



**Minnesota Pollution Control Agency**

**Municipal Division**

**STATEMENT OF NEED AND REASONABLENESS**

Proposed Amendment of Rules Governing Subsurface Sewage Treatment Systems  
Minn. R. ch. 7080 and the Addition of Minn. R. chs. 7081, 7082, and 7083



## I. INTRODUCTION AND BACKGROUND

The subject of this Statement of Need and Reasonableness (Statement or SONAR) is the amendment of the rules of the Minnesota Pollution Control Agency (MPCA or Agency) that govern the Subsurface Sewage Treatment Systems (SSTS) program. The purpose of these rules is to prevent the improper location, design, installation, use, maintenance, and abandonment of SSTS which could adversely affect water quality and the public health, safety, and general welfare by the discharge of inadequately treated sewage to surface and ground waters of the state.

Minnesota Statute §115.55 "Individual Sewage Treatment Systems," Subdivision 1(g) reads:

*"Individual sewage treatment system" or "system" means a sewage treatment system, or part thereof, serving a dwelling, other establishment, or group thereof, that uses subsurface soil treatment and disposal.*

The statutory definition above includes both singular systems and groups of systems, and uses "ISTS" to reference either. MPCA proposes the following clarification in terms; "ISTS" to refer to individual and small groups of systems serving three or fewer dwelling units and "MSTS" to refer to mid-sized groups of systems, serving more than three dwelling units up to a combined total of 10,000 gallons per day. (All systems larger than "MSTS" which treat more than 10,000 gallons per day are not regulated through the proposed rules and must obtain a State Disposal System permit.) Because groups of systems have become more common and increasingly complex, MPCA proposes rule revisions and in some instances more specific requirements for MSTS. Throughout this Statement, the terms ISTS, MSTS, and SSTS will be used.

Minn. R. ch. 7080 currently contains minimum standards and criteria for the location, design, installation, use, maintenance, and abandonment of SSTS, a licensing program for SSTS professionals, and SSTS ordinance and administrative requirements for local units of government. The Agency is revising this chapter and adding new chapters to add or expand the following elements: a new technology review program, specifications for systems serving multiple dwellings, new professional licensing categories, performance (outcomes based) regulatory option for local programs, updated standards based on new findings, and grammatical changes for clarity.

The MPCA is proposing to divide the major regulatory areas of Minn. R. ch. 7080 into individual chapters: Minn. R. ch. 7080 – standards for systems serving one to three dwellings, Minn. R. ch. 7081 – standards for systems serving more than three dwellings and other establishments, Minn. R. ch. 7082 – requirements for local regulatory programs, and Minn. R. ch. 7083 – professional licensing and certification program.

This Statement contains the MPCA's affirmative presentation of facts on the need for and reasonableness of the proposed rules and amendments. Section II describes the procedural history of this rulemaking process and also addresses the additional notice efforts conducted by the MPCA. Section III sets forth the MPCA's statutory authority to adopt the proposed rules and amendments. Section IV discusses the general need for the amendments. Section V establishes the general and specific reasonableness of each part of the rules. Section VI addresses statutory considerations established in Minnesota statutes, including a discussion of economic factors. Section VII is a listing of authors, witnesses, and exhibits, and section VIII is the conclusion.

This Statement can be made available in other formats, including Braille, large print, and audio tape. To make a request, contact Carol Nankivel at the Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, MN, 55155-4194; telephone: 651-297-8371; Fax: 651-297-8676; e-mail: [carol.nankivel@pca.state.mn.us](mailto:carol.nankivel@pca.state.mn.us). TTY users may call the MPCA at 651-282-5332 or 1-800-657-3864, TDD: 651-282-5332.

## II. PROCEDURAL HISTORY

The proposed rule amendments were developed by MPCA staff in close cooperation with many interested and affected parties. Several methods were employed to seek internal and external input on the proposed rule amendments. The Agency took the follow actions to seek input and comments prior to publishing the draft rule in the *State Register*.

- A. The Agency received comments from SSTS professionals, the public, other state agencies and others since promulgation of the current rule in 1999. Input was gained from telephone calls, e-mails, site visits, training venues, and through the outcome of enforcement actions (Exhibits 88, 96, and 97).
- B. Input was taken from various training activities Agency staff attended since 1999. These include two national SSTS symposiums by the American Society of Agricultural Engineers held in 2001 and 2004. Statewide annual trade shows conducted by the Minnesota Onsite Sewage Treatment Contractor's Association (MOSTCA) were also attended. Input was also taken from the University of Wisconsin Small Scale Waste Management Project and the Wisconsin Department of Commerce. Staff also received new information from regular reading of technical journals (e.g. Journal of Environmental Quality, Soil Science Society of America Journal, Small Flows Quarterly, Ground Water Journal.)
- C. A Request for Comments was published in the *State Register* on January 5, 2004, requesting comments on the areas of the rule that were proposed to be revised (Exhibits 195 [cover letter sent to interested and affected parties] and 283).
- D. The Agency sought input from attendees at the University of Minnesota (U of M) Onsite Sewage Treatment continuing education workshops during the 2003 – 2004 and 2004 – 2005 workshop season and at one advanced designer's workshop in 2005. The MPCA staff presented information to approximately 750 SSTS professionals in ten cities throughout the state (Exhibit 201). Surveys were handed out for measurable input on some rule issues (Exhibit 101). A petition in opposition to the proposed increase in the bond amounts was submitted to the MPCA by the participants at one workshop and other comments not to raise the bond amount were also received. (Exhibit 160 and comment 5 Exhibit 339.)
- E. Sought input from the bonding industry and other state agencies that require bonding in a meeting held at the Agency on October 28, 2004 (Exhibit 140). The MPCA also received follow-up written information from these same parties (Exhibits 143, 149, 152, 160, 163, 301, and 305).
- F. Reviewed a draft model performance ordinance developed for Northeast Minnesota in a meeting on July 19, 2004 (Exhibit 181).
- G. Sought counsel from the Agency's SSTS Advisory Committee (as required by Minnesota Statutes (hereinafter "Minn. Stat." § 115.55) at meetings held on August 11, 2004 (Exhibit 89), November 17, 2004 (Exhibit 157), December 15, 2004 (Exhibit 131), January 12, 2005 (Exhibit 199), February 16, 2005 (Exhibits 41 and 187), and March 30, 2005 (Exhibit 198).

H. Sought comments in public meetings throughout the state as follows:

- Duluth – (2 meetings) August 17, 2004 (Exhibits 91 and 372).
- Brainerd – (2 meetings) August 18, 2004 (Exhibits 202 and 373).
- Detroit Lakes – (2 meetings) August 19, 2004 (Exhibit 374).
- Willmar – August 24, 2004 (Exhibit 81).
- Marshall – (2 meetings) – August 25, 2004 (Exhibits 84 and 85).
- Rochester – August 26, 2004 (Exhibit 83).
- Mankato – August 30, 2004 (Exhibit 90).
- St. Paul – August 31, 2004 (Exhibit 203).

These meetings were advertised in the summer 2004 edition of the Agency's SSTS Report. (Exhibits 204, 267, and 303).

- I. Sought input from attendees at MPCA sponsored Water Quality Engineer's meetings (Exhibits 4, 116, 119, 208, and 218), and from MPCA water quality hydrologists (Exhibits 112, 126, and 331).
- J. Concepts and changes to the sewage tank sections were made based upon meetings and comments from representatives of the sewage tank manufacturing industry. (Exhibits 29, 30, 32, 33, 37, 38, 39, 42, 60, 68, 69, 72, 73, 74, 367, 370, 391, and 427). Exhibit 41 provides tank comments from the SSTS Advisory Committee, Exhibits 43, 51, and 54 are other state tank regulations, and Exhibits 42, 45, 64, and 65 provide comments from a Minnesota tank manufacturing work shop. Examples of national and international tank specifications can be found in Exhibits 46, 47, 49, 50, 53, and 63.
- K. MPCA staff sought input from non-precast tank manufacturers and others (Exhibits 31, 33, 39, and 318). Other comments and information about tank criteria can be found in Exhibits 35, 36, 38, 40, 42, 44, 45, 55, 56, 57, 58, 61, 62, 64, 65, 66, 67, 70, 75, 76, 109, 110, 111, 209, 213, 219, 245, 252, 255, 364, and 472).
- L. MPCA staff presented the proposed changes at MOSTCA summer picnic – July 23, 2004, and at the MOSTCA winter convention – March 21, 2005. MPCA staff also attended a MOSTCA rule meeting, numerous U of M specialty workshops and 17 U of M continuing education workshops (Exhibits 79, 80, 104, 164, 201, and 205) to present the proposed changes and seek input.
- M. Sought input from the Minnesota Professional Wastewater Recyclers Association (MnPWR) at a June 29, 2004, meeting (Exhibit 98) and with its parent organization the National Onsite Wastewater Recyclers Association (NOWRA) concerning its model performance code at an April 11, 2005, meeting (Exhibit 180).
- N. Sought comments from MOSTCA for rule amendments (Exhibits 79, 80, 151, and 169).
- O. Sought input from the Minnesota Association of Professional Soil Scientists (MAPSS) at meetings on October 1, 2003 (Exhibit 217); March 1, 2004 (Exhibit 214); February 3, 2005 (Exhibit 28); and January 31, 2006 (Exhibit 471). In addition, to fulfill the legislative mandate of Minn. Law chapter 249 – 2004 Regular Session, soil saturation identification training was held to clarify rule provisions of Minn. R. 7080.0110 (Exhibit 214). Input from other soil scientist was also sought. (Exhibits 207, 210, 211, 212, 215, and 224).

- P. Sought input from the Minnesota chapter of the American Council of Engineering Companies (ACEC) at meetings held on December 10, 2003, April 20, 2005, and August 24, 2005. (Exhibits 344, 414, and 421).
- Q. Sought input from a group of SSTS professionals, engineers, U of M and state agency staff (i.e., the large system workgroup) to study the design standards for large subsurface sewage treatment systems (LSTS) (Exhibits 113, 235, and 269). Sought additional information and comments from participants at the April 2004 U of M Large System workshop.
- R. Met with internal review committee consisting of MPCA and U of M staff in multiple meetings and received comments during critical points of the rule development (Exhibits 18, 20, 21, 22, 68, 105, 106, 107, 108, 114, 117, 118, 121, 124, 138, 146, 150, 153, 156, 158, 189, 200, 205, 223, 228, 231, 261, 262, 263, 265, 266, 275, 288, 290, 295, 296, 298, 329, 349, 353, 365, 368, 403, 473, 477, and 478).
- S. Sought input from national representatives of manufacturers of soil dispersal and treatment system distribution media at a September 21, 2004, meeting (Exhibit 191) and had other media discussions and meetings with manufacturers on August 10, 2004, and September 2, 2004 (Exhibits 183, 184, 192, 304, 306, 308, and 313).
- T. Sought comments from postings on national SSTS list serve sponsored by the United States Environmental Protection Agency (EPA).
- U. Examined many state SSTS codes and national codes for design standards and specifications (Exhibits 4, 43, 51, 54, 125, 173, 188, 227, and 330). Also, consulted other national trade standards (Exhibits 46, 47, 49, 50, and 53).
- V. In addition to all the group comments, individual comments on various issues can be found in Exhibit 206, which categorizes each comment or series of comments by rule, topic, submitter, and date.
- W. Draft copies of each new rule chapter were e-mailed to each local unit of government that has a subsurface sewage treatment system ordinance and draft copies were posted for public review on the Agency's web page starting in the spring of 2004 (Exhibits 246, 257, 272, 273, and 291).
- X. Met with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design Board on October 14, 2005, and March 17, 2006, concerning the MSTTS licensure as it relates to the professional licensing of engineers, soil scientists and geologists (Exhibits 395, 436, 437, 438, and 442).

The MPCA believes it has employed an exhaustive public input process and believes that the process used for the development of the rule was open to all individuals and groups. The MPCA feels it has provided many opportunities for personal meetings in all geographic areas of the state.

### III. STATUTORY AUTHORITY

The MPCA's statutory authority to adopt the proposed amendments is set forth in Minn. Stat. § 115.03, subd. 1(e), which provides:

115.03 Powers and duties.

Subdivision 1. **Generally.** The agency is hereby given and charged with the following powers and duties:

- (e) To adopt, issue, reissue, modify, deny, or revoke, enter into or enforce reasonable orders, permits, variances, standards, rules, schedules of compliance, and stipulation agreements, under such conditions as it may prescribe, in order to prevent, control or abate water pollution, or for the installation or operation of disposal systems or parts thereof, or for other equipment and facilities;

Under this statute, the MPCA has the necessary statutory authority to adopt the proposed change parts.

In addition to the Agency's general statutory authority to adopt rules and standards to prevent, control, or abate water pollution, the Agency is specifically charged under Minn. Stat. § 115.55, subd. 3, as follows:

Subd. 3. **Rules.** (a) The agency shall adopt rules containing minimum standards and criteria for the design, location, installation, use, and maintenance of subsurface sewage treatment systems. The rules must include:

- (1) how the agency will ensure compliance under subdivision 2;
- (2) how local units of government shall enforce ordinances under subdivision 2, including requirements for permits and inspection programs;
- (3) how the advisory committee will participate in review and implementation of the rules;
- (4) provisions for alternative systems;
- (5) provisions for handling and disposal of effluent;
- (6) provisions for system abandonment; and
- (7) procedures for variances, including the consideration of variances based on cost and variances that take into account proximity of a system to other systems.

In 1994 the Minnesota Legislature enacted the enabling authority that allowed the MPCA to write standards for SSTS. The 1994 law was signed by the Governor on May 10, 1994. Subsequent, revisions to Minn. Stat. § 115.55 occurred and were subsequently incorporated into Minnesota Rules, but did not impact the rulemaking authority provided under Minn. Stat. § 115.55, subd. 3.

The proposed rule will be enforced in accordance with the authority provided to the MPCA by Minn. Stat. § 115.071 and § 116.072. The MPCA has the general authority to enforce its rules under these statutes. If approved, this rule and the changes to the existing rule contained herein would be enforceable by the MPCA.

#### IV. NEED FOR THE AMENDMENTS

Minn. Stat. ch. 14 requires the MPCA to make an affirmative presentation of facts establishing the need for and reasonableness of the rules as proposed. In general terms, this means that the MPCA must not be arbitrary or capricious. However, to the extent that need and reasonableness are separate, “need” has come to mean that a problem exists that requires administrative attention, and “reasonableness” means that the solution proposed by the MPCA is appropriate. The need for the rule is described below.

The current Minn. R. ch. 7080 contains minimum standards and criteria for the location, design, installation, use, maintenance and abandonment of SSTS, a licensing program for SSTS professionals and administrative requirements for local units of government. Overall, Minn. R. ch. 7080 is working well in serving the needs of system owners, regulators and the SSTS industry. However, the Agency has a specific need to amend Minn. R. ch. 7080 in order to address emerging issues and correct specific problems. The Agency is specifically revising this chapter in order to:

- A. Add a product registration program. Currently the Agency does not have a protocol or methodology to review, assess and register new SSTS technologies. There are many new technologies being proposed that local permitting authority's currently have to make a local decision on their use. The local permitting authorities and manufacturers strongly favor the agency taking a leadership role in technology assessment.
- B. Add specifications for systems serving multiple dwellings (cluster systems). Within the past few years, many new developments have been designed to collect and transport the sewage from multiple dwellings to one large soil dispersal and treatment system. This practice is now very common with some localities now requiring cluster systems and disallowing individual systems on each lot. In addition, many older developments have very small lots with poor soil conditions and must collect and transport the sewage to an offsite soil dispersal and treatment system. The current code has limited specifications on how to design, permit, inspect, and operate such systems. The Agency is aware of approximately 20 new cluster systems that have design, operation, and/or maintenance problems. Therefore, it is prudent to embellish the current standards for these larger systems to avoid future system failures. The proposed revisions also provide needed criteria for establishments that generate high strength wastes.
- C. Add new professional licensing categories. The industry has strongly encouraged the Agency to develop new licensing categories for specific areas of need. The identified areas of need are – advanced designer (for non-standard technologies for small systems), MSTTS designer (for systems designed under chapter 7081), and service provider (i.e., system operator).
- D. Add an enhanced performance (outcomes based) regulatory option for local programs. The rule currently allows performance based systems, but it has been suggested that these standards need to be enhanced to allow local permitting authorities to set different design standards based on varying environmental conditions.
- E. Update design standards based on new findings and suggestions from the public and the industry. New SSTS research has been conducted since 1999 and the Agency has received many comments to update the standards. This new information should be reflected in the standards.

F. Structural and format changes for clarity.

The Agency proposes to divide the diverse regulatory areas now covered under Minn. R. ch. 7080 into individual chapters as follows:

- Chapter 7080 – standards for systems serving flows of 2,500 gallons per day or less.
- Chapter 7081 – standards for systems serving flows from 2,501 (or four dwellings) to 10,000 gallons per day.
- Chapter 7082 – requirements for local regulatory programs.
- Chapter 7083 – requirements for professional licensing and certification.

V. REASONABLENESS OF THE AMENDMENTS

A. Reasonableness of the Proposed Rule Amendments as a Whole

The reasonableness portion of the Statement provides the discussion and background on why and how certain provisions of the proposed rules were established. This part discusses the reasonableness of the proposed rules as a whole. The reasonableness of specific requirements is discussed under part B.

The proposed SSTS rules (Minn. R. chs. 7080, 7081, 7082, and 7083) as a whole are reasonable because they will provide standards to reasonably protect public health, safety, and the environment from SSTS hazards.

An estimated 536,000 Minnesota households rely on SSTS for sewage treatment and disposal. This group of households is extremely diverse. On one end of the spectrum are elderly residents on a small, fixed income, who are in remote locations and who generate very little sewage. On the other end of the spectrum are individuals with large homes in densely-populated urban areas within city limits. Other groups include: cabin owners along lakeshores, farmers in sparsely-populated areas, and clusters of new residential properties.

The Agency believes that the benefit derived from properly treating sewage is worth the cost. Not bearing the cost results in untreated sewage being discharged on to lawns, ditches, tile lines, surface waters, and directly into ground water. These results are evident in areas of Minnesota that have no regulations or when existing regulations are poorly enforced and where the improper discharge of sewage discharge is commonplace. It is estimated that, in Minnesota, the volume of sewage generated from dwellings and businesses not connected to municipal sewage systems is 56 million gallons of sewage per day (536,000 unsewered households x 2.1 people/ household x 50 gal/person/day). The public health and environmental cost of improper disposal has not been studied in detail and quantified. However, it is known that sewage can contain pathogenic organisms at high concentrations from feces, blood, urine, vomit, phlegm, skin diseases and spoiled food. The effect of surfacing of untreated sewage is foul-smelling and can attract unwanted vectors and vermin and improperly treated sewage can enter surface waters where pathogens and eutrophication by nutrients are concerns.

In addition to the concerns with surfacing of untreated sewage, improper subsurface disposal of sewage into the soil can contaminate ground water drinking sources. Contaminated ground water can enter private drinking water wells which are untreated before consumption.

Even though the risks of untreated sewage are not quantified, the Agency feels a significant public health threat would occur if sewage from dwellings is not properly treated and disposed. Properly treating sewage will maintain surface water quality for its many uses and will maintain property values by eliminating nuisance conditions and potential health threats.

The SSTS rules in Minnesota started with set of standards developed in the 1970's as Minn. R. ch. WPC40. In shoreland areas and throughout some counties, WPC40 was adopted by local governments to regulate SSTS. However enforcement of these standards was lacking in most areas. In the 1970's, a system of voluntary certification for SSTS professionals was developed jointly by the University and the MPCA. The level of enforcement and consistency between local programs increased, but there were still significant deficiencies.

One area that was a major concern to SSTS contractors was local SSTS licensure. Many local jurisdictions required that SSTS contractors be licensed by their jurisdiction, which meant that many contractors had to purchase multiple licenses. As a result, in 1994 the Minnesota legislature required statewide licensure of SSTS professionals. The rationale for the new law, supported by the SSTS contractors through their organization (Minnesota Onsite Sewage Treatment Contractors Association) was to eliminate multiple fees for local licensure. The 1996 rules adopted by the MPCA (Minn. R. ch. 7080) included statewide SSTS licensing requirements. This requirement is reasonably carried forward in the proposed rules, with some adjustment to the categories based on current experience and changes in the nature of the industry.

The 1994 legislation also required those jurisdictions with an SSTS ordinance to amend their ordinance if it did not conform to Minn. R. ch. 7080. In some areas of the state, these established minimum standards were controversial. Some local jurisdictions chafed at the loss of local licensure, a key tool they used in administering their programs. Others said that their jurisdiction's elected leaders did not have the political will to be more stringent than the new minimum state standards. Still other local jurisdictions, largely those that had chosen not to adopt the previous voluntary state standards, said that the new minimum standards were too rigid for their counties, and not a good fit. In 1997 the law was changed to its current form cited in this Statement. (Minor modifications to the law have occurred in subsequent years.) Counties are now required to ensure that all areas of the county are covered by an SSTS program, but they are also allowed to vary from the state standards. Minn. Stat. § 115.55 subd. 2(c) requires local governments to prepare and distribute on request a list of differences from the state code. The MPCA believes it is reasonable to provide a clear and consistent set of technical standards in order to encourage consistency in local ordinances.

If a local jurisdiction chooses to be more stringent than the state SSTS design standards, all that is required is that the differences be identified in accordance with the law. The law also allows counties to be less stringent than the state in certain circumstances, described in Minn. Stat. § 155.55 subd. (7). When this law was enacted, the stated legislative intent was to avoid overly-strict regulation in areas where population density is low and will remain so. These lower-than-state-SSTS-design standards are referred to in Minn. R. ch. 7080 as "alternative local standards." In the 2004 SSTS annual reports from local units of government, 33 counties, 18 cities, and three towns reported having adopted alternative local standards. Note that cities and towns are not allowed to adopt alternative local standards. Also, alternative local standards are not allowed to be employed in shoreland, wellhead protection areas or for licensed food, beverage, and lodging facilities.

Due to staffing levels in the late 1990's and early 2000's, MPCA was not able to either provide significant support to local governments as they developed and revised their ordinances or to review local ordinances when they were submitted to MPCA. In recent years, staff has been added at the MPCA and increasing effort is being put toward development of effective local programs. One goal

of this rule revision is the achievement of greater consistency statewide when local ordinances are rewritten to conform with the new requirements of this chapter. The MPCA believes it is reasonable at this time to establish rules to more clearly identify the responsibilities and expectations for local units of government as they adopt and revise their ordinances.

A vast majority of the changes being made in this rulemaking are a result of comments the Agency has received concerning common problems faced by SSTS owners or the industry. Therefore, many of these changes are reactive in nature. A vast majority of the solutions offered to alleviate the problems were suggested by the interested and affected parties. If conflicting solutions were offered, the Agency attempted to resolve the conflict before arriving at a conclusion. MPCA staff met with interested parties on several occasions to decide on final solutions. The U of M was also invited to participate in these meetings. The Agency feels all the solutions established in the proposed rules are reasonable, cost effective, and can be readily implemented.

## B. Specific Reasonableness of the Proposed Amendments

This section addresses the reasonableness of each rule part and answers questions about the Agency's intent for each rule requirement. The need for and reasonableness of some rule parts are obvious and therefore are only explained briefly, while others are explained in more detail. Where there may be a question of future rule interpretation, the Agency has provided additional discussion of the meaning of the specific rule. Rule text that remains the same is not discussed, nor is rule text that is just moved from one rule location to another without change in content.

The changes will be presented for each new rule chapter, starting with Minn. R. ch. 7080. The rule language appears in *italics*. Since all portions of the rules have been moved all rule language is underlined, even the language that is not being changed. Deleted language is shown by ~~strikeout~~. The justification for each proposed rule change appears immediately below the rule language.

