
 9 sized as for any other establishment (see part 7080.0600, subpart 4, item C) except that  
 10 the minimum liquid capacity shall be at least 300 gallons.

11 Greywater aerobic tanks shall meet all requirements of part 7080.0130, subpart 6.

12 E. Flow determination. The flow for greywater systems shall be 60 percent of the  
 13 amount calculated in part 7080.0125. The absorption area shall be determined in  
 14 accordance with subpart 2, 5, or 6.

15 F. Distribution and dosing. Distribution and dosing of greywater shall meet all  
 16 requirements of parts 7080.0150 and 7080.0160.

17 G. Final treatment and disposal. A greywater soil treatment system shall meet all  
 18 requirements of this part.

19 **7080.0172 ALTERNATIVE SYSTEMS.**

20 Subpart 1. **Floodplain areas.** ISTS shall not be located in the floodway, and whenever  
 21 possible, placement within any part of the floodplain should be avoided. If no  
 22 alternative exists, the ISTS may be placed within the flood fringe if the following  
 23 requirements in items A to H are met.

24 A. There shall be no pipe or other installed opening between the distribution  
 25 medium and the soil surface.

26 B. Individual sewage treatment systems shall be located on the highest feasible  
 27 area and shall have location preference over all other improvements except the water  
 28 supply well. If the ten-year flood data are available, the bottom of the distribution  
 29 medium shall be at least as high as the elevation of the ten-year flood.

1 C. If a dosing device is used to move effluent from the sewage tank to the trenches,  
2 provisions shall be made to prevent the dosing device from operating when inundated  
3 with flood waters.

4 D. When it is necessary to raise the elevation of the soil treatment system to meet  
5 the vertical separation distance requirements, a mound system as specified in part  
6 7080.0170, subpart 5, may be used with the additional requirements in subitems (1) to  
7 (3).

8 (1) The elevation of the bottom of the rock bed shall be at least one-half foot  
9 above the ten-year flood elevation if ten-year flood data are available.

10 (2) Inspection pipes shall not be installed unless the top of the mound is above  
11 the 100-year flood elevation.

12 (3) The placement of clean sand and other fill will be done in accordance with  
13 any community-adopted floodplain management ordinance.

14 E. When the top of a sewage tank is inundated, the dwelling must cease  
15 discharging sewage into it.

16 F. The building sewer shall be designed to prevent backflow of liquid into the  
17 building when the system is inundated. If a holding tank is used, the building sewer  
18 shall be designed to permit rapid diversion of sewage into the holding tank when the  
19 system is inundated.

20 G. If a holding tank is used to serve a dwelling, the holding tank's liquid capacity  
21 shall equal 100 gallons times the number of bedrooms times the number of days  
22 between the ten-year stage on the rising limb of the 100-year flood hydrograph and the  
23 ten-year stage on the falling limb of the hydrograph, or 1,000 gallons, whichever is  
24 greater. For other establishments, the tank must provide storage equal to at least five  
25 times the average design flow. The holding tank must be accessible for removal of tank  
26 contents under flooded conditions.

1 H. Whenever the water level has risen above the top of a sewage tank, the tank  
2 shall be pumped to remove all solids and liquids after the flood has receded and before  
3 use of the system is resumed.

4 Subp. 2. **Privies.**

5 A. Pit privies shall not be installed where the bottom of the pit is less than three  
6 feet above saturated soil or bedrock. A vault privy shall be used in areas not meeting the  
7 three-foot separation. The vault of a vault privy shall be constructed in the same manner  
8 as a sewage tank under part 7080.0130, subparts 1 and 4.

9 B. Privies shall be set back from surface waters, buildings, property lines, and  
10 water supply wells as required under part 7080.0170, subpart 1, item F, Table IV.

11 C. Pits or vaults shall have sufficient capacity for the dwelling they serve, but shall  
12 have at least 25 cubic feet of capacity.

13 D. The sides of the pit shall be curbed to prevent cave-in.

14 E. The privy shall be constructed so as to be easily maintained and insect proof.  
15 The door and seat shall be self-closing. All exterior openings, including vent openings,  
16 shall be screened.

17 F. Privies shall be adequately vented.

18 G. When the privy is filled to within one foot of the top of the pit, the solids shall  
19 be removed. Abandoned pits shall have the solids removed and be filled with clean  
20 earth and slightly mounded to allow for settling. Removed solids shall be disposed of  
21 according to part 7080.0175, subpart 6.

22 Subp. 3. **Holding tanks.**

23 A. Holding tanks for new construction are prohibited unless approved by the  
24 permitting authority, with a monitoring and disposal ~~plan~~ contract signed by the owner  
25 and ~~administered and enforced by the permitting authority~~ a licensed pumper. The



1 contract must guarantee the removal of the tank contents prior to overflow or any  
2 discharge.

3 B. A holding tank shall comply with the requirements of part 7080.0130, subparts 1  
4 and 4.

5 C. A cleanout pipe of at least four inches diameter shall extend to the ground  
6 surface and be provided with seals to prevent odor emissions and exclude insects and  
7 vermin. A maintenance hole of at least 20 inches in least dimension shall extend through  
8 the cover to a point within 12 inches, but no closer than six inches, below finished grade.  
9 If the maintenance hole is covered with less than six inches of soil, the cover must be  
10 secured to prevent unauthorized access.

11 D. For a dwelling, the minimum size shall be 1,000 gallons or 400 gallons times the  
12 number of bedrooms, whichever is greater.

13 For other establishments, the minimum capacity shall be at least five times the  
14 average design flow. Tank sizing for floodplain areas shall be calculated in accordance  
15 with subpart 1, item G.

16 E. Holding tanks shall be located in an area readily accessible to the pump truck  
17 under all weather conditions as specified for septic tanks in part 7080.0170, subpart 1,  
18 item F, Table IV; and where accidental spillage during pumping will not create a  
19 nuisance.

20 F. The owner shall maintain a contract for disposal and treatment of the septage  
21 with a pumper, municipality, agency, or firm established for that purpose.

22 G. Holding tanks shall ~~be monitored~~ have an alarm device to minimize the chance  
23 of accidental sewage overflows. ~~Techniques such as visual observation, warning lights~~  
24 ~~or audible alarms, or unless~~ regularly scheduled pumping shall be is used. Mechanical  
25 or electrical monitoring shall identify when the holding tank is at 75 percent capacity.

26 Subp. 4. ~~Greywater systems.~~

1 ~~A. Toilets. A toilet waste treatment device shall be used in conjunction with a~~  
 2 ~~greywater system. Greywater or garbage shall not be discharged to the toilet waste~~  
 3 ~~treatment device except as specifically recommended by a manufacturer.~~

4 ~~B. Greywater system plumbing. The drainage system in a dwelling or other~~  
 5 ~~establishments served by a greywater system shall be based on a pipe diameter of two~~  
 6 ~~inches to prevent installation of a water flush toilet. There shall be no openings or~~  
 7 ~~connections to the drainage system, including floor drains, larger than two inches in~~  
 8 ~~diameter. The existing drainage system may be used if a greywater system is to be~~  
 9 ~~installed for an existing dwelling.~~

10 ~~Garbage disposals shall not be connected to the soil treatment system.~~

11 ~~C. Building sewer. The building sewer shall meet all requirements of part~~  
 12 ~~7080.0120, except that the building sewer for a greywater system shall be no greater than~~  
 13 ~~two inches in diameter.~~

14 ~~D. Sewage tank. Greywater septic tanks shall meet all requirements of part~~  
 15 ~~7080.0130, subparts 1 and 4, except that the liquid capacity of a greywater septic tank~~  
 16 ~~serving a dwelling shall be based on the number of bedrooms existing and anticipated~~  
 17 ~~in the dwelling served and shall be at least as large as the capacities given in Table Vb.~~

18 ~~TABLE Vb~~

<del>Number of Bedrooms</del>	<del>Tank Liquid Capacity (gallons)</del>
<del>2 or less</del>	<del>300</del>
<del>3 or 4</del>	<del>500</del>
<del>5 or 6</del>	<del>750</del>
<del>7, 8, or 9</del>	<del>1,000</del>

26 ~~For ten or more bedrooms or other establishments, the greywater septic tank shall be~~  
 27 ~~sized as for any other establishment (see part 7080.0130, subpart 3, item B) except that~~  
 28 ~~the minimum liquid capacity shall be at least 300 gallons.~~

29 ~~Greywater aerobic tanks shall meet all requirements of part 7080.0130, subpart 6.~~

1 ~~E. Flow determination. The flow for greywater systems shall be 60 percent of the~~  
2 ~~amount calculated in part 7080.0125. The absorption area shall be determined in~~  
3 ~~accordance with subpart 2, 5, or 6.~~

4 ~~F. Distribution and dosing. Distribution and dosing of greywater shall meet all~~  
5 ~~requirements of parts 7080.0150 and 7080.0160.~~

6 ~~G. Final treatment and disposal. A greywater soil treatment system shall meet all~~  
7 ~~requirements of this part.~~

#### 8 **7080.0175 MAINTENANCE.**

9 Subpart 1. **General.** The individual sewage treatment system and all components  
10 must be maintained in compliance with this chapter and manufacturer requirements.

11 Subp. 2. **Frequency of assessment.** The owner of an individual sewage treatment  
12 system or the owner's agent shall regularly, but in no case less frequently than every  
13 three years:

14 A. assess whether the sewage tank leaks below the designed operating depth and  
15 whether sewage tank tops, riser joints, and riser connections leak through visual  
16 evidence of major defects; and

17 B. measure or remove the accumulations of scum, which includes grease and other  
18 floating materials at the top of each septic tank and compartment along with the sludge,  
19 which includes the solids denser than water.

#### 20 Subp. 3. **Removal of material.**

21 A. Septage shall be removed by pumping of septage from all tanks or  
22 compartments in which the top of the sludge layer is less than 12 inches below the  
23 bottom of the outlet baffle or whenever the bottom of the scum layer is less than three  
24 inches above the bottom of the outlet baffle.

25 B. Removal of accumulated sludge, scum, and liquids must be through the  
26 maintenance hole.

1 C. If no maintenance hole exists on a sewage tank, the owner or the owner's agent  
2 shall install maintenance holes in sewage tanks in accordance with part 7080.0130,  
3 subpart 2, item M, subitem (1), to allow for maintenance to take place through the  
4 maintenance hole. If the owner or owner's agent refuses to allow the removal through a  
5 maintenance hole, the licensed pumper must obtain a signed statement from the owner  
6 or owner's agent that the owner or agent was informed of correct removal procedures  
7 and the reason for refusal.

