

1.1 **Pollution Control Agency**1.2 **Adopted Permanent Rules Relating to Sewage Treatment Systems**1.3 **7080.1100 DEFINITIONS.**

1.4 [For text of subps 1 to 10, see M.R.]

1.5 Subp. 11. **Building.** ~~"Building" means any lot improvement with a foundation.~~1.6 [See repealer.]

1.7 [For text of subps 12 to 18, see M.R.]

1.8 Subp. 18a. **Contour loading rate.** "Contour loading rate" means the amount of  
1.9 effluent loaded to the soil per the length of the dispersal unit or units along the single  
1.10 hillslope along the contour. The contour loading rate is determined on the relationship  
1.11 between the vertical and horizontal water movement in the soil and is based on the  
1.12 permeability difference between the absorption area and any deeper horizons, the depth  
1.13 between the absorption area and the change in permeability, and the land slope.

1.14 [For text of subps 19 to 40, see M.R.]

1.15 Subp. 41. **Individual subsurface sewage treatment system or ISTS.** "Individual  
1.16 subsurface sewage treatment system" or "ISTS" means a subsurface sewage treatment  
1.17 system or part thereof, as set forth in Minnesota Statutes, sections 115.03 and 115.55, that  
1.18 employs sewage tanks or other treatment devices with final discharge into the soil below  
1.19 the natural soil elevation or elevated final grade that are designed to receive a sewage  
1.20 design flow of 5,000 gallons per day or less.

1.21 ISTS also includes all holding tanks that are designed to receive a ~~sewage~~ design flow  
1.22 of ~~5,000~~ 10,000 gallons per day or less; sewage collection systems and associated tanks  
1.23 that discharge into ISTS treatment and dispersal components; and privies. ISTS does not  
1.24 include those components defined as plumbing under chapter 4715.

1.25 [For text of subps 42 to 47, see M.R.]

2.1 Subp. 48. [See repealer.]

2.2 [For text of subps 49 to 63, see M.R.]

2.3 Subp. 64. **Pump tank.** "Pump tank" means a sewage tank or separate compartment  
2.4 within a sewage tank, which receives sewage tank effluent, that serves as a reservoir for  
2.5 a pump. A separate tank used as a pump tank is considered a septic system tank under  
2.6 Minnesota Statutes, section 115.55, subdivision 1, paragraph (p).

2.7 [For text of subps 65 and 66, see M.R.]

2.8 Subp. 66a. **Rock fragments.** "Rock fragments" means pieces of rock greater than  
2.9 two millimeters in diameter ~~or larger~~ that are strongly cemented and resistant to rupture.  
2.10 Rock fragments are commonly known as gravel, stones, cobbles, and boulders.

2.11 Subp. 66b. **Sand.** "Sand" means a sand soil texture, as described in the ~~Field Book~~  
2.12 ~~for Describing and Sampling Soils, which is incorporated by reference in subpart 36~~ Soil  
2.13 Survey Manual (1993) developed by the Natural Resource Conservation Service, United  
2.14 States Department of Agriculture. The manual is incorporated by reference, is not subject  
2.15 to frequent change, and is available through the Minitex interlibrary loan system.

2.16 [For text of subps 67 to 73, see M.R.]

2.17 Subp. 74. **Sewage tank.** "Sewage tank" means a receptacle used in the containment  
2.18 or treatment of sewage and includes, but is not limited to, septic tanks, aerobic tanks,  
2.19 pump tanks, and holding tanks. Requirements for sewage tanks are described in parts  
2.20 7080.1900 to 7080.2030. Sewage tanks are considered a septic system tank in Minnesota  
2.21 Statutes, section 115.55, subdivision 1, paragraph (p).

2.22 [For text of subps 75 to 80, see M.R.]

2.23 Subp. 80a. **Structure.** "Structure" means a constructed lot improvement that  
2.24 ~~does not have a foundation but the location of which will~~ is intended or used for human  
2.25 occupancy or that is determined by the local unit of government to:

3.1 A. interfere with the ~~dispersal, treatment construction,~~ operation, or  
3.2 maintenance of an SSTS. ~~Structure includes, but is not limited to, animal shelters, decks,~~  
3.3 ~~paved areas, and sheds.;~~ or

3.4 B. be interfered with by the construction, operation, or maintenance of an SSTS.

3.5 [For text of subps 81 to 89, see M.R.]

3.6 Subp. 89a. **Uniform distribution.** "Uniform distribution" means a method that,  
3.7 ~~upon activation of the SSTS,~~ reliably distributes effluent evenly over the entire absorption  
3.8 area of a component over both time and space.

3.9 [For text of subps 90 to 93, see M.R.]

#### 3.10 **7080.1500 COMPLIANCE CRITERIA.**

3.11 Subpart 1. **Treatment required.** Sewage discharged from a dwelling, group of  
3.12 dwellings, or other establishment that is not served by a system issued a permit by the  
3.13 agency that contains effluent and discharge limits or specific monitoring requirements  
3.14 must be treated according to applicable requirements.

3.15 Subp. 2. **Hand-carried graywater.** Graywater that originated from hand-carried  
3.16 water must not be discharged directly to surface waters, drainageways, or poorly drained  
3.17 soils; in a manner or volume harmful to the environment or public health; or in a manner  
3.18 that creates a public health nuisance as determined by the local unit of government.

3.19 [For text of subp 3, see M.R.]

3.20 Subp. 4. **Compliance criteria for existing systems.** To be in compliance, an  
3.21 existing ISTS must meet the provisions of this subpart.

3.22 [For text of items A to C, see M.R.]

3.23 D. ISTS built after March 31, 1996, or in an SWF area as defined under part  
3.24 7080.1100, subpart 84, must have at least a three-foot vertical separation or a vertical

4.1 separation in compliance with part 7080.2350, subpart 2, Table XI. The local ordinance is  
4.2 allowed to provide for a reduced vertical separation ~~in the following cases:~~ for existing  
4.3 systems that were designed with at least a three-foot vertical separation distance.

4.4 (1) ~~Types I, II, and III systems; and~~

4.5 (2) ~~Types IV and V systems that are designed with at least a three-foot~~  
4.6 ~~separation distance.~~

4.7 The local ordinance must not allow more than a 15 percent reduction in the vertical  
4.8 separation distance. A 15 percent reduction is only allowed to account for settling of  
4.9 sand or soil, normal variation of measurements, and interpretations of the limiting layer  
4.10 conditions.

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

4.12 F. The vertical separation measurement for items D and E must be measured  
4.13 outside the area of system influence in an area of similar soil.

4.14 Subp. 5. **Compliance criteria for systems with a flow of greater than 2,500**  
4.15 **gallons per day.** In addition to the requirements under subpart 4, systems designed  
4.16 under part 7080.2150, subpart 4, must demonstrate that the additional nutrient reduction  
4.17 component required under those items is in place and functioning.

4.18 [For text of subp 6, see M.R.]

4.19 **7080.1550 ACCEPTABLE AND PROHIBITED DISCHARGES.**

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

4.21 Subp. 2. **System influent.**

4.22 A. Footing or roof drainage and chemically treated hot tub and pool water must  
4.23 not be discharged into any part of a system. Products containing hazardous chemicals and  
4.24 hazardous waste must not be discharged to a system other than in normal amounts of  
4.25 household products and cleaners designed for household use. Substances not intended for

5.1 use in household cleaning, including but not limited to solvents, pesticides, flammables,  
5.2 photo finishing chemicals, paint, and dry-cleaning chemicals must not be discharged  
5.3 to the system. Other unused products or substances, or unused medicines, must not be  
5.4 discharged to the system solely as a method of disposal. Floor drains from garages serving  
5.5 dwellings must not be connected to the system.

5.6 B. An ISTS must be designed to provide additional treatment if:

5.7 (1) raw sewage exceeds 300 mg/l BOD, 200 mg/l TSS, or 50 mg/l oil  
5.8 and grease; or

5.9 (2) sewage tank effluent applied to the soil from the sewage tank or other  
5.10 secondary treatment device is greater than the concentrations in part 7080.2150, subpart  
5.11 3, item K.

5.12 Additional treatment must be designed by a Minnesota licensed professional engineer  
5.13 or according to the recommendations in the Prescriptive Designs and Design Guidance  
5.14 for Advanced Designers, which is incorporated by reference in item C, or must use a  
5.15 product registered under chapter 7083.

5.16 C. Prescriptive Designs and Design Guidance for Advanced Designers,  
5.17 Minnesota Pollution Control Agency (September 2009 and as subsequently amended),  
5.18 is incorporated by reference, is subject to frequent change, and is available at  
5.19 [www.pca.state.mn.us/programs/ists/technical.html](http://www.pca.state.mn.us/programs/ists/technical.html).

5.20 **7080.1710 PRELIMINARY EVALUATION.**

5.21 A preliminary evaluation of a proposed site for an ISTS consists of determining  
5.22 the following items:

5.23 A. design flow, anticipated effluent concentrations of biochemical oxygen  
5.24 demand, total suspended solids, and oil and grease, and anticipated presence of  
5.25 nondomestic waste from the dwelling, dwellings, or other establishments;

6.1 [For text of items B to K, see M.R.]

6.2 **7080.1720 FIELD EVALUATION.**

6.3 [For text of subps 1 to 3, see M.R.]

6.4 Subp. 4. **Soil observations.** A minimum of three soil observations are required for  
6.5 the initial and replacement soil treatment area and at least one soil observation must be  
6.6 performed in the portion of the soil treatment area anticipated to have the most limiting  
6.7 conditions. The total number of soil observations required is based on the judgment of  
6.8 the certified individual or the local unit of government. Soil observations must comply  
6.9 with the following requirements:

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

6.11 C. the soil observation method must allow observation of the different soil  
6.12 horizons that constitute the soil profile and, if determining the loading rate by part  
6.13 7080.2150, subpart 3, item E, Table IX, an undisturbed sample must be observed;

6.14 [For text of items D to G, see M.R.]

6.15 Subp. 5. **Soil descriptions for determination of limiting layer.** Each soil profile  
6.16 observed at the proposed soil treatment area must be evaluated under adequate light  
6.17 conditions with the soil in a moist unfrozen state for the characteristics in items A to H:

6.18 [For text of items A to D, see M.R.]

6.19 E. depth to the periodically saturated soil for new construction or replacement  
6.20 as determined by redoximorphic features and other indicators, as determined in subitems  
6.21 (1) to (3):

6.22 [For text of subitems (1) and (2), see M.R.]

7.1 (3) in the upper 12 inches of the topsoil layer, if it is immediately followed  
7.2 by a periodically saturated horizon, the depth of seasonal saturation is determined by one  
7.3 or more of the indicators in units (a) to (f):

7.4 [For text of units (a) to (c), see M.R.]