The changes noted in this Statement are one of nine types:

1. Reformatted into a new subpart within chapter 7080 with the language unchanged.
2. Move from chapter 7080 into a new chapter with the language unchanged.
3. Reformatted into a new subpart within chapter 7080 with minor language changes for clarity with no change in meaning intended.
4. Moved from chapter 7080 with minor language changes for clarity with no change in meaning intended.
5. Reformatted into a new subpart within chapter 7080 with substantive changes.
6. Moved from chapter 7080 with substantive changes.
7. Provision deleted.
8. New provision.
9. A combination of more than one of these types of changes.

If a provision was moved from former chapter 7080, the rule language and justification will appear in this Statement under the new chapter location. If the provision has been deleted and not simply moved to a new subpart or chapter, then that deletion will appear as struck-through language under the former chapter heading.

## AMENDMENTS TO INDIVIDUAL SECTIONS OF MINN. R. CH. 7080

### Minn. R. 7080.0150 PURPOSE AND INTENT

1. Proposed Change - new 7080.1050 first paragraph, formerly 7080.0010 first paragraph.

In addition to reformatting, the language has changed as follows:

*The proper location, design, installation, use, and maintenance of an individual subsurface sewage treatment system (ISTS or system) protects the public health, safety, and general welfare by the discharge of adequately treated sewage to the groundwater. In accordance with the authority granted in Minnesota Statutes, chapters 103F, 103G, 115, and 116, the Pollution Control Agency provides the minimum environmental protection standards for ISTS as defined in this chapter. These environmental protection standards shall be adopted countywide and administered and enforced by local units of government as directed by chapter 7082, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55.*

#### Justification

It is proposed to limit this rule to individual systems serving dwellings, small cluster systems and small systems serving other establishments. The current rule contains technical standards for both individual and mid-sized systems. Current design standards for some mid-sized system components currently do not exist, so designers have used standards for individual homes for the design of mid-sized systems. This is problematic, because it is not always technically correct to use design standards for individual systems for mid-sized systems. Therefore, it is prudent to place the standards in separate chapters, with mid-sized system standards moved to proposed Minn. R. ch. 7081 to avoid any confusion about which standards apply for each component. This concept was generally accepted by interested parties at the various meetings that this change was presented.

2. Proposed Change - former 7080.0010 second paragraph.

~~*Industrial wastewater treatment systems receiving nonhazardous wastes and systems serving facilities not classified as dwellings are regulated by the United States Environmental Protection Agency as Class V injection wells under Code of Federal Regulations, title 40, parts 144 and 146. These federal regulations along with this chapter cover systems serving other establishments and systems serving more than 20 persons*~~

#### Justification

This language and concept is reworded and relocated in a later paragraph and also repeated in Minn. R. 7081.0050.

3. Proposed Change - new 7080.0010 second paragraph.

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

regulate systems that do not receive sewage as defined in this chapter. If systems receive both sewage and nonsewage, the requirements of this chapter apply, plus any additional requirements governing the nonsewage portion of the wastewater. Systems serving two or more dwellings and systems receiving nonsewage are also regulated under Code of Federal Regulations, title 40, parts 144 and 146.

~~Industrial wastewater treatment systems receiving nonhazardous wastes and systems serving facilities not classified as dwellings are regulated by the United States Environmental Protection Agency as Class V injection wells under Code of Federal Regulations, title 40, parts 144 and 146. These federal regulations along with this chapter cover systems serving other establishments and systems serving more than 20 persons~~

#### Justification

It is proposed to clearly state that if a subsurface system does not receive sewage, from any source, then it is not covered under these rules. This is a common question because of the variety of wastes that may be disposed of by subsurface systems. This provision clarifies that if the system does receive both sewage and nonsewage, then these provision do apply. It is also proposed to clarify the question of whether a system is compliant if non-sewage is discharged into an SSTS. The answer would be yes, if the nonsewage component is being properly treated and disposed. The language referring to the federal requirements is reworded for clarity.

#### 4. Proposed Change - new third paragraph 7080.1050, formerly 7080.0010 third paragraph.

This chapter does not regulate systems that discharge to the ground surface or surface waters. Those systems require a national pollution discharge elimination system permit.

#### Justification

It is the intent of this chapter to only regulate subsurface, leaving the design and operation, regulations of surface discharge systems to other Agency rules. However, this rule does regulate surface discharge systems to the extent that surface discharge systems are illegal under this rule. This clarification is reasonable because there are systems serving households in rural Minnesota which were designed with an illegal surface discharge (mainly older systems) or newer systems with operational problems.

#### 5. Proposed Change - former part 7080.0010 third paragraph.

~~to provide a framework for permitting and inspection programs to be administered at the local level; -and to describe the responsibilities, licensing, and enforcement requirements for subsurface sewage treatment system professionals. All counties must adopt and enforce subsurface sewage treatment system ordinances that comply with this chapter unless all towns and cities in the county have adopted complying ordinances. The technical portions of this chapter are based on sound research and practical field applications to achieve adequate sewage treatment.~~

#### Justification

This language is proposed to limit the scope of this chapter to technical standards for small SSTS and to move the local ordinance requirements to new Minn. R. ch. 7082. The concept that local units must adopt these standards (a requirement of Minn. Stat. § 115.55) is proposed to be moved to Minn. R. ch. 7082. This concept of moving these standards to new chapters was generally accepted at the various meetings held with interested and affected parties where this change was presented.

**6. Proposed Change – former part 7080.0010 fourth paragraph.**

*In addition, this chapter establishes programs for ~~licensing businesses and training and registering SSTS professionals.~~*

Justification

This language is proposed to move the professional licensing requirements to new Minn. R. ch. 7083 for the ease of the user. This concept of moving these standards to new chapters was generally accepted at the various meetings where this change was presented.

**7. Proposed Change - new part 7080.1050 fourth paragraph.**

*In addition, this chapter provides prescriptive design, construction, and operational standards to reasonably protect surface water and ground water and promote public health, safety, and general welfare. This chapter also provides public health and environmental outcomes as a basis for a custom-designed system. Technology and products employed in system design shall adequately protect the public health and the environment as determined by this chapter and be approved for use by the local unit of government.*

Justification

The language and concept was moved from the third paragraph of former Minn. R. 7080.0010.

**8. Proposed Change - new part 7080.1050 fifth paragraph.**

*In conjunction with these standards, the Agency encourages the use of advanced treatment methods and waste reduction to further reduce the discharge of contaminants.*

Justification

This language is moved from the third paragraph of former Minn. R. 7080.0010.

**9. Proposed Change - new part 7080.1050 sixth paragraph.**

*Companion to this chapter are standards for midsized ISTS, chapter 7081; as published in the State Register, volume ..., page ...; administrative requirements for local ordinances, permit, and inspection programs, chapter 7082; as published in the State Register, volume ..., page ...; and certification and licensing requirements for those who design, install, inspect, manage, or maintain ISTS, chapter 7083; as published in the State Register, volume ..., page .....*

Justification

This proposed language is offered for clarity and the ease of users of this rule and for other related SSTS rules.

**MINN. R. 7080.0020 DEFINITIONS**

**10. Proposed Change - new part 7080.1100, subpart 1, formerly 7080.0020, subpart 1.**

In addition to reformatting, the language changed as follows:

Subpart 1. **Certain terms.** In addition to the definition in chapters 7081, 7082, and 7083, as published in the State Register, volume ..., page ..., which are incorporated in this part, and Minnesota Statutes, section 115.55, the following terms have the meanings given them. For the purposes of this chapter, if a term used in this chapter is defined in chapter 7081, 7082, or 7083, as published in the State Register, volume ..., page ..., it shall apply to other SSTs if referenced in later chapters. For the purposes of these standards, certain terms or words used are interpreted as follows: the words "shall" and "must" are mandatory and the words "should" and "may" are permissive. All distances specified in this chapter are horizontal distances unless otherwise specified.

#### Justification

Many of the terms used in proposed chapters 7080, 7081, 7082, and 7083 will occur in one or more chapters. Instead of repeating the definition in each rule and repeating in this Statement the discussion of the reasonableness of each of the repeated definitions in every chapter, it is proposed to define each term and explain the reasonableness of each definition in the chapter where that definition is most relevant and appropriate. For example, the definition of "mid-sized treatment system" is defined in chapter 7081 and the reasonableness of it will be discussed in this Statement where it occurs in chapter 7081.

One problem with addressing the reasonableness of the frequently used definitions in different chapters is that within some of the definitions the specific terms "individual sewage treatment system" or "mid-sized sewage treatment system" are used. These two terms have a very specific meanings and therefore, in some cases, a definition that uses one or the other of these terms would not seem to apply in the context it is used. However, the Agency is clarifying in this subpart that the definition applies to either type of treatment system, if that term is used in the text of each chapter.

#### **11. Proposed Change - part 7080.1100, subpart 2, formerly 7080.0020, subpart 1a.**

Subp. 2. **Absorption area.** "Absorption area" means the area on original soil below a mound system that is designed to absorb sewage tank effluent. The absorption area for trenches, seepage beds, and at-grade systems is the soil area in contact with the part of the distribution medium that is designed and loaded to allow absorption of sewage tank effluent. This includes both bottom and sidewall soil contact areas.

#### Justification

A change to the definition is proposed to clearly include sidewall as well as bottom area as area which is designed to infiltrate effluent, as has been the case since the inception of this rule and has been included in new Minn. R. 7080.2150 and 7080.2210. This is in response to the various geometries of distribution products which has resulted in confusion to the industry on how to size the various technologies.

#### **12. Proposed Change - formerly part 7080.0020, subpart 1b.**

Subpart 1b. ~~Additive, subsurface sewage treatment system.~~ "Additive, subsurface sewage treatment system" means a product added to the wastewater or to the system with the intent to improve the performance of an subsurface sewage treatment system

#### Justification

Since this term is only used once in this chapter, it is proposed to move it into the text Minn. R. 7080.2450, subp. 5.

**13. Proposed Change - formerly part 7080.0020, subpart 2.**

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

Justification

Aerobic tanks are manufactured by various companies and all aerobic tanks are proprietary in nature. The purpose of this change is to remove all proprietary technologies from this chapter and place such technologies on an approved technology list. Because all references to aerobic tanks in this chapter will be removed, this definition will no longer be needed. For more information on the new technology review program, please refer to new Minn. R. 7080.1600 to 7080.1660.

**14. Proposed Change - new part 7080.1100, subpart 3, formerly 7080.0020, subpart 3.**

~~***Subp. 3. Agency.** "Agency" means the Pollution Control Agency.*~~

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**15. Proposed Change - new part 7080.1100, subpart 4, formerly 7080.0020, subpart 3a.**

~~***Subp. 4. Alarm device.** "Alarm device" means a device that uses visual and audible methods to alert the system owner or operator of malfunction to prevent sewage overflows.*~~

Justification

It is proposed to add "owner" to this current provision to clarify who is intended to be notified of a malfunction. This change is proposed for clarity as the owner will be the person at the point of system use who initially needs to be warned. If the former language remained, it could have been interpreted that telemetry devices would need to be installed and monitored by a system operator. This is not intended for systems regulated under this chapter.

It is intended that alarms now provide both audible and visual warnings. This is reasonable because alarms manufactured and used by the industry provide both audible and visual warnings. It is not intended that existing systems with either a visual or audible alarm be considered nonconforming or in need of replacement.

**16. Proposed Change - former part 7080.0020, subpart 3b.**

~~***Alternative local standards.** "Alternative local standards" means subsurface sewage treatment system standards that are less restrictive than the technical standards and criteria in this chapter and adequately protect public health and the environment.*~~

Justification

It is intended that all local unit of government ordinance and administrative requirements be moved to new Minn. R. 7082, therefore this definition is no longer needed in this chapter.

**17. Proposed Change – former part 7080.0020, subpart 4.**

~~Alternative system. "Alternative system" means an subsurface sewage treatment system employing methods and devices presented in part 7080.0172 or as designated by the Commissioner in part 7080.0400, subpart 2.~~

Justification

The Agency proposes to eliminate the classification of systems; therefore, this definition will become obsolete. Please refer to the justification for Minn. R. 7080.2150 for more information on the new system classification.

**18. Proposed Change - new part 7080.1100, subpart 5, former 7080.0020, subpart 4a.**

In addition to reformatting, the language has changed as follows:

Subp. 5. Applicable requirements. "Applicable requirements" means:

A. local ISTS ordinances that comply with parts 7080.2150, subpart 2, and 7081.0080, subparts 1 to 5, as published in the State Register, volume ..., page ...; chapter 7082, as published in the State Register, volume ..., page ...; and Minnesota Statutes, section 115.55; or

B. in areas without complying ordinances to regulate ISTS, the requirements of this chapter.

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**19. Proposed Change - former part 7080.0020, subpart 4b.**

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

Justification

It is proposed to place all licensing requirements into new chapter 7083, therefore, this definition will be moved to Minn. R. 7083.0020, subp. 3.

**20. Proposed Change - former part 7080.0020 subpart 4c.**

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

Justification

The definition is proposed to be moved to Minn. R. 7083.0020 subp. 4.

**21. Proposed Change - new part 7080.1100, subpart 6.**

Subp. 6. **ASTM.** "ASTM" means the American Society for Testing and Materials.

Justification

This acronym is used in various locations throughout the rule to represent the national organization which sets standards which are applicable for SSTS systems.

**22. Proposed Change - new part 7080.1100, subpart 7, former 7080.0020, subpart 4d.**

Subp. 7. **At-grade system.** "At-grade system" means a pressurized soil treatment and dispersal system where sewage tank effluent is dosed to an absorption bed that is constructed directly on original soil at the ground surface and covered by loamy soil materials.

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**23. Proposed Change - new part 7080.1100, subpart 8, former 7080.0020, subpart 5.**

Subp. 8. **Baffle.** "Baffle" means a device installed in a septic tank to retain solids and includes, but is not limited to, vented sanitary tees with submerged pipes and effluent screens.

Justification

The former language is to be changed to include effluent screens (also known as septic tank outlet filters) as outlet baffles. The current practice is to judge the effluent screen against the baffle size requirements, and if the effluent screen meets those specifications, then it can be considered a baffle. This language attempts to make it clear that an effluent screen can qualify as a baffle. Please refer to the proposed change to the definition of effluent screens for further clarification.

**24. Proposed Change - new part 7080.1100, subpart 9, former 7080.0020, subpart 6.**

Subp. 9. **Bedrock.** "Bedrock" means geologic layers which greater than 50 percent by volume consists of unweathered in-place consolidated rock or rock fragments. Bedrock also means weathered in-place rock which cannot be hand augered or penetrated with a knife blade in a soil pit.

Justification

Larger rock fragments have a smaller surface area to volume ratio, thereby reducing the surface area the sewage can come in contact with. The high surface area is needed to provide the retention time and chemical processes to remove contaminants from the sewage effluent.

In some instances bedrock may be weathered to the point that it can provide the same treatment abilities as soil. Therefore, it is proposed that if the rock material is weathered to the point that the porosity and surface area is similar to weathered soil, then it is likely that this material (i.e., saporlite) can provide adequate treatment of sewage effluent and can be counted as "soil" and not the limiting layer.

**25. Proposed Change – new part 7080.1100, subpart 10, former 7080.0020, subpart 7.**

*Subp. 10. **Bedroom.** "Bedroom" means a room or unfinished area within a dwelling that might reasonably be used as a sleeping room as determined by the local unit of government.*

Justification

This former definition is proposed to be changed by addition the phrase “*as determined by the local unit of government.*”

The determination of what constitutes a bedroom has been a continuing problem. The importance of this determination is that the amount of sewage flow is based on the number of bedrooms in the dwelling. The reason being, the more bedrooms, the more people and the more flow. However modern homes contain rooms that may not initially be designed for sleeping (e.g. dens, sewing rooms, offices, craft rooms, workout rooms, etc....), but can be converted to sleeping rooms in the future as the need changes or if the dwelling changes ownership. The MPCA staff solicited many ideas and suggestions on what constitutes a bedroom, but none seemed to alleviate the problem. Therefore, the proposed language will just substantiate the current practice which is that the local permitting authority will make that determination. The local authorities would like a more precise definition of what is offered and the Agency understands their dilemma in making these choices. Instead of attempting to write a precise definition the Agency in cooperation with local units of government and the University of Minnesota (U of M) will develop a guidance document that can be used to administratively determine what constitutes a bedroom, or language that can be placed into local ordinances. There also appears to some advantage to keeping the definition broad in nature as in some instances the permitting official would like to have some discretion and flexibility in making a bedroom determination. Please refer to comment 1 of Exhibit 11.

**26. Proposed Change – new part 7080.1100, subpart 11**

*Subp. 11. **Biochemical oxygen demand or BOD.** "Biochemical oxygen demand" or "BOD" means the measure of the quantity of oxygen used by microorganisms in the aerobic oxidation of organic matter and reduced chemicals.*

Justification -

This is a standard definition of the measure of the amount of material in sewage which can be decomposed in the presence of oxygen (Exhibit 440). This definition is needed because this measurement is used in designing systems. This measurement was not needed in past rules because in the past only septic tanks were used for treatment prior to the soil and the biological oxygen demand amount was factored into the design standards provided in the rule. Currently more treatment devices are being used in lieu of septic tanks and the designers need to be aware of the biological oxygen demand levels to adequately size systems. An acronym is also proposed for ease of reading and fitting into tables used in the rule.

**27. Proposed Change – new part 7080.1100, subpart 12, former 7080.0020, subpart 7a**

*Subp. 12. **Building.** "Building" means all potentially occupied structures and any structure's foundation that could be damaged or the structural integrity of which could be jeopardized by the seepage of sewage or sewage tank effluent.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. For an explanation of the need for this change, please refer to comment 1 of Exhibit 10 and comment 2 of Exhibit 11.

### **28. Proposed Change - former part 7080.0020, subpart 8.**

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

### Justification

Since this term is only used in the definition of building sewer and that definition is proposed to be deleted, this definition is likewise proposed to be deleted. Please see the justification for deleting former Minn. R. 7080.0020, subp. 9.

### **29. Proposed Change former 7080.0020, subpart 9.**

~~**Building sewer.** "Building sewer" means the part of the drainage system that extends from the end of the building drain to an subsurface sewage treatment system.~~

### Justification

It is proposed that the new rule remove all references to the plumbing components in this chapter to avoid confusion about which rule governs the defined component, as has happened in past incidents. See Exhibit 452.

### **30. Proposed Change - former part 7080.0020, subpart 9a.**

~~**Business.** "Business" means an individual or organization that designs, installs, maintains, repairs, pumps, or inspects subsurface sewage treatment systems.~~

### Justification

This definition has been renamed and moved to Minn. R. 7083.0020, subp. 13.

### **31. Proposed Change - new part 7080.1100, subpart 13.**

**Subp. 13. Carbonaceous biochemical oxygen demand or CBOD<sub>5</sub>.** "Carbonaceous biochemical oxygen demand" or "CBOD<sub>5</sub>" means the measure of the quantity of oxygen used by microorganisms in the aerobic oxidation of organic matter and other compounds containing carbon.

### Justification

This term is needed to differentiate between oxygen consuming compounds which are organic in composition and compounds which are inorganic (such as ammonia). An acronym is used for ease of reading and fitting into tables used in the rule.

**32. Proposed Change – new part 7080.1100, subpart 14, former 7080.0020, subpart 10a.**

*Subp. 14. Certificate of compliance. "Certificate of compliance" means a document, written after a compliance inspection, certifying that a system was in compliance with applicable requirements at the time of the inspection.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**33. Proposed Change - new part 7080.1100, subpart 15, former 7080.0020, subpart 10b.**

*Subp. 15. Certified statement. "Certified statement" means a statement signed by a certified individual, apprentice, or qualified employee under chapter 7083, as published in the State Register, volume ..., page ..., certifying that the licensed business or qualified employee completed work in accordance with applicable requirements.*

Justification

This is a former provision with a change in the list of individuals qualified to make a certified statement. This change is due to changes in certification nomenclature and to make clear that apprentices can make certified statements.

**34. Proposed Change - new part 7080.1100, subpart 16, former 7080.0020, subpart 11.**

*Subp. 16. Cesspool. "Cesspool" means an underground pit, receptacle, or seepage tank that receives sewage directly from a building sewer and leaches sewage into the surrounding soil, bedrock, or other soil materials. Cesspools include sewage tanks that were designed to be watertight, but subsequently leak below the designed operating depth.*

Justification

This is a former provision with the additional language: Cesspools also include sewage tanks, that were designed to be watertight, that subsequently leak below the designed operating depth. This language is needed to identify those tanks that were designed and installed as being watertight, which now leak sewage into the soil. The problem with these systems is that the sewage is discharged into a small area (i.e. high loading rate) at a high hydraulic head, and may discharge near or into the seasonally saturated soil.

**35. Proposed Change - former part 7080.0020, subpart 11a.**

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

Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for Minn. R. 7080.1600, subp. 1(A) and Minn. R. 7080.1645 subp. 1.

**36. Proposed Change - new part 7080.1100, subpart 17, former 7080.0020, subpart 11b.**

*Subp. 17. Clean sand. "Clean sand" means a soil fill material required to be used in mounds. The standards for clean sand are outlined in part 7080.2220, subpart 3, item C.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**37. Proposed Change - new part 7080.1100, subpart 18, former 7080.0020, subpart 11c.**

*Subp. 18. Commissioner. "Commissioner" means the Commissioner of the Pollution Control Agency.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**38. Proposed Change - new part 7080.1100, subpart 19, former 7080.0020, subpart 11d.**

*Subp. 19. Compliance inspection. "Compliance inspection" means an evaluation, investigation, inspection, or other such process for the purpose of issuing a certificate of compliance or notice of noncompliance.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**39. Proposed Change – former part 7080.0020, subpart 12.**

*DNR. "DNR" means the Minnesota Department of Natural Resources.*

Justification

This acronym is only used once in the chapter, so it is proposed just to write-out in whole the name “Minnesota Department of Natural Resources” where it occurs.

**40. Proposed Change - former part 7080.0020, subpart 12a.**

*Designated registered professional. "Designated registered certified professional" means an individual who is included on the Agency's SSTS professional register certification list with specialty area endorsements that correspond to the license, who has been designated by the individual's employer as its representative for work to be done on an individual sewage treatment system, and who is subject to the obligations of a license.*

Justification

It is proposed to move this definition to Minn. R. 7083.0020, subp. 5.

**41. Proposed Change - former part 7080.0020, subpart 12b.**

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

Justification

Due to its limited use, it is proposed to delete this definition and place the definition into the body of the rule where used.

**42. Proposed Change - new part 7080.1100, subpart 20.**

*Subp. 20. Disinfection. "Disinfection" means the process of destroying pathogenic microorganisms in sewage through the application of ultraviolet light, chlorination, ozonation.*

Justification

This term is use because the amendments will allow less vertical separation distance (i.e., soil treatment) in the soil dispersal system. Therefore, pathogen removal must come from other sources, one being a disinfection unit.

**43. Proposed Change - new part 7080.1100, subpart 21, former 7080.0020, subpart 11d.**

*Subp. 21. Distinct. "Distinct" means a soil color that is not faint.*

Justification

It is proposed to use a default definition to state that any color variation which does not qualify for faint, be considered distinct. This is intended for simplicity's sake. It should be understood that in classic soil science terminology there is a term beyond distinct which is termed as prominent. For SSTS design work, it makes no difference if the redoximorphic color variation is distinct or prominent, as both terms indicate a repeated and prolonged saturated period.

**44. Proposed Change – new part 7080.1100, subpart 22, former 7080.0020, subpart 12c.**

*Subp. 22. Distribution box. "Distribution box" means a device designed to distribute sewage tank effluent concurrently and equally by gravity to multiple segments of a soil treatment and dispersal system.*

Justification

This is a current provision that has been moved due to rule restructuring.