8 Subp. 4. **Toilet waste treatment devices.** The owner or owner's agent shall operate a  
9 toilet waste treatment device in accordance with manufacturer's requirements. For  
10 primitive dwellings and dwellings using toilet waste treatment devices in low density  
11 areas, septage disposal must not be to surface waters, drainageways, or in a manner or  
12 volume harmful to the environment or public health or that creates a nuisance if  
13 allowed under local ordinance. For all other uses of toilet waste treatment devices,  
14 septage disposal must meet the requirements of subpart 6.

15 Subp. 5. **Additives.** Individual sewage treatment system additives must not be used  
16 as a means to reduce the frequency of proper maintenance and removal of septage from  
17 the septic tank as specified in this part. Individual sewage treatment system additives  
18 that contain hazardous substances must not be used in individual sewage treatment  
19 systems.

20 Subp. 6. **Septage disposal.** Septage shall be disposed of in accordance with state,  
21 federal, or local requirements. If septage is disposed of into a municipal sewage  
22 treatment facility, a written agreement must be provided between the accepting facility  
23 and the septage disposal firm.

24 Subp. 7. **Use of soil treatment site.** Activities on the soil treatment system or the  
25 additional soil treatment area as specified in part 7080.0305, subpart 4, item F, that may  
26 impair the treatment abilities or hydraulic performance of the soil treatment system are  
27 prohibited.

1 Subp. 8. **System rejuvenation.** Any maintenance activity used to increase the  
2 acceptance of effluent to a soil treatment system must:

3 A. not be used on failing systems, unless the activity meets the requirements of  
4 part 7080.0179;

5 B. not decrease the required vertical separation;

6 C. not cause preferential flow from the system bottom to the saturated soil or  
7 bedrock; and

8 D. be conducted by an appropriately registered qualified employee or an  
9 appropriately licensed ISTS professional.

10 **7080.0176 SYSTEM ABANDONMENT.**

11 Subpart 1. **Tank abandonment.** Tank abandonment procedures for sewage tanks,  
12 cesspools, leaching pits, drywells, seepage pits, vault privies, pit privies not serving  
13 primitive dwellings, and distribution devices are as follows:

14 A. all solids and liquids shall be removed and disposed of in accordance with part  
15 7080.0175, subpart 6;

16 B. abandoned chambers shall be removed or be filled with soil material, rock, or  
17 other inert material; and

18 C. tanks buried close to the ground surface must be removed or crushed to permit  
19 drainage through the tank.

20 Subp. 2. **Further discharge.** Access for future discharge to the system shall be  
21 permanently denied.

22 Subp. 3. **Removal of system.** If soil treatment systems are removed, contaminated  
23 materials shall be properly handled to prevent human contact and shall be disposed of  
24 in a manner assuring that public health and the environment are protected.

25 **7080.0178 OTHER SYSTEMS.**

1 Subpart 1. **General.** Other systems may be designed under this part that do not meet  
 2 technical standards and criteria if the requirements under this part are met. Systems  
 3 designed under this subpart must be operated under the permit requirements of part  
 4 7080.0310. Reasonable assurance of performance of the system must be submitted to the  
 5 ~~permitting authority~~ local unit of government. The engineering design of the system  
 6 must be submitted and approved by the ~~permitting authority~~ local unit of government.

7 Subp. 2. **Minimum requirements.** Systems designed, constructed, and operated  
 8 under this part shall meet the requirements of part 7080.0179, subpart 2, items B, and D,  
 9 ~~and E~~, and:

10 A. be designed with a vertical separation of three feet or greater and with a soil  
 11 texture of medium sand or finer ~~with a minimum of one foot of original soil~~  
 12 immediately below the distribution medium;

13 B. operate to load effluent at a rate no greater than 1.2 gpd/ft<sup>2</sup>; and

14 C. provide flow measurement.

15 Subp. 3. **Compliance.** Systems designed and constructed under this part shall be  
 16 considered in compliance if they meet the conditions of the approved monitoring plan.

17 **7080.0179 PERFORMANCE.**

18 Subpart 1. **Incorporation by reference of this part.** Past or current incorporation by  
 19 reference of this chapter into a local ordinance ~~of the minimum technical standards and~~  
 20 ~~criteria for individual sewage treatment systems~~ does not include adoption of this part.  
 21 If a local unit of government chooses to adopt this part, it must do so expressly. The  
 22 local unit of government may use the following format: "Minnesota Rules, part  
 23 7080.0179, is incorporated by reference into Ordinance ....."

24 Subp. 2. **Performance systems.**

25 A. Each system's design report, monitoring plan, and mitigation plan under this

1 part must be operated under the permit requirements of part 7080.0310, subpart 6.  
2 Reasonable assurance of performance of the system must be submitted to the ~~permitting~~  
3 ~~authority~~ local unit of government. The engineering design of the system must be  
4 submitted and approved by the ~~permitting authority~~ local unit of government.

5 B. Systems designed, constructed, and operated under this part shall meet or  
6 exceed the following requirements:

7 (1) only sewage may be discharged into the system;

8 (2) treatment processes and devices shall not allow bodily contact with sewage  
9 or sewage effluent;

10 (3) disposal of sewage effluent shall be below grade, with the effluent remaining  
11 below grade until reaching a groundwater discharge area. The below grade discharge  
12 shall not result in creation of a new surface discharge;

13 (4) the treatment and disposal of sewage or sewage effluent shall be in a safe  
14 manner that adequately protects the public, including protection from physical injury  
15 and harm;

16 (5) all methods and devices used to treat and dispose of sewage shall conform to  
17 all applicable federal, state, and local requirements; and

18 (6) all devices shall be operated and maintained in accordance with  
19 manufacturer's requirements.

20 C. Groundwater and surface water protection.

21 (1) Soil ~~dispersal~~ treatment systems must be designed with a ~~minimum of one~~  
22 ~~foot of vertical separation distance.~~ appropriate for the sewage treatment system design,  
23 including effluent quality, loading rates, loading methods, soil conditions, and other  
24 site-specific considerations as established in the operating permit. An unsaturated zone  
25 must be maintained between the bottom of the ~~dispersal~~ soil treatment system and the  
26 seasonally saturated soil or bedrock during loading of effluent.

1 (2) The sewage effluent/groundwater ~~mixture plume~~ shall contain: ~~(a) no viable~~  
2 ~~fecal organisms, or (b) concentrations of viable fecal coliforms, and shall not exceed~~  
3 ~~background concentrations~~ 25 feet horizontally from the soil dispersal treatment area.  
4 This limit shall not be exceeded during typical periods of climatic stress and/or under  
5 typical maximum designed flow volumes.

6 (3) If the system is located on a lot which adjoins a lake, the sewage  
7 effluent/groundwater ~~mixture plume~~ shall:

8 (a) have a total phosphorus concentration of 1 mg/l or less 50 feet or greater  
9 from the soil ~~system~~ treatment area; or

10 (b) have concentrations of total phosphorus less than 1 mg/l above  
11 background concentrations 50 feet or greater from the soil ~~system~~ treatment area.

12 (4) Local units of government may enact nitrogen standards for sewage  
13 effluent/groundwater plumes from an ISTS. Local units of government may also  
14 require additional standards for local resource protection.

15 D. Long-term performance.

16 (1) Designers of systems designed under this part shall provide to the local unit  
17 of government and the property owner the following:

18 (a) estimated costs for construction, operation, monitoring, service,  
19 component replacement, and management;

20 (b) anticipated system life; and

21 (c) hydraulic and organic loading rates to all components of the system.

22 (2) Flow shall be determined in accordance with part 7080.0125 for dwellings or  
23 with part 7080.0600, subpart 4, item B, for groups of dwellings or other establishments.

24 ~~E. Systems designed and constructed under this part shall be considered in~~  
25 ~~compliance if they meet the conditions of the approved monitoring plan.~~



1                                   **REQUIREMENTS FOR LOCAL ORDINANCES**

2       **7080.0305 GENERAL REQUIREMENTS FOR LOCAL ORDINANCES.**

3           Subpart 1. **Compliance with this chapter.** All counties must adopt ordinances that  
4       comply with this chapter unless all towns and cities in the county have adopted local  
5       ordinances that also comply with this chapter and are as strict as the applicable county  
6       ordinance.

7           Subp. 2. **General requirements for county, town, and city local ordinances.** Local  
8       ordinances to regulate individual sewage treatment systems shall incorporate  
9       provisions of parts 7080.0020 and 7080.0060 to 7080.0176. Counties may adopt  
10      alternative local standards in local ordinances if the requirements of subpart 6 are met.  
11      For all local ordinances, items A to E apply.

12           A. County ordinances must apply to all areas of the county other than cities or  
13      towns that have adopted local ordinances that comply with this chapter and are as strict  
14      as the county ordinance.

15           B. Local ordinance requirements for new construction and replacement may be  
16      more restrictive than this chapter.

17           C. Local ordinance requirements regulating vertical separation for ~~existing~~ systems  
18      built prior to April 1, 1996, in non-SWF must meet the requirements in part 7080.0060,  
19      subpart 3, item B, subitem (2).

20           D. Warranted systems (7080.0450), and design options under part 7080.0172 may  
21      be employed unless specifically prohibited, in whole or in part, by local ordinance.

22           E. A local unit of government must make available to the public upon request a  
23      written list of all technical differences between its ordinance and rules adopted under  
24      this chapter.

25           Subp. 3. **Variations.**

1           A. After December 31, 1995, a local unit of government shall not issue a variance  
2 for replacement, or for the addition of a bedroom on property served by a system unless  
3 the individual sewage treatment system is in compliance with local ordinance, as  
4 evidenced by a certificate of compliance.

5           B. Variances to technical standards and criteria may be granted by the local unit of  
6 government if applicable local variance procedures are followed, ~~except for the required~~  
7 ~~vertical separation.~~ Less restrictive vertical separation ~~must be granted under ordinance~~  
8 ~~provisions meeting the requirements of part 7080.0179, or granted a variance under part~~  
9 ~~7080.0030, subpart 3~~ is allowed if the requirements of Minnesota Statutes, section 115.55,  
10 subdivision 7, are met or if the requirements in part 7080.0179 are met.