7.5 (d) the soil treatment area at or near the elevation of the ordinary high  
7.6 water level of a surface water or in a concave hill slope position;

7.7 (e) redoximorphic accumulation or depletions; or

7.8 (f) the soil expressing indicators of seasonal saturation as determined  
7.9 in Field Indicators of Hydric Soils in the United States: A Guide for Identifying and  
7.10 Delineating Hydric Soils, USDA Natural Resource Conservation Service (2006 and as  
7.11 subsequently amended). The field indicators are incorporated by reference, are available  
7.12 through the Minitex interlibrary loan system, and are subject to frequent change;

7.13 [For text of items F to H, see M.R.]

7.14 Subp. 6. **Determination of loading rate and absorption area size.** The effluent  
7.15 loading and absorption area size must be determined by item A or B, or both, as required  
7.16 by the local unit of government:

7.17 A. the loading rate based on an examination of soil texture, undisturbed soil  
7.18 structure, and soil consistence at ~~the most limiting layer, within 12 inches below the~~  
7.19 ~~proposed absorption area~~ the depth of either the proposed soil absorption area or the most  
7.20 restrictive layer within three feet of the proposed soil absorption area, using the United  
7.21 States Department of Agriculture (USDA) soil classification system as specified in the  
7.22 Field Book for Describing and Sampling Soils, which is incorporated by reference under  
7.23 part 7080.1100, subpart 36; or

7.24 B. the loading rate based on the percolation procedure described in subitems (1)  
7.25 to (8) or other equivalent procedure as approved by the local unit of government:

8.1 (1) each test hole must be six to eight inches in diameter; and have vertical  
8.2 sides, and be located at the depth of the proposed soil absorption area. For mounds and  
8.3 at-grade systems, the bottom of each test hole must be in the upper 12 inches of the  
8.4 original soil. For trenches and seepage beds, the bottom of each test hole must be at the  
8.5 depth of either the proposed absorption area or the most restrictive layer within three  
8.6 feet of the proposed soil absorption layer;

8.7 [For text of subitems (2) to (8), see M.R.]

8.8 [For text of subp 7, see M.R.]

8.9 **7080.1850 SEWAGE FLOW DETERMINATION FOR DWELLINGS.**

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

8.11 Subp. 2. **Design flow.** The estimated design flow for any dwelling must provide for  
8.12 at least two bedrooms. For multiple or multifamily dwellings, the design flow must be  
8.13 calculated according to part 7081.0120, ~~subpart 1.~~

8.14 **7080.1920 SEPTIC TANK DESIGN.**

8.15 Septic tanks must:

8.16 A. have a liquid depth of at least 30 inches. Any liquid depth that is greater than  
8.17 84 inches must not be used when calculating the septic tank liquid capacity;

8.18 B. have a minimum of six feet between the inlet and outlet of the tank, rather  
8.19 than between compartments, or have a minimum of six feet from the inlet of the first  
8.20 tank to the outlet of the last tank in series;

8.21 C. if site conditions warrant, the inlet and outlet are allowed to be located on  
8.22 walls that are not opposite each other along the axis of maximum dimension; however,  
8.23 the requirements of item B must be met;

8.24 D. have an inlet invert at least two inches above the outlet invert; and



9.1 E. have a space between the liquid surface and the top of the inlet and outlet  
9.2 baffles of not less than six inches or 100 gallons, whichever is greater, for all liquid depths  
9.3 with an effluent screen and alarm or for liquid depths of less than 39 inches without an  
9.4 effluent screen and alarm. The space between the liquid surface and the top of the inlet  
9.5 and outlet baffles must not be less than eight inches for liquid depths of 39 inches or  
9.6 more without an effluent screen and alarm.

9.7 In addition, there must be at least one inch between the underside of the top of the  
9.8 tank and the highest point of the inlet and outlet baffles.

9.9 **7080.1930 SEPTIC TANK CAPACITY.**

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

9.11 Subp. 2. **Garbage disposals.** If a garbage disposal unit is anticipated or installed in a  
9.12 dwelling, the septic tank capacity must be at least 50 percent greater than that required in  
9.13 subpart 1 and must include either multiple compartments or multiple tanks. In addition,  
9.14 ~~either an effluent screen with an alarm or a pressure filter must be employed~~ screening  
9.15 device is recommended.

9.16 Subp. 3. **Sewage pumping.** If sewage is pumped from a sewage ejector or grinder  
9.17 pump from a dwelling to a septic tank, the septic tank capacity must be at least 50 percent  
9.18 greater than that required in subpart 1 and must include either multiple compartments or  
9.19 multiple tanks. In addition, ~~either an effluent screen with an alarm or a pressure filter must~~  
9.20 ~~be employed~~ screening device is recommended.

9.21 [For text of subp 4, see M.R.]

9.22 Subp. 5. **Septic tank capacity for multiple dwellings.**

9.23 A. For systems serving ten or fewer dwellings with a common septic tank,  
9.24 the liquid capacity must be determined by adding the capacities for each dwelling as  
9.25 determined in this part or according to subpart 6.

10.1 B. For systems serving more than ten dwellings with a common septic tank, the  
10.2 requirements of subitem (1) or (2) apply:

10.3 (1) total septic tank liquid capacity for common tanks serving multiple  
10.4 dwellings under gravity flow to common tanks is determined by multiplying the design  
10.5 flow by 3.0 or according to subpart 6; or

10.6 (2) total septic tank liquid capacity for common tanks serving multiple  
10.7 dwellings under pressure flow to common tanks is determined by multiplying the design  
10.8 flow by 4.0 or according to subpart 6.

10.9 C. Total septic tank liquid capacity for systems employing individual tanks at  
10.10 each dwelling discharging into a collection system must be determined:

10.11 (1) by a Minnesota licensed professional engineer; or

10.12 (2) according to the Prescriptive Designs and Design Guidance for  
10.13 Advanced Designers, incorporated by reference under part 7080.1550, subpart 2.

10.14 [For text of subp 6, see M.R.]

10.15 Subp. 7. **Septic tank capacity for other establishments.** Total septic tank liquid  
10.16 capacity for other establishments with domestic strength waste as described in part  
10.17 7080.1550, subpart 2, item B, subitem (1), is determined by multiplying the design flow  
10.18 by 3.0 if receiving sewage under gravity flow, by multiplying the design flow by 4.0 if  
10.19 receiving sewage under pressure flow, or ~~according to~~ in accordance with subpart 6.  
10.20 Additional design considerations, such as equalization tanks, additional capacity, grease  
10.21 interceptors, or secondary treatment, are required for influent concentrations that exceed  
10.22 the levels identified in part 7080.1550, subpart 2, item B, subitem (1).

10.23 ~~Subp. 8. **Oil and grease interceptor.** An exterior oil and grease intereeptor must~~  
10.24 ~~be employed if oil and grease exeeded the amount identified in part 7080.1550, subpart 2,~~  
10.25 ~~item B, subitem (1).~~

11.1 **7080.1940 MULTIPLE SEPTIC TANKS.**

11.2 [For text of item A, see M.R.]

11.3 B. When tanks are connected in series, each tank or compartment must contain  
11.4 at least 25 percent of the required total liquid capacity.

11.5 **7080.1960 SEPTIC TANK BAFFLES.**

11.6 All septic tanks must be baffled according to items A to G. Effluent screens are  
11.7 allowed to be substituted for outlet baffles.

11.8 [For text of items A to C, see M.R.]

11.9 D. The inlet baffle must extend at least six inches, but not more than 20 percent  
11.10 of the total liquid depth, below the liquid surface. The inlet baffle must extend above the  
11.11 liquid surface in compliance with part 7080.1920, item E, and at least one inch above the  
11.12 crown of the inlet sewer.

11.13 E. The outlet baffle and any baffles between compartments must extend below  
11.14 the liquid surface a distance equal to 40 percent of the liquid depth, except that the  
11.15 penetration of the indicated baffles or sanitary tees for horizontal cylindrical tanks must  
11.16 be 35 percent of the total liquid depth. They must also extend above the liquid surface  
11.17 as determined in part 7080.1920, item E.

11.18 [For text of items F and G, see M.R.]

11.19 **7080.1970 SEPTIC SEWAGE TANK ACCESS.**

11.20 A. Septic tanks must have a minimum of two maintenance holes with a  
11.21 minimum diameter of 20 inches (least dimension). Maintenance holes must be placed  
11.22 over the inlet baffle or the center of the tank and the outlet device (baffle or screen). The  
11.23 maintenance holes must be large enough to allow pumping without interference. Enough  
11.24 maintenance holes must be provided so access can be gained within six feet of all walls

12.1 for solids removal of each compartment. Inspection pipes of no less than six inches must  
12.2 be provided over any baffles that are not otherwise accessible through a maintenance hole.

12.3 ~~{For text of items B and C, see M.R.}~~

12.4 B. Pump tanks must have a minimum of one maintenance hole with a minimum  
12.5 diameter of 20 inches (least dimension). Enough maintenance holes must be provided so  
12.6 access can be gained within six feet of all walls for solids removal.

12.7 ~~B. C.~~ All maintenance hole risers must extend through the tank cover above  
12.8 final grade.

12.9 ~~C. D.~~ Covers for maintenance holes must:

12.10 (1) be secured by being locked, being bolted or screwed, having a weight  
12.11 of at least 95 pounds, or other methods approved by the local unit of government. Covers  
12.12 shall also be leak resistant; and be designed so the cover cannot be slid or flipped, which  
12.13 could allow unauthorized access to the tank;

12.14 (2) have a written and graphic label warning of the hazardous conditions  
12.15 inside the tank;

12.16 (3) be capable of withstanding a load that the cover is anticipated to  
12.17 receive; and

12.18 (4) be made of a material suitable for outdoor use and resistant to  
12.19 ultraviolet degradation.

12.20 **7080.2030 EFFECTIVE DATE.**

12.21 Sewage tanks must meet the requirements of parts 7080.1910 to 7080.2020 ~~within~~  
12.22 ~~three years of February 4, 2008~~ by April 4, 2012. Tanks produced and installed ~~within~~  
12.23 ~~this three-year period must~~ before April 4, 2012, must meet either the requirements of  
12.24 Minnesota Rules 2005, part 7080.0130, or the requirements of Minnesota Rules 2009,  
12.25 parts 7080.1910 to 7080.2020.

13.1 **7080.2050 DISTRIBUTION OF EFFLUENT.**

13.2 [For text of subps 1 to 3, see M.R.]

13.3 Subp. 4. **Pressure distribution.**

13.4 A. All systems must be pressurized as required in parts 7080.2200 to 7080.2400.

13.5 [For text of items B to J, see M.R.]

13.6 **7080.2100 DOSING OF EFFLUENT.**

13.7 [For text of subps 1 to 3, see M.R.]

13.8 Subp. 4. **Pumps for pressure distribution.** Pumps for pressure distribution must  
13.9 meet the requirements in items A to D.