**45. Proposed Change - new part 7080.1100, subpart 23, former 7080.0020, subpart 12d.**

*Subp. 23. Distribution device. "Distribution device" means a device used to receive and transfer effluent from supply pipes to distribution pipes or downslope supply pipes, or both. These devices include, but are not limited to, drop boxes, valve boxes, distribution boxes, or manifolds.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**46. Proposed Change - new part 7080.1100, subpart 24, former 7080.0020, subpart 12e.**

Subp. 24. **Distribution medium.** "Distribution medium" means the material used to store and distribute sewage tank effluent within a soil treatment and dispersal system.

Justification

This is a former provision and it is proposed to delete the phrase: "This medium includes soil dispersal and treatment system rock, gravelless soil dispersal and treatment system pipe in a geotextile wrap, or a chambered system." This is proposed because all proprietary products are proposed to be removed from this chapter, therefore, the listing of technologies in this definition is proposed to be deleted. For more information please refer to the justification for Minn. R. 7080.1600, subp. 1.

**47. Proposed Change - new part 7080.1100, subpart 25, former 7080.0020, subpart 13.**

Subp. 25. **Distribution pipes.** "Distribution pipes" means perforated pipes that distribute effluent within a distribution medium.

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**48. Proposed Change - new part 7080.1100, subpart 26, former 7080.0020, subpart 14.**

Subp. 26. **Dosing chamber.** "Dosing chamber" means a tank or separate compartment following the sewage tank that serves as a reservoir for a pump. Dosing chambers in a separate tank are considered a septic system tank under Minnesota Statutes, section 115.55, subdivision 1, paragraph (o).

Justification

This is a former provision with minor language changes for clarity. It is proposed to eliminate the multiple terms used for a tank that stores sewage effluent to be dosed to a soil dispersal system. The second change is a result of the proposed elimination of siphons as a dosing device. This proposed elimination is due to siphons never being considered as a pressure distribution device, and that they are virtually unused in the state.

**49. Proposed Change - new part 7080.1100, subpart 27.**

Subp. 27. **Drip dispersal system.** "Drip dispersal system" means a small diameter pressurized wastewater distribution system that can deliver small, precise doses of effluent to the soil surrounding the drip distribution piping.

Justification

Systems using small diameter tubing with emitters will need to be assessed as a distribution media in new Minn. R. 7080.1640 and Minn. R. 7080.1645. Therefore, it is helpful to define these systems in this chapter.

**50. Proposed Change part - former 7080.0020, subpart 15.**

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

Justification

The proposed change to this part is a result of the proposed elimination of siphons as a dosing device. Siphons are not being considered as a pressure distribution device, and they are virtually unused in the state. Therefore, the only remaining dosing device is a pump, so the term "pump" will be used in the rule in place of the term "dosing device." Siphons may still be used, but they would be considered a Type III system (Minn. R. 7080.2300) or Type V system (Minn. R. 7080.2400).

**51. Proposed Change part - former 7080.0020, subpart 15a.**

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

Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information please refer to the justification for Minn. R. 7080.1600, subp. 1. Please refer to comment 4 of Exhibit 398.

**52. Proposed Change - new part 7080.1100, subpart 28, former 7080.0020, subpart 15b.**

*Subp. 28. **Drop box.** "Drop box" means a distribution device used for the serial gravity application of sewage tank effluent to a soil treatment system.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**53. Proposed Change - new part 7080.1100, subpart 29, former 7080.0020, subpart 16.**

*Subp. 29. **Dwelling.** "Dwelling" means any building or place used or intended to be used by human occupants as a single-family, multifamily, or seasonal residence with plumbing. Each family unit in a multifamily residence is considered one dwelling.*

Justification

The first change from the former language is to add the term "seasonal" in the definition of dwelling. It has always been implied, but not expressly stated in the past rule, that sewage from seasonal dwellings has the same treatment and dispersal requirements (although in small quantities) as sewage from full-time residences.

The second change is to add the term “plumbing” in order to distinguish between dwellings that require an ISTS, versus primitive dwellings (with hand pumps, etc.) which do not require an ISTS unless determined by the local unit of government. See the justification for Minn. R. 7080.1500, subp. 2.

**54. Proposed Change - new part 7080.1100, subpart 30, former 7080.0020, subpart 16a.**

*Subp. 30. **Effluent screen.** "Effluent screen" means a device that filters solid materials from sewage tanks as effectively as an outlet baffle before discharge to a soil treatment system.*

Justification

This proposed language change is to highlight the fact that effluent screens can be used as outlet baffles.

**55. Proposed Change new part 7080.1100, subpart 31.**

*Subp. 31. **EPA.** "EPA" means the United States Environmental Protection Agency.*

Justification

An explanation of this acronym is needed when used in charts contained in this chapter.

**56. Proposed Change - new part 7080.1100, subpart 32.**

*Subp. 32. **Existing systems.** "Existing systems" means systems that have been previously inspected and approved by the local unit of government during installation. In addition, all operating systems installed before the adoption of a local permitting and inspection program are considered existing systems.*

Justification

The term “existing system” needs to be defined so an inspector knows under what compliance classification system the system is to be judged. For example, an older system currently in use is judged by the simple criteria found in Minn. R. 7080.1500, subp. 4. This subpart only requires basic sewage treatment and dispersal requirements (i.e., that there not be a cesspool, or seeping to the ground surface, etc...) while a system being constructed today on a new lot or as a replacement system must meet a more rigorous set of design and construction standards (i.e., correct size, meets setbacks, etc.). Please refer to comment 2 of Exhibit 10.

**57. Proposed Change part - former 7080.0020, subpart 16b.**

*Failing system. "Failing system" means a seepage pit, cesspool, drywell, leaching pit, other pit, a tank that obviously leaks below the designated operating depth, or any system with less than the required vertical separation as described in part 7080.0060, subpart 3.*

Justification

It is proposed to change the name of these types of systems. Please see the justification for “Systems Failing to Protect Ground Water” (Minn. R. 7080.1500, subp. 4[B]).

**58. Proposed Change - new part 7080.1100, subpart 33, former 7080.0020, subpart 16i.**

*Subp. 33. **Faint.** "Faint" means a soil color:*

A. with the same hue as another soil color but that varies from the other color by two or less units of value and not more than one unit of chroma;

B. that differs from another soil color by one hue and by one or less units of value and not more than one unit of chroma; or

C. that differs from another soil color by two units of hue with the same value and chroma.

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **59. Proposed Change - new part 7080.1100, subpart 34.**

Subp. 34. **Fecal coliform or FC.** "Fecal coliform" or "FC" means bacteria common to the digestive systems of warm-blooded animals that are cultured in standard tests. Counts of these organisms are typically used to indicate potential contamination from sewage or to describe a level of disinfection, generally expressed in colonies per 100 mL.

#### Justification

Fecal coliform is the bacterial indicator of whether pathogenic organisms may be present in the sewage. The term will be used when assessing treatment devices for pathogen removal potential. An acronym is used for ease of reading and fitting into tables used in the rule.

#### **60. Proposed Change - new part 7080.1100, subpart 35, former 7080.0020, subpart 16c.**

Subp. 35. **Fine sand.** "Fine sand" means a sand soil texture, as described in the *Field Book for Describing and Sampling Soils*, which is incorporated by reference in subpart 42, where more than 50 percent of the sand has a particle size range of 0.05 millimeters, sieve size 270, to 0.25 millimeters, sieve size 60.

#### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

#### **61. Proposed Change - new part 7080.1100, subpart 36, former 7080.0020, subpart 16e.**

Subp. 36. **Flood fringe.** "Flood fringe" means that portion of the floodplain outside the floodway. Flood fringe is synonymous with the term "floodway fringe" used in flood insurance studies.

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **62. Proposed Change - new part 7080.1100, subpart 37, former 7080.0020, subpart 16d.**

Subp. 37. **Floodplain.** "Floodplain" means the area covered by a 100-year flood event along lakes, rivers, and streams as published in technical studies by local, state, and federal agencies, or in the absence of these studies, estimates of the 100-year flood boundaries and elevations as developed according to a local unit of government's floodplain or related land use regulations.

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **63. Proposed Change - new part 7080.1100, subpart 38, former 7080.0020, subpart 16f.**

*Subp. 38. Floodway. "Floodway" means the bed of a wetland or lake, the channel of a watercourse, and those portions of the adjoining floodplain that are reasonably required to carry the regional flood discharge.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **64. Proposed Change - new part 7080.1100, subpart 39, former 7080.0020, subpart 16g.**

*Subp. 39. Flow measurement. "Flow measurement" means any method to accurately measure water or sewage flow, including, but not limited to, water meters, event counters, running time clocks, or electronically controlled dosing.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **65. Proposed Change part - former 7080.0020, subpart 16h.**

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

### Justification

This definition is only used in the definition of the acronym "SWF" in new Minn. R. 7080.1100, subp. 90, so the main portions of the definition of "food, beverage, and lodging facility" were placed in subpart 90.

#### **66. Proposed Change - new part 7080.1100, subpart 40.**

*Subp. 40. Geomorphic description. "Geomorphic description" means the identification of the landscape, landform, and surface morphometry of the proposed area of the soil treatment and dispersal system as described in the Field Book for Describing and Sampling Soils: Version 2.0 (2002), developed by the National Soil Survey Center and Natural Resources Conservation Service of the United States Department of Agriculture. The field book is incorporated by reference, is subject to frequent change, and is available through the Minitex interlibrary loan system.*

### Justification

This definition is proposed to replace the definition of landscape position formerly found in Minn. R. 7080.0020, subp. 21e. This proposed method is much preferable because it is comprehensive in its description of the soils position in a geomorphic setting. Soil characteristics and behaviors are very dependent on the soils position in the landscape which can greatly aid in the interpretation of the soils

ability to treat and disperse sewage. Training will be provided by the MPCA staff and U of M on how to determine the geomorphic position.

**67. Proposed Change part - former 7080.0020, subpart 17b.**

~~*Subpart 17b. Gravelless drainfield pipe.. "Gravelless drainfield pipe" means a distribution medium consisting of a corrugated distribution pipe encased in a geotextile wrap installed in a trench.*~~

Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all references to soil treatment and dispersal media products from this rule and have those types of products registered under the new product registration program. For more information please refer to the justification for Minn. R. 7080.1600, subp. 1.

**68. Proposed Change - new part 7080.1100, subpart 41, former 7080.0020, subpart 18.**

*Subp. 41. Greywater. "Greywater" means sewage that does not contain toilet wastes.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**69. Proposed Change - new part 7080.1100, subpart 41, former 7080.0020, subpart 18a.**

*Subp. 42. Greywater system. "Greywater system" means a system that receives, treats, and disperses only greywater or other similar system as designated by the Commissioner.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**70. Proposed Change - new part 7080.1100, subpart 43, former 7080.0020, subpart 18b.**

*Subp. 43. Hazardous waste. "Hazardous waste" means any substance that, when discarded, meets the definition of hazardous waste in Minnesota Statutes, section 116.06, subdivision 11.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**71. Proposed Change - new part 7080.1100, subpart 44, former 7080.0020, subpart 19.**

*Subp. 44. Holding tank. "Holding tank" means a tank for storage of sewage until it can be transported to a point of treatment and dispersal. Holding tanks are considered a septic system tank under Minnesota Statutes, section 115.55, subdivision 1, paragraph (o).*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring." Please refer to comment 1 of Exhibit 398.

**72. Proposed Change part - former 7080.0020, subpart 19a.**

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

Justification

Since this definition is used only once, the information is to be moved into the body of the rule in new Minn. R. 7080.1500, subp. 4(A).

**73. Proposed Change part - former 7080.0020, subpart 19b.**

~~**ISTS.** *"ISTS" means an individual sewage treatment system as defined in subpart 21.*~~

Justification

This acronym is proposed to be moved to Minn. R. 7080.1100, subp. 45.

**74. Proposed Change part - former 7080.0020, subpart 19c.**

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

Justification

This definition is proposed to be renamed and moved to Minn. R. 7083.0020, subp. 5.

**75. Proposed Change - new part 7080.1100, subpart 45, former 7080.0020, subpart 21.**

In addition to reformatting, the language has changed as follows:

**Subp. 45. Individual subsurface sewage treatment system or ISTS.** *"Individual subsurface sewage treatment system" or "ISTS" means a sewage treatment and dispersal system or part that consists of sewage tanks or other treatment devices with final discharge into the soil below the natural soil elevation or elevated final grade that are designed to receive sewage from three or less dwellings or other establishments with an average daily flow of 2,500 gallons per day or less. ISTS includes the holding tanks and privies that serve these same facilities. ISTS does not include building sewers or other components regulated under chapter 4715.*

Justification

Minor word changes from the former language are proposed for clarity. In addition, the definition is to be changed to reflect the new size boundary between MSTs and ISTS to draw the distinction between the design standards in new Minn. R. 7081 and this chapter. Much discussion took place with interested and affected parties as to where the thresholds between ISTS and MSTs should be set. Please refer to comment 4 Exhibit 10 and comment 1 of Exhibit 279 and the justification for Minn. R. 7081.0020, subp. 5.

**76. Proposed Change - new part 7080.1100, subpart 46, former 7080.0020, subpart 21a.**

*Subp. 46. **Inner wellhead management zone.** "Inner wellhead management zone" means the drinking water supply management area for a public water supply well that does not have a delineated wellhead protection area approved by the Department of Health under part 4720.5330.*

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring.

**77. Proposed Change - new part 7080.1100, subpart 47, former 7080.0020, subpart 21b.**

*Subp. 47. **Invert.** "Invert" means the lowest point of a channel inside a pipe.*

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring.

**78. Proposed Change part - former 7080.0020, subpart 21c.**

*Landscape position. "Landscape position" means the identification of the shape of the land or geomorphic setting of the soil. Terms used to describe landscape position include ridge, sideslope, footslope, closed depression or pothole, drainage way or swale, terrace, or floodplain.*

**Justification**

It is proposed to replace this definition with the term "geomorphic description." Please refer to the justification for geomorphic description in new Minn. R. 7080.1100, subp. 41.

**79. Proposed Change part - former 7080.0020, subpart 21d.**

*Licensee. "Licensee" means a person to whom a license is issued under part 7080.0705.*

**Justification**

It is proposed to move this definition to Minn. R. 7083.0020, subp. 7.

**80. Proposed Change - new part 7080.1100, subpart 48, formerly 7080.0020, subpart 22b.**

*Subp. 48. **Liquid capacity.** "Liquid capacity" means the liquid volume of a sewage tank below the invert of the outlet pipe or, for holding tanks and dosing chambers, the liquid volume below the invert of the inlet.*

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring.

**81. Proposed Change part - former 7080.0020, subpart 22c.**

*Local ordinance. "Local ordinance" means any ordinance that complies with this chapter adopted by a local unit of government to regulate subsurface sewage treatment system, and/or any ordinance to*

~~regulate the issuance of permits or variances for the addition of a bedroom on property served by an subsurface sewage treatment system.~~

Justification

It is proposed to move this definition into the body of Minn. R. 7082.0050.

**82. Proposed Change part - former 7080.0020, subpart 22d.**

~~Local unit of government. "Local unit of government" means a township, statutory or home rule charter city, or county with jurisdiction over individual sewage treatment systems through a local ordinance.~~

Justification

It is proposed to move this definition into the body of Minn. R. 7082.0040.

**83. Proposed Change - new part 7080.1100, subpart 49, formerly 7080.0020, subpart 22e.**

Subp. 49. Lot. "Lot" means a parcel of land in a plat recorded in the office of the county recorder or registrar of titles or a parcel of land created and conveyed, using a specific legal description, for a building site to be served by an ISTS.

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**84. Proposed Change - new part 7080.1100, subpart 50**

Subp. 50. Management plan. "Management plan" means a plan that requires the periodic examination, adjustment, testing, and other operational requirements to maintain system performance expectations, including a planned course of action in the event a system does not meet performance expectations.

Justification

This term is to replace the current terms of a “monitoring plan” and “mitigation plan” used in former Minn. R. ch. 7080. This change is reasonable in order to reflect the expanded duties surrounding the use, operation, monitoring, sampling, repair, adjustment, and contingency plans for system performance. The proposed term “management plan” better reflects these operational considerations.

**85. Proposed Change - new part 7080.1100, subpart 51.**

Subp. 51. Matrix. "Matrix" means the majority of the color in a soil horizon, as described in the Field Book for Describing and Sampling Soils, which is incorporated by reference in subpart 40.

Justification

This term is needed to differentiate between the minority soil color (mottle) and the majority of the soil color (matrix).

**86. Proposed Change - new part 7080.1100, subpart 52, formerly 7080.0020, subpart 22f.**

*Subp. 52. **Medium sand.** "Medium sand" means a sand soil texture, as described in the Field Book for Describing and Sampling Soils, which is incorporated by reference in subpart 40, that ranges in size between 0.25 millimeters, sieve size 60, and 0.5 millimeters, sieve size 35.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**87. Proposed Change part - former 7080.0020, subparts 2g and 22h.**

*~~Subp. 22g. **Mitigation plan.** "Mitigation plan" means a planned course of action to be used in the event that a system fails to meet performance expectations established in part 7080.0310, subpart 7. 0060.~~*

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

Justification

It is proposed to replace the definitions “mitigation plan” and “monitoring plan” with a definition of “management plan.” Please see the justification for Minn. R. 7080.1100, subp. 50 and comment 1 Exhibit 177.

**88. Proposed Change part - former 7080.0020, subpart 22i**

*~~**More restrictive standards.** "More restrictive standards" means the modification of technical standards and criteria in a local ordinance to provide an additional measure of public health or environmental protection, additional margins of safety, or greater system longevity.~~*

Justification

It is proposed to move this definition to into the body of Minn. R. 7082.0100, subp. 5.

**89. Proposed Change - new part 7080.1100, subpart 53, formerly 7080.0020, subpart 23**

*Subp. 53. **Mottles.** "Mottles" means the minority of the variegated colors in a soil horizon, as described in the Field Book for Describing and Sampling Soils, which is incorporated by reference in subpart 40.*

Justification

It is proposed to change the former term “mottling” to the term “mottles” as a noun is now needed to be used to fit with the revised language in the rule text. It should be understood that the term redoximorphic features is still intended to be used as the determination for seasonal saturation. However, the term “mottles” is still useful to describe the minority of soil color when describing the expression of redoximorphic features.

**90. Proposed Change - new part 7080.1100, subpart 54, formerly 7080.0020, subpart 24.**

*Subp. 54. **Mound system.** "Mound system" means a soil treatment and dispersal system with an absorption bed elevated above the original soil with clean sand to overcome soil limitations.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **91. Proposed Change - new part 7080.1100, subpart 55, formerly 7080.0020, subpart 24b.**

*Subp. 55. **New construction.** "New construction" means installing or constructing a new ISTS or altering, extending, or adding capacity to a system that has been issued an initial certificate of compliance.*

### Justification

It is proposed to delete the term "collector system" from the former definition of new construction, as it is proposed to remove the collector system standards in the former Minn. R. ch. 7080. The collection system standards are being removed because this chapter deals primarily with the treatment and dispersal components and does not deal with the collection components in which there are no nationally recognized small diameter collection systems standards.

#### **92. Proposed Change - new part 080.1100, subpart 56, formerly 7080.0020, subpart 24d.**

*Subp. 56. **Notice of noncompliance.** "Notice of noncompliance" means a document written and signed by a certified inspector after a compliance inspection that gives notice that an ISTS is not in compliance as specified under part 7080.1500.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

#### **93. Proposed Change - new part 7080.1100, subpart 57.**

*Subp. 57. **O&G.** "O&G" means oil and grease, a component of sewage typically originating from foodstuffs such as animal fats or vegetable oils or consisting of compounds of alcohol or glycerol with fatty acids such as soaps and lotions, typically expressed in mg/L.*

### Justification

This term is needed to determine the treatment ability of treatment devices for these constituents, which if found in high concentrations, can result in clogging of the infiltrative surface, causing hydraulic failure. An acronym is used for ease of reading and fitting into tables used in the rule.

#### **94. Proposed Change - new part 7080.1100, subpart 58, formerly 7080.0020, subpart 24e.**

*Subp. 58. **Ordinary high water level.** "Ordinary high water level" of surface water has the meaning given in Minnesota Statutes, section 103G.005, subdivision 14.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**95. Proposed Change - new part 7080.1100, subpart 59, formerly 7080.0020, subpart 24f.**

*Subp. 59. Original soil. "Original soil" means naturally occurring soil that has not been cut, filled, moved, smeared, compacted, altered, or manipulated to the degree that a different soil sizing factor is needed from natural soil conditions.*

**Justification**

It is proposed to more precisely define what is original soil as the MPCA staff receives many calls in regard to this definition. More specificity is required for inspectors to determine whether the site conditions are altered to the degree such that the system's hydraulic performance cannot be reasonably predicted. The proposed revision attempts to provide a framework to judge the site conditions and the extent of the soil's alteration. It seems reasonable to say that if no measurable effects can be determined on the soil's hydraulic capacity, then the system is within the range of known performance expectations. It should be understood that the "change" in the soil sizing factor can be either a greater or lesser sizing factor. A greater sizing factor would be needed in compacted areas, while a smaller sizing factor may be determined for under-compacted areas such as areas of "loose fill." However, the measurements to determine the degree of alteration will need to be carefully made. For example, a percolation test for a mound site, which has had the first few inches of soil compacted, will not indicate compactions because the 12-inch deep percolation hole is only filled to eight inches, thereby not testing the zone in question. Detailed rules cannot be reasonably written on standard methods to test a suspected disturbed site, but the MPCA staff has prepared guidance for assistance to local inspectors.

It is also proposed to remove the former reference to phased disturbance by "construction equipment" so that the definition will be inclusive of other practices that may disturb the soil. This is not meant to include normal agricultural practices, but may include agricultural practices that truly damage the soil such as grazing during wet periods, farm lanes and end rows where tillage equipment turns.

**96. Proposed Change part - former 7080.0020, subpart 25.**

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

**Justification**

The main design standards for other establishments are proposed to be contained in new Minn. R. 7081, therefore, it is proposed that this definition be moved to Minn. R. 7081.0020, subp. 6.

**97. Proposed Change - new part 7080.1100, subpart 60, formerly 7080.0020, subpart 25a.**

*Subp. 60. Other pit. "Other pit" means any pit or other device designed to leach sewage effluent that is greater than 30 inches in height or has a bottom area loading rate of sewage greater than two gallons per square feet, per day.*

**Justification**

It is proposed to add some clarifying language and also add the language: *has a bottom area loading rate of greater than 2.0 gallons per square feet, per day.* One of the soil treatment standards is loading rate, and if the loading rate is excessive, contaminant attenuation and breakdown is diminished.

**98. Proposed Change part - former 7080.0020, subpart 25b.**

~~*Other systems. "Other systems" means systems described in part 7080. do not meet technical standards and criteria and rely on soil treatment and disposal.*~~

Justification

In the current rule there is a system classification system (standard, other, performanc and alternative). It is proposed to eliminate the classification system and list each system specifications in a specific individual subpart. Therefore, a specific definition is not necessary and can be eliminated.

**99. Proposed Change - new part 7080.1100, subpart 61, formerly 7080.0020, subpart 25c.**

~~*Subp. 61. Owner. "Owner" means any person having possession of, control over, or title to property with an ISTS.*~~

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**100. Proposed Change - new part 7080.1100, subpart 62.**

~~*Subp. 62. Parent material. "Parent material" means the geologic material from which the soil was formed and is commonly differentiated from soil by the absence of soil structure and high color values.*~~

Justification

The addition of the term "parent material" is needed to aid in correctly determining the depth to the seasonally saturated soil in Minn. R. 7080.2150, subp. 3(D)(1)(a). The current rule has redoximorphic (redox) feature criteria listed for only topsoil and subsoil materials. In a general sense this would be a sufficient characterization, however, technically subsoil ends where pedogenic process is minimal or absent. Therefore, the current rule would not identify redox features below the subsoil layer. However, redox features also occur in the parent material and must be accounted for as a limiting layer for design purposes, in the event a detailed technical argument ever ensued which would claim that redox features in parent material cannot be determined to be a seasonally saturated soil because only redox features in topsoil and subsoil are noted in the rule language.