11           C. Only the governing state agency may issue variances to chapters 4720, 4725,  
12 6105, and 6120.

13           Subp. 4. **Administrative requirements for local ordinances.** Administration of local  
14 ordinances regulating individual sewage treatment systems shall comply with parts  
15 7080.0305 to 7080.0315. Local ordinances shall include items A to H.

16           A. A provision requiring the upgrade, replacement, repair, or discontinued use of  
17 a failing system within a specified time period after the owner receives a notice of  
18 noncompliance.

19           B. A provision requiring the upgrade, replacement, repair, or discontinued use of a  
20 system which represents an imminent threat to public health or safety within ten  
21 months after the owner receives a notice of noncompliance.

22           C. A provision requiring that the owner has five years from the date of the  
23 bedroom addition permit issuance to upgrade, replace, repair, or discontinue use of the  
24 system. This upgrade criterion applies only if:

25           (1) the local unit of government issues a permit to add a bedroom;

26           (2) the system inspection is triggered by a bedroom addition permit request;

1 (3) the system was installed between May 27, 1989, and January 23, 1996;

2 (4) the system does not comply with ~~applicable requirements~~ part 7080.0060;

3 and

4 (5) the system is not an imminent threat to public health or safety.

5 D. A provision to adopt the requirements under subpart 2.

6 E. A provision that requires all design, installation, alteration, repair, maintenance,  
7 pumping, and inspection activities for an individual sewage treatment system to be  
8 completed by an appropriately licensed business, an appropriately registered qualified  
9 employee, or a person exempted under part 7080.0700, subpart 1. A local unit of  
10 government may not require additional local licenses for ISTS professionals.

11 F. A provision that requires all lots created after January 23, 1996, to have a  
12 minimum of one additional soil treatment area that can support a standard system.

13 G. A provision that requires abandonment in accordance with part 7080.0176 of an  
14 existing individual sewage treatment system, or part thereof, that will no longer be used  
15 ~~as a component of new construction or replacement.~~

16 H. A provision regulating the installation and management of holding tanks.

17 Subp. 5. **Submittal of ordinance to commissioner.** A copy of all local ordinances  
18 regulating ISTS and all future ordinances or amendments must be submitted to the  
19 commissioner within 30 days after adoption. Local ordinances with alternative local  
20 standards must be submitted to the commissioner for comment prior to adoption by the  
21 local unit of government. A written list of any differences between the local ordinance  
22 and this chapter must be included in the submittal.

23 Subp. 6. **Requirements for alternative local standards.** Counties may adopt and  
24 enforce by ordinance alternative local standards for an existing system or new  
25 construction or replacement. The alternative local standards must protect public health

1 and the environment in accordance with Minnesota Statutes, section 115.55, subdivision  
2 7, paragraphs (a) and (b), and must comply with items A to E.

3 A. Alternative local standards shall not apply to SWF.

4 B. Any alternative local standard must include references to applicable  
5 requirements under other state laws or rules or local ordinances.

6 C. Local ordinances with alternative local standards for existing systems must  
7 include a time period to upgrade, replace, or discontinue use of a failing system. The  
8 draft local ordinance, including the alternative local standards, shall be submitted to the  
9 commissioner for comment prior to adoption to demonstrate that, based on local  
10 circumstances in that jurisdiction, the alternative local standards adequately protect  
11 public health and the environment. Justification for the alternative local standard for  
12 existing systems may include:

13 (1) soil separation;

14 (2) soil classification;

15 (3) vegetation;

16 (4) system use;

17 (5) localized well placement and construction;

18 (6) localized density of systems and wells;

19 (7) extent of area to be covered by the alternative local standard;

20 (8) groundwater flow patterns; and

21 (9) existing natural or artificial drainage systems.

22 D. Alternative local standards for new construction or replacement. Counties may  
23 adopt alternative local standards for new construction or replacement in areas of  
24 sustained and projected low population density where conditions render conformance  
25 to ~~applicable requirements~~ this chapter difficult or otherwise inappropriate. Counties

1 seeking to adopt alternative local standards for new construction or replacement must  
2 submit the following information:

3 (1) population density of the area covered by the alternative local standard;

4 (2) reasons why conformance to this chapter is difficult or otherwise  
5 inappropriate;

6 (3) a description of the hardship that would result from strict adherence to this  
7 chapter;

8 (4) evidence of sustained and projected low population density;

9 (5) evidence that the proposed alternative local standard provides cost-effective  
10 and long-term treatment alternatives;

11 (6) a map delineating the area of the county to be served by the local standard;  
12 and

13 (7) justification should also include item C, subitems (1) to (9).

14 E. The draft county ordinance, including the alternative local standards for new  
15 construction and replacement, shall be submitted to the local water planning advisory  
16 committee created under Minnesota Statutes, section 103B.321, subdivision 3, and then  
17 submitted with justification to the commissioner at least 30 days before adoption for  
18 review and comment demonstrating that they adequately protect public health and the  
19 environment.

20 Subp. 7. [See repealer.]

21 Subp. 8. [See repealer.]

22 Subp. 9. **Enforcement of local ordinances.** Local units of government shall enforce  
23 local ordinances that regulate individual sewage treatment systems through permitting  
24 programs that meet the minimum requirements under part 7080.0310 and inspection  
25 programs that meet the minimum requirements under part 7080.0315. Local units of

1 government may also enforce local ordinances ~~that are applicable requirements~~ under  
 2 Minnesota Statutes, section 115.071, subdivisions 3 and 4.

3 Subp. 10. **Incorporation by reference** ~~parts~~ part 7080.0179 and 7080.0450. Past or  
 4 future incorporation by reference into a local ordinance of all or part of this chapter ~~or~~  
 5 ~~the minimum technical standards and criteria for individual sewage treatment systems,~~  
 6 ~~parts 7080.0060 to 7080.0176,~~ does not include adoption of part 7080.0179, the part  
 7 establishing standards for performance or part 7080.0170, subpart 2, item C, subitem (1),  
 8 unit (b), Table Va. If a local unit of government chooses to adopt that part, it must do so  
 9 expressly. The local unit of government may use the following format: "Minnesota  
 10 Rules, part 7080.0179, is incorporated by reference into Ordinance ....." ~~or for part~~  
 11 ~~7080.0450, "Minnesota Rules, part 7080.0450, is incorporated by reference into Ordinance~~  
 12 ~~....."~~

13 **7080.0310 PERMIT PROGRAM FOR INDIVIDUAL SEWAGE TREATMENT**  
 14 **SYSTEMS.**

15 Subpart 1. **General requirements for permit program.**

16 A. A local unit of government with a local ordinance to regulate individual sewage  
 17 treatment systems must have a permit program that specifically addresses the  
 18 following:

- 19 (1) permit application requirements;  
 20 (2) permit review and approval requirements and procedures;  
 21 (3) recordkeeping; and  
 22 (4) reporting.

23 These program elements must contain the minimum requirements under subparts 2  
 24 to 7. Permits are required for all new construction and replacement.

25 B. A local unit of government with a local ordinance to regulate bedroom additions  
 26 must comply with subpart 3, item C.

1 Subp. 2. **ISTS permit application requirements.** ISTS permit applications issued by  
2 the ~~permitting authority~~ local unit of government must require the submittal of exhibits  
3 described under subpart 4, items A, B, D, and E, along with general requirements for  
4 identifying the property and owners, a site evaluation report, a design report, and any  
5 other information requested by the ~~permitting authority~~ local unit of government  
6 pertinent to this process. Exhibits for site evaluation, design, and applicable construction  
7 information must be complete and include a certified statement from the person who  
8 conducted the work. The local unit of government must have an approval process to  
9 address changes in the approved design that served as the basis for issuing a permit.

10 Subp. 3. **Permit approval requirements and procedures.** The permit program must  
11 include the requirements in items A to C.

12 A. A qualified employee or licensee who is a designer I or inspector and who is  
13 authorized by the local unit of government must review the permit application and  
14 exhibits to determine whether the proposed system will meet applicable requirements.

15 B. The local unit of government must review and approve or deny the application.  
16 Construction shall not be initiated until ~~preliminary approval~~ a permit is granted. Final  
17 approval shall be evidenced by issuance of a certificate of compliance.

18 C. Local units of government shall not issue a permit or variance for a bedroom  
19 addition on property served by a system unless the individual sewage treatment system  
20 is in compliance with applicable requirements, as evidenced by a certificate of  
21 compliance.

22 A local unit of government may temporarily waive the certificate of compliance  
23 requirement in item C for a bedroom addition permit for which application is made  
24 during the period from November 1 to April 30, provided an inspection of the system is  
25 performed by the following June 1 and the applicant submits a certificate of compliance  
26 by the following September 30. This requirement does not apply if the local unit of  
27 government does not have an ordinance requiring a permit to add a bedroom.

1 Subp. 4. **Recordkeeping requirements.** Local units of government must maintain  
2 copies of certificates of compliance, notices of noncompliance, permit applications,  
3 issued permits, enforcement proceedings, variance requests, and other actions taken.  
4 Records must be available for review by the commissioner. Permit files must also  
5 include:

6 A. site evaluation reports including items identified in part 7080.0110;

7 B. design reports for items identified in part 7080.0115 and warranties;

8 C. as-builts;

9 D. monitoring plans and results for approved monitoring plans (subpart ~~6~~ or 7);

10 and

11 E. mitigation plans and actions on approved mitigation plans (subpart ~~6~~ or 7).

12 Subp. 5. **Reporting requirements.** Local units of government must submit annual  
13 reports to the commissioner to demonstrate enforcement of the local ordinance. The  
14 reports shall be submitted by March 1, 2001, and contain information from the previous  
15 calendar year and shall be received by the commissioner no later than March 1 of each  
16 succeeding year. At a minimum, the reports must include:

17 A. a copy of the standard permit and inspection forms;

18 B. the name and address of the program administrator, all qualified employees and  
19 contracted licensees authorized by the local unit of government;

20 C. the number of permits issued and the percent of systems field inspected;

21 D. the number and type of systems, including number of mound systems; at-grade  
22 systems; seepage beds; gravelless, chamber, and drainfield rock trenches; alternative,  
23 warrantied, and performance systems; and other systems; estimated total number of  
24 systems and estimated percentage in compliance within their jurisdictional boundaries;

25 and



1 E. for counties, the names of cities and townships that have local ordinances within  
2 the county.

3 Subp. 6. **Operating permit.** Local units of government must issue and enforce an  
4 operating permit for systems designed under part 7080.0179, and as described in items  
5 A ~~and B~~ to F.