13.10 [For text of item A, see M.R.]

13.11 B. The pump discharge capacity must be based on the perforation discharges for  
13.12 a minimum average head of 1.0 foot for ~~1/4-inch and 3/16-inch~~ 1/4-inch perforations  
13.13 and 2.0 feet for 1/8-inch perforations for dwellings. The minimum average head must be  
13.14 2.0 feet for other establishments with 3/16- to 1/4-inch perforations and 5.0 feet of head  
13.15 for 1/8-inch perforations. Perforation discharge is determined by the following formula:

13.16 
$$Q = 19.65 cd^2h^{1/2}$$

13.17 where: Q = discharge in gallons per minute

13.18 c = 0.60 = coefficient of discharge

13.19 d = perforation diameter in inches

13.20 h = head in feet.

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

13.22 D. The quantity of effluent delivered for each pump cycle must be no greater  
13.23 than 25 percent of the design flow and at least four times the volume of the distribution  
13.24 pipes plus the volume of the supply pipe.

14.1 **7080.2150 FINAL TREATMENT AND DISPERSAL.**

14.2 [For text of ~~subs 1 and 2~~ subp 1, see M.R.]

14.3 Subp. 2. **General technical requirements for all systems.** All new construction or  
 14.4 replacement ISTS must be designed to meet or exceed the provisions in items A to F.

14.5 [For text of items A to E, see M.R.]

14.6 F. ISTS components must be set back in accordance with Table VII.

14.7 TABLE VII

14.8 MINIMUM SETBACK DISTANCES (FEET)

14.9 Feature	14.10 Sewage tank, 14.11 holding tank, or sealed privy	Absorption area or unsealed privy	Building sewer or supply pipes
14.12 Water supply wells	*	*	*
14.13 Buried water lines	*	*	*
14.14 <del>Buildings</del> ** <u>Structures</u>	10	20	
14.15 Property lines*** <u>**</u>	10	10	
14.16 Ordinary high water level of 14.17 public waters	<u>**** **</u>	<u>**** **</u>	

14.18 \* Setbacks from buried water lines and water supply wells are governed by chapters  
 14.19 4715 and 4725, respectively.

14.20 ~~\*\* For structures other than buildings, these setbacks are allowed to be reduced if~~  
 14.21 ~~necessary due to site conditions, but no component of an ISTS is allowed to be located~~  
 14.22 ~~under or within the structure or other impermeable surface.~~

14.23 ~~\*\*\* \*\*~~ Infringement on property line setbacks must be made through accepted local  
 14.24 procedures.

14.25 ~~\*\*\*\* \*\*~~ Setbacks from lakes, rivers, and streams are governed by chapters 6105 and  
 14.26 6120.

15.1 Subp. 3. **Other technical requirements for systems.** Items A to M are required for  
15.2 specific designs as determined in parts 7080.2200 to 7080.2400.

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

15.4 C. For acceptable treatment of septic tank effluent by soil, the soil treatment and  
15.5 dispersal systems must meet the requirements of subitems (1) and (2).

15.6 (1) A minimum three-foot vertical soil treatment and dispersal zone must  
15.7 be designed below the distribution media that meets the criteria in units (a) to (c):

15.8 [For text of unit (a), see M.R.]

15.9 (b) any soil layers that are any of the United States Department of  
15.10 Agriculture (USDA) soil textures classified as sand with 35 to 50 percent rock fragments  
15.11 or loamy sand texture with 35 to 50 percent rock fragments must be credited at only  
15.12 one-half their thickness as part of the necessary treatment zone. Soil layers, regardless of  
15.13 soil texture, with greater than 50 percent rock fragments must not be credited as part of  
15.14 the necessary treatment zone. Layers that are given full, partial, or no credit must, in any  
15.15 layering arrangement in the soil profile, be cumulatively added to determine the amount of  
15.16 soil treatment zone in accordance with other soil treatment zone provisions; and

15.17 [For text of unit (c), see M.R.]

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

15.19 [For text of item D, see M.R.]

15.20 E. The system's absorption area and mound absorption ratio must be sized  
15.21 according to Table IX or IXa.

15.22 TABLE IX  
15.23 LOADING RATES FOR DETERMINING BOTTOM ABSORPTION AREA AND  
15.24 ABSORPTION RATIOS USING DETAILED SOIL DESCRIPTIONS\*

	Major soil texture grouping (with less than 50% rock fragments or as otherwise noted)	Structure shape	Structure grade	Moist consistence	Treatment level C absorption area loading rate (gpd/ft <sup>2</sup> )	Treatment mound absorption ratio	Treatment levels A, A-2, B, and B-2 absorption area loading rate (gpd/ft <sup>2</sup> )	Treatment levels A, A-2, B, and B-2 mound absorption ratio**
16.1	All sands with 35% to 50% rock fragments	Single grain	N/A	Loose	-	1.0	-	1.0
16.2								
16.3								
16.4								
16.5								
16.6								
16.7								
16.8								
16.9								
16.10								
16.11	Coarse sand or sand with less than 35% rock fragments	Single grain	N/A	Loose	1.2	1.0	1.6	1.0
16.12								
16.13								
16.14								
16.15								
16.16								
16.17								
16.18								
16.19	Fine sand and loamy fine sand with less than 35% rock fragments	All, except massive	N/A	Loose, very friable, or friable	0.6	2.0	1.0	1.6
16.20								
16.21								
16.22								
16.23								
16.24								
16.25								
16.26								
16.27	Sandy loam	All and massive	Weak to strong*	Very friable or friable	0.78	1.5	1.0	1.6
16.28								
16.29								
16.30								
16.31	Loam	All and massive	Weak to strong*	Very friable or friable	0.6	2.0	0.78	2.0
16.32								
16.33								
16.34								



17.1	Silt loam	All,	Weak to	Very	0.5	2.4	0.78	2.0
17.2		except	strong	friable or				
17.3		platy and		friable				
17.4		massive						
17.5	Clay loam	All,	Mod to	Very	0.45	2.6	0.6	2.6
17.6		except	strong	friable or				
17.7		platy and		friable				
17.8		massive						
17.9	Clay	All,	Strong	Very	-	5.0	0.3	5.3
17.10		except		friable or				
17.11		platy and		friable				
17.12		massive						
17.13	Other	N/A	N/A	N/A	-	-	-	-
17.14	clays							

17.15 \* ~~Excludes moderate and strong platy structure.~~

17.16 \*\* ~~Mound media bed absorption area loading rate of 1.6 gpd/ft<sup>2</sup>.~~

17.17				<u>Treatment</u>	<u>Treatment</u>	<u>Treatment</u>	<u>Treatment</u>
17.18				<u>Level C</u>	<u>Level C</u>	<u>Level A,</u>	<u>Level A,</u>
17.19						<u>A-2, B, B-2</u>	<u>A-2, B, B-2</u>
17.20				<u>Absorption</u>	<u>Mound</u>	<u>Absorption</u>	<u>Mound</u>
17.21				<u>area loading</u>	<u>absorption</u>	<u>area loading</u>	<u>absorption</u>
17.22				<u>rate (gpd/ft<sup>2</sup>)</u>	<u>ratio</u>	<u>rate (gpd/ft<sup>2</sup>)</u>	<u>ratio***</u>

17.23	<u>USDA soil</u>	<u>Soil structure</u>					
17.24	<u>texture</u>	<u>and grade</u>					
17.25	<u>Sand, coarse</u>	<u>Single grain,</u>	<u>**</u>	<u>1.0</u>	<u>**</u>	<u>1.0</u>	
17.26	<u>sand, loamy</u>	<u>granular, blocky,</u>					
17.27	<u>sand, loamy</u>	<u>or prismatic</u>					
17.28	<u>coarse sand,</u>	<u>structure; weak</u>					
17.29	<u>fine sand, very</u>	<u>grade</u>					
17.30	<u>fine sand, loamy</u>						
17.31	<u>fine sand, loamy</u>						
17.32	<u>very fine sand,</u>						
17.33	<u>35 to 50% rock</u>						
17.34	<u>fragments</u>						

18.1	<u>Sand, coarse</u>	<u>Single grain,</u>	<u>1.2</u>	<u>1.0</u>	<u>1.6</u>	<u>1.0</u>
18.2	<u>sand, loamy</u>	<u>granular, blocky,</u>				
18.3	<u>sand, loamy</u>	<u>or prismatic</u>				
18.4	<u>coarse sand,</u>	<u>structure; weak</u>				
18.5	<u>&lt;35% rock</u>	<u>grade</u>				
18.6	<u>fragments</u>					
18.7	<u>Fine sand, very</u>	<u>Single grain,</u>	<u>0.6</u>	<u>2.0</u>	<u>1.0</u>	<u>1.6</u>
18.8	<u>fine sand, loamy</u>	<u>granular, blocky,</u>				
18.9	<u>fine sand, loamy</u>	<u>or prismatic</u>				
18.10	<u>very fine sand,</u>	<u>structure; weak</u>				
18.11	<u>&gt;35% rock</u>	<u>grade</u>				
18.12	<u>fragments</u>					
18.13	<u>Sandy loam,</u>	<u>Granular,</u>	<u>0.78</u>	<u>1.5</u>	<u>1.0</u>	<u>1.6</u>
18.14	<u>coarse sandy</u>	<u>blocky, or</u>				
18.15	<u>loam, fine sandy</u>	<u>prismatic</u>				
18.16	<u>loam, very fine</u>	<u>structure; weak</u>				
18.17	<u>sandy loam</u>	<u>to strong grade</u>				
18.18	<u>Sandy loam,</u>	<u>Platy with weak</u>	<u>0.68</u>	<u>1.8</u>	<u>0.87</u>	<u>1.8</u>
18.19	<u>coarse sandy</u>	<u>grade or massive</u>				
18.20	<u>loam, fine sandy</u>					
18.21	<u>loam, very fine</u>					
18.22	<u>sandy loam</u>					
18.23	<u>Loam</u>	<u>Granular,</u>	<u>0.6</u>	<u>2.0</u>	<u>0.78</u>	<u>2.1</u>
18.24		<u>blocky, or</u>				
18.25		<u>prismatic</u>				
18.26		<u>structure; weak</u>				
18.27		<u>to strong grade</u>				
18.28	<u>Loam</u>	<u>Platy with weak</u>	<u>0.52</u>	<u>2.3</u>	<u>0.68</u>	<u>2.4</u>
18.29		<u>grade or massive</u>				
18.30	<u>Silt loam, silt</u>	<u>Granular,</u>	<u>0.5</u>	<u>2.4</u>	<u>0.78</u>	<u>2.1</u>
18.31		<u>blocky, or</u>				
18.32		<u>prismatic</u>				
18.33		<u>structure; weak</u>				
18.34		<u>to strong grade</u>				
18.35	<u>Silt loam, silt</u>	<u>Platy with weak</u>	<u>0.42</u>	<u>2.9</u>	<u>0.65</u>	<u>2.5</u>
18.36		<u>grade or massive</u>				

19.1	<u>Clay loam,</u>	<u>Granular,</u>	<u>0.45</u>	<u>2.6</u>	<u>0.6</u>	<u>2.7</u>
19.2	<u>sandy clay loam,</u>	<u>blocky, or</u>				
19.3	<u>silty clay loam</u>	<u>prismatic</u>				
19.4		<u>structure;</u>				
19.5		<u>moderate to</u>				
19.6		<u>strong grade</u>				
19.7	<u>Clay, sandy clay,</u>	<u>-</u>	<u>**</u>	<u>**</u>	<u>**</u>	<u>**</u>
19.8	<u>silty clay</u>					

19.9 \* Only includes soil horizons with <50% rock fragments, with very friable and friable  
 19.10 consistence, and loose noncemented sands. Soil horizons with >50% rock fragments must  
 19.11 not come in contact with soil dispersal system media.