**101. Proposed Change - new part 7080.1100, subpart 63, formerly 7080.0020, subpart 26.**

~~*Subp. 63. Percolation rate. "Percolation rate" means the rate of a drop of water infiltrating into a test hole as specified in part 7080.1720, subpart 6.*~~

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**102. Proposed Change part - former 7080.0020, subpart 26a.**

~~*Performance systems. "Performance systems" Means subsurface sewage treatment systems described in part 7080.0179 Subpart 3 B designed to adequately protect the public health and the environment and to provide long term performance.*~~

### Justification

This term is proposed to be deleted as some have claimed that all system should “perform” not just those classified as “performance” systems. Therefore, it is proposed to term systems using secondary treatment devices along with soil treatment as “Type IV or Type V” systems in Minn. R. 7080.2350 and Minn. R. 7080.2400.

### **103. Proposed Change part - former 7080.0020, subparts 26b. and 26c.**

~~**Permit.** *"Permit" means a building, construction, sanitary, planning, zoning, or other such permit issued for new construction, replacement, repair, alteration, or extension of an subsurface sewage treatment system or collector system. Permit also means a permit issued for the addition of a bedroom on property served by an subsurface sewage treatment system.*~~

~~**Permittee.** *"Permittee" means a person who is named on a permit issued pursuant to local ordinance.*~~

### Justification

It is proposed to move these terms to new Minn. R. 7082.0020, subp. 2 and in the body of Minn. R. 7082.0500.

### **104. Proposed Change - new part 7080.1100, subpart 64, formerly 7080.0020, subpart 28.**

**Subp. 64. Plastic limit.** *"Plastic limit" means a soil moisture content below which the soil may be manipulated for purposes of installing a soil treatment and dispersal system and above which manipulation will cause compaction or smearing. The soil moisture content at the plastic limit can be measured by American Society for Testing and Materials (ASTM), Standard test methods for liquid limit, plastic limit, and plasticity index of soil, ASTM D4318 (2005). The standard is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

### **105. Proposed Change - new part 7080.1100, subpart 65.**

**Subp. 65. Pressure distribution.** *"Pressure distribution" means a network of distribution pipes in which effluent is forced through orifices under pressure.*

### Justification

There was a specific request to the MPCA staff to define pressure distribution. The reason was that some were interpreting pressure distribution as any system which employed a pump, even if the pump only lifted the sewage to a gravity distribution system. Therefore, a definition is necessary because lifting sewage for gravity distribution to above ground systems and systems without a biomat, will cause either surface breakout, ground water impacts due to excessive point loading, or both.

**106.** Proposed Change - new part 7080.1100, subpart 66, formerly 7080.0020, subpart 28a.

*Subp. 66. **Privy.** "Privy" means an aboveground structure with an underground cavity meeting the requirements of part 7080.2280 that is used for the storage or treatment and dispersal of toilet wastes, excluding water for flushing and greywater.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**107.** Proposed Change - new part 7080.1100, subparts 67 and 68.

*Subp. 67. **Proprietary product.** "Proprietary product" means a sewage treatment or distribution technology, method, or material subject to a patent or trademark.*

*Subp. 68. **Public domain technology.** "Public domain technology" means a sewage treatment or distribution technology, method, or material not subject to a patent or trademark.*

Justification

These terms are used to determine the review and registration of product under new Minn. R. 7080.1600 to Minn. R.7080.1660.

**108.** Proposed Change - new part 7080.1100, subpart 69, formerly 7080.0020, subpart 28c.

*Subp. 69. **Public waters.** "Public waters" means any public waters or wetlands defined in Minnesota Statutes, section 103G.005, subdivision 15, or identified as public waters or wetlands by the inventory prepared according to Minnesota Statutes, section 103G.201.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**109.** Proposed Change part – former 7080.0020, subpart 28d.

*~~**Qualified employee.** "Qualified employee" means a state or local government employee who designs, installs, maintains, pumps, or inspects subsurface sewage treatment systems as part of that person's employment duties.~~*

Justification

It is proposed to move this definition to Minn. R. 7083.0020, subp. 11.

**110.** Proposed Change – new part 7080.110, subpart 70, formerly 7080.0020, subpart 28e.

*Subp. 70. **Redoximorphic features.** "Redoximorphic features" means:*

*A. a color pattern in soil, formed by oxidation or reduction of iron or manganese in saturated soil coupled with their removal, translocation, or accrual, which results in the loss (depletion) or gain (concentration) of mineral compounds compared to the matrix color; or*

*B. a soil matrix color controlled by the presence of ferrous iron. Redoximorphic features are described in part 7080.1720, subpart 5, item E.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**111. Proposed Change - new part 7080.1100, subpart 72, formerly 7080.0020, subpart 28g.**

*Subp. 71. **Replacement.** "Replacement" means the removal or discontinued use of any major portion of an ISTS and reinstallation of that portion of the system, such as reinstallation of a new sewage tank, holding tank, dosing chamber, privy, or soil treatment and dispersal system.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. It is also proposed to delete the reference to collector systems as those standards are proposed to be removed from the rule. Please see the justification for Minn. R. 7080.1100, subp.55.

**112. Proposed Change - new part 7080.1100, subpart 72, formerly 7080.0020, subpart 29a.**

*Subp. 72. **Seasonally saturated soil.** "Seasonally saturated soil" means the highest elevation in the soil that is in a reduced chemical state due to soil pores filled with water causing anaerobic conditions. Seasonally saturated soil is determined by the presence of redoximorphic features in conjunction with other established indicators as specified in part 7080.1720, subpart 5, item E and F, or determined by other scientifically established technical methods or empirical field measurements acceptable to the permitting authority in consultation with the Commissioner.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**113. Proposed Change part - former 7080.0020, subpart 29b.**

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

### Justification

This exact of a definition is no longer needed as all systems are to be sized the same, whether seasonally used or not. The reason being is that if a system is to be used, the same daily processes will occur if the system is to be used a few days in a row or many days in a row. Therefore, you cannot undersize a seasonal dwelling because the system will be able to rest sometime in the future. This is especially true for septic tanks which must be designed on peak flows. Secondly, it is becoming common place for seasonal dwellings to be converted to full time residences, resulting in an undersized system.

**114. Proposed Change - new part 7080.1100, subpart 73, formerly 7080.0020, subpart 29c.**

*Subp. 73. **Seepage bed.** "Seepage bed" means a soil treatment and dispersal system, the absorption width of which is greater than three feet but no greater than 25 feet and that has more than one distribution pipe.*

### Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information please refer to the justification for Minn. R. 7080.1600, subp. 1.

**115. Proposed Change - new part 7080.1100, subpart 74, formerly 7080.0020, subpart 30.**

*Subp. 74. **Seepage pit.** "Seepage pit" means an underground pit that receives sewage tank effluent and from which the liquid seeps into the surrounding soil and that meets the design requirements in part 7080.2550.*

Justification

The former definition is proposed to be changed by deleting the terms leaching pit or dry well to coincide with the change that only one term is to be used for pits that do not qualify as seepage pits or cesspools. Please see the justification for "Other pits" in new Minn. R. 7080.1100, subp. 60.

**116. Proposed Change - new part 7080.1100, subpart 75, formerly 7080.0020, subpart 31.**

*Subp. 75. **Septage.** "Septage" means solids and liquids removed from an SSTS. Septage includes solids and liquids from cesspools, seepage pits, other pits, or similar systems or devices that receive sewage. Septage also includes solids and liquids that are removed from portable, incinerating, composting, holding, or other toilets. Waste from Type III marine sanitation devices, as defined in Code of Federal Regulations, title 33, section 159.3, and material that has come into contact with untreated sewage within the past 12 months is also considered septage.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. The remaining changes are proposed to fill-in some deficiencies in the current definition. Currently septage is only defined as solids and liquids from an SSTS, however, solids and liquids from other rural sewage devices, which are not defined as SSTS (such as cesspools), are not defined as septage and therefore, not regulated. These solids and liquids need to be regulated the same as septage because it is the same type of material, if not containing more contaminants, than solids and liquids from an SSTS. Please refer to comment 1 of Exhibit 88.

**117. Proposed Change - new part 7080.1100, subpart 77, formerly 7080.0020, subpart 31a.**

*Subp. 76. **Septic tank.** "Septic tank" means any watertight, covered receptacle that is designed and constructed to receive the discharge of sewage from a building sewer or preceding tank, stores liquids through a period of detention, separates solids from liquid, digests organic matter, and allows the effluent to discharge to a succeeding tank, treatment device, or soil treatment and dispersal system.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**118.** Proposed Change - new part 7080.1100, subpart 77, formerly 7080.0020, subpart 31b.

*Subp. 77. Serial distribution. "Serial distribution" means distribution of sewage tank effluent by gravity flow that progressively loads one section of a soil treatment and dispersal system to a predetermined level before overflowing to the succeeding section and does not place a dynamic head on the lower section of the soil treatment and dispersal system. The distribution medium may function as a conveyance medium to the next section.*

Justification

It was previously thought the distribution media should not be used as a mean of conveyance between different portions of the soil dispersal system. However, after many discussions with interested parties, it is generally felt that there is no real problem with this method of conveyance. Therefore, this definition is amended to allow the medium itself to act as a conveyance medium to the next zone or section. This method would help tremendously on flat sites with a shallow seasonally saturated soil and for fast percolation rate soils requiring short distribution system trenches. Please refer to Exhibits 5 and 350 and comment 2 of Exhibit 378.

**119.** Proposed Change - new part 7080.1100, subpart 78, formerly 7080.0020, subpart 32.

*Subp. 78. Setback. "Setback" means a separation distance measured horizontally.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**120.** Proposed Change - new part 7080.1100, subpart 79, formerly 7080.0020, subpart 33.

*Subp. 79. Sewage. "Sewage" means waste produced by toilets, bathing, laundry, or culinary operations or the floor drains associated with these sources, and includes household cleaners, medications, and other constituents in sewage restricted to amounts normally used for domestic purposes.*

Justification

It is proposed to include language that restricts the quantity of other waste products to what is normally found in sewage produced by dwellings. This distinction is drawn because systems which receive sewage with greater contaminant levels are considered a Class V injection well under EPA Underground Injection Control regulations. These standards require ground water protection for non-sewage waste components. Please refer to comment 7 of Exhibit 10, Exhibit 307 and <http://www.epa.gov/safewater/uic/uicregs.html>.

**121.** Proposed Change - new part 7080.1100, subpart 80, formerly 7080.0020, subpart 35.

*Subp. 80. Sewage tank. "Sewage tank" means a receptacle used in the containment or treatment of sewage and includes, but is not limited to, septic tanks, aerobic tanks, lift stations, dosing chambers, and holding tanks. Requirements for sewage tanks are described in parts 7080.1900 to 7080.2030. Sewage tanks are considered a septic system tank in Minnesota Statutes, section 115.55, subdivision 1, paragraph (o).*

Justification

The proposed language is a modification of the former language for clarity as more description is given for what constitutes a sewage tank. One purpose for the change is that the Agency has been legislatively

authorized to collect a \$25 septic system tank fee per Minn. Stat. § 115.551, so clarification is required as to what constitutes a tank for fee collection purposes. The change is not meant to alter the meaning or intent of the definition.

**122. Proposed Change - new part 7080.1100, subpart 81, formerly 7080.0020, subpart 36.**

*Subp. 81. Sewage tank effluent. "Sewage tank effluent" means the liquid that flows from a septic tank or other treatment device.*

**Justification**

This change is proposed to clarify that sewage tank effluent is not only from a septic tank, but also from the many other treatment devices now used by the industry. This change is necessary because all effluent, regardless of the level of treatment, must be disposed of in a soil dispersal system. If highly pretreated effluent is to be discharged to the ground surface, it would need to be issued a NPDES Permit which is not regulated under this chapter.

**123. Proposed Change part - former 7080.0020, subpart 38.**

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

**Justification**

This definition is just used in the definition of the acronym "SWF," therefore, it is proposed to place the provisions of this definition in the definition of "SWF" in Minn. R. 7080.1100, subp. 90.

**124. Proposed Change - new part 7080.1100, subpart 82, formerly 7080.0020, subpart 39.**

*Subp. 82. Site. "Site" means the area required for the proper location of the ISTS.*

**Justification**

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**125. Proposed Change - new part 7080.1100, subpart 83, formerly 7080.0020, subpart 40.**

*Subp. 83. Slope. "Slope" means the vertical rise or fall divided by the horizontal distance, expressed as a percentage.*

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring.

**126. Proposed Change - new part 7080.1100, subpart 84, formerly 7080.0020, subpart 42.**

*Subp. 84. Soil texture. "Soil texture" means the soil particle size classification and particle size distribution as specified in the Field Book for Describing and Sampling Soils, incorporated by reference in subpart 40.*

### Justification

The change proposed is to reference the new U.S. Department of Agriculture (USDA) Natural Resource Conservation Service Field Book for Describing and Sampling Soils. This publication is used by field soil scientist to describe soil characteristics and properties. This new USDA reference is more applicable than the older USDA Soil Survey Manual.

#### **127. Proposed Change - new part 7080.1100, subpart 85, formerly 7080.0020, subpart 43.**

*Subp. 85. Soil treatment area. "Soil treatment area" means the area required for the soil treatment and dispersal system, including spacing between individual units or zones.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

#### **128. Proposed Change - new part 7080.1100, subpart 87, formerly 7080.0020, subpart 44.**

*Subp. 86. Soil treatment and dispersal system. "Soil treatment and dispersal system" means a system where sewage effluent is treated and dispersed into the soil by percolation and filtration and includes, but is not limited to, trenches, seepage beds, at-grade systems, mound systems, and drip dispersal systems.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

#### **129. Proposed Change part - former 7080.0020, subpart 45.**

*Standard system. "Standard system" means an subsurface sewage treatment system specified in parts 7080.0065 to 7080.0170, and 7080.0600 and as designated by the Commissioner under part 7080.0400, subpart 4.*

### Justification

It is proposed to change/eliminate the classification of systems, so this definition will be obsolete. For a description of the change to the classification of systems, please refer to the justification for Minn. R. 7080.2150.

#### **130. Proposed Change part - former 7080.0020, subpart 45a.**

*SDS and NPDES permits. "SDS and NPDES permits" means State Disposal System and National Pollutant Discharge Elimination System permits issued by the Agency to regulate subsurface sewage treatment systems.*

### Justification

This definition is proposed to be deleted due to the fact that the term is no longer to be found in this chapter due to limiting the size of systems under this rule to 2,500 gallons per day or less.

**131. Proposed Change - new part 7080.1100, subpart 87, formerly 7080.0020, subpart 45b.**

Subp. 87. **Subsoil.** "Subsoil" means a soil layer that has a moist color value of 3.5 or greater and has undergone weathering and soil formation processes.

Justification

It is proposed to add the phrase: "and has undergone weathering and soil formation processes" due to the distinction that needs to be drawn between parent material and subsoil. Please refer to the justification for Minn. R. 7080.1720, subp. 5 and the definition of "parent material."

**132. Proposed Change - new part 7080.1100, subpart 88.**

Subp. 88. **Subsurface sewage treatment system or SSTS.** "Subsurface sewage treatment system" or "SSTS" is either an individual subsurface sewage treatment system as defined in subpart 45 of this part or a mid-sized subsurface sewage treatment system as defined part 7081.0020, subpart 3, as published in the State Register, volume ..., page ..., as applicable.

Justification

This acronym is proposed to be added to combine the terms ISTS and MSTS into one group as appropriate for ease of description.

**133. Proposed Change - new part 7080.1100, subpart 89, formerly 7080.0020, subpart 45c.**

Subp. 89. **Supply pipe.** "Supply pipe" means a nonperforated pipe, the purpose of which is to transport sewage tank effluent.

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**134. Proposed Change - new part 7080.1100, subpart 90, formerly 7080.0020, subpart 46a.**

Subp. 90. **Systems in shoreland areas or wellhead protection areas or systems serving food, beverage, or lodging establishments or SWF.** "Systems in shoreland areas or wellhead protection areas or systems serving food, beverage, or lodging establishments" or "SWF" means the following three categories of systems:

A. SSTS constructed in shoreland areas where land adjacent to public waters has been designated and delineated as shoreland by local ordinance as approved by the Department of Natural Resources;

B. SSTS constructed in wellhead protection areas regulated under Minnesota Statutes, chapter 103I; and

C. SSTS serving food, beverage, and lodging establishments that are required to obtain a license under Minnesota Statutes, section 157.16, subdivision 1, including manufactured home parks and recreational camping areas licensed according to Minnesota Statutes, chapter 327.

Justification

This new language adds the full definition of shoreland and a food beverage and lodging establishment into this definition. No change in meaning or intent is intended.

**135. Proposed Change part – former 7080.0020, subpart 46b.**

*Technical standards and criteria. "Technical standards and criteria" means parts 7080.0020, 7080.0060 to 7080.0176, and 7080.0600.*

Justification

This term is proposed to be deleted because it is no longer to be used in this chapter, due to the changes in the way systems are to be classified.

**136. Proposed Change - new part 7080.1100, subpart 91, formerly 7080.0020, subpart 48.**

*Subp. 91. **Toilet waste.** "Toilet waste" means waste commonly disposed of in toilets, including fecal matter, urine, toilet paper, and water used for flushing.*

Justification

This proposed definition has deleted the phrase: *Toilet waste does not include sanitary napkins, tampons, and disposable diapers unless the system is specifically designed to treat and dispose of these types of waste*” from the former rule, because some toilet waste treatment devices are designed to receive other types of wastes in addition to toilet wastes. However, this chapter will no longer contain standards for proprietary devices and those devices will be placed on a technology listing. Therefore, this language is no longer needed. Please see justification for Minn. R. 7080.1600, subp. 1.

**137. Proposed Change - new part 7080.1100, subpart 92, formerly 7080.0020, subpart 48a.**

*Subp. 92. **Toilet waste treatment devices.** "Toilet waste treatment devices" means other toilet waste apparatuses including incinerating, composting, biological, chemical, recirculating, or holding toilets or portable restrooms.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**138. Proposed Change - new part 7080.1100, subpart 93, formerly 7080.0020, subpart 48b.**

*Subp. 93. **Topsoil.** "Topsoil" means the natural, in-place organically enriched soil layer with a color value of less than 3.5.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**139. Proposed Change - new part 7080.1100, subpart 94, formerly 7080.0020, subpart 48c.**

*Subp. 94. **Topsoil borrow.** "Topsoil borrow" means a loamy soil material having:*  
*A. less than five percent material larger than two millimeters, No. 10 sieve;*  
*B. no material larger than 2.5 centimeters;*  
*C. a moist color value of 3.5 or less; and*  
*D. adequate nutrients and pH to sustain healthy plant growth.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **140. Proposed Change - new part 7080.1100, subpart 95.**

*Subp. 95. **TN.** "TN" means total nitrogen, typically expressed in mg/L.*

### Justification

This term is needed to determine the nitrogen reduction capabilities of treatment devices.

#### **141. Proposed Change part - new 7080.1100, subpart 96.**

*Subp. 96. **Total suspended solids or TSS.** "Total suspended solids" or "TSS" means solids that are in suspension in water and that are removable by laboratory filtering.*

### Justification

This term is needed to determine the solids removal capabilities of treatment devices. Solids can clog soil dispersal systems and cause hydraulic failures. An acronym is used for ease of reading and fitting into tables used in the rule.

#### **142. Proposed Change - new part 7080.1100, subpart 97.**

*Subp. 97. **TP.** "TP" means total phosphorus, typically expressed in mg/L.*

### Justification

This term is needed for pretreatment devices that are evaluated for the removal of phosphorus for environmental protection.

#### **143. Proposed Change - new part 7080.1100, subpart 98, formerly 7080.0020, subpart 48d.**

*Subp. 98. **Trench.** "Trench" means a soil treatment and dispersal system, the absorption width of which is 36 inches or less.*

### Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for Minn.R. 7080.1600, subp. 1.

The second change is to eliminate the minimum width of a soil dispersal and treatment system trench. This is due to some proprietary products currently not being able to gain approval in Minnesota under current technical criteria. Keeping this criteria may have impacts to any new technology approval program. MPCA staff attempted to determine the reason for a minimum trench width but were unable to find any justification. Discussions on this topic were brought up at numerous meetings with interested parties and no one could generate a reason why a minimum trench width is necessary.

**144. Proposed Change - new part 7080.1100, subpart 99, formerly 7080.0020, subpart 49.**

*Subp. 99. Valve box. "Valve box" means a watertight structure designed for alternate distribution of sewage tank effluent to segments of a soil treatment system.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**145. Proposed Change - new part 7080.1100, subpart 100, formerly 7080.0020, subpart 49b**

In addition to reformatting, the language has changed as follows:

*Subp. 100. Vertical separation. "Vertical separation" means the vertical measurement of unsaturated soil or sand between the bottom of the distribution medium and the seasonal saturated soil level or bedrock.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**146. Proposed Change - new part 7080.1100, subpart 101, formerly 7080.0020, subpart 52.**

*Subp. 101. Watertight. "Watertight" means constructed so that no liquid can get into or out of a device except through designed inlets and outlets.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**147. Proposed Change - new part 7080.1100, subpart 102, formerly 7080.0020, subpart 54.**

*Subp. 102. Wellhead protection area. "Wellhead protection area" means the surface and subsurface area surrounding a well or well field that supplies a public water system, through which contaminants are likely to move toward and reach the well or well field as regulated under chapter 4720. For the purposes of this chapter, wellhead protection area is that area bounded by the drinking water supply management area as regulated under chapter 4720.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**MINN. R. 7080.0025 ADVISORY COMMITTEE**

**148. Proposed Change - new part 7080.1150, subpart 1, formerly 7080.0025, subpart 1.**

*Subpart 1. Establishment. An advisory committee on subsurface sewage treatment systems is established.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 149.** Proposed Change - new part 70801150, subpart 2, items A to E, formerly 7080.0025, subpart 2, items A to E.

*Subp. 2. Duties. The committee shall, subject to the approval of the Commissioner, review and advise the Agency on:*

*A. revisions to chapters 7080 to 7083, as published in the State Register, volume ..., page ..., and legislation relating to SSTS;*

*B. technical data relating to SSTS;*

*C. a technical manual on SSTS;*

*D. educational materials and programs for SSTS;*

*E. the administration of standards and ordinances pertaining to SSTS at the state and local level;*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 150.** Proposed Change - new part 7080.1150, subpart 2, item F.

*F. the product registration and renewal process;*

### Justification

In the past, the advisory committee has participated in the review of new technologies. This review is different than the product registration process which will be discussed below. This process is for technologies that will not be registered by the Commissioner, such as baffles, pumps, tanks, etc.... This work activity by the committee appears to be within the legislative charge as stated in Minn. Stat. § 115.55.

- 151.** Proposed Change - new part 7080.1150, subpart 2, item G.

*G. development of any product registration advisory panels that may be created; and*

### Justification

The MPCA staff's review of new technologies should be aided by the work of the advisory committee. However, due to the anticipated work involved and the technical nature of the review, it is proposed that a subcommittee be formed for the sole purpose of technology review. It is anticipated that the subcommittee can be populated by members of the full committee and other technical experts as needed.

- 152.** Proposed Change - new part 7080.1150, subpart 2, item H, formerly 7080.0025, subpart 2, item F.