6 A. At a minimum, the operating permit shall include:

7 (1) ~~A.~~ A. maintenance requirements;

8 (2) ~~B.~~ B. monitoring and ~~mitigative~~ mitigation plans as described in subpart 7;

9 (3) ~~C.~~ C. compliance limits and compliance boundaries;

10 (4) ~~D.~~ D. reporting frequency, not less than annually;

11 (5) ~~E.~~ E. requirements that the permittee notify the ~~permitting authority~~ local unit  
12 of government when monitoring plan requirements are not met; and

13 (6) ~~F.~~ F. disclosure of the status and condition of replacement ISTS.

14 B. ~~If item A is not complied with, the system is in violation of its operating permit.~~

15 Subp. 7. **Monitoring and mitigation plans.**

16 A. General.

17 (1) Local units of government must require monitoring and mitigation plans for  
18 systems designed under part 7080.0178 and 7080.0179.

19 (2) Monitoring and mitigation plans required by parts 7080.0178 and 7080.0179  
20 shall be developed and approved before the issuance of a permit for the system.  
21 Monitoring and mitigation plans must be signed by the permittee and approved by the  
22 ~~permitting authority~~ local unit of government.

23 (3) Monitoring plans may be modified as necessary and reapproved by the  
24 permitting authority.

1 B. Monitoring plan.

2 (1) A monitoring plan must adequately detail the operation, maintenance, and  
3 monitoring necessary for the proposed design to ensure both continued system  
4 performance as designed and public health and environmental protection for the life of  
5 the system. The plan must prescribe the type and frequency of monitoring and require  
6 routine flow measurement.

7 (2) Monitoring results shall be submitted by the permittee to the ~~permitting~~  
8 ~~authority~~ local unit of government. The ~~permitting authority~~ local unit of government  
9 must maintain the monitoring results. Monitoring plans must require the permittee to  
10 notify the ~~permitting authority~~ local unit of government within 30 days if monitoring  
11 results do not meet monitoring plan requirements.

12 C. Mitigation plan. The mitigation plan must indicate what the permittee will do if  
13 the system fails to provide treatment and disposal or public health and environmental  
14 protection. The plan must detail the actions, responsible parties, and appropriate  
15 timelines for mitigation.

16 **7080.0315 INSPECTION PROGRAM FOR INDIVIDUAL SEWAGE TREATMENT**  
17 **SYSTEMS.**

18 Subpart 1. **Inspection requirements.** Local units of government must have an  
19 inspection program to enforce requirements under part 7080.0305, subpart 9, and must  
20 specify the frequency and times of inspections, the requirements of an inspection, an  
21 inspection protocol if an inspection cannot be completed in a timely manner, and, at a  
22 minimum, the requirements for a compliance inspection under subparts 2 and 3.

23 Subp. 2. **Compliance inspection.** A compliance inspection shall be conducted:

24 A. to ensure compliance with applicable requirements. Persons conducting  
25 compliance inspections for disclosures shall also meet the requirements of item E E;

26 B. to ensure compliance before issuance of a permit or variance for the addition of  
7080.0315

1 a bedroom on property served by a system, if the local unit of government issues  
2 permits for the addition of a bedroom, unless the requirements under part 7080.0310,  
3 subpart 3, item C, are met;

4 C. for all new construction or replacement;

5 D. by a qualified employee or under a licensee authorized by the local unit of  
6 government who is independent of the owner and the installer;

7 E. for all new construction and replacement. A licensed inspector or licensed  
8 designer I who inspects an existing system may subsequently design and install a new  
9 system for that property, provided the inspector or designer also has an installer license;  
10 and

11 E. F. for any evaluation, investigation, inspection, recommendation, or other  
12 process used to prepare a disclosure if conducted by a party who is not the property  
13 owner. This disclosure action shall constitute a compliance inspection and must be  
14 conducted in accordance with this chapter.

15 **Subp. 3. Certificate of compliance; notice of noncompliance.**

16 A. General.

17 (1) All certificates of compliance and notices of noncompliance must include  
18 property and property owner identification, the party or parties requesting the  
19 inspection, reason for the inspection, date of inspection, system components,  
20 methodology used to determine compliance, system location (dimensioned or drawn to  
21 scale), SWF designations as applicable, and Class V designation as applicable.

22 (2) A certificate of compliance or notice of noncompliance must be signed by a  
23 licensed inspector or designer I, or a qualified employee registered as an inspector or  
24 designer I, and submitted to the local unit of government with jurisdiction and the  
25 property owner within 30 days after any compliance inspection. The certificate of  
26 compliance or notice of noncompliance must also be submitted to the owner's agent, if  
27 applicable.

1 (3) A certificate of compliance or notice of noncompliance must include a  
2 certified statement from the licensee or qualified employee who conducted the  
3 compliance inspection. The certificate or notice shall identify the type of system  
4 inspected, and indicate whether the individual sewage treatment system is in  
5 compliance with ~~applicable requirements~~ part 7080.0060.

6 (4) If a compliance inspection indicates that the system is not in compliance with  
7 ~~applicable requirements~~ part 7080.0060 or presents an imminent threat to public health  
8 or safety, the notice must also contain a statement to this effect and specify why the  
9 owner must upgrade, replace, or discontinue use of the system ~~within the required time~~  
10 ~~period~~.

11 B. New construction or replacement.

12 (1) A certificate of compliance for new construction or replacement shall include  
13 documentation showing that the individual sewage treatment system ~~reasonably~~  
14 complies with applicable requirements. The inspection requirement may be satisfied by  
15 a review by the designated local official of video, electronic, photographic, or other  
16 evidence to show ~~reasonable~~ compliance as provided by the installer.

17 (2) Certificates of compliance for new construction or replacement system  
18 compliance inspections remain valid for five years from the date of issuance unless the  
19 local unit of government finds evidence of an imminent threat to public health and  
20 safety.

21 C. Existing systems.

22 (1) ~~A certificate of compliance~~ An inspection report for existing systems shall  
23 include the methodology used to determine vertical separation ~~distance~~, tank ~~water~~  
24 ~~tightness~~ leakage, and if whether an imminent threat to public health or safety exists. If  
25 the original installation took place under a local unit of government permit process that  
26 included the following verification procedure, then there is no further need to verify the

1 vertical separation for the life of the system. Under the local permit process, this  
2 verification must be made by in-field measurements of the redoximorphic features  
3 determined and documented during the original soil testing, governmental review and  
4 as-builts, or by documentation of in-field measurements of the redoximorphic features  
5 and the in-place systems determined during a construction inspection.

6 (2) Certificates of compliance for existing systems remain valid for three years  
7 from the date of issuance unless the local unit of government finds evidence of an  
8 imminent threat to public health or safety ~~or that other supporting verifications are no~~  
9 ~~longer valid. The certificate of compliance remains valid for the three years from the~~  
10 ~~date of issuance even if a supporting verification as described in subitem (1) used to~~  
11 ~~issue the certificate has expired.~~

#### 12 7080.0400 NEW TECHNOLOGY.

13 Subpart 1. **Procedures for approval designation.** The commissioner may approve  
14 designate a new technologies as meeting the technical standards and criteria of this  
15 chapter if documentation submitted to the commissioner demonstrates that the new  
16 technology: technology as standard or alternative if the submittal meets the  
17 requirements of this part.

18 Subp. 2. Alternative designation. To be designated as an alternative system, the new  
19 technology must:

20 A. ~~meets~~ meet or exceed the requirements of part 7080.0179, subpart 2, items A B  
21 ~~and B, and this part C;~~

22 B. ~~has long-term treatment and hydraulic reliability while serving typical domestic~~  
23 ~~households under adverse climatic conditions and varied soil conditions through~~  
24 ~~in-field testing~~ have structural components that meet or exceed a 25-year design life and  
25 have soil treatment that meets or exceeds a seven-year design life when loaded at  
26 maximum design flows established in part 7080.0125 or 7080.0600. The new technology

1 must be tested at its design maximum hydraulic and organic loading rates. Structural  
2 and soil treatment testing must be adequate to extrapolate the life expectancies required  
3 in this item;

4 C. ~~may~~ be readily operated and maintained ~~to meet the conditions described in~~  
5 ~~item B~~; and

6 D. ~~presents~~ identify conditions under which its use is recommended and  
7 conditions where its use is limited.

8 Subp. 2: 3. Submittal requirements. ~~The submittal shall be accompanied by data and~~  
9 ~~information to document that the new technology will meet the performance criteria in~~  
10 ~~part 7080.0179, subpart 2, items B to D. The submittal shall include, A request for~~  
11 alternative designation must be accompanied by the following documentation, as  
12 applicable:

13 A. plans and specifications;

14 B. theory of operation;

15 C. testing protocol ~~as appropriate~~ for the system;

16 D. testing or research data with extrapolating calculations;

17 E. limits of reliable operation in terms of capacity and longevity as described in  
18 subpart 2, item B;

19 F. installation requirements and procedures;

20 G. inspection requirements;

21 H. ~~capital costs~~;

22 I. ~~design, installation, and operation and maintenance costs stated in present value~~;

23 J. operation and maintenance requirements and schedules;

24 K. I. documented review by an independent professional with extensive

1 knowledge of ISTS engineering principles, soil science, construction processes, and  
2 material quality, as applicable; and

3 ~~E.~~ J. additional data and information as requested by the commissioner.

4 Subp. 4. Standard system designation. For a new technology to be designated as a  
5 standard system, the following criteria must be met:

6 A. The new technology must be designated as an alternative system in subpart 2.

7 B. A minimum of 100 of each new technology and soil treatment or dispersal  
8 systems must be installed, operated, monitored, and distributed across all major soil  
9 classifications and under normal use for a minimum of seven years.