19.12 \*\* Conduct percolation test and size under Table IXa. May need to be designed under  
 19.13 part 7080.2300.

19.14 \*\*\* Assume a hydraulic loading rate to the sand at 1.6 gpd/ft<sup>2</sup>.

19.15 TABLE IXa

19.16 LOADING RATES FOR DETERMINING BOTTOM ABSORPTION AREA AND  
 19.17 ABSORPTION RATIOS USING PERCOLATION TESTS

19.18	Percolation rate	Treatment level	Treatment	Treatment levels	Treatment levels
19.19	(MPI)	C absorption	level C mound	A, A-2, B, and	A, A-2, B, and
19.20		area loading rate	absorption ratio	B-2 absorption	B-2 mound
19.21		(gpd/ft <sup>2</sup> )		area loading rate	absorption ratio
19.22				(gpd/ft <sup>2</sup> )	
19.23	<0.1	-	1.0	-	1.0
19.24	0.1 to 5	1.2	1.0	1.6	1.0
19.25	0.1 to 5 (fine sand	0.6	2.0	1.0	1.6
19.26	and loamy fine				
19.27	sand)				
19.28	6 to 15	0.78	1.5	1.0	1.6
19.29	16 to 30	0.6	2.0	0.78	2.0
19.30	31 to 45	0.5	2.4	0.78	2.0
19.31	46 to 60	0.45	2.6	0.6	2.6

20.1	61 to 120	-	5.0	0.3	5.3
20.2	>120	-	-	-	-

20.3 [For text of items F to H, see M.R.]

20.4 I. A minimum of six inches of topsoil borrow must be placed over the system.

20.5 J. A close-growing, vigorous vegetative cover must be established over the soil  
 20.6 treatment and dispersal system and other vegetatively disturbed areas. The sodding,  
 20.7 seeding, or other vegetation establishment must begin immediately after the placement  
 20.8 of the topsoil borrow. If the climatic season does not allow immediate establishment of  
 20.9 vegetation, the soil treatment and dispersal system must be protected from erosion and  
 20.10 excessive frost ~~until~~ and a vegetative cover is must be established as soon as favorable  
 20.11 climatic conditions exist. The vegetative cover established must not interfere with  
 20.12 the hydraulic performance of the system and must provide adequate frost and erosion  
 20.13 protection. Trees, shrubs, deep-rooted plants, or hydrophytic plants must not be planted  
 20.14 on the system.

20.15 K. Sewage tank effluent concentrations to the soil dispersal system must not  
 20.16 exceed a BOD concentration of 170 mg/l, a CBOD<sub>5</sub> concentration of 125 mg/l, a TSS  
 20.17 concentration of 60 mg/l, or an oil and grease concentration of 25 mg/l.

20.18 L. The distribution media must not be in contact with soils with any of the  
 20.19 USDA soil textures classified as sand soil texture with 35 percent or more rock fragments  
 20.20 or loamy sand with 35 percent or more rock fragments or any soils that have a percolation  
 20.21 rate of less than 0.1 minute per inch.

20.22 M. The contour loading rate for soil dispersal systems must be between 1 and  
 20.23 12 gallons per lineal foot per day.

20.24 [For text of subp 4, see M.R.]

20.25 **7080.2210 TRENCHES AND SEEPAGE BEDS.**

21.1 Subpart 1. **Characteristics.** To qualify as a trench or seepage bed system, the system  
21.2 must meet the requirements of items A to E:

21.3 [For text of item A, see M.R.]

21.4 B. meet applicable technical requirements of parts 7080.1900 to 7080.2030,  
21.5 7080.2050, and 7080.2100;

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

21.7 D. meet the requirements of part 7080.2150, subparts 2 and 3, except subpart  
21.8 3, item M; and

21.9 E. meet the requirements of subparts 2 to 4.

21.10 Subp. 2. **General.** Seepage bed placement must be limited to areas having natural  
21.11 slopes of less than six percent. Absorption areas for seepage beds and trenches must not  
21.12 be placed in soils with a loading rate of less than 0.45 gallons per day per square foot or as  
21.13 shown in Table IX or IXa in part 7080.2150, subpart 3, item E. Seepage beds must not  
21.14 be located in floodplains.

21.15 Subp. 3. **Sizing of trenches and seepage beds.**

21.16 [For text of item A, see M.R.]

21.17 B. The minimum sidewall absorption is six inches. The bottom absorption area  
21.18 is allowed to be reduced, for trenches only, by the following:

21.19 Sidewall absorption - inches	Bottom area reduction
21.20 12 to 17	20%
21.21 18 to 23	34%
21.22 24	40%

21.23 A 40 percent reduction is not allowed with a loading rate of 1.2 gallons per day per square  
21.24 foot.

21.25 Subp. 4. **Design and construction of trenches and seepage beds.**

22.1 A. Trenches must be no more than 36 inches wide. Any excavation wider than  
22.2 36 inches is a seepage bed. A seepage bed must not be wider than 12 feet if gravity  
22.3 distribution is used and 25 feet if pressure distribution is used. Natural, undisturbed soil  
22.4 must exist between multiple trenches and seepage beds. Multiple seepage beds must be  
22.5 spaced at one-half the bed width.

22.6 [For text of items B to E, see M.R.]

22.7 F. Trenches and seepage beds in which the distribution media is in contact with  
22.8 ~~soils that are~~ any of the United States Department of Agriculture soil textures classified as  
22.9 sand, or loamy sand, fine sand, or loamy fine sand or soils with a percolation rate of 0.1 to  
22.10 5 minutes per inch must employ one or more of the following measures:

22.11 (1) employ pressure distribution according to part 7080.2050, subpart 4;

22.12 (2) divide the total dispersal area into multiple units that employ serial  
22.13 distribution, with each dispersal unit having no greater than 15 percent of the required  
22.14 bottom absorption area; or

22.15 (3) have a vertical separation distance of at least five feet.

22.16 **7080.2220 MOUNDS.**

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

22.18 Subp. 2. **Location of mounds.**

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

22.20 C. On slopes of one percent or greater and where the original soil mound  
22.21 absorption ratio is 5.0 or greater in Table IX or IXa in part 7080.2150, subpart 3, item E,  
22.22 mounds must not be located where the ground surface contour lines that lie directly below  
22.23 the long axis of the distribution media bed represent a swale or draw, unless the contour

22.24 lines have a radius of curvature greater than 100 feet. Mounds must never be located in  
22.25 swales or draws where the radius of curvature of the contour lines is less than 50 feet.

23.1 **Subp. 3. Mound design and construction.**

23.2 A. The mound distribution media bed area consists of bottom area only and  
23.3 must be calculated by dividing the design flow by 1.2 gallons per square foot per day.

23.4 B. Mound distribution media beds must be determined according to part  
23.5 7080.2150, subpart 3, item M, and must be no wider than ten feet.

23.6 [For text of items C to U, see M.R.]

23.7 **7080.2230 AT-GRADE SYSTEMS.**

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

23.9 **Subp. 3. Design and construction of at-grade systems.**

23.10 A. The at-grade bed absorption width must be determined according to part  
23.11 7080.2150, subpart 3, item M, and must not exceed a width of 15 feet. The at-grade bed  
23.12 absorption width for slopes of one percent or greater does not include any width of the  
23.13 media necessary to support the upslope side of the pipe.

23.14 [For text of items B to E, see M.R.]

23.15 F. Six inches of loamy or sandy cover material must be installed over the  
23.16 distribution media. Cover must extend at least five feet from the ends of the media bed and  
23.17 be sloped to divert surface water. Side slopes must not be steeper than four horizontal units  
23.18 to one vertical unit. Six inches of topsoil borrow must be placed on the cover material.

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

23.20 **7080.2250 TYPE II SYSTEMS.**

23.21 Systems designed according to parts 7080.2270 to 7080.2290 are considered Type II  
23.22 systems.

23.23 **7080.2300 TYPE III SYSTEMS.**

24.1 A system that deviates from the requirements in parts 7080.2210 to 7080.2240 is a  
24.2 Type III system. Deviations from the standards in parts 7080.2210 to 7080.2240 must be  
24.3 submitted to the local unit of government for approval or denial. However, no deviation is  
24.4 allowed from the following standards and at a minimum a Type III system must:

24.5 A. employ design flow values in parts 7080.1850 to 7080.1885;

24.6 B. meet technical requirements of part 7080.2050;

24.7 C. meet the requirements of parts 7080.1900 to 7080.2030;

24.8 D. meet the requirements of part 7080.2100 with mound and at-grade systems  
24.9 required to have pressure distribution;

24.10 E. provide flow measurement;

24.11 F. meet the requirements of part 7080.2150, subparts 2 and 4;

24.12 G. meet the requirements of part 7080.2150, subpart 3, items A, B, C, F, I,  
24.13 J, and L; and

24.14 H. follow the absorption area loading rates in part 7080.2150, subpart 3, item  
24.15 E, Tables IX and IXa. If the site cannot accommodate a soil treatment and dispersal  
24.16 system sized in accordance with Table IX or IXa in part 7080.2150, subpart 3, item E, a  
24.17 smaller soil treatment and dispersal system is allowed to be constructed if it employs flow  
24.18 restriction devices that do not allow loadings in excess of those in Table IX or IXa of part  
24.19 7080.2150, subpart 3, item E. In those cases where a loading rate or mound absorption  
24.20 ratio is not listed in Tables IX and IXa in part 7080.2150, subpart 3, item E, an alternative  
24.21 loading rate or absorption ratio ~~must~~ is allowed to be proposed.

24.22 **7080.2350 TYPE IV SYSTEMS.**

24.23 Subpart 1. **General.** A system designed according to this part is considered a Type  
24.24 IV system. The system must:



25.1 [For text of items A to C, see M.R.]