*H. other SSTS activities considered appropriate by the committee.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 153.** Proposed Change - new part 7080.1150, subpart 3, items A and B, formerly 7080.0025, subpart 3, items A and B.

*Subp. 3. Membership. The committee consists of the following voting members of whom:*

- A. one must be a citizen of Minnesota, representative of the public;*  
*B. one must be from the Minnesota Extension Service of the University of Minnesota;*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

- 154.** Proposed Change - new part 7080.1150, subpart 3, item C, formerly 7080.0025, subpart 3, item C.

*C. six must be county administrators, such as zoning administrators, sanitarians, and environmental health specialists, each of whom administers an SSTS permitting or inspection program. The six administrators must be geographically distributed throughout the state;*

### Justification

The proposed language has two changes from the former language. The first change is to make clear that these administrators are administering a SSTS program. The second change is to keep the intent of having committee representation from all areas of the state, but does not tie such a requirement to the Agency's administrative structure, which has a tendency to change due to reorganizations and may not be divided into six administrative regions as has recently occurred when the Agency had three districts with seven sub-district offices. The Agency will likely measure geographic diversity based on the organizational structure that the Agency is currently employing. Please refer to comment 2 of Exhibit 12 and Exhibit 264.

- 155.** Proposed Change - new part 7080.1150, subpart 3, item D, formerly 7080.0025, subpart 3, item D.

*D. one must be a municipal inspector who administers an SSTS permitting and inspection program;*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 156.** Proposed Change - new part 7080.1150, subpart 3, item E, formerly 7080.0025, subpart 3, item G.

*E. one must be a township inspector who administers an SSTS permitting and inspection program;*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**157. Proposed Change - new part 7080.1150, subpart 3, item F, formerly 7080.0025, subpart 3, item E.**

*F. six must be SSTS designated certified individuals as defined in part 7083.0020, as published in the State Register, volume ..., page ..., who have geographic distribution throughout the state, with each certification category represented on the committee;*

### Justification

The changes to the former language ensure that all of the Agency's SSTS disciplines (designers, installers, pumpers, and service providers) are represented on the advisory committee, not just "contractors" (which has typically meant those who install systems). In addition, it is also felt that good geographic representation is present on the committee, as many issues have divided opinions based on those working on systems serving high density rural residential areas with large modern homes, versus those working on systems serving dwellings in remote areas of rural Minnesota.

**158. Proposed Change - new part 7080.1150, subpart 3, item G, formerly 7080.0025, subpart 3, item H.**

In addition to reformatting, the language has changed as follows:

*G. two must be elected public officials with members having geographic distribution throughout the state;*

### Justification

It is proposed to reduce the elected public officials from the current three officials to two officials. This is proposed to try to limit the number of members since it has increased over the years, and it is more difficult to conduct meetings and express ideas with a large group.

**159. Proposed Change - new part 7080.1150, subpart 3, item H, formerly 7080.0025, subpart 3, item I.**

*H. one must be from the Department of Natural Resources;*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**160. Proposed Change - new part 7080.1150, subpart 3, item I, formerly 7080.0025, subpart 3, item J.**

*I. one must be from the Department of Labor and Industry; and*

### Justification

The unit at the Department of Health which deals with plumbing and SSTS issues has been moved to the Department of Labor and Industry, therefore the reference change was needed.

**161. Proposed Change - new part 7080.1150, subpart 3, item J, formerly 7080.0025, subpart 3, item F.**

*J. one must be a water well contractor.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **162. Proposed Change - new part 7080.1150, subpart 4, formerly 7080.0025, subpart 4.**

*Subp. 4. Nonvoting members. The following agencies and associations shall each have at least one nonvoting member to assist the advisory committee and to be advised, in turn, on matters relating to chapters 7080 to 7083, as published in the State Register, volume ..., page ...: the Agency, the United States Department of Agriculture Natural Resource Conservation Service, the Minnesota Association of Professional Soil Scientists, the Metropolitan Council, the Association of Minnesota Counties, the Minnesota Association of Townships, the League of Minnesota Cities, the Minnesota Society of Engineers, the Association of Small Cities, the Minnesota Association of Realtors, the Minnesota Environmental Health Association, SSTS suppliers, the Minnesota On-Site Wastewater Association, the American Society of Home Inspectors, the Minnesota Small Business Association, Hospitality Minnesota, and Minnesota Waters.*

### Justification

The first change from the former language is to remove the soil survey program from the Natural Resource Conservation Service designation, based on their request. It is intended to also change from the Minnesota Association of Campground Operators to Minnesota Hospitality, which is the umbrella organization of all resort associations, of which, the Campground Association is a part. It is intended to remove the Minnesota County Recorders' Association because they have attended few, if any, meetings since being placed on the committee. The MPCA staff still plans to inform these parties if issues relevant to them are in need of an Agency decision. There is also a removal of the organizations – Minnesota On-site Sewage Treatment Contractor's Association and the Minnesota Professional Organization of Wastewater Recycling, because these two organizations have joined to form the Minnesota On-site Wastewater Association, which is added to the list of non-voting members. Also, the Minnesota Lakes Association's name has been changed to Minnesota Waters.

#### **163. Proposed Change - new part 7080.1150, subpart 5, formerly 7080.0025, subpart 5.**

*Subp. 5. Appointment; terms. All members must be appointed by the Commissioner from recommendations by the named entities or organizations. All members serve four-year terms, with terms staggered to maintain continuity. Voting members may serve a maximum of two consecutive terms, except by virtue of their office. If the voting member's attendance falls below 50 percent during the term, the appointed member loses membership status for the remaining term. The Commissioner shall then appoint a replacement member for the remainder of the term from the recommendation offered by the affected entity or organization. In the case of a vacancy, the Commissioner shall appoint a replacement member for the unexpired balance of the term. Administrators, inspectors, elected officials, and contractors must be bona fide residents of this state for at least three years before being appointed and must have at least three years' experience in their respective businesses or offices.*

### Justification

It is proposed to simplify the requirements of when an SSTS Advisory Committee member is to be replaced due to non-attendance. The simplification is to remove the requirement if a member misses three consecutive meetings, but to keep the removal criteria if their attendance falls below 50 percent. This makes it easier for Agency staff to administer the non-attendance requirement. It is felt that this simplification will not hinder the effectiveness of the committee.

**164. Proposed Change - new part 7080.1150, subpart 6, formerly 7080.0025, subpart 6.**

In addition to reformatting, the language has changed as follows:

*Subp. 6. Procedural rules. Robert's Rules of Order Newly Revised, Henry M. Robert (2000), must prevail at all meetings of the advisory committee. Robert's Rules of Order is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change.*

Justification

The reference has been updated from the former rule language to reference the latest version of this publication.

**165. Proposed Change - new part 7080.1150, subpart 7, formerly 7080.0025, subpart 7.**

*Subp. 7. Quorum. A quorum consists of nine voting members.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**MINN. R. 7080.1200 ADMINISTRATION OF DESIGN STANDARDS**

**166. Proposed Change - new part 7080.1200, subpart 1.**

*Subpart 1. Administrative scope. ISTS must be designed, constructed, and operated according to this chapter, except as modified through a local ordinance in compliance with chapter 7082, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55. ISTS must be designed, installed, inspected, pumped, serviced, and operated by licensed businesses meeting the qualifications in chapter 7083, as published in the State Register, volume ..., page .... ISTS must conform to all applicable state laws and rules.*

Justification

This language is proposed to provide general overall directives. The directives are based in Minn. Stat. § 115.55, subd. 2(a); subd. 7(d); and Minn. Stat. § 115.56 subd. 2(a). Please refer to comment 6 of Exhibit 11.

**167. Proposed Change - new part 7080.1200, subpart 2, formerly 7080.1200, subpart 1.**

*Subp. 2. Federal regulation. SSTS that are designed to receive sewage or nonsewage from a two-family dwelling or greater or receive sewage or nonsewage from another establishment that serves more than 20 persons per day, are regulated under Code of Federal Regulations, title 40, parts 144 and 146.*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. Please refer to Exhibit 240.

**168. Proposed Change part – former 7080.0030, subpart 1a.**

~~Subpart 1a. SDS and NPDES permits required. The Agency issues State Disposal System (SDS) and National Pollutant Discharge Elimination System (NPDES) permits. All systems that discharge to surface waters or above the ground surface must obtain either an NPDES/SDS or an SDS permit from the Agency and shall comply with all permit requirements.~~

Justification

This provision is no longer needed in this rule and is proposed to be deleted. The proposed revisions will put a cap on the size of system which falls well below the SDS permit threshold.

**169. Proposed Change - new part 7080.1200, subpart 3, former 7080.0305, subpart 3, item B.**

Subp. 3. Variance procedures. The standards in this chapter are provided to be incorporated into a local ordinance according to chapter 7082, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55. Variance requests to the standards made by an owner or owner's agent must be issued or denied by the local unit of government. Variances may not be issued by the local unit of government for part 7080.2150, subpart 2, items A to F.

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. A prohibition on issuing a variance to basic public health and environment standards will remain as it did in the former Minn. R. ch. 7080. The Agency believes that violating these basic principles is in violation of the environmental protection requirements of Minn. Stat. § 115.55.

**170. Proposed Change part - former 7080.0030, subpart 3 and 4.**

~~In certain cases, the owner or other person responsible for an SSTS which requires a variance by the Agency may submit a request for a variance from the standards in this chapter as described in items A to D. A. Variances to the minimum requirements in parts 7080.0305 to 7080.0315, must be submitted to and approved by the Commissioner prior to implementation.~~

~~B. Variances to separation distances from wells and water supply pipes may only be issued by the Minnesota Department of Health. In areas where the Minnesota Department of Health has designated the well program to a local governmental unit, a variance is required from the local delegated program. Variances to separation distances from water supply pipes may only be issued by the Minnesota Department of Health or Plumbing Code administrative authority.~~

~~C. Before granting a requested variance, the Commissioner must find that by reason of exceptional circumstances the strict enforcement or strict conformity with parts 7080.0305 to 7080.0315 would be unreasonable, impractical, or not feasible under the circumstances. The agency may permit a variance under part 7000.7000 upon conditions as it may prescribe for prevention, control, or abatement of pollution in harmony with the general purpose of this chapter and the intent of applicable state and federal laws. The variance request must contain, as applicable:~~

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

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

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

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

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

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

~~(7) cost considerations; and~~

~~(8) proximity of system to other systems.~~

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

~~Subpart 4. Administration by all state agencies. Individual sewage treatment systems serving establishments licensed or otherwise regulated by Minnesota shall conform to the requirements of this chapter. Use of systems designed under part 7080.0172, 7080.0178, or 7080.0179 for new construction or~~

~~replacement of systems that serve establishments licensed or otherwise regulated by the Minnesota Department of Health are allowed only in areas where a standard system cannot be installed or is not the most suitable treatment and only where allowed and enforced under ordinance and permit of the local unit of government. Any subsurface sewage treatment systems requiring approval by the state, which does not require a state permit, shall also comply with applicable local codes and ordinances. Plans and specifications must receive the appropriate state and local approval before construction is initiated.~~

#### Justification

It is intended that the specific variance language be moved to new Minn.R. ch. 7082, which will address SSTs administrative processes.

### **MINN. R. 7080.1500 COMPLIANCE CRITERIA**

#### **171. Proposed Change - new part 7080.1500, subpart 1, formerly 7080.0060, subpart 1.**

Subpart 1. Treatment required. Sewage discharged from a dwelling that is not served by a system issued a permit containing effluent and discharge limits or specific monitoring requirements by the Agency must be treated according to applicable requirements.

#### Justification

The proposed language change from the former language is to replace the word “generated” to “discharged” to make it clear that only sewage discharged outside the structure is regulated. This is an important distinction to draw since total water recycling/reuse systems have been developed and marketed in Minnesota. These rules are only intended to start to be applied at the inlet of the first sewage tank. The conveyance mechanisms to transport the sewage to the first sewage tank are considered as plumbing. Another fine distinction needs to be made in regard to collection system, as this rule regulates systems which serve up to three dwellings. It is the Agency’s intention that the design and construction of all collection systems not be governed by this chapter, but will govern any tank providing primary or secondary treatment which may be employed between the building sewers and the start of the collection system.

Another language change to the former rule which required all sewage generated to be treated in accordance with this chapter. It is proposed to modify this language to say that all sewage must be treated in compliance with a local ordinance that is in compliance this chapter or chapter 7081. This change is necessary to accurately reflect the mandate of Minn. Stat. § 115.55, subd. 7, which allows local ordinances to vary from this chapter and chapter 7081. Please see the justification for the definition of applicable requirements.

**172. Proposed Change - new part 7080.1500, subpart 2, formerly 7080.0060, subpart 2.**

*Subp. 2. Primitive dwellings. Greywater from dwellings without plumbing that originated from hand-carried water must not be discharged directly to surface waters, drainageways, or poorly drained soils; in a manner or volume harmful to the environment or public health; or in a manner that creates a public health nuisance as determined by the local unit of government.*

**Justification**

This section provides general outcomes for disposal of small amounts of sewage and is very similar to the former language. However, it is intended that this general disposal option is only for disposal of greywater and not for disposal of waste from toilets. This is proposed due to the increased risk of disease transmission from toilet wastes.

The second change is for clarification purposes as the MPCA staff receives many questions concerning the former language. It is intended that the water must be hand carried into the structure, not only from a hand pump, but from water carried from another source such as a pails of water from a main residence. This hand carried provision is hoped to ensure that this disposal option is only for small quantities of sewage.

The final change is to provide the local permitting authority some the authority to interpret the proper disposal conditions described in this subpart.

**173. Proposed Change - new part 7080.1500, subpart 3, formerly 7080.0060, subpart 3.**

*Subp. 3. Compliance criteria for new construction. An ISTS regulated under a current construction permit is considered compliant if it meets the requirements of parts 7080.2150 to 7080.2400.*

**Justification**

This chapter has two distinct compliance standards, one for systems currently in operation and another for systems currently under construction. It appears from questions received by the Agency, that the current chapter does not make a clear distinction between the two types of systems. Therefore, a language change appears in this part in an attempt to make a clear compliance distinction between new and existing systems.

The remaining change adding the phrase; “*compliant if meeting requirements of parts 7080.2150 to 7080.2400*” is an attempt to address that compliance shall be based on a local ordinance which adequately protects the public health and the environment as stated in Minn. Stat. § 115.55, subd. 5a(g), 7(a), and 7(b). The statute does not define the adequate protection of the public health and environment, so the Agency will rely on use of the design standards proposed in Minn. R. 7080.2150 to 7080.2400.

**174. Proposed Change - new part 7080.1500, subpart 4.**

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

### Justification

The change to the title and beginning of this subpart is to make it clear that this criteria is exclusively for existing systems.

**175.** Proposed Change - new part 7080.1500, subpart 4, item A, formerly 7080.0060, subpart 3, item A, subitem (1).

*A. The ISTS must be protective of public health and safety. A system that is not protective is considered an imminent threat to public health or safety. At a minimum, a system that is an imminent threat to public health or safety is a system with a discharge of sewage or sewage effluent to the ground surface, drainage systems, ditches, or storm water drains or directly to surface water; systems that cause a sewage backup into a dwelling; systems with electrical hazards; or sewage tanks with unsecured or weak maintenance hole covers or weak lids. A determination of protectiveness for other conditions may be made by a qualified employee inspector or licensed inspection business.*

### Justification

The proposed change is to add the definition of a system that poses an imminent threat to public health and safety into the body of the rule in this item. It is also proposed to add a few more conditions which pose an imminent threat such as electrical hazards or sewage maintenance hole covers. These are added to provide inspectors more tools to identify hazardous conditions. These changes are not meant to alter the meaning or intent of the this provision.

**176.** Proposed Change - new part 7080.1500, subpart 4, item B, formerly 7080.0060, subpart 3, item A., subitem (2).

*B. The ISTS must be protective of ground water. A system that is not protective is considered a system failing to protect ground water. At a minimum, a system that is failing to protect ground water is a system that is a seepage pit, cesspool, drywell, leaching pit, or other pit and a system with less than the required vertical separation distance described in items D and E, and a system not abandoned in accordance with 7080.2500. A determination of protectiveness for other conditions may be made by a qualified employee or licensed inspection business.*

### Justification

This definition was renamed and moved from former Minn. R. 7080.0020, subp. 16b. The name change from “failing” to “failing to protect ground water” is to stem the confusion caused by the current term “failing.” The common use of the word failing by homeowners and elected officials was for those systems that were hydraulically failing (seeping, or backing-up). However, those types of systems are termed an imminent threat to public health or safety in Minn. R. 7080.1500, subp. 4. Please refer to Exhibit 417.

Systems no longer in use and not properly abandoned are proposed to be included to avoid any future safety concerns with a tank that may collapse and to prohibit any future discharge of contaminants into the system which can impact ground water quality.

It is proposed to allow inspector discretion in making a determination of other situations that pose a threat to ground water. These situations are difficult to address in rule requirements. For example, the MPCA staff has received calls wanting a decision on whether a system covered by an impermeable surface is failing to protect ground water, because the impermeable surface restricts oxygen transfer into the soil

treatment zone. In trying to craft language about a system covered by an impermeable surface, many difficulties arose, such as the nature of the impermeable surface (i.e., compacted soil?, gravel roadway?, etc...) and how much of the surface area is needed to be covered (i.e., more than 50 percent?). Another situation difficult to quantify is if the system has received a nonhazardous, non-domestic waste which may be adversely impacting the ground water. Therefore, it is proposed to give the inspector discretion in making these determinations. This authority is consistent with the inspector's authority to determine if the system is an imminent threat to public health or safety granted by Minn. Stat. § 115.55 5a(4).

**177.** Proposed Change - new part 7080.1500, subpart 4, item C, formerly 7080.0060, subpart 3, item A, subitem (3).

*C. The ISTS must be operated, meet performance standards, and be managed according to its management plan, operating permit, monitoring and mitigation plan, or local ordinance requirements.*

Justification

The former rule states that a non-standard system must have a monitoring and mitigation plan, and if not followed, the system is non-compliant. New Minn. R. ch. 7082 will require that all systems have a management plan. This item proposes that if the management plan is not followed, the system will be non-compliant until the maintenance has been performed. The Agency believes this is reasonable because to have enforceable standards for system design and construction, but not for system management, appears to leave a major gap in public health and environmental protection. This provision should also be cost effective as proper maintenance will extend the system life and avoid premature replacement costs. Please refer to comment 7 of Exhibit 11, Exhibit 345 and comment 7 of Exhibit 369.

**178.** Proposed Change - new part 7080.1500, subpart 4, item D, formerly 7080.0060, subpart 3, item B subitem (1)

*D. ISTS built after March 31, 1996, or in an SWF area shall have a three-foot vertical separation or a vertical separation based on applicable requirements. The local ordinance may allow no more than a 15 percent reduction in the vertical separation distance to account for settling of sand or soil, normal variation of measurements, and interpretations of the limiting layer conditions.*

Justification

The first change from the former rule is to allow less than a three-foot vertical separation distance for systems in SWF areas if the system was designed for less under provisions of Minn. R. 7080.2350 (Type IV system) or Minn. R. 7080.2400 (Type V system). This part allows the use of non-soil treatment components so a three-foot vertical separation distance is not needed.

The second change is to allow those who conduct compliance inspections of existing systems some flexibility in determining compliance on the vertical separation distance. In the past, the inspector had no discretion if their determination of the vertical separation varied slightly with that of a previous inspector or designer. It appears reasonable to allow some discretion due to the fact that we are dealing with natural systems which can be difficult to quantify exact measurements. For example, most conducting soil evaluations will likely deviate slightly in the determination of depth of redoximorphic features in the soil. This is especially true if the compliance inspector cannot probe close to the system due to ground water mounding raising the level of saturation, so the inspector has to be some distance away from the system which may have different soil conditions than where the system was actually placed. This flexibility and allowance will not cause undue environmental consequences as some safety factors are built into the designed separation distance. However, it should be understood that this provision is only in effect for

systems with three feet or systems designed under former Minn. R. 7080.0179 or new Minn. R. 7080.2350 (Type IV system) or Minn. R. 7080.2400 (Type V). Those existing systems granted a two foot vertical separation by Minn. Stat. § 115.55, subd. 5a(c), do not qualify for this 15 percent reduction, because a two foot vertical separation has little to no remaining safety factor. Please refer to comment 8 of Exhibit 11 and comment 2 of Exhibit 88.

**179. Proposed Change - new part 7080.1500, subpart 4, item E, formerly 7080.0060, subpart 3, item B subitem (2).**

*E. ISTS built before April 1, 1996, must have at least two feet of vertical separation.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**180. Proposed Change - new part 7080.1500, subpart 4, item F, former 7080.0060, subpart 3, item B.**

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

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**181. Proposed Change part – former 7080.0060, subpart 3, item C.**

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

Justification

This provision is now included in new subpart 3.

**182. Proposed Change part – former 7080.0060, subpart 3 item D.**

~~*Performance systems designed under part 7080.0179 must also meet all requirements of the operating permit specified in part 7080.0310, subpart 6.*~~

Justification

This provision is now included in new Minn. R. 7080.1500, subp. 4(C).

**183. Proposed Change part – former 7080.0060, subpart 3, item E.**

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

Justification

This provision is now included in new Minn. R. 7080.1500, subp. 4(C).

**184. Proposed Change - new part 7080.1500, subpart 5.**

*Subp. 5. Compliance criteria for systems receiving replacement components. Components of an existing system that result in the system being in noncompliance must be repaired or replaced according to part 7082.0100, subpart 1, as published in the State Register, volume ..., page .... The repaired or replacement components must meet technical standards and criteria for new construction according to local ordinance. The remaining components of the existing system must result in the system being in compliance with subpart 4.*

Justification

This new language is proposed to alleviate much confusion of what is necessary if some components of an existing system are found in compliance and some components are found not to be in compliance. The Agency believes the changes are reasonable because it allows existing components to continue to be used if they are meeting minimal public health and environmental protection standards. It is the Agency's understanding that this is the current common practice of many local units of government as the Agency has provided this recommendation in the past. Please refer to comment 1 of Exhibit 8 and comment 1 of Exhibit 294.

**MINN. R. 7080.1550 ACCEPTABLE AND PROHIBITED DISCHARGES**

**185. Proposed Change - new part 7080.1550, subpart 1, formerly 7080.0065 subpart 1.**

*Subpart 1. Sewage. This chapter provides design standards for ISTS that exclusively receive sewage. If ISTS receive both sewage and nonsewage, the requirements of this chapter and requirements governing the nonsewage portion of the waste apply.*

Justification

The change from the former rule is that any non-sewage discharged to the system must be able to be treated by the system and protect ground water. The Agency is commonly asked if nonhazardous, nonsewage waste can be treated and dispersed in an SSTS. Any waste discharged into the system should be able to be adequately treated by any pretreatment and soil system employed. If not, or if treatment is unknown, then the nonsewage waste should not be discharged into the system. In addition, if the introduction of any nonsewage will affect the treatment ability of the sewage, then the nonsewage should not be discharged into the system. For example, if the volume of the nonsewage waste will exceed the designed maximum loading rate for the soil treatment zone, then the extra wastes should not be introduced.

**186. Proposed Change part – former 7080.0065, subpart 2.**

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

Justification

This is proposed to be deleted as it is redundant to Minn. R. 7080.1500, subp. 1.