10 C. The frequency and type of monitoring must be approved by the commissioner.

11 Subp. 3: 5. Approval Designation. New technology designation shall be based on  
12 whether the new technology successfully demonstrates performance as described in this  
13 part. If upon review, the commissioner determines that the new technology complies  
14 with this part, the agency shall issue ~~an approval~~ the designation in writing. If it has  
15 been determined that the new technology has limitations for its use, the commissioner  
16 shall impose conditions under which ~~an approval~~ the designation is granted. Within 90  
17 days of ~~approval~~ after designation, the applicant must submit to the commissioner fact  
18 sheets, which can then be offered directly to ISTS professionals. The fact sheets must  
19 include a general description of the new technology and clearly written instructions and  
20 graphical representations for design, construction, inspection, operation, and  
21 maintenance requirements. If ~~an approved~~ designated new technology, ~~component, or~~  
22 ~~design~~ is modified or additional assertions of function or performance are made,  
23 modification and additions are not covered by the approval shall be considered null and  
24 void, designation unless the ~~change is~~ changes are submitted to the agency for review  
25 and ~~the approval~~ designation is reaffirmed. After obtaining a commissioner ~~approval~~  
26 designation letter or modified designation letter, new technology ~~may~~ must be  
27 employed as designated unless specifically prohibited in local ordinance.

1 Subp. ~~4.~~ 6. **Denial.** If upon review, the commissioner determines that the  
 2 performance, documentation, or data is are insufficient to grant ~~approval~~ designation,  
 3 or that for any other reason a new technology does not meet the requirements of this  
 4 part, the request for ~~approval~~ designation shall be denied in writing.

5 **7080.0450 WARRANTIED INDIVIDUAL SEWAGE TREATMENT SYSTEMS.**

6 Subpart 1. **Adoption and use.** Warrantied individual sewage treatment systems  
 7 meeting the requirements under this part may be employed unless specifically  
 8 prohibited in local ordinance. ~~Past or current incorporation by reference of this chapter~~  
 9 ~~into a local ordinance of the minimum technical standards and criteria for individual~~  
 10 ~~sewage treatment systems does not include adoption of this part. If a local unit of~~  
 11 ~~government chooses to adopt this part, it must do so expressly. The local unit of~~  
 12 ~~government may use the following format: "Minnesota Rules, part 7080.0450, is~~  
 13 ~~incorporated by reference into Ordinance ....."~~

14 Subp. 2. **Submittal requirements.** ~~Warrantied individual sewage treatment systems~~  
 15 ~~may be employed provided~~ The manufacturer or designer ~~submits~~ must submit  
 16 satisfactory information to the commissioner as follows to qualify for placement on the  
 17 warrantied systems list:

18 A. how the system must be used and installed, how it is expected to perform under  
 19 those conditions, the anticipated design life, and the period to be warrantied;

20 B. pertinent existing data, including in-field testing data, that the system will  
 21 perform as expected;

22 C. a commonly accepted financial assurance document or documentation of the  
 23 manufacturer's or designer's financial ability to cover potential replacement and  
 24 upgrades necessitated by failure of the system to meet the performance expectations for  
 25 the duration of the warranty period;

26 D. a full warranty effective for the designated warranty period, which must be at



1 least five years from the time of installation, covering design, labor, and material costs to  
2 remedy failure to meet performance expectations for systems used and installed in  
3 accordance with the manufacturer's or designer's instructions; and

4 E. additional information requested by the commissioner to ensure compliance  
5 with this part.

6 **Subp. 3. Administrative requirements.**

7 A. Individual sewage treatment systems meeting the requirements of subpart 2  
8 shall be placed on a warrantied systems list maintained by the commissioner.

9 B. Changes made to a warrantied individual sewage treatment system that are not  
10 included in the original warranty submittal require resubmittal to be placed on the  
11 warrantied systems list.

12 C. The commissioner may remove a warrantied individual sewage treatment  
13 system from the warrantied systems list upon a finding of fraud, system failure, failure  
14 to meet warranty conditions, or failure to meet the requirements of this part or other  
15 matters that fail to meet with the intent and purpose of this chapter. Removal of a  
16 technology from the warrantied systems list by the commissioner does not alter or end  
17 warranty obligations for systems installed under the previously approved warranty.

18 D. A copy of the warranty must be provided to the owner and included with the  
19 design records.

20 E. Warrantied individual sewage treatment systems may be submitted for  
21 approval under designation if they meet the requirements of part 7080.0400.

22 **7080.0600 OTHER ESTABLISHMENTS.**

23 **Subpart 1. General.**

24 A. The requirements in part 7080.0020, subpart 46b, apply as appropriate for  
25 systems designed for other establishments.

1 B. Systems designed under this part may require additional design requirements  
2 pursuant to Code of Federal Regulations, title 40, parts 144 and 146.

3 Subp. 2. **Administration by state agencies.**

4 A. ISTS serving other establishments licensed or otherwise regulated by the state  
5 shall conform to appropriate requirements of this chapter.

6 B. When a single ISTS, or group of ISTS, under single ownership within one-half  
7 mile of each other, are designed to treat an average design flow greater than 10,000  
8 gallons per day, the owner or owners shall make application for and obtain a state  
9 disposal system (SDS) permit from the agency in accordance with this subpart and  
10 chapter 7001.

11 C. The owner of systems required to have an SDS permit must submit to the  
12 agency a complete set of plans and specifications with a completed SDS permit  
13 application which includes the following information under subitems (1) to (9) in detail  
14 appropriate for the complexity of the system:

15 (1) a site evaluation according to part 7080.0110;

16 (2) a description of methods to meet or exceed permit standards for  
17 down-gradient groundwater quality;

18 (3) an evaluation of groundwater conditions and groundwater impacts, and a  
19 groundwater monitoring and mitigation plan addressing those conditions and impacts;

20 (4) a plan to identify and eliminate discharges of wastewater other than sewage;

21 (5) a plan to prevent future discharges of wastewater other than sewage;

22 (6) flow measurements;

23 (7) an operation and maintenance plan;

24 (8) a septage disposal plan; and

25 (9) for joint systems, a statement signed by all owners of dwellings or other

1 establishments planned to be connected to collection systems that they agree to be part  
2 of the system, to participate in the construction projects, and to participate in and  
3 finance future operation, maintenance, and replacement of the system.

4 Subp. 3. **Administrative requirements for other establishments.** The owner or  
5 owner's agent of an other establishment served by an ISTS shall submit to the  
6 commissioner and the United States Environmental Protection Agency the inventory  
7 information specified in Code of Federal Regulations, title 40, section 144.26, subpart (a),  
8 including, as appropriate, items A to J.

9 A. Facility name.

10 B. Facility location by, at a minimum, section, township, range, and quarter,  
11 preferably including longitude and latitude coordinates.

12 C. A map showing the location of the system, property lines, adjacent surface  
13 waters, wellhead protection areas, and existing and proposed water supply wells within  
14 100 feet of the system.

15 D. Name and address of facility owner or owner's agent and contact person.

16 E. Type of facility and chemicals and processes used.

17 F. Facility average and maximum design flow in gallons per day.

18 G. Chemical composition of waste stream.

19 H. Operating status of the system.

20 I. Certification by the owner or owner's agent that the submitted information is  
21 correct.

22 J. Additional information as required by the commissioner or the United States  
23 Environmental Protection Agency.

24 Subp. 4. **Technical requirements, design.** Systems shall be designed in accordance  
25 with applicable portions of technical standards and criteria, or under part 7080.0178 or  
26 7080.0179, and as modified in this subpart.

1 A. Flow measurement. All other establishment designs must include a method to  
2 measure the flow to the treatment system.

3 B. Design flows.

4 (1) For multifamily dwellings, the average design flow shall consist of the sum  
5 of the average design flows for each individual unit as described in part 7080.0125,  
6 subpart 2. Flow determination for systems designed to serve more than ten dwellings  
7 may consider classification I dwellings as classification II dwellings.

8 (2) For other establishments, average design flow shall be used to size soil  
9 treatment systems. Maximum design flow shall be used to size sewage tanks. Design  
10 flows shall be calculated using estimated or measured values for other establishments  
11 according to units (a) and (b).

12 (a) Estimated average and estimated maximum design flows shall be  
13 determined from the best available data provided by the agency.

14 (b) Measured average and maximum design flows:

15 i. the measured average design flow shall be determined by averaging the  
16 measured daily flows for a consecutive seven-day period in which the establishment is  
17 at maximum capacity or use; and

18 ii. the measured maximum design flow shall be the measured peak daily  
19 flow.

20 (3) Estimated or measured average concentrations of biochemical oxygen  
21 demand, total suspended solids, and oil and grease shall be determined.

22 C. Septic tanks and holding tanks.

23 (1) A septic tank larger than 3,000 gallons shall be divided into two or more  
24 compartments or multiple tanks shall be used.

25 (2) Septic tank liquid capacity must be in accordance with units (a) and (b).

1 (a) Sufficient capacity shall provide a septic tank detention period of not less  
2 than 36 hours in the tank for maximum design flow of less than 1,500 gallons per day,  
3 but in no instance shall the liquid capacity be less than 750 gallons.

4 (b) For maximum design flows greater than 1,500 gallons per day, the  
5 minimum liquid capacity shall equal 1,125 gallons plus 75 percent of the maximum  
6 design flow.

7 ~~(c) For restaurants, laundromats, and other nonsewage discharge facilities,~~  
8 Sufficient detention time or pretreatment must be provided to produce an effluent  
9 quality suitable for discharge to a soil treatment system as defined in part 7080.0170,  
10 subpart 1, item D.

11 ~~(3) An effluent screen shall be used on the last septic tank prior to discharge to a~~  
12 ~~soil treatment system.~~ For laundromats, the outlet baffle of all septic tanks and baffles  
13 between compartments must be submerged to a depth of 50 percent of the liquid depth  
14 of the tank.

15 (4) Holding tanks serving an other establishment must provide storage of at  
16 least five times the average design flow.

17 D. Dosing devices, dosing chambers, pump pits, wet wells, or lift stations.

18 (1) Dosing chambers, pump pits, wet wells, or lift stations shall meet all  
19 requirements in part 7080.0160 with the pump discharge capacity based upon the  
20 perforation discharges for a minimum average head of 2.0 feet.

21 (2) A dosing device must discharge at a rate at least ten percent greater than the  
22 water supply flow rate but no faster than the rate at which effluent will flow out of the  
23 distribution device.

24 (3) Dosing chambers shall include a separate alarm ~~system~~ device for each  
25 dosing device to warn of dosing device failure, overflow, or other malfunction.