25.2 D. meet the requirements of part 7080.2150, subpart 3, ~~items A and B~~ except  
25.3 as modified in this part;

25.4 E. meet the requirements of Table XI in subpart 2; and

25.5 F. meet soil dispersal requirements of parts 7080.2210, 7080.2220, and  
25.6 7080.2230, except that the reductions in part 7080.2210, subpart 3, item B, are not  
25.7 applicable.

25.8 Subp. 2. **Table XI.**

25.9 TABLE XI  
25.10 TREATMENT COMPONENT PERFORMANCE LEVELS AND METHOD OF  
25.11 DISTRIBUTION BY TEXTURE GROUP<sup>1</sup>

25.12 Vertical separation 25.13 (inches)	Texture group <sup>2</sup>		
25.14	All sands and loamy 25.15 sands	Sandy loam, loam, silt loam	Clay, clay loams
25.16	<hr/>		
25.17 12 to 17 <sup>3</sup>	Treatment level A	Treatment level A	Treatment level A
25.18	Uniform distribution	Uniform distribution	Uniform distribution
25.19	Timed dosing	Timed dosing	Timed dosing
25.20 18 to 35 <sup>3</sup>	Treatment level B	Treatment level B	Treatment level B
25.21	Uniform distribution	Uniform distribution	Uniform distribution
25.22	Timed dosing	Timed dosing	
25.23 36+ <sup>3</sup>	Treatment level A-2 or B-2	Treatment level A-2 or B-2	Treatment level A-2 or B-2
25.24	Uniform distribution	Uniform distribution	Uniform distribution
25.25	Treatment level C	Treatment level C	Treatment level C

25.27 <sup>1</sup>The treatment component performance levels correspond with those established  
25.28 for treatment components under the product testing requirements in Table III in part  
25.29 7083.4030.

25.30 <sup>2</sup> With less than 50 percent rock fragments.

26.1 <sup>3</sup> Additional vertical separation distance is required as determined in part 7080.2150,  
26.2 subpart 3, item C, subitem (1), unit (b).

26.3 Subp. 3. **Soil loading rates.** The absorption area and mound absorption ratio must  
26.4 be sized according to Table IX or IXa.

26.5 **7080.2400 TYPE V SYSTEMS.**

26.6 A system designed according to this part is considered a Type V system. The system  
26.7 must:

26.8 A. employ design flow values in parts 7080.1850 to 7080.1885;

26.9 B. meet the requirements of part 7080.2150, subpart 2; and

26.10 C. be designed with a vertical separation that ensures adequate sewage dispersal  
26.11 and treatment. Design factors to consider include, but are not limited to, effluent quality,  
26.12 loading rates, groundwater mounding if loading rates are in excess of those in part  
26.13 7080.2150, subpart 3, item E, Table IX or IXa, loading methods, and soil conditions.

26.14 ISTS must not contaminate underground waters or zones of periodic saturation with  
26.15 viable fecal organisms.

26.16 **7080.2440 COLLECTION SYSTEMS.**

26.17 Collection of greater than 2,500 gallons per day of sewage from multiple buildings or  
26.18 multiple other establishments discharging into an ISTS must be:

26.19 A. according to the Prescriptive Designs and Design Guidance for Advanced  
26.20 Designers, incorporated by reference under part 7080.1550, subpart 2; or

26.21 B. designed by a Minnesota licensed professional engineer.

26.22 **7080.2450 MAINTENANCE.**

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

26.24 Subp. 3. **Removal of material.**

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

27.2 C. After removal of solids and liquids from a system installed after the adoption  
27.3 of a local ordinance adopted after February 4, 2008, the maintenance hole cover must be  
27.4 secured as described in part 7080.1970, item E. Covers secured by screws must be  
27.5 refastened in all screw openings.

27.6 D. After removal of solids and liquids from a system installed before the  
27.7 adoption of a local ordinance adopted after February 4, 2008, maintenance hole covers  
27.8 must be sound, durable, and of adequate strength as specified in part 7080.1970, item E.  
27.9 D, subitem (3), and:

27.10 (1) be buried with a minimum of 12 inches of soil cover or, if the cover is  
27.11 currently at or above the ground surface or within 12 inches from final grade, be secured  
27.12 by a method that was deemed secure by the local ordinance that was in effect before  
27.13 February 4, 2008; or

27.14 (2) meet the requirements of part 7080.1970, item E, if the cover is to be  
27.15 raised to be at or above the ground surface or within 12 inches from final grade.

27.16 E. Pump tanks must be maintained according to this part. Sludge must be  
27.17 removed if within one inch of the pump intake.

27.18 [For text of subps 4 to 6, see M.R.]

27.19 Subp. 7. **Use of soil treatment site.** Activities on the current soil dispersal and  
27.20 treatment system or the reserve soil dispersal and treatment area as specified in part  
27.21 7082.0100, subpart 3, item F, that impair the current or future treatment abilities or  
27.22 hydraulic performance of the soil treatment and dispersal system are prohibited. This  
27.23 includes, but is not limited to, covering all or part of the soil treatment system with an  
27.24 impermeable surface as determined by the local unit of government.

27.25 [For text of subp 8, see M.R.]

28.1 **7080.2500 SYSTEM ABANDONMENT.**

28.2 Subpart 1. **Tank abandonment.** All systems with no future intent for use must  
 28.3 be abandoned according to this part. Tank abandonment procedures for sewage tanks,  
 28.4 cesspools, leaching pits, drywells, seepage pits, vault privies, and pit privies must meet  
 28.5 the requirements in items A to C.

28.6 [For text of items A to C, see M.R.]

28.7 [For text of subps 2 and 3, see M.R.]

28.8 **7080.2550 SEEPAGE PITS, DRYWELLS, AND LEACHING PITS.**

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

28.10 Subp. 2. **Requirements for seepage pits, drywells, and leaching pits.** A seepage  
 28.11 pit, drywell, or leaching pit is a system that:

28.12 [For text of items A to D, see M.R.]

28.13 E. has a pit that has not been placed in a soil stratum ~~of~~ with any of the United  
 28.14 States Department of Agriculture textures classified as a sand; or loamy sand, fine sand, or  
 28.15 ~~loamy fine sand texture when any of those soils contain 35 percent or more rock fragments~~  
 28.16 or a percolation rate of less than five minutes per inch;

28.17 [For text of items F and G, see M.R.]

28.18 **7081.0020 DEFINITIONS.**

28.19 [For text of subps 1 to 3, see M.R.]

28.20 Subp. 4. **Midsized subsurface sewage treatment system or MSTs.** "Midsized  
 28.21 subsurface sewage treatment system" or "MSTs" means a subsurface sewage treatment  
 28.22 system, or part thereof, as set forth in Minnesota Statutes, sections 115.03 and 115.55, that  
 28.23 employs sewage tanks or other treatment devices with final discharge into the soil below

29.1 the natural soil elevation or elevated final grade and that is designed to receive sewage  
29.2 design flow of greater than 5,000 gallons per day to 10,000 gallons per day.

29.3 MSTS also includes ~~holding tanks that are designed to receive a sewage design flow~~  
29.4 ~~of greater than 5,000 gallons per day to 10,000 gallons per day; on-lot sewage tanks~~  
29.5 ~~discharging into a sewage collection system~~ systems and associated tanks that discharges  
29.6 discharge into MSTS treatment or dispersal components; and the sewage collection system  
29.7 ~~that discharges into MSTS treatment or dispersal components.~~ MSTS does not include  
29.8 those components defined as plumbing under chapter 4715.

29.9 [For text of subps 5 to 8, see M.R.]

29.10 **7081.0040 STATE REGULATION.**

29.11 Subpart 1. **Agency regulation.**

29.12 A. All MSTS must be designed and operated according to this chapter, except as  
29.13 modified through an ordinance in compliance with chapter 7082 and Minnesota Statutes,  
29.14 section 115.55. All MSTS must be designed, installed, inspected, pumped, and operated  
29.15 by a qualified employee under part 7083.1010 or a licensed business under part 7083.0710.  
29.16 All MSTS must conform to applicable state statutes and rules.

29.17 B. The owner or owners of a single SSTS or a group of SSTS under common  
29.18 ownership must obtain an SDS permit from the agency according to chapter 7001 when all  
29.19 or part of proposed or existing soil dispersal components are within one-half mile of each  
29.20 other and the combined flow from all proposed and existing SSTS is greater than 10,000  
29.21 gallons per day. For proposed SSTS, the flow must be determined according to item D.  
29.22 For existing SSTS, the flow is determined by the greater of:

29.23 (1) the average maximum seven-day measured flow; or

29.24 (2) the flow determined according to item D.

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

30.1 [For text of subp 2, see M.R.]

30.2 **7081.0080 PERFORMANCE AND COMPLIANCE CRITERIA.**

30.3 [For text of subps 1 to 3, see M.R.]

30.4 Subp. 4. **Groundwater protection.** To be in compliance, all MSTs must:

30.5 A. meet the requirements of part 7080.1500, subpart 4, item D;

30.6 [For text of items B to E, see M.R.]

30.7 [For text of subps 5 to 8, see M.R.]

30.8 **7081.0120 DESIGN FLOW DETERMINATION FOR DWELLINGS.**

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

30.10 Subp. 2. **New housing developments.** For new housing developments to be served  
30.11 by a common SSTS, the developer must determine and restrict the total number of  
30.12 bedrooms for the development. Proposed dwellings are determined to be Classification I  
30.13 dwellings for flow determination purposes unless different classifications are approved  
30.14 by the local unit of government. The determined classification system must be used in  
30.15 conjunction with the flow calculation method in subpart 1. If the ultimate development of  
30.16 phased or segmented growth meets or exceeds the thresholds in part 7081.0040, subpart 1,  
30.17 item B, the initial system or systems and all subsequent systems require a state disposal  
30.18 system permit.

30.19 [For text of subp 3, see M.R.]