**187. Proposed Change - new part 7080.1550, subpart 2, formerly 7080.0065, subpart 3.**

*Subp. 2. System influent. Footing or roof drainage and chemically treated hot tub and pool water must not be discharged into any part of a system. Products containing hazardous chemicals and hazardous waste must not be discharged to a system other than in normal amounts of household products and cleaners designed for household use. Substances not intended for use in household cleaning, including but not limited to solvents, pesticides, flammables, photo finishing chemicals, paint, and dry-cleaning chemicals must not be discharged to the system. Other unused products or substances, or unused medicines, must not be discharged to the system solely as a method of disposal. Floor drains from garages serving dwellings must not be connected to the system.*

Justification

The change from the former rule is to include that any unused products not be discarded into the system as the design standards have not been developed with these wastes in mind. A reference to garage floor drains from dwellings is also to be added to the prohibited discharges as once again, the contamination from garage floor drains may not be adequately treated by an SSTS. Please refer to comment 2 of Exhibit 15.

Please refer to Exhibit 354 for a hazardous waste determination.

**188. Proposed Change part – former 7080.0065, subpart 4**

~~*Surface discharge. Unless specifically permitted by the Agency, a system shall not discharge sewage or sewage tank effluent, to the ground surface or to surface water. In addition, systems shall not seep to the ground surface.*~~

Justification

This provision is redundant to Minn. R. 7080.1500, subp. 4(A) and 7080.2150, subp. 2.

**MINN. R. 7080.1600 PRODUCT REVIEW AND REGISTRATION PROCESS**

**189. Proposed Change - new part 7080.1600, subpart 1, item A.**

**Subpart 1 General.**

*A. The Commissioner shall develop a product review and registration process and maintain a list of registered sewage treatment and distribution products for SSTS.*

Justification

The current rule does not provide for the approval or registration for on-site wastewater treatment products in Minnesota. The MPCA has been directed by the legislature to develop a technology review and approval process in this rule revision (MN Laws 2003, ch. 128, sec. 2, subd. 1(2)(iii)). A few generic products are currently in the rule. Many states have developed some type of product listing and approval or registration to assist designers and owners in their selection of wastewater technologies. There is no such program at the national level.

Over the past several decades, new technologies have emerged to address the limitations of the traditional septic tank and gravity drainfield. Technologies have made it possible to develop lots that were previously not buildable due to poor soils. These new technologies can be “public domain” products that are developed without a patent and have been widely studied with a large volume of data regarding their effectiveness. They can also be “proprietary products” developed with a patent and sold and marketed by a private entity.

The on-site industry has evolved considerably over the past ten years and it continues to evolve. As the industry grows it gains greater acceptance of products and technologies. Because the industry is changing from the use of using traditional septic tank, drainfield, and mounds to the use of advanced treatment systems, it would be difficult for proprietary products to be part of the rules because of the need for frequent rule revisions as new products enter the market. Historically, if products have not been incorporated into rule, many local units of government will not allow their use. Most local units of government do not have the time or expertise to evaluate the host of wastewater products available for use.

Local units of government do not have the resources to go through a detailed analysis of all the options themselves, and carry the burden of recommending products to their constituents that have not been reviewed by any regulatory authority. So, there is a need to have a centralized, efficient process to evaluate these products, which is not done at the national level. Consequently, designers and property owners, in need of on-site treatment systems, do not have a list of products from which to select technologies. There is currently no clear process to evaluate products, identify design standards, and develop the needed operation and maintenance requirements for long term system performance.

The proposed rule establishes an objective, measurable, and consistent regulatory framework for the registration of products. All products will be subject to the same requirements, which will level the playing field among similar types of products. The list would help local units of government and designers select appropriate products. Local units of government will still make the final decisions on how various technologies are applied within their jurisdictions.

The proposed rule establishes a detailed process for proprietary product registration, similar to the process proposed in Washington State (see Exhibit 441). These processes, together with the treatment levels discussed in the rule for proprietary treatment products will encourage the development of technical advances. This will result in more options and flexibility for designers and owners. Please refer to Exhibits 300, 368, and comment 1Exhibit 408.

**190. Proposed Change - new part 7080.1600, subpart 1item B.**

*B. The Commissioner shall develop recommended standards and guidance to assist local units of government in permitting different types of sewage treatment technologies and sewage distribution technologies, including the following four categories:*

- (1) public domain treatment technologies, such as sand filters;*
- (2) proprietary treatment technologies, such as manufactured aerobic treatment systems;*
- (3) public domain distribution technologies, such as drainfield rock or generic drainfield rock substitutes;*
- and*
- (4) proprietary distribution technologies, such as gravelless distribution products and drip dispersal products.*

Justification

There is a need to develop a set of comprehensive standards for wastewater products used in the on-site industry. There are currently no technical standards or guidance in Minnesota or at the national level.

Besides the need for a formal product registration (listing) process, local units of government need detailed guidance on the proper application of wastewater technologies.

Application of recommended standards at the local level may be done two ways: (1) adopted as part of the local ordinance, or (2) referred to as a technical guide. If the recommended standards are adopted at the local level, they can either be adopted as written by the State or modified to more accurately reflect local conditions. This gives local units of government flexibility in using technologies in their communities. If the recommended standards are simply referred to by local unit of governments as technical guidance, they can either use the guidance as written by the State or modified to more accurately reflect local conditions. How these recommended standards are applied at the local level remains at the discretion of the local unit of government.

Recommended standards for wastewater technologies would be developed for statewide application for four broad categories: (1) public domain treatment technologies; (2) proprietary treatment technologies; (3) public domain distribution technologies; and (4) proprietary distribution technologies. The recommended standards developed by the State of Washington will be used as an initial foundation for Minnesota's standards. We expect that this will make the process simpler and save time to develop the recommended standards.

**191. Proposed Change - new part 7080.1600, subpart . 1 item C.**

*C. Sewage technologies shall have standards described in this chapter or Agency recommended standards and guidance before local units of government may permit them. Recommended standards and guidance must include information and detail, such as application, design, installation, operation, monitoring and maintenance, and performance expectations, and sources of the information.*

**Justification**

This would require treatment technologies and distribution products on the list of registered sewage treatment and distribution products (see subpart 2 item A) to also have recommended standards and guidance documents for use before they could be used in Minnesota. Currently, there is little guidance in the application of these on-site wastewater technologies, which has led to much confusion on how to use these technologies. Some units of government allow the use of these technologies, while others do not. Local programs often lack the time and money to learn about different wastewater treatment and distribution technologies at workshops and conferences, and consequently, do not allow their use. Other programs do not allow them because of the time and effort needed to develop operating permits and the lack of maintenance providers available to service these systems in their jurisdictions.

The recommended standards and guidance for treatment technologies is expected to contain information that practitioners and owners currently need to make good decisions in selecting technologies for their sites and soil conditions. The recommended standards, planned to be patterned after Washington State's standards, will contain detailed information on the following items: performance standards, application standards, design standards, and operation and maintenance requirements.

**192. Proposed Change part- new 7080.1600, subpart 2.**

*Subpart 2. **Proprietary Treatment Products – Certification and Registration.***

**Justification**

Proprietary (held under patent or trademark) treatment products are used when a site requires additional treatment beyond that provided by a septic tank. These products include proprietary components, such as

but not limited to, aerobic treatment units (ATU's) and packed bed filters, which will provide treatment prior to discharge to a soil treatment and dispersal system. An objective, measurable, and consistent regulatory framework is needed for the registration of these products.

**193. Proposed Change - new part 7080.1600 subp. 2 A**

*A. Manufacturers shall register their proprietary products with the Commissioner before the local unit of government may permit their use.*

**Justification**

An objective, measurable, and consistent regulatory framework for the registration of products is needed. These products would be subject to the same requirements. While local units of government will make the final decisions on how various technologies are applied within their jurisdiction, local units of government want a centralized review and listing process. They have neither the time nor technical background to evaluate each new technology. Likewise, manufacturers or proponents of products prefer to have a central entity to which information can be submitted for registration, rather than having to be reviewed by each local unit of government.

The proposed rule establishes consistent protocols, a level “playing field” for the testing of new products. All manufacturers will be required to meet the same requirements. This process will assure that each product will be expected to meet the product registration requirements. The rule establishes a clear process for product registration.

There are two categories of treatment products: Category A includes systems designed to treat residential strength effluent (i.e.: domestic residences) while Category B includes systems designed to treat high-strength effluent (i.e.: restaurants and other establishments with high strength sewage). There is also a secondary nitrogen reduction performance standard that systems would be expected to meet in reducing total nitrogen in the treatment process if required by the local unit of government.

**194. Proposed Change - new part 7080.1600, subpart 2 item B.**

*B. To qualify for product registration, manufacturers desiring to sell or distribute proprietary treatment products shall:*

**Justification**

The following section of the rule specifies requirements for proprietary distribution products to be registered for use in Minnesota. All products would be subject to the same set of well-defined criteria to determine their suitability for use in Minnesota. Product registration would verify that each product satisfied the testing protocol and administrative requirements and, therefore, is available for use in the state. Soil and site conditions will determine what level of treatment is required.

**195. Proposed Change - new part 7080.1600, subpart 2, item B, subitem (1).**

*(1) verify product performance through testing using the testing protocol established in Table I in part 7080.1610 and register their product with the Commissioner using the process described in parts 7080.1600 to 7080.1660;*

### Justification

The proposed rules require proprietary treatment products to be tested to the same, consistent, nationally established standards and protocols. It would be simpler for manufacturers if more states used the same process, making it easier for them to get product approval in each state.

Detailed testing protocols are needed to assure all products go through the same consistent testing process. The protocols include specific testing methodologies for sampling procedures and frequency of sampling. Both national and international protocols have been developed to test wastewater treatment technologies. The Agency now has the needed protocols to assure each technology has the initial capability of meeting a specified performance.

#### **196. Proposed Change - new part 7080.1600, subpart 2, item B, subitem (2).**

*(2) report test results of influent and effluent sampling obtained throughout the testing period, including normal and stress loading phases, for evaluation of constituent reduction according to Table II in part 7080.1615;*

### Justification

Product testing performed by manufacturers and their distributors varies considerably among manufacturers. Some manufacturers have a complete set of testing data spanning over several months or years. Other companies have minimal testing data that does not have third-party testing. Therefore, there is a need to standardize reporting of test results by manufacturers so they know what is required by the Agency. Each manufacturer would be required to submit test results in a specified format and all manufacturers of proprietary products would be required to report test results in the same way. Each submittal would be evaluated by the Agency in a fair and consistent manner. Furthermore, Agency review of the product submittal application is expected to take a minimal amount of time, if the application is complete. This is expected to result in a quick turn around time for placement of products on the registration list.

#### **197. Proposed Change - new part 7080.1600, subpart 2, item B, subitem (3).**

*(3) demonstrate product performance according to Table III in part 7080.1620. All 30-day averages and geometric means obtained throughout the test period must meet the identified threshold values to qualify for registration at that threshold level; and*

### Justification

The proposed rule will ensure that all products registered to meet specified treatment levels have been tested to the protocol and verified that the parameters of concern were met in the testing. Without testing to the specified protocol and without verification that the treatment levels can be met, there is no assurance that public health concerns are being satisfied.

Three treatment levels (A, B, and C) are proposed, along with a single treatment level for total nitrogen. The standards contain values that must be met for different parameters, including organic strength (as measured by CBOD<sub>5</sub>), suspended solids (as measured by total suspended solids [TSS]), and the pathogen indicator organism, fecal coliform bacteria (FC), commonly used in the sewage treatment assessment.

The three treatment levels (A, B, and C) have different values for CBOD<sub>5</sub>, TSS, and fecal coliform. There is also a standard for Oil and Grease (O&G), a constituent of concern in high strength wastewater,

and a standard for nitrogen, a constituent of concern in ground water quality. These are called performance standards that must be met by the treatment component prior to discharge into the soil. The closer the bottom of the soil treatment and dispersal system is placed in proximity to the seasonally saturated soil or bedrock, the greater the level of pre-treatment required to compensate for less native soil for treatment.

**198. Proposed Change - new part 7080.1600, subpart 2, item B, subitem (4).**

*(4) verify bacteriological reduction according to part 7080.1635, for registration at Levels A and B in Table III in part 7080.1620.*

Justification

The proposed rule establishes a protocol for determining the bacteriological reduction capabilities of products. The fecal coliform standard is a critical public health measure that has, until now, not been required to be demonstrated by proprietary products.

There are existing national standards or protocols from the National Sanitation Foundation (NSF) that include testing for CBOD<sub>5</sub> and TSS. However, there is not an NSF or other national standard or protocol that contains requirements for testing bacteriological reduction equipment, such as ultraviolet radiation (UV), chlorination, or ozonation.

All manufacturers that want to be able to use their product to meet the fecal coliform requirements of Treatment Levels A or B of the proposed rules will be required to verify that their product can meet the applicable fecal coliform value of a treatment level. They must subject their product to the testing protocol established in the proposed rules and satisfactorily meet or exceed the values in the applicable treatment level.

The testing protocol may be applied to testing the bacteriological reduction capability of (1) a proprietary treatment unit itself, (2) a proprietary treatment component with a disinfection product added to the discharge side of the treatment component, or (3) just the disinfection product itself.

**199. Proposed Change - new part 7080.1600, subpart 2, item C.**

*C. Manufacturers verifying product performance through testing according to the following standards or protocols shall have product testing conducted by a qualified, third-party testing facility. Product performance testing shall be consistent with the following:*

Justification

Products need to be tested by a credible, third party testing organization using specified protocol and not just tested by the product manufacturer, to verify product performance, thereby protecting the environment and the consumer from unsubstantiated claims.

The EPA instituted the Environmental Technology Verification Program (ETV) in 1995 to verify the performance characteristics of commercial-ready environmental technologies through the evaluation of objective and quality-assured data. The independent technology verification generated through the ETV Program provides purchasers and the regulatory community of wastewater technologies with an independent and credible assessment of the technology. On-site wastewater treatment technologies addressed by the ETV Water Quality Protection Center include a generic protocol for wastewater treatment technologies and for nutrient reduction technologies.

**200.** Proposed Change - new part 7080.1600 subpart 2, item C, subitem (1).

*(1) National Sanitation Foundation (NSF) International, Residential Wastewater Treatment Systems, Standard 40 (July 2000). The standard is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change;*

Justification

The NSF developed a protocol to establish minimum materials, design and construction, and performance requirements for residential wastewater treatment systems with treatment capacities between 400 gallons per day and 1,500 gallons per day. The standard also specifies the minimum literature that manufacturers will supply to authorized representatives and owners as well as service requirements.

**201.** Proposed Change - new part 7080.1600, subpart 2, item C, subitem (2).

*(2) Environmental Protection Agency (EPA) and National Sanitation Foundation (NSF), Protocol for the Verification of Wastewater Treatment Technologies (April 2001). The protocol is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change;*

Justification

The EPA instituted the ETV in 1995 to verify the performance characteristics of commercial-ready environmental technologies through the evaluation of objective and quality-assured data. The independent technology verification generated through the ETV Program provides purchasers and the regulatory community of wastewater technologies with an independent and credible assessment of the technology. On-site wastewater treatment technologies addressed by the ETV Water Quality Protection Center include a generic protocol for wastewater treatment technologies and for nutrient reduction technologies. This generic protocol was developed to be employed for the verification testing of commercially available, prefabricated technologies for the on-site treatment of wastewater. Technologies eligible for evaluation under this protocol include all technologies for the on-site treatment of non-residential wastewater (commercial or industrial), in addition to residential wastewater treatment technologies with a design flow of greater than 1,500 gallons per day.

**202.** Proposed Change - new part 7080.1600, subpart 2, item C, subitem (3).

*(3) Environmental Protection Agency (EPA) Environmental Technology Verification (ETV) Program, Protocol for the Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction (November 2000). The protocol is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change;*

Justification

A protocol is needed to test for nutrient reduction, specifically nitrogen. The primary reasons for nutrient reduction are to protect water quality for drinking water purposes as there is a drinking water standard for nitrite and nitrate. This protocol was developed to evaluate and verify nutrient reduction associated with wastewater treatment systems capable of treating domestic wastewater from individual homes and having flows up to 1,500 gallons per day. Technologies to be evaluated according to this protocol need to be commercially ready. Please see Exhibit 454.

**203. Proposed Change - new part 7080.1600, subpart 2, item C, subitem (4).**

*(4) European Committee for Standardization (CEN), Small Wastewater Treatment Systems for up to 50 PT - Part 3: Packaged and/or Site Assembled Domestic Wastewater Treatment Plants, EN 12566-3:2005 (October 2003). The standard is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change;*

**Justification**

Other counties, including the European countries, require that manufacturers of small wastewater treatment units verify their units are capable of achieving acceptable treatment performance, verified by third-party testing. Under the European Norm, the testing protocol is used to establish the performance capability of each unit and to verify its suitability for the intended end use. This protocol also establishes standards for materials of construction and minimum design and construction standards against which each unit is evaluated. The European norm is reasonably equivalent to the NSF protocol for the purpose of verifying product performance reported by manufacturers of proprietary treatment products.

**204. Proposed Change - new part 7080.1600 subpart 2, item C subitem (5).**

*(5) other equivalent protocols and standards consistent with the above-referenced standards and protocol to verify product performance as approved by the Commissioner; and*

**Justification**

Other protocols may be equivalent, both now and in the future, to verify product performance. The intent is to ensure that appropriate protocols are used to ensure treatment products meet performance requirement claims reported by manufacturers and that verification be performed by qualified, third-party testing entities.

**205. Proposed Change - new part 7080.1600, subpart 2, item C, subitem (6).**

*(6) protocol for bacteriological reduction described in part 7080.1635.*

**Justification**

A protocol for determining the bacteriological reduction capabilities of products is needed since none exists in Minnesota. Fecal coliform is the most commonly used pathogenic indicator for public health protection. There is currently no national protocol for bacteriological testing. This requirement would establish consistent testing requirements and protocol for verifying the bacteriological reduction abilities of treatment products.

**206. Proposed Change - new part 7080.1600, subpart 2, item D.**

*D. Treatment levels used in part 7080.1620 are not intended to be applied as field compliance standards. Their intended use is to establish treatment product performance in a product testing setting under established protocols by qualified testing entities.*

**Justification**

Product registration verifies that a product has satisfied the testing protocol and administrative requirements and, consequently, is available for use in the state. Soil and site conditions will determine

what level of treatment is required. The design practitioner then selects a treatment technology that satisfies the site's treatment level requirements. Testing protocols are used solely to determine if the product meets the product registration requirements, not to verify field compliance by the system owner. An operating permit, issued by the local unit of government, would be issued to the owner to ensure proper system operation and maintenance over the years.

**MINN. R. 7080.1610 TESTING REQUIREMENTS FOR PROPRIETARY TREATMENT PRODUCTS**

**207. Proposed Change - new part 7080.1610, (TABLES I to III).**

*The testing protocols in this part are incorporated by reference under part 7080.1600, subpart 2, item C.*

**TABLE I**

<u>Treatment component/ sequence category</u>	<u>Required testing protocol</u>
-----	
<u>Category A: Designed to treat sewage with strength typical of a residential source when septic tank effluent is anticipated to be equal to or less than treatment Level C (Table III, part 7080.1620)</u>	<u>NSF Residential Wastewater Treatment Systems, Standard 40, or CEN European Standard, EN-12566-3:2005</u>
<u>Category B: Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment Level C (Table III, part 7080.1620), including restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.</u>	<u>EPA/NSF Protocol for the Verification of Wastewater Treatment Technologies/EPA Environmental Technology Verification, or equivalent</u>
-----	
<u>Total nitrogen and phosphorus reduction in Categories A and B</u>	<u>EPA Environmental Technology Verification, Protocol for the Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction, or equivalent</u>

**TABLE II**

<u>Treatment component/ sequence category</u>	<u>Testing results reported</u>
-----	
<u>Category A: Designed to treat sewage with strength typical of a residential source when septic tank effluent is anticipated to be equal to or less than treatment</u>	<u>Report test results for influent and effluent sampling obtained throughout the testing period for evaluation of consistent reduction for the parameters CBOD<sub>5</sub> and TSS:</u>

Level C (Table III, part 7080.1620)

- Average
- Minimum
- Median
- 30-day average (each month)
- Standard deviation
- Maximum
- Interquartile range.

For bacteriological reduction performance, report fecal coliform test results of influent and effluent sampling by geometric mean from samples drawn within 30-day or monthly calendar periods, obtained from a minimum of three samples per week throughout the testing period. See part 7080.1635. Test report must also include the individual results of all samples drawn throughout the test period.

Category B: Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment Level C (Table III, part 7080.1620), including restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc. Report all individual test results and full test average values of influent and effluent sampling obtained throughout the testing period for CBOD<sub>5</sub>, TSS, and oil and grease. Report the treatment capacity of the product tested in pounds per day for CBOD<sub>5</sub>.

Total nitrogen and phosphorus reduction in Categories A and B Report test results on all required performance criteria according to the format prescribed in the test protocol described in Table I, part 7080.1610.

Table III.  
Treatment component/sequence category Product performance requirements

Category A: Designed to treat sewage with strength typical of a residential Level Parameters  
CBOD<sub>5</sub> TSS O&G FC Nutrient  
(mg/L) (mg/L) (mg/L) (#/100ml) (mg/L)

<u>source when septic tank effluent is anticipated to be equal to or less than treatment Level C.</u>	<u>A</u>	<u>15</u>	<u>15</u>	<u>--</u>	<u>1,000</u>	<u>--</u>
	<u>B</u>	<u>25</u>	<u>30</u>	<u>--</u>	<u>10,000</u>	<u>--</u>
	<u>C</u>	<u>125</u>	<u>80</u>	<u>20</u>	<u>--</u>	<u>--</u>
	<u>TN</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>20</u>
	<u>TP</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>2</u>

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

Category B: All of the following requirements must be met:  
Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment Level C, including restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.  
(1) all full test averages must meet  
(2) the treatment capacity of the product tested in pounds per day for CBOD<sub>5</sub> must be reported.

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

Justification

These three tables are provided in the rules to tabulate the required testing protocols, the requirements for reporting test results, and product performance requirements in order to be registered for use at different treatment levels.

**MINN.R. 7080.1625 - PROPRIETARY TREATMENT PRODUCTS REGISTRATION – PROCESS AND REQUIREMENTS.**

**208. Proposed Change - new part 7080.1625, item A.**

A. Manufacturers shall register their proprietary treatment products with the Commissioner by submitting a complete application in the format prescribed by the Commissioner, including:

Justification

The list of items needed in the application for product registration is presented in this subpart. The manufacturer would submit information, specifications and performance data for technical evaluation. Upon review and approval, the Agency would list the product on the list of registered sewage treatment and distribution products.

There are 16 items that would need to be submitted for each treatment product seeking to be registered for use. The information submitted in the application packet would be used to develop the recommended standards and guidance for those products. Local units of government will use this information to better understand the products and permit their use within their jurisdictions. The reader may refer to the application developed by Washington State as an example of what Minnesota's application may include. For the state of Washington's application form, please see Exhibit 456.

**209. Proposed Change - new part 7080.1625, item A, subitem (1).**

*(1) the manufacturer's name, mailing address, street address, and telephone number;*

**Justification**

The manufacturer's name, address, and telephone number are needed to be able to properly correspond with the applicant.

**210. Proposed Change - new part 7080.1625, item A, subitem (2).**

*(2) the contact individual's name, title, mailing address, street address, and telephone number. The contact individual must be a company official with the authority to represent the manufacturer in this capacity;*

**Justification**

The contact person's name, the individual that represents the company, along with the individual's address and telephone number, is needed to properly correspond with the contact person for the company. This individual must have the proper authority to represent the company.

**211. Proposed Change - new part 7080.1625, item A, subitem (3).**

*(3) the name, including specific brand and model, of the proprietary treatment product;*

**Justification**

The manufacturer needs to submit the product brand name and model for the treatment product seeking to be registered for use in Minnesota.

**212. Proposed Change - new part 7080.1625, item A, subitem (4).**

*(4) a description of the function of the proprietary treatment product along with any known limitation of the use of the product;*

**Justification**

Information regarding the purpose of the treatment product would be included as part of the submittal requirements for registration. The manufacturer would need to disclose limitations they are aware of regarding the use of each product.