1 E. Conventional collector system design.

2 (1) Collector system design and testing shall be based on standard engineering  
3 practices.

4 (2) Collection systems shall be designed based on the sum of all flows for  
5 dwellings and other establishments as described in item B. Flows shall be increased to  
6 allow for 200 gallons of infiltration per inch of pipe diameter per mile per day. If the  
7 system shall be is designed with each dwelling ~~or other establishment~~ having a sewage  
8 tank, or designed with a common sewage tank serving ten bedrooms or more or serving  
9 another establishment, the liquid capacity of the tanks shall be in accordance with item  
10 C. ~~If a common septic tank is used, the capacity of the septic tank shall be the sum of the~~  
11 ~~tanks sized according to part 7080.0130, subpart 3, item A.~~ All sewage tanks shall meet  
12 the applicable requirements of part 7080.0130.

13 (3) The conventional sewer for systems with common sewage tanks shall be  
14 constructed to give mean velocities, when flowing full, of not less than two feet per  
15 second. The sewer for systems with individual sewage tanks shall be constructed and  
16 designed to hydraulically conduct the flow for which they were designed.

17 (4) In no case shall a gravity sewer be less than four inches in diameter. The  
18 diameter and grade line should be based on a flow equal to 50 percent of the average  
19 design flow occurring in a one-hour period.

20 (5) Infiltration or exfiltration shall not exceed 200 gallons per inch of pipe  
21 diameter per mile per day. Hydrostatic water testing, air testing, or other appropriate  
22 methods shall be used to verify nonexceedance.

23 (6) Cleanouts, brought flush with or above finished grade, or maintenance hole  
24 access, shall be provided wherever a common sewer joins an individual building sewer  
25 or piping from an individual sewer tank, or every 100 feet, whichever is less, unless  
26 maintenance methods can be provided.

1 (7) There shall be no physical connection between sewers and water supply  
 2 systems. Sewers shall be set back from water supply systems and piping as required for  
 3 building sewers. ~~Where it is not possible to obtain proper separation distances, the~~  
 4 ~~sewer connections shall be watertight and pressure tested.~~

5 (8) Pipes and pipe joints shall be designed and installed to be watertight.

6 (9) Pumps and dosing chambers shall be sized to handle 50 percent of the  
 7 average design flow in a one-hour period. Common pump tanks shall have a pumpout  
 8 capacity of ten percent of average design flow and two alternating pumps.

9 (10) For systems with individual septic tanks, a stilling tank of at least 1,500  
 10 gallons liquid capacity or ten percent of the average design flow, whichever is greater,  
 11 must be installed before the soil treatment system.

12 (11) All persons using a common system shall ensure, by contract with  
 13 maintenance personnel or other equivalent means, that the system will be maintained  
 14 throughout its useful life. The system so maintained includes common soil treatment  
 15 systems, common sewage tanks, common pumps, common pump stations, common  
 16 sewers, and all individual tanks connected to the common system. Flow measurements  
 17 must be taken and recorded according to a monitoring plan.

18 **7080.0700 LICENSES.**

19 Subpart 1. **State license required.** A state license applicable to the type of work being  
 20 performed is required for any business that conducts work to design, install, maintain,  
 21 pump, or inspect all or part of an ISTS. A license is not required for:

22 A. an individual who is a qualified employee performing work as directed by a  
 23 state or local government employer;

24 B. an individual who, ~~after consulting with~~ obtaining a signed design report from a  
 25 designer I or II, constructs a system on land that is owned or leased by the individual  
 26 and functions solely as a dwelling or seasonal dwelling for that individual. The system

1 must be inspected before being covered and a certificate of compliance or notice of  
2 noncompliance must be provided to the local unit of government after the inspection;

3 C. an individual who performs labor or services as an employee of a licensee;

4 D. a farmer who pumps septage from individual sewage treatment systems from  
5 dwellings or other establishments that are owned or leased by the farmer and disposes  
6 septage on land that is owned or leased by the farmer; or

7 [For text of item E, see M.R.]

8 Subp. 2. **State license categories.** The commissioner may issue the following licenses:

9 A. designer I license for activities listed in items B and E;

10 B. designer II license for designing ISTS and issuing and maintaining design  
11 reports;

12 C. installer license for constructing, installing, altering, extending, or maintaining  
13 ISTS; ensuring all work is done according to a written design report; notifying the local  
14 unit of government with jurisdiction to ensure inspections are conducted for new  
15 construction or replacement; ensuring site conditions allow for construction; providing  
16 evidence to verify compliance with applicable requirements; maintaining quality  
17 control/quality assurance records; identifying problems related to ISTS and making  
18 repairs; providing upgrade, repair, and replacement advice; and maintaining and  
19 submitting to the ~~permitting authority~~ local unit of government as-builts of all work;

20 D. pumper license for measuring scum and sludge depths for the accumulation of  
21 solids and removing these deposits; maintaining toilet waste treatment devices; storing  
22 and hauling septage; disposing properly by land application of septage or disposal in a  
23 publicly owned treatment works; identifying problems related to sewage tanks, dosing  
24 chambers, baffles, maintenance hole covers and extensions, and pumps, and making  
25 repairs; evaluating sewage tanks, dosing chambers, distribution devices, valve boxes, or  
26 drop boxes for leakage; identifying cesspools, seepage pits, leaching pits, and drywells;  
27 and cleaning supply pipes and distribution pipes; and



1 [For text of item E, see M.R.]

2 Subp. 3. **Applicable license category.** In the case of ISTS work not described under  
3 subpart 2, the commissioner shall determine which license category is applicable along  
4 with any additional requirements that may be necessary to obtain a license.

5 Subp. 4. **Restricted licenses.** The commissioner may add restrictions to a license for  
6 the following reasons:

7 A. as the result of an enforcement action under part 7080.0900;

8 B. as a method to allow an individual to gain experience as described under part  
9 7080.0815, subpart 1, item B or C; or

10 [For text of item C, see M.R.]

11 **7080.0705 APPLICATION FOR LICENSE; FEES; RENEWAL.**

12 Subpart 1. **Eligibility.** A business is eligible to apply for a license when it has:

13 A. one or more designated registered professionals with specialty area  
14 endorsement matching the requested license to meet the conditions under part  
15 7080.0715, subpart 2;

16 B. general liability insurance as required by part 7080.0710; and

17 C. a corporate surety bond as required by part 7080.0710.

18 Subp. 2. **Requirements for obtaining or renewing licenses.** A business that meets the  
19 eligibility requirements under subpart 1 may apply for or renew a license on forms  
20 provided by the commissioner. The application must be submitted no later than 60 days  
21 prior to the expiration/renewal date. Issuance of new licenses will also require a 60-day  
22 review and approval period.

23 [For text of subp 3, see M.R.]

24 Subp. 4. **Issuance.** Upon the commissioner's approval of the license application and  
25 payment of the license fees, a license will be issued to the proprietor for a sole

1 proprietorship, the partners of a partnership, or the corporate chief executive officer or a  
2 qualifying person in Minnesota designated by a corporation.

3 Subp. 5. **Term.** The license is valid for one year after the date of issuance. License  
4 renewals may be requested for longer periods up to three years. The fee is determined  
5 by multiplying the approved number of years by the fee in subpart 3.

6 Subp. 6. **Denial.** The commissioner shall deny an application for issuance or renewal  
7 of a license if the applicant is not eligible under subpart 1. A license application may  
8 also be denied as the result of an enforcement action under part 7080.0900.

9 **7080.0710 BONDING AND INSURANCE FOR LICENSES.**

10 Subpart 1. **Submittal.** At the time an application for an initial or renewal license is  
11 submitted to the commissioner, the applicant must show proof of holding a corporate  
12 surety bond in the amount of at least \$10,000, and proof of general liability insurance  
13 meeting the following requirements:

14 A. the bond must be submitted to the commissioner on the bond form provided in  
15 part 7080.0920, and must name the applicant as the principal;

16 B. the bond must be signed by an official of the business who is legally authorized  
17 to represent the business;

18 C. the bond must cover work to be done under all individual sewage treatment  
19 system licenses to be held by the business; and

20 D. proof of general liability insurance must be evidenced by a notarized certificate  
21 of insurance form which shows the minimum coverage that will be in effect for at least  
22 the term of the license.

23 Subp. 2. **Multiple licenses.** If a business holds more than one license, one bond and  
24 one general liability insurance policy will fulfill the bond and insurance requirement for  
25 all the licenses.

1 [For text of subps 3 and 4, see M.R.]

2 Subp. 5. **Bond components.** The bond must be written by a corporate surety licensed  
3 to do business in Minnesota. The corporate surety shall be responsible for providing 30  
4 days' written notice to the commissioner of cancellation of a licensee's bond. If a bond is  
5 canceled, a licensee must not perform work requiring the bond as a condition of ISTS  
6 license until the licensee obtains another bond meeting the requirements of this part.

7 **7080.0715 LICENSE CONDITIONS.**

8 Subpart 1. **General license conditions.** All ISTS licenses shall include the following  
9 conditions. The licensee must:

10 A. ensure that all work to design, install, maintain, repair, pump, or inspect an  
11 ISTS is done according to applicable requirements;

12 [For text of items B to E, see M.R.]

13 Subp. 2. **Conditions for designated registered professional.**

14 A. General designated registered professional in all specialty areas are subject to all  
15 the obligations of the license under which they work and must:

16 (1) provide direction and personal supervision to other employees working on  
17 an individual sewage treatment system;

18 (2) ensure the work completed meets applicable requirements; and

19 (3) complete a certified statement for design reports, as-builts, pumping records,  
20 inspection reports, and other formal work products.

21 B. Requirements for designated registered professionals in each specialty area.

22 (1) Designers I and II must review designs by nonregistered employees. This  
23 review includes both verification of field observations and conclusions and design  
24 assumptions and calculations. All inspections under a designer I specialty must follow  
25 subitem (3).

1 (2) Installers must:

2 (a) ensure a compliance inspection is conducted prior to completion and  
3 covering work;

4 (b) ~~be present during inspections;~~

5 (c) be on the worksite:

6 i. to meet supervision needs as determined by the training and experience  
7 level of the crew;

8 ii. to make determinations about material quality, work methods, and  
9 problem detection when activities are being performed that are critical to the  
10 installation; and

11 iii. at any other time that is appropriate to ensure compliance with  
12 applicable requirements.