30.20 **7081.0130 FLOW AND WASTE CONCENTRATION DETERMINATION FOR**  
30.21 **OTHER ESTABLISHMENTS.**

30.22 Subpart 1. **Method.** Design flows for other establishments are determined by  
30.23 methods in item A or B.

31.1 A. The design flow of sewage for MSTs serving other establishments is  
 31.2 estimated using Table I.

31.3 TABLE I  
 31.4 ESTIMATED DESIGN SEWAGE FLOW FROM OTHER ESTABLISHMENTS

31.5	(1) Dwelling units (also see outdoor Unit 31.6 recreation)	Unit	Design 31.7 flow (gal/ day/unit)
31.8	(a) Hotel or luxury hotel	guest	55
31.9		square foot	0.28
31.10	(b) Motel	guest	38
31.11		square foot	0.33
31.12	(c) Rooming house	resident	45
31.13		add for each nonresident meal	3.3
31.14	(d) Daycare (no meals)	child	19
31.15	(e) Daycare (with meals)	child	23
31.16	(f) Dormitory	person	43
31.17	(g) Labor camp	person	18
31.18	(h) Labor camp, semipermanent	employee	50
31.19	(2) Commercial/Industrial		
31.20	(a) Retail store	square foot	0.13
31.21		customer	3.8
31.22		toilet	590
31.23	(b) Shopping center	employee	11.5
31.24		square foot	0.15
31.25		parking space	2.5
31.26	(c) Office	employee/8-hour shift	18
31.27		square foot	0.18
31.28	(d) Medical office*	square foot	1.1
31.29		practitioner	275
31.30		patient	8
31.31	(e) Industrial building*	employee/8-hour shift	17.5

32.1		employee/8-hour shift with showers	25
32.2	(f) Laundromat	machine	635
32.3		load	52.5
32.4		square foot	2.6
32.5	(g) Barber shop*	chair	68
32.6	(h) Beauty salon*	station	285
32.7	(i) Flea market	nonfood vendor/space	15
32.8		limited food vendor/space	25
32.9		with food vendor/space	50
32.10	(3) Eating and drinking establishments		
32.11	(a) Restaurant (does not include		
32.12	bar or lounge)	meal without alcoholic drinks	3.5
32.13		meal with alcoholic drinks	8
32.14		seat (open 16 hours or less)	30
32.15		seat (open more than 16 hours)	50
32.16		seat (open 16 hours or less, single	
32.17		service articles)	20
32.18		seat (open more than 16 hours, single	
32.19		service articles)	35
32.20	(b) Restaurant (short order)	customer	7
32.21	(c) Restaurant (drive-in)	car space	30
32.22	(d) Restaurant (carry out,		
32.23	including caterers)	square foot	0.5
32.24	(e) Institutional meals	meal	5.0
32.25	(f) Food outlet	square foot	0.2
32.26	(g) Dining hall	meal	8.5
32.27	(h) Coffee shop	customer	7
32.28	(i) Cafeteria	customer	2.5
32.29	(j) Bar or lounge (no meals)	customer	4.5
32.30		seat	36
32.31	(4) Entertainment establishments		



33.1	(a) Drive-in theater	car stall	5
33.2	(b) Theater/auditorium	seat	4.5
33.3	(c) Bowling alley	alley	185
33.4	(d) Country club	member (no meals)	22
33.5		member (with meals and showers)	118
33.6		member (resident)	86
33.7	(e) Fairground and other similar		
33.8	gatherings	visitor	1.5
33.9	(f) Stadium	seat	5
33.10	(g) Dance hall	person	6
33.11	(h) Health club/gym	member	35
33.12	(5) Outdoor recreation and related lodging facilities		
33.13	(a) Campground	campsite with sewer hook-up (per	
33.14		person)	32
33.15		campsite with sewer hook-up (per	
33.16		site/space)	100
33.17		campsite without sewer hook-up, with	
33.18		central toilet or shower facility (per	
33.19		site)	50
33.20		campsite without sewer hook-up, with	
33.21		central toilet or shower facility, served	
33.22		by central dump station (per site)	63
33.23	(b) Permanent mobile home	mobile home	225
33.24	(c) Camp, day without meals	person	20
33.25	(d) Camp, day with meals	person	25
33.26	(e) Camp, day and night with		
33.27	meals	person	45
33.28	(f) Resort/lodge hotel	person	62
33.29	(g) Cabin, resort	person	50
33.30	(h) Retail resort store	customer	4
33.31	(i) Park or swimming pool	guest	10
33.32	(j) Visitor center	visitor	13

34.1	(6) Transportation		
34.2	(a) Gas station/convenience store customer		3.5
34.3	(b) Service station*	customer	11
34.4		service bay	50
34.5		toilet	250
34.6		square foot	0.25
34.7	(c) Car wash* (does not include		
34.8	car wash water)	square foot	5
34.9	(d) Airport, bus station, rail depot passenger		5
34.10		square foot	5
34.11		restroom	565
34.12	(7) Institutional		
34.13	(a) Hospital*	bed	220
34.14	(b) Mental health hospital*	bed	147
34.15	(c) Prison or jail	inmate	140
34.16	(d) Nursing home, other adult		
34.17	congregate living	resident	125
34.18	(e) Other public institution	person	105
34.19	(f) School (no gym, no cafeteria,		
34.20	and no showers)	student	14
34.21	(g) School (with cafeteria, no		
34.22	gym and no showers)	student	18
34.23	(h) School (with cafeteria, gym,		
34.24	and showers)	student	27.5
34.25	(i) School (boarding)	student	95
34.26	(j) Church	seat	4
34.27		add for each meal prepared	5
34.28	(k) Assembly hall	seat	4
34.29	(8) Miscellaneous		
34.30	(a) Public lavatory	user	5
34.31	(b) Public shower	shower taken	11

35.1 \* Waste other than sewage is only allowed to be discharged into the system if the waste is  
35.2 suitable to be discharged to groundwater.

35.3 Unless otherwise noted in Table I, the flow values do not include flows generated  
35.4 by employees. A flow value of 15 gallons per employee per eight-hour shift must be  
35.5 added to the flow amount. Design flow determination for establishments not listed in  
35.6 Table I shall be determined by the best available information and approved by the local  
35.7 unit of government.

35.8 B. The measured design flow of sewage for MSTs serving other establishments  
35.9 is determined by averaging the measured daily flows for a consecutive seven-day period in  
35.10 which the establishment is at maximum capacity or use.

35.11 Subp. 2. **Waste concentration.** If concentrations from the sewage tank to the soil  
35.12 dispersal system are expected to be higher than 170 mg/l BOD (or 125 mg/l CBOD<sub>5</sub>), 60  
35.13 mg/l TSS, or 25 mg/l of oil and grease, an estimated or measured average concentration  
35.14 must be determined and be acceptable to the local unit of government. System design  
35.15 must account for concentrations of these constituents so as not to cause internal system  
35.16 malfunction, such as, but not limited to, clogging of pipes, orifices, treatment devices,  
35.17 or media.

35.18 **7081.0160 PRELIMINARY EVALUATION.**

35.19 A preliminary evaluation consists of determining:

35.20 A. the design flow, anticipated effluent concentrations of biochemical  
35.21 oxygen demand, total suspended solids, and oil and grease, and anticipated presence of  
35.22 nondomestic waste from the dwelling, dwellings, or other establishments;

35.23 [For text of items B to L, see M.R.]

35.24 **7081.0170 FIELD EVALUATION.**

35.25 [For text of subps 1 to 4, see M.R.]

36.1 Subp. 5. **Soil pits.**

36.2 A. Soil pits are required to investigate the soil for MST5 design. The required  
36.3 number of soil pits to adequately define the limiting layer and soil dispersal system sizing  
36.4 must be determined by professional judgment based on the size of the area and consistency  
36.5 of the soil and must be approved by the local unit of government.

36.6 [For text of items B and C, see M.R.]

36.7 [For text of subps 6 to 8, see M.R.]

36.8 **7081.0240 SEWAGE TANKS.**

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

36.10 Subp. 2. [See repealer.]

36.11 Subp. 3. **Lint filters, effluent screens, and pressure filters.** An effluent screen or  
36.12 pressure filter must be used on all systems. If multiple septic tanks are used, the effluent  
36.13 screen must be placed in the last tank in the series and provided with an alarm. Lint filters  
36.14 are recommended if the sewage contains laundry waste.

36.15 Subp. 4. **Tank geometry.** ~~For common septic tanks,~~ The maximum liquid depth  
36.16 of septic tanks to determine liquid capacity must be no greater than 84 inches. The  
36.17 length-to-width ratio and the length-to-depth ratio must facilitate settling of solids.

36.18 [For text of subps 5 and 6, see M.R.]

36.19 Subp. 7. [See repealer.]

36.20 **7081.0270 FINAL TREATMENT AND DISPERSAL.**

36.21 [For text of subps 1 to 4, see M.R.]

36.22 Subp. 5. **Soil absorption area sizing.**

37.1 A. Effluent loading rates to the soil ~~shall not exceed the soil's ability to~~  
37.2 ~~infiltrate and transmit effluent as determined by the observations and measurements in~~

37.3 ~~part 7081.0170, subpart 7, and must be no greater than loading rates prescribed~~ must be  
37.4 determined in:

37.5 (1) part 7080.2150, subpart 3, item E, Table IX or IXa, ~~if the absorption~~  
37.6 ~~area receives treatment level C effluent as described in part 7083.4030; or~~

37.7 (2) ~~part 7080.2150, item E, if the absorption area receives effluent meeting~~  
37.8 ~~treatment levels A or B in part 7083.4030; or~~

37.9 (3) (2) part 7080.2400, if allowed by the local unit of government.

37.10 B. If the absorption area receives effluent as described in item A, subitem (1),  
37.11 the absorption area shall be increased by 50 percent of the amount derived in item A,  
37.12 subitem (1), and zoned for dosing and resting.

37.13 [For text of subps 6 and 7, see M.R.]

37.14 Subp. 8. **Soil treatment zone.** For treatment of effluent by soil to meet the  
37.15 performance criteria in part 7081.0080, subpart 4, item C, the soil treatment and dispersal  
37.16 systems must meet the requirements of item A, B, or C.

37.17 A. For soil treatment and dispersal systems that receive treatment level A-2,  
37.18 B-2, or C effluent as described in part 7083.4030, the soil treatment zone requirements  
37.19 must meet part 7080.2150, subpart 3, item C. The required three-foot vertical separation  
37.20 must be maintained during operation after accounting for groundwater mounding.

37.21 B. For soil treatment and dispersal systems that receive treatment level A or B  
37.22 effluent as described in part 7083.4030, the soil treatment zone requirements must meet  
37.23 part 7080.2150, subpart 3, item C, unless it is modified in Table XI of part 7080.2350,  
37.24 subpart 2, with a minimum vertical separation of two feet. The required vertical separation  
37.25 must be maintained during operation after accounting for groundwater mounding.

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

38.2 [For text of subps 9 to 11, see M.R.]

38.3 **7081.0275 COLLECTION SYSTEMS.**

38.4 The collection system for collection of sewage from multiple buildings or multiple  
38.5 other establishments discharging into an MSTs must be designed:

38.6 A. according to the Prescriptive Designs and Design Guidance for Advanced  
38.7 Designers, incorporated by reference under part 7080.1550, subpart 2; or

38.8 B. by a Minnesota licensed professional engineer.

38.9 **7082.0040 REGULATORY ADMINISTRATION RESPONSIBILITY.**

38.10 [For text of subps 1 to 4, see M.R.]