**213. Proposed Change - new part 7080.1625, item A, subitem (5).**

*(5) product description and technical information, including process flow drawings and schematics, materials and characteristics, component design specifications, design capacity, volumes and flow assumptions and calculations, components, dimensioned drawings, and photos;*

**Justification**

Technical information will be needed by the reviewer of the product submittal to adequately review the product. Information on the list contains standard engineering documents that should be readily available for each product.

**214. Proposed Change - new part 7080.1625, item A, subitem (6).**

*(6) for treatment systems in Category B, daily capacity of the model or models provided in pounds per day of CBOD<sub>5</sub>;*

**Justification**

Category B treatment systems are systems designed to treat high-strength sewage. These treatment systems are usually rated by their capacity to consume a maximum quantity of organic matter per day, measured as pounds CBOD<sub>5</sub> per day. For each product submitted for registration, the manufacturer would submit the treatment capacity of the product, expressed in pounds of CBOD<sub>5</sub>/day.

**215. Proposed Change - new part 7080.1625, item A, subitem (7).**

*(7) siting and installation requirements;*

**Justification**

Where the product could be used and how the product needs to be installed needs to be known for each product. This information would be included in the recommended standards and guidance to ensure the product is properly sited and installed by practitioners. The local unit of government will have a better understanding of where the product should be used and installation requirements so they can properly inspect the system during construction.

**216. Proposed Change - new part 7080.1625, item A, subitem (8).**

*(8) a detailed description, procedure, and schedule of routine service and system maintenance events;*

**Justification**

These systems must be properly operated and maintained in order to function over the life of the system. Like an automobile, on-site systems need routine servicing and maintenance. The application needs to include a description of the maintenance requirements, procedures to be followed, and schedules for when servicing is needed. The information will be integrated into the recommended standards and guidance for the product. Local units of government, service providers, and homeowners will rely on them for critical operation and maintenance information.

**217. Proposed Change - new part 7080.1625, item A, subitem (9).**

*(9) estimated operational costs for the first five years of the treatment component's life including estimated annual electricity usage and routine maintenance costs, including replacement of parts;*

**Justification**

Costs associated with the treatment products are needed so owners are aware of ongoing operational costs associated with the treatment product. A five year timeframe is suggested. The costs would include the annual cost for electricity, which can be a significant cost for some of the treatment products. The costs associated with routine maintenance and replacement parts for each product are suggested as consumer-related information.

**218. Proposed Change - new part 7080.1625, item A, subitem (10).**

*(10) identification of information requested to be protected from disclosure of trade secrets or confidential business information;*

**Justification**

The manufacturer needs to identify specific information regarding each product that needs to be protected as proprietary “trade secret” and confidential business information and therefore, protected from disclosure.

**219. Proposed Change - new part 7080.1625, item A, subitem (11).**

*(11) copies of product brochures and manuals, such as sales, promotional, design, installation, operation, and maintenance materials and homeowner instructions;*

**Justification**

Product brochures and manuals are needed to ensure the manufacturer has developed appropriate information for practitioners and owners of these products. The information to be submitted would include promotional materials (brochures), technical documents (design, installation, operation and maintenance requirements), and instructions prepared for owners on the use of the product.

**220. Proposed Change - new part 7080.1625, item A, subitem (12).**

*(12) the most recently available product test protocol and results report;*

**Justification**

The test results would need to be submitted for review. It is anticipated that the test results and supporting documentation would be presented in a technical report format. The test results would be reviewed to ensure that each product used the correct protocols and meets the testing requirements.

The test results would then be used to determine conformance with the Treatment System Performance Testing Levels as specific in Minn. R.7080.1600 Table III. Treatment Level A would need to achieve a CBOD<sub>5</sub> of less than or equal to 15 milligrams per liter (mg/L), TSS of less than or equal to 15 mg/L, and fecal coliform of less than or equal to 1,000 colonies per 100 milliliter (ml). Treatment Level B would

need to achieve a CBOD<sub>5</sub> of less than or equal to 25 mg/L, TSS of less than or equal to 30 mg/L, and fecal coliform of less than or equal to 10,000 colonies per 100 ml. Treatment Level C would need to achieve a CBOD<sub>5</sub> of less than or equal to 125 mg/L and TSS of less than or equal to 80 mg/L. Treatment Level N would need to achieve a total nitrogen (TN) less than or equal to 20 mg/L, and Treatment Level P would achieve a total phosphorus (TP) less than or equal to 2 mg/L.

**221. Proposed Change - new part 7080.1625, item A, subitem (13).**

*(13) all available product testing results, including a listing of state approvals and denials;*

**Justification**

The manufacturer would be required to submit other pertinent product testing results. For example, if a university tested the product being marketed, the test results would be submitted as supplemental documentation of product performance. Those test results performed as part of product development would not be submitted. The manufacturer would provide a listing of other state approvals and denials, which would provide supporting documentation of the use of the product in other states.

**222. Proposed Change - new part 7080.1625, item A, subitem (14).**

*(14) a signed and dated certification by the manufacturer's authorized senior executive or authorized agent specifically including the following statement: "I certify that I represent (INSERT MANUFACTURING COMPANY HERE) and I am authorized to prepare or direct the preparation of this application for registration. I attest, under penalty of law, that this document and all attachments are true, accurate, and complete. I understand and accept that the product testing results reported in this application for registration are the parameters and values to be used for determining conformance with treatment system performance testing levels established in Minnesota Rules, part 7080.1620.";*

**Justification**

On the application, the manufacturer would provide a certified statement that they represent the product manufacturer and are authorized to prepare, or to direct the preparation of, all documents and the application for product registration. Furthermore, the individual attests that all information submitted is true and accurate and that no false information was submitted in the application.

**223. Proposed Change - new part 7080.1625, item A, subitem (15).**

*(15) a signed and dated certification from the testing entity including the statement: "I certify that I represent (INSERT TESTING ENTITY NAME) and I am authorized to report the testing results for this proprietary product. I attest, under penalty of law, that the report about the test protocol and results is true, accurate, and complete.";* and

**Justification**

On the product submittal application, the testing entity would provide a certified statement that they were the testing entity and that they are authorized to report test results. Furthermore, the testing entity attests to the fact that the technical report about the test results is true and accurate and that the application and documentation contains no false information.

**224. Proposed Change - new part 7080.1625, item A, subitem (16).**

*(16) a technology review fee if allowed by law.*

**Justification**

A fee to cover the costs associated with product registration and the development of technical guidance and standards documents would be established by the Agency to administer this part of the proposed rule.

**225. Proposed Change - new part 7080.1625, item B.**

*B. Manufacturers shall submit each proprietary product for registration to the Commissioner. Products within a single series or model line, sharing distinct similarities in design, materials, and capabilities, may be registered under a single application, consistent with their test protocols for the certification of other products within a product series. Products outside of the series or model line must be registered under separate applications.*

**Justification**

Each product would need to be submitted as a separate submittal. Products determined to be nearly identical, in terms of their design, materials, and function, would be registered under one application. Different products would be required to have separate applications and accompanying testing results.

**226. Proposed Change - new part 7080.1625, item C.**

*C. Upon receipt of the application, the Commissioner shall, within 60 days:*

*(1) review the application and verify the application for compliance with item A;*

*(2) if the application is not in compliance with item A, return the application for resubmittal with the requested information for full compliance with item A; and*

*(3) if the application is complete and the Commissioner determines that the product meets or exceeds all applicable protocols, the Commissioner shall place the product on the list of registered treatment devices.*

**Justification**

Once the application for product registration is submitted, the Commissioner is required to determine if the needed information is contained in the application. If the information is complete, the Commissioner will approve or register the product for use in Minnesota. The product would be listed on the current list of proprietary products registered for use in Minnesota.

**227. Proposed Change - new part 7080.1625, item D.**

*D. Registrations are valid for up to three years, expiring on December 31 of the third year of registration, unless the product is recalled for any reason, found to be defective, or no longer available.*

**Justification**

There is a need to provide a feedback mechanism on how these products perform. Product registration would be valid for three years. The product would be renewed if no major issues were identified through the renewal process.

**228. Proposed Change - new part 7080.1625, item E, subitem (1).**

*E. To renew technology registration, a manufacturer shall:*

*(1) submit a request for renewal of product registration at least 30 days before the current registration expires, using the form or in the format prescribed by the Commissioner;*

Justification

The manufacturer would need to submit renewal information once every three years.

**229. Proposed Change - new part 7080.1625, item E, subitem (2).**

*(2) submit the results of retesting if the product has completed retesting according to the protocol required for registration and a report from the testing entity has been issued since initial registration or previous renewal. Renewal must be based on the most recent test results; and*

Justification

If the product has been retested, the test results need to be submitted to the Commissioner for review. Any new test results, per the protocol needed for the initial product registration, would be submitted by the manufacturer.

**230. Proposed Change - new part 7080.1625, item E, subitem (3).**

*(3) provide an affidavit to the Commissioner verifying whether the product has changed over the previous three years. If the product has changed, the affidavit must include a full description of the changes. If the product has changed in a way that affects performance, the product may not be renewed and must fulfill the requirements for initial registration.*

Justification

The manufacturer would be expected to provide an affidavit to verify whether or not the product changed since the last time it was registered for use in Minnesota. Since products are continually changing, some method to verify changes in products is needed. The affidavit would provide a description of the changes to the product. Based on this information, the product may not be renewed if there have been substantial changes that may affect its performance. The product would need to be re-submitted for initial registration and would be considered a new product.

**231. Proposed Change - new part 7080.1625, item F, subitem (1).**

*F. As part of the product registration renewal, the Commissioner shall:*

*(1) request field assessment comments from local units of government no later than October 31 for product renewal. The comments may include concerns about a variety of field assessment issues, including product function, product reliability, product performance, and problems arising from operation and maintenance;*

Justification

It is very critical that a feedback mechanism be incorporated into the product registration process. Local units of government are commonly notified by owners and practitioners when systems are having problems. There is currently no mechanism to evaluate the overall performance of products and systems actually used in the field. The Agency proposes to request written comments from local units of

government regarding each product, three months before product renewal. The comments would be solicited to identify potential problems that local units of government are witnessing in the field and through complaints by system owners.

**232. Proposed Change - new part 7080.1625, item F, subitem (2).**

*(2) discuss with the Technical Advisory Panel of the ISTS advisory committee established under part 7080.1150 any field assessment information that may impact product registration renewal;*

**Justification**

Prior to product renewal, the Technical Advisory Panel would review the field assessment comments in a fair and impartial manner. The Technical Advisory Panel would provide a recommendation to the Commissioner prior to renewal of the product.

**233. Proposed Change - new part 7080.1625, item F, subitem (3).**

*(3) notify the manufacturer of any product to be discussed with the Technical Advisory Panel, prior to discussion with the Technical Advisory Panel, regarding the nature of comments received; and*

**Justification**

In order to be fair to product manufacturers, the manufacturers would be notified of any field assessment comments before meeting with the Technical Advisory Panel. The manufacturer would be able to attend the meeting when the comments are presented.

**234. Proposed Change - new part 7080.1625, item F, subitem (4).**

*(4) renew the product registration, unless the manufacturer does not apply for renewal or the Commissioner, after deliberation with the Technical Advisory Panel, concludes product registration renewal should not be given or should be delayed until the manufacturer submits information that satisfactorily answers concerns and questions.*

**Justification**

If there are significant concerns regarding a registered product, there needs to be a process to discuss the problem at the time of product renewal. If there are legitimate concerns regarding a product, renewal of the product could be delayed until the manufacturer provides sufficient information to address the concerns. If there were serious unresolved issues regarding a product, product renewal could be denied.

**235. Proposed Change - new part 7080.1625, item G.**

*G. The Commissioner shall maintain a list of proprietary treatment products meeting the registration requirements established in this chapter. The product registration is a condition of approval for use.*

**Justification**

A convenient list of products registered in Minnesota is needed for owners, practitioners, and local permitting authorities. The format of the list would be patterned after the state of Washington's product listing. The approved products would be listed by treatment process (i.e.: Suspended Growth, Attached Growth) and by treatment level (i.e.: Level A, Level B, as previously described).

**236. Proposed Change - new part 7080.1625, item H.**

H. Manufacturers shall have readily accessible information for designers, regulators, systems owners, and other interested parties about their product, including but not limited to:

- (1) product manuals;
- (2) design instructions;
- (3) installation instructions;
- (4) information regarding operation and maintenance;
- (5) homeowner instructions; and
- (6) a list of representatives and manufacturer-certified service providers, if any.

Justification

Manufacturers need to provide important information about the products they sell so they can be properly designed, installed, used, and maintained. The information should be readily available and include: product manuals, instructions for design and installation, operation and maintenance manuals, instructions for owners, and a list of certified providers – if required by the product manufacturer. This information will be used to develop the recommended standards and guidance for products placed on the product registration list.

**MINN. R. 7080.1630. TRANSITION FROM PREVIOUS REQUIREMENTS FOR AEROBIC TANK TREATMENT SYSTEMS AND OTHER TREATMENT SYSTEMS TO THE NEW REGISTERED LIST**

Justification

A transition period to register products for use in Minnesota is needed so that products and technologies can be used before the product registration process is fully implemented. Products could continue to be used without being registered for use during this transition period.

**237. Proposed Change - new part 7080.1630, item A.**

A. The use of aerobic tank treatment systems as specified in Minnesota Rules chapter 7080 (2005), and other advanced treatment technologies may be used for eighteen months from the effective date of this chapter.

Justification

Proprietary treatment products would be removed from the rule and replaced with a product registration process and listing of products. Specific products identified in the former version of Minn. R. ch. 7080 include aerobic tank treatment systems and distribution products (i.e.: gravelless drainfield pipe; chambered systems). A transition period is needed so products can continue to be used before the product registration process is fully implemented.

**238. Proposed Change - new part 7080.1630, item B.**

B. After March 1, 2009, only those products registered under this chapter may be used as directed in registration guidance documents.

### Justification

A transition period is needed so products can continue to be used before the product registration process is fully implemented.

#### **239.** Proposed Change - new part 7080.1630, item C.

C. To be registered, manufacturers of aerobic tank treatment systems shall apply for product registration. Aerobic tank treatment systems must meet all other requirements established in this chapter for registration.

### Justification

Sewage treatment products can be used during this interim period without being on a registered listing. Some transition time is needed so products could be used before product registration is fully implemented.

#### **240.** Proposed Change - new part 7080.1630, item D.

D. Manufacturers of aerobic tank treatment system products shall meet all other requirements established in this chapter for product registration.

### Justification

This statement is included in the rule for clarification purposes to ensure other requirements of the rule apply and not just the product registration process, in and by itself.

## **MINN. R. 7080.1635 - BACTERIOLOGICAL REDUCTION**

#### **241.** Proposed Change - new part 7080.1635, subpart 1.

Subpart 1. Scope. This part establishes the requirements for registering bacteriological reduction processes.

### Justification

The proposed rule establishes a protocol for determining the bacteriological reduction capabilities of products. The fecal coliform standard is a critical for public health. There is currently no national protocol for bacteriological testing. This section establishes consistent testing requirements and protocol for verifying the bacteriological reduction abilities of treatment products.

Testing according to this protocol can be done by using the bacteriological reduction protocol specified in this rule or in conjunction with other testing, including CBOD5 and TSS. The testing protocol may also be applied to testing the bacteriological reduction capability of (1) a proprietary treatment unit by itself, (2) proprietary treatment components [like a mechanical aerobic treatment unit] with a disinfection product (i.e.: chlorine or UV) added to the discharge side of the treatment component, or (3) just the disinfection product itself. In order for products that meet the fecal coliform values for the different treatment levels to be permitted, manufacturers or proponents of those products must have their products registered using the registration process contained in the proposed rules.

**242. Proposed Change - new part 7080.1635, subpart 2.**

*Subp. 2. Verification. Manufacturers shall, for the purpose of product registration as described in parts 7080.1605 to 7080.1625 for meeting treatment Level A or B, verify bacteriological reduction performance by sampling and testing for fecal coliform.*

**Justification**

The fecal coliform standard is a critical public health measure. All manufacturers that want to be able to use their product to meet the fecal coliform requirement. All manufacturers that want to be able to use their product to meet the fecal coliform requirements of Treatment Levels A and B of the proposed rules must verify their product can meet or exceed the applicable fecal coliform value of a treatment level. They would be required to subject their product to the testing protocol established in the proposed rules and satisfactorily meet or exceed the values in the applicable treatment level.

**243. Proposed Change - new part 7080.1635, subpart 3.**

*Subp. 3. Testing process. All test data submitted for product registration must be produced by a qualified, third-party testing organization. Bacteriological reduction performance requirements must be determined while the treatment product or sequence is tested according to the NSF Standard 40 testing protocol, or other equivalent Commissioner-approved testing protocol. The tester must:*

**Justification**

The fecal coliform standard is a critical public health measure that needs to be demonstrated by proprietary products. Products need to be tested for the removal of fecal coliform by a credible, third party testing organization, not by the product manufacturer. This is needed to ensure the product will perform, as stated, and the consumer is protected. The proposed rule establishes a protocol for determining the bacteriological reduction capabilities of products. It provides a consistent protocol, one that all manufacturers must meet. Placing this protocol in rule provides all manufacturers with a clear and objective standard and a path to achieve the standard.

One organization to perform the required testing would be an American National Standards Institute certified entity using the required protocol. There are existing national standards or protocols from NSF that include testing for CBOD<sub>5</sub> and TSS. However, there is not an NSF or other national standard or protocol that contains requirements for testing bacteriological reduction equipment.

**244. Proposed Change - new part 7080.1635, subpart 3 item A.**

*A. collect samples from both the influent and effluent streams and identify the treatment performance achieved by the full treatment process, component, or sequence;*

**Justification**

Samples need to be properly collected and analyzed at the time of product testing to determine overall effectiveness in the removal of fecal coliform, or its bacteriological reduction capabilities. To determine product effectiveness in removing fecal coliform, the quality of effluent entering the treatment product (called influent) and exiting the treatment product (called effluent) needs to be known. Samples would need to be collected from the individual components (i.e.: ultraviolet light radiation - UV) or from a group of treatment components (i.e.: aerobic treatment unit with UV disinfection).

**245. Proposed Change - new part 7080.1635, subpart 3, item B.**

*B. obtain influent characteristics within the range of  $10^6$  -  $10^8$  fecal coliform/100 mL calculated as 30-day geometric means during the test;*

Justification

When treatment products are tested to determine bacteriological reduction capabilities, testing needs to be performed using wastewater that is representative of what would typically be expected. Fecal coliform bacteria serve as an indicator of disease causing organisms. Wastewater normally contains many of these indicator organisms, normally ranging from 1,000,000 to 100,000,000 ( $10^6$ - $10^8$ ). The product testing would be required to be performed using wastewater with these high levels of fecal coliform to ensure the product is rigorously tested. The test results would be reported as 30-day geometric means, normal reporting protocol for fecal coliform.

**246. Proposed Change - new part 7080.1635 subpart 3 item C.**

*C. test the influent to any disinfection unit and report flow rate, pH, temperature, and turbidity at each occasion of sampling performed in item D;*

Justification

The influent to each disinfection device would need to be tested, for not only fecal coliform bacteria, but for other key parameters at the same time. Other wastewater parameters important to the disinfection process include: flow rate to the device, and the temperature, pH, turbidity and color of the wastewater. Each of these wastewater characteristics can have a significant impact on the effectiveness of disinfection devices in reducing pathogenic organisms. Consequently, these parameters would be required as part of the testing process.

**247. Proposed Change - new part 7080.1635 subpart 3 item D.**

*D. obtain samples for fecal coliform analysis during both design loading and stress loading periods, as follows:*

Justification

During the entire testing period, wastewater samples would need to be properly collected and analyzed for pathogenic indicator organisms (fecal coliform). The testing protocol specifies that products will be tested rigorously, including design flow and during periods of heavy use (called stress loading). Examples of stress loading include laundry days on Saturdays, higher flows expected after vacations, and family visits.

**248. Proposed Change - new part 7080.1635, subpart 3, item D, subitem (1)**

*(1) grab samples shall be collected and analyzed from both the influent and effluent on three separate days of the week; and*

Justification

The testing protocol for bacterial reductions needs to ensure each product is tested according to a set methodology. This will ensure all products are tested to the same rigorous standards, and that testing is equitable among all products tested. Grab samples from where the wastewater enters the device (called

influent) and where it leaves the device (effluent) would be collected and analyzed during each test cycle and at least three days of the week. This will ensure consistency in methods used to test for pathogenic organisms. Please refer to Exhibit 407.

**249. Proposed Change - new part 7080.1635, subpart 3, item D, subitem (2)**

*(2) each set of influent and effluent grab samples must be taken from a different dosing time frame (morning, afternoon, or evening) so that samples have been taken from each dosing time frame by the end of the week;*

**Justification**

A procedure that specifies how wastewater samples will be collected is needed to ensure samples are collected correctly and that there is consistency in the sampling procedure. This method would apply to how both influent and effluent samples are collected. The procedure specifies that three grab samples would be collected each day and then combined to form a single, composite sample for analysis. This technique is commonly used because it better characterizes the composition of wastewater.

**250. Proposed Change - new part 7080.1635, subpart 3, item E.**

*E. conduct analyses for fecal coliform according to Standard Methods;*

**Justification**

“Standard Methods for the Examination of Water and Wastewater” by the American Public Health Association is the national referenced manual for the analysis of wastewater. Testing laboratories doing business in Minnesota are required to be certified by the Minnesota Department of Health. Any testing organization would be required to be certified by the Minnesota Department of Health for the parameters being tested (i.e.: fecal coliform bacteria, pH, color, and turbidity).

**251. Proposed Change - new part 7080.1635, subpart 3, item F.**

*F. report the geometric mean of fecal coliform test results from all samples taken within 30-day or monthly calendar periods;*

**Justification**

The test results for fecal coliform would be summarized and reported as 30-day geometric means, normal reporting protocol for fecal coliform. All fecal coliform samples collected and analyzed would be used to calculate this simple summary statistic.

**252. Proposed Change - new part 7080.1635, subpart 3, item G.**

*G. report the individual results of all samples taken throughout the test period for design loading and stress loading; and*

**Justification**

All data for fecal coliform collected during the test period would need to be reported as part of the product registration process. Manufacturers would not be able to selectively submit the data they choose to report due to poor results. For the test period, all test results would need to be reported and submitted to the

Agency, and include sample results when the poorest performance would be expected to occur, during periods of higher loadings or stress loading.

**253. Proposed Change - new part 7080.1635, subpart 3, item H.**

*H. report all maintenance and servicing conducted during the testing period, such as instances of cleaning an ultraviolet lamp or replenishment of chlorine chemicals.*

**Justification**

Any maintenance or servicing of the product performed during the time the product is tested needs to be reported with the test results. If maintenance or servicing was done during the testing period, we would need to understand what maintenance was done during the testing period and how it may impact the test results. A description of the maintenance conducted at the time of testing would be reported along with the fecal coliform test results.

**254. Proposed Change - new part 7080.1635, subpart 4.**

*Subp. 4. Disinfection. Manufacturers may register products that use disinfection in Treatment Levels A and B, or products that use disinfection may be registered by manufacturers as a component of the process in Treatment Level A and B.*

**Justification**

There are two treatment levels that a disinfection product could qualify for after the appropriate testing is completed and submitted: Treatment Level A and Treatment Level B. This provides manufacturers with two distinct levels of product registration for fecal coliform and use on sensitive sites or sites with limited soil conditions. The performance requirement would be 1,000 colonies per 1,000 milliliter for Treatment Level A and 10,000 colonies per 100 milliliter for treatment level B.