13 (3) All inspections must be conducted by designated registered professionals.

14 (4) Pumpers must verify the adequacy of pumpouts and land application or  
15 septage disposal. This verification may be fulfilled by periodic evaluations. Pumpers  
16 must provide a report to the property owner that includes the pumpout date, gallons  
17 removed, tank leakage, access point used to remove the septage, location and method of  
18 land application or disposal, and any troubleshooting or repairs conducted.

19 **7080.0720 QUALIFIED EMPLOYEE.**

20 A qualified employee must fulfill the conditions under part 7080.0715, subpart 2, that  
21 are applicable to the work being performed. Qualified employees must be registered on  
22 the ISTS professional register with specialty area endorsements applicable to the work  
23 being conducted. A qualified employee may be an apprentice if the individual has  
24 specialty area endorsements applicable to the work to be completed, has fulfilled the  
25 contractual requirement under part 7080.0815, subpart 1, item B or C, and has been  
26 issued performance restrictions.





1 Subpart 1. **Options to gain experience.** The experience needed to qualify for a  
2 specialty area can be acquired by one of the methods in items A to C.

3 A. Experience may be completed at the direction of and under the personal  
4 supervision of a designated registered professional who has a specialty area  
5 endorsement that is the same as the specialty area sought by the individual acquiring  
6 the experience. The individual acquiring the experience must be employed by the  
7 licensee.

8 B. If the individual ~~is seeking~~ obtains a restricted license, qualifying experience  
9 may be completed under an experience plan which includes direct and personal  
10 supervision with a qualified employee, a designated registered professional who has a  
11 specialty area registration endorsement that is the same as the specialty area sought by  
12 the individual acquiring the experience, a designer I, or an inspector.

13 C. Experience may be gained by a plan approved by the commissioner.

14 Subp. 1a. **Experience plans.** Experience plans are required if the options under  
15 subpart 1, items B and C, are used.

16 A. Experience gained under an experience plan must supplement rule  
17 requirements under subpart 2.

18 B. Designated registered professionals and qualified employees with designer I  
19 and inspector endorsements may approve qualifying experience for all specialty area  
20 experience plans.

21 C. An apprentice shall not provide direction and personal supervision for someone  
22 else to gain experience.

23 D. A restricted license must be issued if an individual will be working under an  
24 approved experience plan.

25 Subp. 1b. **Components of experience plans.** Experience plans must include:

1 A. the number of systems used to obtain experience;

2 B. the name of the person or persons providing direction and personal supervision,  
3 and their specialty area endorsements;

4 C. a description of the method used for obtaining direction and personal  
5 supervision; and

6 D. any other information as necessary to determine compliance with this part.

7 Subp. 1c. **Approval by commissioner.**

8 A. Experience plans under subpart 1, items B and C, must be submitted to and  
9 approved by the commissioner before the application for a restricted license or for the  
10 qualified employee apprentice will be approved by the commissioner.

11 B. The commissioner may monitor progress under the experience plan and may  
12 require that the plan be discontinued or modified to correct the problems if the  
13 objectives for acquiring experience are not being fulfilled.

14 C. The commissioner shall make a final evaluation to determine if the experience  
15 gained under the plan successfully fulfilled the experience requirement.

16 Subp. 2. **Basic experience requirements.** All individuals seeking registration must:

17 [For text of items A to C, see M.R.]

18 D. provide certification that work submitted under subparts 3 to 7 is in compliance  
19 with applicable requirements. The certification must be signed by:

20 (1) a designated registered professional or qualified employee with an  
21 endorsement in the appropriate specialty area;

22 (2) designated registered professional or qualified employee with an  
23 endorsement for an inspector or designer I; or

24 (3) a qualified person approved by the commissioner under subpart 1, item C;  
25 and



1 E. acquire necessary experience within the six years immediately preceding  
2 submittal of the completed professional registration application. Experience gained after  
3 April 1, 1996, must have been acquired under a valid license in the appropriate specialty  
4 area.

5 Subp. 3. **Designer I.** An individual seeking the endorsement for the designer I  
6 specialty area must have completed the experience required under subparts 4 and 7.

7 Subp. 4. **Designer II.** An individual seeking the endorsement for the designer II  
8 specialty area must have completed a minimum of 15 site evaluations and 15 individual  
9 sewage treatment system designs.

10 Subp. 5. **Installer.** An individual seeking the endorsement for the installer specialty  
11 area must have completed a minimum of 15 individual sewage treatment system  
12 installations.

13 Subp. 6. **Pumper.** An individual seeking the endorsement for the pumper specialty  
14 area must have pumped out and properly disposed of septage from a minimum of 15  
15 individual sewage treatment system components.

16 [For text of subp 7, see M.R.]

17 Subp. 8. **Reduction of required experience.** The experience requirements under  
18 subparts 3 to 7 may be reduced from 15 to ten work products if 12 hours of accredited or  
19 authorized training are taken in addition to the training required under parts 7080.0805,  
20 subpart 1; ~~7080.0810, subpart 3;~~ and 7080.0820.

21 Subp. 9. **Documentation.** Documentation of experience must include:

22 A. a summary of the work performed that includes dates, type of work done, and  
23 locations;

24 B. the signature and registration number of the designated registered professional  
25 or, if under an experience plan under subpart 1, item B or C, a qualified employee who  
26 supervised the performed work; and

1 C. a statement that the work was completed in accordance with applicable  
2 requirements. The statement must be signed by an inspector, designer I, or by a person  
3 with an endorsement in the appropriate specialty area. This person must be the  
4 designated registered professional or qualified employee. The statement must be signed  
5 by a qualified person approved by the commissioner if experience is gained under  
6 subpart 1, item C.

7 **7080.0820 CONTINUING EDUCATION.**

8 Subpart 1. **Renewal requirements.**

9 A. Individuals registered as professionals and apprentices must complete the  
10 applicable hours of continuing education under items B ~~and C~~ to D that meet the criteria  
11 under subpart 2 for each three-year period. The continuing education requirement is not  
12 increased for multiple specialty area endorsements. Continuing education hours earned  
13 in excess of those required under this subpart cannot be carried over to meet the  
14 requirements for future three-year periods. The three-year period begins after an  
15 individual has received a passing score on the examination under part 7080.0810 for one  
16 specialty area endorsement.

17 B. An individual with a designer I, designer II, installer, or inspector endorsement  
18 must complete 12 hours of continuing education training related to individual sewage  
19 treatment systems. All inspectors, designers I, and designers II who have not taken  
20 in-depth soils training after January 1, 1995, must take in-depth soils training by January  
21 1, 2005.

22 C. An individual with a pumper endorsement must complete 12 hours of  
23 continuing education related in general to individual sewage treatment systems or nine  
24 hours of continuing education specifically related to pumping individual sewage  
25 treatment systems or land application of septage. A pumper whose gross annual  
26 revenue from pumping systems is \$9,000 or less and whose gross revenue from

1 pumping systems during the year ending May 11, 1994, was at least \$1,000 is not subject  
2 to the continuing education requirements.

3 D. In each registration period, individuals must accrue continuing education hours  
4 specified in items A to C. At least six hours of this required training must be directly  
5 related to the administrative and technical parts of this chapter.

6 Subp. 2. **Criteria for continuing education.** Only programs accredited or otherwise  
7 authorized by the commissioner for continuing education credit may be used to  
8 maintain a professional registration or apprentice designation.

9 Subp. 3. [See repealer.]

10 **7080.0830 ACCREDITATION OF TRAINING PROGRAMS AND**  
11 **AUTHORIZATION OF TRAINING FOR CONTINUING EDUCATION CREDITS.**

12 Subpart 1. **Requirements.** To receive ISTS professional training program  
13 accreditation for basic, specialty area, or continuing education training, the program  
14 sponsor must submit to the commissioner the following:

15 A. a written objective that describes expected outcomes for the participant;

16 B. a summary of the credentials of the persons conducting the training that  
17 demonstrates the trainers' knowledge about individual sewage treatment systems and  
18 specify the specific subject area that the trainers will be responsible for;

19 C. a training plan that demonstrates how the course will meet the requirements in  
20 parts 7080.0805, subpart 1, and 7080.0820;

21 D. a method for evaluating successful completion, including the form that will  
22 document course participation and successful completion;

23 E. a description of the topics and how much time will be spent on training for each  
24 topic during the hours the course is conducted; and

25 F. a document signed by a representative of the sponsoring organization certifying

1 that the sponsor will maintain records of participants, attendance, and successful  
2 completions for a minimum of three years.

3 Subp. 2. **Procedures for approval.** The commissioner shall approve a training course  
4 if the information submitted under subpart 1 demonstrates that the course meets the  
5 objectives for a specific specialty area under part 7080.0805, subpart 1, or for continuing  
6 education under part 7080.0820. The commissioner shall evaluate the submitted  
7 information to determine how many continuing education credits will be awarded. The  
8 accreditation may be reevaluated by the commissioner at any time. The commissioner  
9 may require that the training program be updated to ensure recent industry  
10 developments are included. Accreditation may be canceled by the commissioner if the  
11 program sponsor does not respond to the commissioner's written request for program  
12 information or training course revisions, or if the commissioner determines that the  
13 program has not met its training objective.

14 Subp. 3. **Authorization of training for continuing education credits.** Nonaccredited  
15 training may qualify for continuing education credits only if authorized by the  
16 commissioner. The person requesting the credits must provide the information  
17 requirements of subpart 1, items A to F, for any nonaccredited training attended, and  
18 document in written format how the course will meet or has met the requirements  
19 under parts 7080.0805, subpart 1, and 7080.0820, including a proof of successful  
20 completion of the training. The commissioner may prorate the credit hours granted  
21 based on the amount of the training which pertains to the ISTS specialty area for which  
22 it is requested.

## 23 INDIVIDUAL SEWAGE TREATMENT SYSTEM

### 24 PROFESSIONAL REGISTRATION

#### 25 7080.0850 ISTS PROFESSIONAL REGISTRATION.

26 Subpart 1. **Qualifications.** The commissioner shall register in the appropriate

1 specialty area individuals who successfully satisfy the requirements in parts 7080.0805  
2 to 7080.0820 as applicable to a specialty area in part 7080.0800, subpart 1, and submit a  
3 completed application under part 7080.0860, subpart 1, that is approved by the  
4 commissioner.