38.11 Subp. 5. **Reporting requirements for all local programs.** Local units of  
38.12 government that administer SSTS programs must provide an annual report to the  
38.13 commissioner. The report must be submitted to the commissioner no later than ~~January 10~~  
38.14 February 1 for the previous calendar year. The report must include:

38.15 A. the name and address of the program administrator, all qualified employees,  
38.16 and contracted licensed businesses authorized to perform services on behalf of the local  
38.17 unit of government;

38.18 B. the number of permits issued in the reporting year in the following categories:

38.19 Total SSTS by flow permitted in year:

38.20	1-2,499	2,500-4,999	5,000-10,000
38.21	gallons	gallons	gallons
38.22	per day	per day	per day

38.23 New SSTS construction

38.24 Replacement SSTS

39.1 Total SSTS by type permitted in year:

39.2	Residential	Other establishments
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39.3 Type I

39.4 Type II

39.5 Type III

39.6 Type IV

39.7 Type V

39.8 C. the total number of systems serving full-time residences and seasonal  
39.9 residences, the total number of cluster systems, and the total number of other  
39.10 establishments in the jurisdiction;

39.11 D. the estimated percentage of existing SSTS in compliance within the local  
39.12 government's jurisdictional boundaries and how the estimate was developed;

39.13 E. the number of septic system tanks installed by each licensed installation  
39.14 business or homeowner;

39.15 F. the number of systems regulated under an operating permit;

39.16 G. for counties, the names of cities and townships that have local ordinances  
39.17 within the county; and

39.18 H. a narrative description of problem areas in local SSTS administration.

39.19 **7082.0050 GENERAL REQUIREMENTS FOR LOCAL ORDINANCES.**

39.20 [For text of subps 1 to 4, see M.R.]

39.21 Subp. 5. **Requirements for alternative local standards.** Counties are authorized to  
39.22 adopt and enforce by ordinance alternative local standards for existing or new construction  
39.23 or replacement of SSTS as part of a conventional program. The alternative local standards  
39.24 must protect public health and the environment as stipulated in Minnesota Statutes, section  
39.25 115.55, subdivision 7, paragraphs (a) and (b), and must comply with items A to ~~E~~ F.

40.1 [For text of items A to E, see M.R.]

40.2 F. When a county has completed the applicable steps in this subpart, an  
40.3 ordinance containing alternative local standards may be adopted. The county is responsible

40.4 for developing the processes and procedures necessary to administer the conventional  
40.5 program in addition to the alternative local standards. Processes and procedures must  
40.6 include providing maps to SSTS professionals depicting the areal extent of the alternative  
40.7 local standards, developing inspection procedures to be used to verify compliance with  
40.8 the alternative local standards for both new and existing systems, and developing an  
40.9 addendum to the state's existing system inspection form that reflects the altered compliance  
40.10 standards for the alternative local standards systems in the county, if applicable.

40.11 **7082.0100 REQUIREMENTS FOR LOCAL ORDINANCES.**

40.12 Subpart 1. **Requirement.** All SSTS ordinances must contain the provisions in  
40.13 items A to C.

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

40.15 C. Local ordinance requirements regulating vertical separation for systems built  
40.16 before April 1, 1996, in systems that are not SWF as defined in part 7080.1100, subpart  
40.17 84, must meet the requirements in part 7080.1500, subpart 4, item E.

40.18 [For text of subp 2, see M.R.]

40.19 Subp. 3. **Additional ordinance requirements for all programs.** Ordinances  
40.20 adopted by a local unit of government under part 7082.0050 must contain the provisions  
40.21 in items A to R.

40.22 [For text of items A to I, see M.R.]

40.23 J. A provision requiring that a management plan be submitted by the designer  
40.24 to the local unit of government before issuance of a construction permit for all new or  
40.25 replacement ISTS as described in part 7080.1100, subparts 51 and 66.

41.1 K. A provision requiring operating permits for all systems installed under  
41.2 parts ~~7080.2290~~, 7080.2350, and 7080.2400, and chapter 7081. An operating permit is  
41.3 recommended for holding tanks regulated under part 7080.2290.



41.4 [For text of items ~~K~~ L to R, see M.R.]

41.5 [For text of subps 4 and 5, see M.R.]

41.6 **7082.0300 LOCAL PROGRAM ADMINISTRATION.**

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

41.8 Subp. 2. **Prohibited variation.**

41.9 [For text of item A, see M.R.]

41.10 B. Programs adopted under part 7082.0100, subpart 3, must not issue variances  
41.11 from provisions in part 7080.2150, subpart 2, items A to D, or 7081.0080, subparts 2 to 5.

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

41.13 [For text of subps 3 to 5, see M.R.]

41.14 **7082.0500 PERMIT PROGRAM FOR SSTS.**

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

41.16 Subp. 2. **SSTS permit application requirements.** SSTS permit applications must  
41.17 require the submittal of exhibits necessary for issuing a permit as described in this chapter,  
41.18 along with general requirements for identifying the property and owners, a site evaluation  
41.19 report, a design report, a management plan, and any other information requested by the  
41.20 local unit of government pertinent to this process. Exhibits for site evaluation, design, and  
41.21 applicable construction information must be complete and include a certified statement  
41.22 from the certified person who conducted or oversaw the work. An approval process must  
41.23 be developed to address changes in the approved design that served as the basis for issuing  
41.24 a permit.

42.1 Subp. 3. **Permit approval requirements and procedures.** The permit program  
42.2 must include the requirements in items A to D.

42.3 [For text of item A, see M.R.]

42.4 B. The local unit of government must review and either approve or deny the  
42.5 permit application before issuing a construction permit. Construction must not be initiated  
42.6 until a construction permit is granted. Final approval of the system must be evidenced  
42.7 by issuance of a certificate of compliance.

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

42.9 **7082.0600 SYSTEM MANAGEMENT.**

42.10 Subpart 1. **Management plans.**

42.11 A. Local units of government must require management plans for all new or  
42.12 replacement SSTS as described in parts 7080.2210 to 7080.2400. These plans must be  
42.13 submitted to the local government before issuance of a construction permit.

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

42.15 [~~For text of subp 2, see M.R.~~]

42.16 Subp. 2. **SSTS operating permits.**

42.17 A. Local units of government must issue and enforce an operating permit for  
42.18 SSTS specified in ~~parts 7080.2290, 7080.2350, and 7080.2400, and chapter 7081 and any~~  
42.19 ~~other system deemed to require operational oversight as determined by the local unit of~~  
42.20 ~~government~~ part 7082.0100, subpart 3, item K.

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

42.22 **7082.0700 INSPECTION PROGRAM FOR SUBSURFACE SEWAGE**  
42.23 **TREATMENT SYSTEMS.**

43.1 Subpart 1. **Inspection requirements.** Local units of government must adopt and  
43.2 implement a construction inspection program for new construction and replacement SSTS  
43.3 to enforce requirements under this chapter. The construction inspection program must  
43.4 specify the frequency and times of inspections, specify the requirements of an inspection,  
43.5 establish an inspection protocol, provide for when an inspection cannot be completed in a

43.6 timely manner, and, at a minimum, include the requirements for a compliance inspection  
43.7 under subparts 2 and 3, except for subpart 3, item E.

43.8 **Subp. 2. Compliance inspection; new construction or replacement.**

43.9 A. A compliance inspection for all new construction or replacement must be  
43.10 conducted:

43.11 (1) to ensure compliance with applicable requirements;

43.12 (2) to ensure compliance before issuance of a permit for the addition of a  
43.13 bedroom on property served by an SSTS, if the local unit of government issues permits  
43.14 for the addition of a bedroom, unless the requirements under part 7082.0500, subpart  
43.15 3, item C, are met;

43.16 (3) by a qualified employee or licensed inspection business, authorized by  
43.17 the local unit of government, who is independent of the owner and the installer; and

43.18 (4) for an evaluation, investigation, inspection, recommendation, or other  
43.19 process used to prepare a disclosure if conducted by a party who is not the system  
43.20 owner. This disclosure action constitutes a compliance inspection and must be conducted  
43.21 according to this chapter.

43.22 B. A licensed inspection business that inspects an existing SSTS is allowed to  
43.23 subsequently design and install a new SSTS for that property, provided the inspection  
43.24 business is also licensed to design and install.

44.1 C. A licensed inspection business working on behalf of a local unit of  
44.2 government must not design or install a new or replacement system if there is a likelihood  
44.3 that the inspector or business will be responsible for permitting or inspecting the new or  
44.4 replacement system or system site.

44.5 D. A licensed inspection business may inspect an existing system that they  
44.6 designed or installed once it has been independently inspected.

44.7 E. A person working for or on behalf of a local unit of government is not  
44.8 allowed to use the person's position to solicit for private business gain.

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

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

44.11 C. Local units of government must develop a certificate of compliance  
44.12 document or use a certificate of compliance developed by the agency for new construction  
44.13 and replacement. The certificate of compliance for new construction and replacement  
44.14 must include the vertical separation distance report described in subpart 4, item B, subitem  
44.15 (2), and the management plan developed under part 7082.0600, subpart 1. All certificates  
44.16 of compliance and notices of noncompliance for new construction and replacement  
44.17 must include property and property owner identification, date of inspection, system  
44.18 components, system location (dimensioned or drawn to scale), well setback distance, field  
44.19 check of soil conditions, SWF, as defined under part 7080.1100, subpart 84, designations  
44.20 as applicable, and Class V designation as applicable.

44.21 D. A certificate of compliance or notice of noncompliance for new construction  
44.22 or replacement must be signed by a licensed inspection business or by a qualified  
44.23 employee certified as an inspector who is authorized by the local unit of government.  
44.24 The certificate of compliance or notice of noncompliance for new construction and  
44.25 replacement must be submitted to the local unit of government no later than 15 days after  
44.26 any compliance inspection. The certificate of compliance or notice of noncompliance for  
45.1 new construction and replacement must be submitted to the owner or owner's agent within  
45.2 15 days after any compliance inspection.

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

45.4 F. If a compliance inspection for new construction and replacement indicates  
45.5 that the system is not in compliance with applicable requirements, the notice must contain  
45.6 a statement to this effect and specify the reason for noncompliance.

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

45.8 **Subp. 4. Compliance inspection; existing systems.**

45.9 A. A compliance inspection of an existing system must first determine whether  
45.10 the soil dispersal system, sewage tanks, or other conditions pose an imminent threat to  
45.11 public health and safety as defined in part 7080.1500, subpart 4, item A. A determination  
45.12 must then be made as to whether the sewage tanks and soil dispersal area are failing to  
45.13 protect ground water as defined in part 7080.1500, subpart 4, item B. The inspection must  
45.14 also verify compliance with part 7080.1500, subpart 4, item C.

45.15 B. The agency's inspection report form for existing SSTS, supplemented  
45.16 with any necessary or locally required supporting documentation, must be used for the  
45.17 existing system compliance inspections in subitems (1) to ~~(3)~~ (4). Allowable supporting  
45.18 documentation includes tank integrity assessments made within the past three years and  
45.19 prior soil separation assessments.

45.20 (1) A tank integrity and safety compliance assessment must be completed  
45.21 by a licensed SSTS inspection, maintenance, installation, or service provider business or a  
45.22 qualified employee inspector with jurisdiction. An existing compliant tank integrity and  
45.23 safety compliance assessment is valid for three years unless a new evaluation is requested  
45.24 by the owner or owner's agent or is required according to local regulations.

46.1 (2) A soil separation compliance assessment must be completed by  
46.2 a licensed inspection business or a qualified employee inspector with jurisdiction.  
46.3 Compliance must be determined either by conducting new soil borings or by prior soil  
46.4 separation documentation made by two independent parties. The soil borings used for  
46.5 system design or previous inspections are allowed to be used. If the soil separation has  
46.6 been determined by two independent parties, a subsequent determination is not required  
46.7 unless requested by the owner or owner's agent or required according to local regulations.

46.8 (3) Determination of hydraulic performance and other compliance in part  
46.9 7080.1500, subpart 4, item A, must be completed by either a licensed inspection business  
46.10 or a qualified employee inspector with jurisdiction.

46.11 (4) A determination of operational performance and other compliance in  
46.12 part 7080.1500, subparts 4, item C, and 5, must be completed by a licensed advanced  
46.13 inspection business, a qualified employee with an advanced inspector certification with  
46.14 jurisdiction, or a service provider. A passing report is valid until a new inspection is  
46.15 requested.

46.16 C. A certificate of compliance or notice of noncompliance for an existing system  
46.17 must be based on the results of the verifications in item B. The certificate of compliance or  
46.18 notice of noncompliance for an existing system must be signed by a licensed inspection  
46.19 business or a qualified employee inspector with jurisdiction. The certificate or notice for  
46.20 an existing system must be submitted to the local unit of government with jurisdiction  
46.21 and the property owner or owner's agent no later than 15 days after a compliance  
46.22 inspection. The completed form must also be submitted to the owner or owner's agent.  
46.23 The certificate of compliance for an existing system is valid for three years from the  
46.24 date of issuance, unless a new inspection is requested by the owner or owner's agent or  
46.25 is required according to local regulations.

47.1 D. If a compliance inspection for an existing system indicates that the system is  
47.2 noncompliant, the notice must be signed by a licensed inspection business or qualified  
47.3 employee inspector with jurisdiction, contain a statement of noncompliance, and specify  
47.4 the reasons for noncompliance of each component specified in item B.

47.5 [For text of subp 5, see M.R.]

47.6 **7083.0750 INSPECTION LICENSE.**

47.7 Subpart 1. **Authorization.**



48.7 Subp. 3. **Term of bond.** The term of the corporate surety bond must be continuous  
48.8 with the term of the license or, in the case of a plumbing bond provided according to  
48.9 Minnesota Statutes, section 326B.46, subdivision 2, concurrent with the term of the  
48.10 plumbing license. The penal sum of the bond is noncumulative and must not be aggregated  
48.11 every year that the bond is in force.

48.12 [For text of subps 4 and 5, see M.R.]

48.13 **7083.1050 EXPERIENCE.**

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

48.15 Subp. 3. **Experience plan.** Experience plans must meet the requirements in this  
48.16 subpart.

48.17 A. Experience gained under an experience plan must be gained under the  
48.18 supervision of an unrestricted certified individual who has a specialty area certification  
48.19 that is the same as the specialty area sought by the individual acquiring the experience or  
48.20 under the supervision of an inspector who is authorized to design and inspect the system.  
48.21 After December 31, 2010, an individual providing experience oversight must be a mentor  
48.22 as described in part 7083.2000. If an apprentice loses the apprentice's mentor before  
48.23 completing the approved experience plan, the apprentice must notify the agency. The  
48.24 apprentice must not perform any more work until a new mentor is secured and the revised  
48.25 experience plan is approved by the agency.

49.1 [For text of items B and C, see M.R.]

49.2 [For text of subp 4, see M.R.]

49.3 Subp. 5. **Amount of experience.**

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

49.5 C. An applicant for certification as a basic inspector must have:



49.6 (1) co-completed, with a mentor, a minimum of 15 inspections of Type I,  
49.7 II, or III systems, as defined under parts 7080.2200 and 7080.2300, with a flow of 2,500  
49.8 gallons per day or less. The inspections must include a minimum of one aboveground  
49.9 system inspection and one belowground system inspection; and

49.10 (2) observed, with or without a mentor:

49.11 (a) five soil evaluations, system designs, and management plans being  
49.12 developed;

49.13 (b) five system installations; and

49.14 (c) five service or operational instances.

49.15 No additional experience is required to qualify for the advanced inspector certification.

49.16 [For text of items D and E, see M.R.]

49.17 **7083.2040 TRANSITIONING EXISTING REGISTRATIONS AND LICENSES.**

49.18 Subpart 1. **Designers.** A business licensed, and an individual registered, as a designer  
49.19 I or designer II on February 4, 2008, are reclassified as basic designers. A business  
49.20 reclassified as a basic designer under this chapter is authorized to design all types and sizes  
49.21 of SSTS until February 4, 2012. After that time, a business designing systems described  
49.22 under part 7083.0740, subpart 1, item B, must meet the requirements of this chapter.

49.23 Subp. 2. **Inspectors.** A business licensed, and an individual registered, as a designer  
49.24 I or inspector on February 4, 2008, are reclassified as basic inspectors. A business or  
50.1 individual reclassified as an inspector under this chapter is authorized to inspect all types  
50.2 of SSTS until February 4, 2012. After that time, the business or government employee  
50.3 inspecting systems described under part 7083.0740, subpart 1, item B, must meet the  
50.4 requirements of this chapter.

50.5 [For text of ~~subps subp 3 to 5~~, see M.R.]

50.6 Subp. 4. **Service provider.** To gain a service provider license or certification, a  
50.7 business or individual must meet the requirements of this chapter. An ISTS licensed  
50.8 business or a certified individual providing management services before February 4,  
50.9 2008, is authorized to operate an SSTS until February 4, ~~2011~~ 2012, without a service  
50.10 provider license. After February 4, ~~2011~~ 2012, businesses and individuals providing SSTS  
50.11 management services must meet the requirements of this chapter.

50.12 [For text of subp 5, see M.R.]

50.13 **7083.4000 PRODUCT REVIEW AND REGISTRATION PROCESS.**

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

50.15 Subp. 2. **Proprietary treatment products; certification and registration.**

50.16 [For text of item A, see M.R.]

50.17 B. Manufacturers verifying product performance through testing according to  
50.18 the following standards or protocols must have product testing conducted by a qualified,  
50.19 third-party testing facility. Product performance testing must be consistent with the  
50.20 following:

50.21 [For text of subitems (1) to (5), see M.R.]

50.22 (6) protocol for bacteriological reduction described in part 7083.4060; and

51.1 (7) other equivalent protocols and standards consistent with the standards  
51.2 and protocols in subitems (1) to (6) to verify product performance as approved by the  
51.3 commissioner.

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

51.5 **7083.4030 PRODUCT PERFORMANCE REQUIREMENTS FOR PROPRIETARY**  
51.6 **TREATMENT PRODUCTS.**

51.7 TABLE III

51.8 Treatment component/ sequence  
 51.9 category Product performance requirements  
 51.10 Category A: Treatment system performance testing levels

51.11 Designed to treat sewage  
 51.12 with strength typical of a  
 51.13 residential source when  
 51.14 septic tank effluent is  
 51.15 anticipated to be equal to or  
 51.16 less than treatment Level C.

	Level	Parameters				
		CBOD <sub>5</sub> (mg/l)	TSS (mg/l)	O&G (mg/l)	FC (#/100ml)	Nutrient (mg/l)
51.17	A	15	15	–	1,000	–
51.18	A-2	15	15	–	–	–
51.19	B	25	30	–	10,000	–
51.20	B-2	25	30	–	–	–
51.21	C	125*	60	25	–	–
51.22	TN	–	–	–	–	<20, or actual value
51.23	TP	–	–	–	–	<5, or actual value
51.24						
51.25						
51.26						
51.27						
51.28						
51.29						
51.30						

51.31 \* BOD<sub>5</sub> = 170 mg/l

52.1 Values for levels A, A-2, B, and B-2 are 30-day values  
 52.2 (averages for CBOD<sub>5</sub>, TSS, and geometric mean for FC).  
 52.3 All 30-day averages throughout the test period must meet  
 52.4 these values in order to be registered at these levels. Values  
 52.5 for levels C, TN, and TP are derived from full test averages.

52.6 Category B: All of the following requirements must be met:

52.7 Designed to treat (1) all full test averages must meet level C; and  
 52.8 high-strength sewage (2) the treatment capacity of the product tested in pounds  
 52.9 when septic tank effluent is per day for CBOD<sub>5</sub> must be reported.  
 52.10 anticipated to be greater than  
 52.11 treatment level C, including  
 52.12 restaurants, grocery stores,  
 52.13 mini-marts, group homes,  
 52.14 medical clinics, residences,  
 52.15 etc.

52.16 Total nitrogen and Test results must establish product performance effluent  
 52.17 phosphorus reduction in quality meeting levels TN and TP, when presented as the  
 52.18 Categories A and B full test average.

52.19 **7083.4060 BACTERIOLOGICAL REDUCTION.**

52.20 [For text of subps 1 to 3, see M.R.]

52.21 Subp. 4. **Disinfection.** Manufacturers are allowed to register products that:

52.22 A. meet the bacteriological testing requirements alone, without the need for a  
 52.23 separate disinfection device to meet treatment level A or B;

52.24 B. meet the bacteriological testing requirements when tested with a compatible  
 52.25 secondary disinfection device as a component of the process to meet treatment level  
 52.26 A or B; or

52.27 C. meet the bacteriological testing requirements when coupled with a  
 52.28 compatible secondary disinfection device that meets bacteriological requirements of this  
 52.29 part as a component of the process to meet treatment level A or B.

53.1 **7083.4120 PRODUCT REGISTRATION CONTESTED CASE HEARING.**

53.2 A person whose application for product registration under part 7083.4040, item A,  
 53.3 has been denied in whole or in part may petition the agency to hold a contested case  
 53.4 hearing under Minnesota Statutes, chapter 14. To be considered by the agency, the  
 53.5 petition must be submitted within 30 days after the person receives written notice of the

53.6 commissioner's proposed action and must comply with part 7000.1800. The commissioner  
53.7 must grant the petition for a contested case hearing if the commissioner finds that the  
53.8 criteria in part 7000.1900 have been met. Final agency decisions following contested case  
53.9 hearings must be made according to parts 7000.2000 to 7000.2200.

53.10 **REPEALER.** Minnesota Rules, parts 7080.1100, ~~subpart~~ subparts 11 and 48; 7080.2260;  
53.11 7081.0120, subpart 2; and 7081.0240, subparts 2 and 7, are repealed.