5 [For text of subp 2, see M.R.]

6 Subp. 3. **Registration required.** Except as provided under part 7080.0855, subpart 1,  
7 designated registered professionals under part 7080.0705, subpart 1, item A; and  
8 qualified employees must be registered under this part.

9 [For text of subp 4, see M.R.]

10 Subp. 5. **Specific responsibilities.** The requirements in items A to F provide the  
11 minimum basis of professional responsibility.

12 A. Inspectors must have the knowledge and ability to assess site evaluations,  
13 evaluate designs, evaluate installations and components of installation, assess pumping  
14 and septage disposal activities, conduct compliance inspections, conduct permitting  
15 activities, issue written certificates of compliance and notices of noncompliance, and  
16 maintain inspection reports.

17 B. Designer I's must have the knowledge and ability to conduct site evaluations,  
18 design ISTS, evaluate installations and components of installation, assess pumping and  
19 septage disposal activities, conduct compliance inspections, conduct permitting  
20 activities, issue written certificates of compliance and notices of noncompliance, and  
21 maintain inspection reports.

22 C. Designer II's must have the knowledge and ability to conduct site evaluations  
23 and design ISTS.

24 D. Installers must have the knowledge and ability to construct, install, alter,  
25 extend, maintain, abandon, and repair ISTS; ensure all work is done in accordance with  
26 a written site evaluation and design report; ensure inspections are conducted for new

1 construction or replacement; ensure site conditions allow for construction; provide  
2 evidence to verify compliance with applicable requirements; maintain quality  
3 control/quality assurance records; and maintain as-builts of all work.

4 E. Pumpers must have the knowledge and ability to measure scum and sludge  
5 depths for the accumulation of solids and, as needed, completely remove, store, and  
6 haul septage; properly dispose of septage by land application or disposal in a publicly  
7 owned treatment works; identify problems related to sewage tanks, baffles,  
8 maintenance hole covers, and extensions, and make repairs as necessary; and evaluate  
9 sewage tanks, dosing chambers, distribution devices, valve boxes or drop boxes, and  
10 properly dispose of septage.

11 F. A person who designs, installs, alters, repairs, maintains, pumps, or inspects all  
12 or part of an individual sewage treatment system shall comply with applicable  
13 requirements ~~and the most restrictive standards within the county.~~

14 Subp. 6. **Register maintenance.** The commissioner shall assign registration numbers,  
15 maintain a statewide register, record training, and monitor performance of all persons  
16 registered.

17 **7080.0855 APPRENTICE.**

18 Subpart 1. **Qualifications.**

19 A. An individual shall be designated as an apprentice if the individual:

20 (1) successfully completes the requirements in parts 7080.0805 and 7080.0810 for  
21 the specialty areas listed in part 7080.0800, subpart 1;

22 (2) is gaining experience through an approved method in part 7080.0815,  
23 subpart 1, item B or C; and

24 (3) submits a complete application as required in part 7080.0860, subpart 1, that  
25 is approved by the commissioner.

1 B. An apprentice is eligible to be a designated registered professional under a  
2 restricted license or qualified employee under a restricted registration if the individual  
3 has a specialty area endorsement that corresponds to the license or registration.

4 Subp. 2. [See repealer.]

5 Subp. 3. **Maintaining apprentice designation.** To maintain an apprentice  
6 designation, an individual must: fulfill the continuing education requirements in part  
7 7080.0820; complete the renewal requirements in part 7080.0860, subpart 4; and fulfill  
8 the responsibilities in part 7080.0850, subpart 5, that are applicable to earned specialty  
9 area endorsements. An endorsement for each specialty area successfully completed shall  
10 be added to an individual's registration and apprentice designation.

11 **7080.0860 ADMINISTRATION OF PROFESSIONAL REGISTER AND APPRENTICE**  
12 **PROGRAM.**

13 Subpart 1. **Application; issuance.** An individual meeting the qualifications in part  
14 7080.0850, subpart 1, or 7080.0855, subpart 1, is eligible to apply for registration or  
15 apprentice designation on a form provided by the commissioner. The commissioner  
16 requires 60 days for review of applications. A complete application consists of  
17 documentation of training and experience or the experience agreement or plan meeting  
18 the requirements under part 7080.0815, subpart 1.

19 Subp. 2. **Approval of registration or apprentice designation.** Upon the  
20 commissioner's approval of the registration or apprentice application, the commissioner  
21 shall issue a number and verification of the individual's status.

22 Subp. 3. **Registration period.** Registrations issued by the commissioner are valid for  
23 three years.

24 [For text of subp 4, see M.R.]

25 Subp. 5. **Denial of application.** The commissioner may deny an application or  
26 renewal application for a professional registration or apprentice based on evidence of

1 actions listed under part 7080.0900. Notice of the denial shall be served on the applicant  
2 by mail.

3 Subp. 6. **Restrictions; conditions.** The commissioner may add performance  
4 restrictions and training conditions to a professional registration or apprentice  
5 designation at any time to address unusual work situations or experience requirements,  
6 to take enforcement action under part 7080.0900, or to limit the scope of responsibilities  
7 under part 7080.0850, subpart 5, for an individual.

## 8 ENFORCEMENT

### 9 7080.0900 ENFORCEMENT ACTION.

10 Subpart 1. **Business licenses.** The commissioner may deny, suspend, restrict, or  
11 revoke a business license issued under part 7080.0705 for any of the following reasons:

- 12 A. failure to meet the requirements for a license;
- 13 B. failure to comply with applicable requirements;
- 14 C. submission of false or misleading information or credentials in order to obtain  
15 or renew a license;
- 16 D. failure to provide adequate supervision to nonregistered ISTS employees; or
- 17 E. incompetence, negligence, or inappropriate conduct in the performance of the  
18 duties of an individual sewage treatment system professional.

19 [For text of subp 2, see M.R.]

20 Subp. 3. **License complaints.** Upon receiving a signed written complaint that alleges  
21 the existence of grounds for enforcement action against a business or an individual  
22 under subpart 1, the commissioner shall initiate an investigation.

23 [For text of items A to C, see M.R.]

24 Subp. 4. **Enforcement action.** If the commissioner finds that enforcement action is  
25 necessary, the actions described in items A to C shall be taken.



1 A. A written notice shall be mailed to the licensee, registered individual, or  
2 apprentice. The written notice shall contain, as applicable, the effective date of the  
3 enforcement action, the nature of the violations constituting the basis for the  
4 enforcement action, the facts which support the conclusion that violations have  
5 occurred, specific actions necessary to fulfill the terms of the notice, and a statement that  
6 a licensee or registered individual who desires a contested case hearing, must within ten  
7 calendar days, exclusive of the day of service, file a written request with the  
8 commissioner.

9 [For text of item B, see M.R.]

10 C. A licensee or registered individual whose license or registration has been  
11 revoked shall not be entitled to apply for a license or registration for at least one year  
12 following the effective date of revocation or for any longer period of time specified in  
13 the revocation notice. A licensee or registered individual with a revoked or suspended  
14 license or registration shall return the license or registration identification card to the  
15 commissioner.

16 Subp. 5. **Enforcement; general.** General agency enforcement authority under  
17 Minnesota Statutes, sections 115.03, 115.071, 115.072, 115.56, 116.071, 116.072, and  
18 116.073, is also available for enforcement actions under this program.

19 **7080.0950 SEEPAGE PITS, DRYWELLS, AND LEACHING PITS.**

20 Subpart 1. **Intended use of this part.** This part is to be used when conducting existing  
21 system compliance inspections to determine if a system meets the requirements of a  
22 seepage pit, drywell, or leaching pit. Seepage pits, drywells, and leaching pits do not  
23 comply with part 7080.0060 and are considered failing systems unless the local unit of  
24 government with jurisdiction over the system has adopted alternative local standards  
25 for these types of systems under part 7080.0305, subpart 6.

26 Subp. 2. **Requirements for seepage pits, drywells, and leaching pits.** A seepage pit,  
27 drywell, or leaching pit is a system which:

1 A. has a ~~watertight septic tank~~ sewage tank that does not obviously leak below the  
2 designed liquid capacity preceding the pit;

3 B. has a pit which is not located in a geologic formation that is used as a source of  
4 drinking water;

5 C. has at least three feet of vertical separation from the bottom of the pit to the  
6 seasonally saturated soil or bedrock;

7 D. has an absorption area which has been determined by:

8 (1) multiplying the average design flow (under part 7080.0125, subpart 2, Table I  
9 or under part 7080.0600, subpart 4, item B) by the soil sizing factor (under part  
10 7080.0170, subpart 2, item C, Table V or Va) based on the weighted average of each  
11 vertical stratum penetrated by the seepage pit, drywell, or leaching pit; ~~and~~

12 ~~(2) using the sidewall area below the inlet, exclusive of any hardpan, rock, or~~  
13 ~~clay formations and based on the outer diameter of the pit lining plus 12 inches of rock~~  
14 ~~in the annular space, with no reduction for increased filter material below or around the~~  
15 ~~pit;~~

16 E. has a pit ~~which~~ that has not been placed in soils where the percolation rate of  
17 any stratum is faster than one-tenth minute per inch ~~(or in coarse sand);~~

18 F. has a pit with a minimum inside diameter of five feet; and

19 G. meets all setback requirements.

20 **9400.0500 CLASSIFICATION OF FACILITIES.**

21 Subpart 1. **Basis.** The classification of all wastewater treatment facilities actually used  
22 or intended for use by the public and required to have permits under part 7080.0030,  
23 subpart 1a, for individual sewage treatment systems or chapter 7001, must be based on  
24 the degree of hazard to the public health, together with the type and loading of the  
25 facilities and the population served or the average population equivalent of the  
26 wastewater handled.

**9400.0500**

1 [For text of subps 2 to 4, see M.R.]

2 **REPEALER.** Minnesota Rules, parts 7077.0720; 7080.0020, subparts ~~23~~ 17a, 27, 28f, 37,  
3 46, 47, 49a, and 53; 7080.0030, subpart 2; 7080.0060, subpart 4; 7080.0125, subparts 3 and  
4 4; 7080.0190; 7080.0300; 7080.0305, subparts 7 and 8; 7080.0350; 7080.0820, subpart 3;  
5 7080.0855, subpart 2; and 7080.0910, are repealed.