**MINN. R. 7080.1640 – DISTRIBUTION MEDIUM – CERTIFICATION AND REGISTRATION**

**255. Proposed Change - new part 7080.1640, item A, former 7080.0170, subpart 2, item B, subitem (2), unit (a).**

*A. If drainfield rock is to be used as the distribution medium, it must:*

*(1) be insoluble, durable rock;*

*(2) be between 3/4 of an inch and 2-1/2 inches in size;*

*(3) have no more than five percent by weight able to pass through a 3/4 of an inch sieve;*

*(4) have no more than one percent by weight able to pass through a No. 200 sieve; and*

*(5) have no more than five percent by weight of materials greater than 2-1/2 inches in size.*

**Justification**

This is a current provision that has been moved with one substantial change. The former rule allowed use of “similar material” to rock be considered as drainfield rock. Products that fell into this category are polystyrene beads. However, it is proposed to limit “drainfield rock” to rock materials and to allow such things as polystyrene beads under this new product registration process.

**256. Proposed Change - new part 7080.1640, item B.**

*B. For nonrock distribution media, manufacturers shall register the distribution media, including gravelless distribution media and subsurface drip dispersal products, with the Commissioner before the local unit of government may permit their use.*

**Justification**

An objective and consistent framework for the registration of products is needed. These products would be subject to the same registration requirements. While local units of government will make the final decisions on how various distribution products are used within their jurisdiction, local units of government want a centralized review and listing process. Likewise, manufacturers or proponents of products prefer to have a central entity to which information can be submitted for registration, rather than having to be reviewed by each local unit of government.

The proposed rules establish the criteria, standards, and an administrative process for registering proprietary distribution products, just as they do for proprietary treatment products. These standards are primarily design, structural, materials, and construction standards, not testing standards as with the proprietary treatment products.

**257. Proposed Change - new part 7080.1640, item C.**

*C. Manufacturers desiring to sell distribution media shall certify that the media meet the standards established in this part and register the media with the Commissioner using the process in part 7080.1645.*

**Justification**

Proprietary distribution products would need to be registered for use in Minnesota. Each product would be subject to the same set of criteria to determine their suitability for use in Minnesota. Product registration would verify that each product has satisfied the evaluation and administrative requirements as identified in this part.

**258. Proposed Change - new part 7080.1640, item D.**

*D. Distribution media must:*

**Justification**

Gravelless distribution products include several different types, including pipe, chamber, gravel-substitute, and geo-composites. While the specifics of these types differ, their purpose is the same: to meet (or exceed) the characteristics and function of gravel in a conventional gravel-filled drainfield. In a conventional gravel-filled drainfield, the gravel is non-deteriorating; the gravel provides void space for the passage and temporary storage of effluent; the gravel presents an interface with the infiltrative surface, trench bottom and sidewall soil to absorb wastewater; and the gravel maintains the integrity of the excavation, supporting the soil back-fill and cover.

**259. Proposed Change - new part 7080.1640, item D, subitem (1)**

*(1) be constructed or manufactured from materials that are nondecaying and nondeteriorating and do not leach chemicals when exposed to sewage and the subsurface soil environment;*

### Justification

Gravelless distribution products would need to be structurally sound and not subject to decay or deterioration when exposed to wastewater and used in the soil during the expected life of the system. The material used in the fabrication of distribution products cannot produce or leach chemicals or byproducts that could enter the subsurface environment and contribute to ground water degradation.

#### **260. Proposed Change - new part 7080.1640, item D, subitem (2)**

*(2) provide liquid storage volume at least equal to the storage volume provided within the 30 percent void space in a 12-inch layer of drainfield rock in a drainfield-rock-filled distribution system. The storage volume must be established by the distribution medium, system design, and installation and must be maintained for the life of the system. This requirement may be met on a lineal foot basis or on an overall system design basis;*

### Justification

Conventional gravel-filled drain fields typically consist of a level trench (three feet wide) with six to 12 inches of drain field rock placed on the bottom. A gravity flow distribution network consisting of four-inch diameter perforated plastic pipe is located on this layer of drainfield rock. Additional drain field rock is placed over the pipe to a level of two inches above the pipe. The drain field rock is then covered with a layer of geotextile material and the trench is backfilled with suitable soil material.

Drain field rock generally contains 30 percent void space by volume. This pore space provides for the temporary storage of effluent before it infiltrates into the soil. Gravelless distribution products would need to provide a liquid storage capacity at least equal to the storage capacity within the 30 percent void space in a 12-inch layer of drain field rock in a drain field. This storage capacity can be obtained per lineal-foot of drain field or based on an overall system design. Manufacturers would provide this storage capacity information for each gravelless distribution product as part of the product registration process. The required liquid storage capacity would need to be maintained for the life of the drain field generally projected to last for 25 years under normal use and maintenance.

#### **261. Proposed Change - new part 7080.1640, item D, subitem (3)**

*(3) provide suitable effluent distribution and infiltration rate to the absorption area at the soil interface; and*

### Justification

Gravelless distribution products would need to provide for the distribution of effluent to the soil surface. The interface between the gravel or gravelless distribution media and the soil is referred to as its infiltrative surface. Enough infiltrative area is needed so effluent can actually be absorbed into the soil.

#### **262. Proposed Change - new part 7080.1640, item D, subitem (4)**

*(4) maintain the integrity of the trench or bed. The material used, by its nature and manufacturer-prescribed installation procedure, must withstand the physical forces of the soil sidewalls, soil backfill, and weight of equipment used in the backfilling.*

### Justification

Gravelless distribution products need to be rigid enough to support the various pressures that could cause it to deform, including soil sidewall pressure, soil backfill pressure, and the weight of equipment during installation. If the gravelless material does not maintain its integrity, it could reduce both the storage volume and infiltrative area over the expected life of the drain field. The materials used and the prescribed installation procedures must ensure the integrity of trenches or beds are maintained so effluent can infiltrate into the soil.

### **263. Proposed Change - new part 7080.1640, item E.**

*E. Subsurface drip dispersal products must:*

### Justification

Subsurface drip distribution is an efficient device available for the application and subsurface dispersal of wastewater to the soil. A small volume of wastewater is dosed at predetermined time intervals throughout the day to the soil through a pressurized piping network that comes close to achieving uniform distribution over the entire footprint of the dispersal area. A drip distribution system starts with the dripline or tubing and the in-line emitters. The tubing is flexible polyethylene (PE) available in several diameters with a nominal ½ inch as the typical size for wastewater application. Dripline product manufacturers would need to submit basic information to the Commissioner for product registration.

### **264. Proposed Change - new part 7080.1640, item E, subitem (1).**

*(1) be warrantied by the manufacturer for use with sewage and for resistance to root intrusion;*

### Justification

The manufacturer needs to provide a warranty that the dripline tubing is specifically designed and approved for sewage application. There are currently two known manufacturers of dripline products for wastewater applications. Drip tubing from other manufacturers have been used, but several failures and lawsuits have been reported (Wastewater Subsurface Drip Distribution: Peer-Reviewed Guidelines for Design, Operation, and Maintenance, EPRI, Palo Alto, CA. and Tennessee Valley Authority, Chattanooga, TN. 2004. Technical Report 1007406).

The product also needs to be warranted as being resistant to root intrusion. To control root intrusion, drip line manufacturers have used herbicides placed in emitters or employ a physical barrier within the emitters. The manufacturers would provide the warranty information for suitability for wastewater applications and ability to control root intrusion.

### **265. Proposed Change - new part 7080.1640, item E, subitem (2).**

*(2) incorporate emitters with a maximum nominal rated discharge of 1.3 gallons per hour. Emitter discharge rate may be controlled by use of pressure-compensating emitters or with a pressure regulator; and*

### Justification

Dripline emitters are pre-spaced evenly along the dripline with 24-inch spacing as the most commonly used. The emitters may be either pressure compensating or nonpressure compensating emitters. Pressure compensating emitters are available for nominal flow rates ranging from 0.4 to 1 gallon per hour (gal/h).

Nonpressure compensating emitters are available at a higher flow rates, but flow rates greater than 1.3 gal/h are more conducive to soil saturation around emitters in tight soils. If nonpressure compensating emitters are used, pressure regulators are typically used to obtain the required design pressures and flow rate from each emitter.

**266. Proposed Change - new part 7080.1640 item E. subitem (3).**

*(3) be color-coded purple to identify that the pipe contains nonpotable water from a sewage source.*

**Justification**

Purple is the international color that signifies the pipes contain non-potable water from sewage. This would identify that the water is not suitable for consumption.

**MINN. R. 7080.1645 - PROPRIETARY DISTRIBUTION PRODUCTS – PROCESS AND REQUIREMENTS**

**267. Proposed Change - new part 7080.1645, subpart 1.**

*Subpart 1. Proprietary media. Manufacturers shall obtain registration of their proprietary media with the Commissioner by submitting a complete application in the format prescribed by the Commissioner, including:*

**Justification**

The list of items needed in the application for product registration is presented in this subpart. The manufacturer would submit information, specifications and performance data for technical evaluation. Upon review and approval, the Agency would list the product on the *List of Proprietary Systems and Products*.

There are 15 items that would need to be submitted for each proprietary distribution product seeking to be registered for use. The information submitted in the application packet would be used to develop the recommended standards and guidance for those distribution products. Local units of government will use this information to better understand the products and permit their use within their jurisdictions. The reader may refer to the application developed by Washington State as an example of what Minnesota's application may include. For the state of Washington's application form please see Exhibit 455.

**268. Proposed Change - new part 7080.1645, subpart 1, item A.**

*A. the manufacturer's name, mailing address, street address, and telephone number;*

**Justification**

The manufacturers name, address, and telephone number are needed to be able to properly correspond with the applicant.

**269. Proposed Change - new part 7080.1645, subpart 1, item B.**

*B. the contact individual's name, title, mailing address, street address, and telephone number. The contact individual must be a corporate official with the authority to represent the manufacturer in this capacity;*

### Justification

The contact person's name, the individual that represents the company, along with the individual's address and telephone number, is needed to properly correspond with the contact person for the company. This individual must have the proper authority to represent the company.

#### **270. Proposed Change - new part 7080.1645, subpart 1, item C.**

*C. the name, including specific brand and model, of the proprietary distribution product;*

### Justification

The manufacturer needs to submit the product brand name and model for the distribution product seeking to be registered for use in Minnesota.

#### **271. Proposed Change - new part 7080.1645, subpart 1, item D.**

*D. a description of the function of the distribution medium along with any known limitations on its use;*

### Justification

Information regarding the purpose of the distribution product would be included as part of the submittal requirements for registration. The manufacturer would need to disclose limitations they are aware of regarding the use of each product.

#### **272. Proposed Change - new part 7080.1645, subpart 1, item E.**

*E. a description of the medium and technical information, including schematics; materials and characteristics; component design specifications; design capacity; volumes and flow assumptions and calculations; components; and dimensioned drawings, photos, application, and use;*

### Justification

Technical information will be needed by the reviewer of the product submittal to adequately review the product. Information on the list contains standard engineering documents that should be readily available for each product.

#### **273. Proposed Change - new part 7080.1645, subpart 1, item F.**

*F. siting and installation requirements;*

### Justification

Where the product could be used and how the product needs to be installed needs to be known for each product. This information would be included in the recommended standards and guidance to ensure the product is properly sited and installed by practitioners. The local unit of government will have a better understanding of where the product should be used and installation requirements so they can properly inspect the system during construction.

**274. Proposed Change - new part 7080.1645, subpart 1, item G.**

*G. a detailed description, procedure, and schedule of routine service and system maintenance events;*

Justification

These systems must be properly operated and maintained in order to function over the life of the system. Like an automobile, on-site systems need routine servicing and maintenance. The application needs to include a description of the maintenance requirements, procedures to be followed, and schedules for when servicing is needed. The information will be integrated into the recommended standards and guidance for the product. Local units of government, service providers, and homeowners will rely on them for critical operation and maintenance information.

**275. Proposed Change - new part 7080.1645, subpart 1, item H.**

*H. identification of information requested to be protected from disclosure of trade secrets;*

Justification

The manufacturer needs to identify specific information regarding each product that needs to be protected as proprietary information and protected from disclosure of the product's trade secrets.

**276. Proposed Change - new part 7080.1645, subpart 1, item I.**

*I. copies of product brochures and manuals, such as sales, promotional, design, installation, operation, and maintenance materials and homeowner instructions;*

Justification

Product brochures and manuals are needed to ensure the manufacturer has developed appropriate information for practitioners and owners of these products. The information to be submitted would include promotional materials (brochures), technical documents (design, installation, operation and maintenance requirements), and instructions prepared for owners on the use of the product.

**277. Proposed Change - new part 7080.1645, subpart 1, item J.**

*J. a quantitative description of the actual exposed trench-bottom and sidewall absorption area or sizing criteria for drip dispersal systems for each model seeking registration;*

Justification

The manufacturer would provide quantitative descriptions of each product seeking to be registered so that the Agency does not have to perform the calculation on each and every product. The quantitative information would provide actual bottom area infiltrative surface and actual sidewall infiltrative surface. Impervious surfaces (i.e.: pads) used to support distribution products would not be considered as part of the infiltrative surface. The descriptions would include, for example, unit size (width, length, height), void space per unit (cu. ft.), void space per linear foot (cu.ft), infiltrative surface per unit (sq. ft.), and infiltrative surface per linear foot (sq. ft).

**278. Proposed Change - new part 7080.1645, subpart 1, item K.**

*K. all available product testing results, including a listing of state approvals and denials;*

**Justification**

The manufacturer would be required to submit other pertinent product testing results. For example, if a University had tested the product being marketed, the test results would be submitted as supplemental documentation of product performance. Those test results performed as part of product development would not be submitted. The manufacturer would provide a listing of other state approvals and denials, which would provide supporting documentation of the use of the product in other states.

**279. Proposed Change - new part 7080.1645, subpart 1, item L.**

*L. a statement from a licensed professional engineer that certifies the technology meets the standards established in part 7080.1640;*

**Justification**

Manufacturers will need to provide verification from a professional engineer that the product meets the standards established in the rule. This will provide some assurance the product meets the rule standards when the application is submitted.

**280. Proposed Change - new part 7080.1645, subpart 1, item M.**

*M. a signed and dated certification by the manufacturer's senior executive or agent, specifically including the following statement: "I certify that I represent (INSERT MANUFACTURING COMPANY HERE) and I am authorized to prepare or direct the preparation of this application for registration. I attest, under penalty of law, that this document and all attachments are true, accurate, and complete.";*

**Justification**

On the application, the manufacturer would provide a certified statement that they represent the product manufacturer and are authorized to prepare, or to direct the preparation of, all documents and the application for product registration. Furthermore, the individual attests that all information submitted is true and accurate and that no false information was submitted in the application.

**281. Proposed Change - new part 7080.1645, subpart 1, item N.**

*N. a signed and dated certification from the licensed professional engineer including the statement: "I certify that I represent (INSERT PROFESSIONAL ENGINEERING FIRM NAME) and that I am authorized to certify the performance for the proprietary distribution product presented in this application. I attest, under penalty of law, that the technology report is true, accurate, and complete."; and*

**Justification**

The manufacturer would provide a certified statement that they represent the product manufacturer and are authorized to certify the performance of each distribution product at the time of product application. The professional engineer attests that all information submitted is true and accurate and that no false information was submitted in the application.

**282.** Proposed Change - new part 7080.1645, subpart 1, item O.

O. a technology review fee if allowed by law.

Justification

A fee to cover the costs associated with product registration and the development of technical guidance and standards documents would be established by the Agency to administer this part of the proposed rule.

**283.** Proposed Change - new part 7080.1645, subpart 2.

Subp. 2. Proprietary media products. Manufacturers shall submit proprietary media products for registration to the Commissioner. Products within a single series or model line sharing distinct similarities in design, materials, and capabilities may be registered under a single application. Products outside of the series or model line must be registered under separate applications.

Justification

Each product would need to be submitted as a separate submittal. Products determined to be nearly identical, in terms of their design, materials, and function, would be registered under one application. Different products would be required to have separate applications and accompanying documentation.

**284.** Proposed Change - new part 7080.1645, subpart 3.

Subp. 3. Commissioner review. Upon receipt of the application, the Commissioner shall:

A. review the application and verify the application for compliance with subpart 1;

B. if the application is not in compliance with subpart 1, return the application for resubmittal with the requested information for full compliance with subpart 1; or

C. if the application is complete and the Commissioner determines that the product meets or exceeds all applicable protocols, the Commissioner shall place the product on the list of distribution products.

Justification

Once the application for product registration is submitted, the Commissioner is required to determine if the needed information is contained in the application. If the information is complete, the Commissioner will approve or register the product for use in Minnesota. The product would be listed on the current list of proprietary products registered for use in Minnesota.

**285.** Proposed Change - new part 7080.1645, subpart 4.

Subp. 4. Duration of registration. Registrations are valid for up to three years, expiring on December 31 of the third year of registration, unless the product is recalled for any reason, found to be defective, or no longer available.

Justification

There is a need to provide a feedback mechanism on how these products perform. Product registration would be valid for three years, unless the product is recalled under any state, foreign jurisdiction, or federal law, or becomes unavailable. The product registration may be renewed if no major issues were identified through the renewal process.

**286. Proposed Change - new part 7080.1645, subpart 5.**

*Subp. 5. **Renewal.** To renew a proprietary distribution product registration, a manufacturer shall:*

Justification

This is the introductory statement for this subpart. .

**287. Proposed Change - new part 7080.1645, subpart 5, subitem 1.**

*(1) submit a request for renewal of product registration at least 30 days before the current registration expires, using the form or in the format prescribed by the Commissioner; and*

Justification

The manufacturer would need to submit a request for renewal once every three years. Thirty days prior to its expiration date is needed to process the renewal. Specific information will be required to renew the product.

**288. Proposed Change - new part 7080.1645, subpart 5, subitem 2.**

*(2) provide an affidavit to the Commissioner verifying whether the product has changed over the previous three years. If the product has changed, the affidavit must include a full description of the changes. If the product has changed in a way that affects performance, the product may not be renewed and must fulfill the requirements for initial registration.*

Justification

The manufacturer would be expected to provide an affidavit to verify whether or not the product changed since the last time it was registered for use in Minnesota. Since products are continually changing, some method to verify changes in products is needed. The affidavit would provide a description of the changes to the product. Based on this information, the product may not be renewed if there have been substantial changes that may affect its performance. The product would need to be re-submitted for initial registration and would be considered a new product.

**289. Proposed Change - new part 7080.1645, subpart 6, item A.**

*Subp. 6. **Commissioner review.** As part of the product registration renewal, the Commissioner shall:*

*A. request field assessment comments from local units of government no later than October 31 for product renewal. The comments may include concerns about a variety of field assessment issues, including product function, product reliability, and problems arising from operation and maintenance;*

Justification

It is very critical that a feedback mechanism be incorporated into the product registration process. Local units of government are commonly notified by owners and practitioners when systems are having problems. There is currently no mechanism to evaluate the overall performance of products and systems actually used in the field. The Agency proposes to request written comments from all units of government regarding each product, three months before product renewal. The comments would be solicited to identify potential problems that local units of government are witnessing in the field and through complaints by system owners.

**290.** Proposed Change - new part 7080.1645, subpart 6, item B.

*B. discuss with the Technical Advisory Panel of the ISTS advisory committee established under part 7080.1150 any field assessment information that may impact product registration renewal;*

Justification

Prior to product renewal, the Technical Advisory Panel would review the field assessment comments in a fair and impartial manner. The Technical Advisory Panel would provide a recommendation to the Commissioner prior to renewal of the product.

**291.** Proposed Change - new part 7080.1645, subpart 6, item C.

*C. notify the manufacturer of any product to be discussed with the Technical Advisory Panel, prior to discussion with the Panel, regarding the nature of comments received; and*

Justification

In order to be fair to product manufacturers, the manufacturers would be notified of any field assessment comments before meeting with the Technical Advisory Panel. A representative from the manufacturer would be able to attend the meeting when comments are presented.

**292.** Proposed Change - new part 7080.1645, subpart 6, item D.

*D. renew, modify, or deny the product registration based on information received during the renewal process. If the manufacturer does not apply for renewal or the Commissioner, after deliberation with the Technical Advisory Panel, concludes product registration renewal should not be given or should be delayed until the manufacturer submits information that satisfactorily answers concerns and questions, product registration shall be denied.*

Justification

If there are significant concerns regarding a registered product, there needs to be a process to discuss the problem at the time of product renewal. If there are legitimate concerns regarding a product, renewal of the product could be delayed until the manufacturer provides sufficient information to address the concerns. If there were serious unresolved issues regarding a product, product renewal could be denied.

**293.** Proposed Change - new part 7080.1645, subpart 7.

*Subp. 7. List. The Commissioner shall maintain a list of proprietary distribution products meeting the registration requirements established in this part. The product registration is a condition of approval for use.*

Justification

A convenient list of products registered in Minnesota is needed for owners, practitioners, and local permitting authorities. The format of the list would be patterned after the State of Washington's product listing. The approved products would be listed as Recommended Standards and Guidance for Gravelless Drainfield Systems.

**294. Proposed Change - new part 7080.1645, subpart 8.**

Subp. 8. **Manufacturer information.** *Manufacturers shall have readily accessible information for designers, regulators, system owners, and other interested parties about their product, including but not limited to:*

A. *product manuals;*

B. *design instructions;*

C. *installation instructions;*

D. *information regarding operation and maintenance;*

E. *system owner instructions; and*

F. *a list of representatives and manufacturer-certified service providers, if any.*

Justification

Manufacturers need to provide important information about the products they sell so they can be properly designed, installed, used, and maintained. The information should be readily available and include: product manuals, instructions for design and installation, operation and maintenance manuals, instructions for owners, and a list of certified providers, if required by the product manufacturer. This information will be used to develop the recommended standards and guidance for products placed on the product registration list.

**MINN. R. 7080.1650 TRANSITION FROM PREVIOUS REQUIREMENTS FOR DISTRIBUTION PRODUCTS TO NEW REGISTERED LIST**

**295. Proposed Change - new part 7080.1650.**

A transition period to register products for use in Minnesota is needed so that products and technologies can be used before the product registration process is fully implemented. Products could continue to be used without being registered for use during this transition period.

**296. Proposed Change - new part 7080.1650, item A.**

A. *The distribution products specified in Minnesota Rules 2005, chapter 7080, may be used until eighteen months after the effective date of this chapter.*

Justification

Proprietary distribution products would be removed from the rule and replaced with a product registration process and listing of products. Specific products identified in the current version of Minn. R. ch. 7080 include gravelless drainfield pipe and chambered systems.

**297. Proposed Change - new part 7080.1650, item B.**

B. *Only those products registered under this chapter may be used as directed in registration guidance documents after eighteen months from the effective date of this chapter s.*

Justification

A transition period is needed so distribution products can continue to be used before the product registration process is fully implemented.

**298. Proposed Change - new part 7080.1650, item C.**

*C. To be registered, manufacturers of proprietary distribution products shall apply for product registration.*

**Justification**

Manufacturers would need to register proprietary distribution products. Wastewater products can be used during this interim period without being on a registered listing. Some transition time is needed so products could be used before product registration is fully implemented.

**MINN. R. 7080.1655 - PRODUCT DEVELOPMENT PERMITS**

**299. Proposed Change - new part 7080.1655, subpart 1.**

*Subpart 1. Local government may issue. A local unit of government may issue a product development permit (PDP) for any proprietary treatment component or sequence. To protect public health during the development period, a PDP may be applied to a Type I, Type II, or Type III system, as described under part 7080.1860. A PDP may also be applied to a Type IV system, as described under part 7080.1860, if treatment levels of the technologies meet or exceed requirements in the operating permit. The product under development may then be added to the treatment system allowing the product developer to gather data about the product's performance in the field. The PDP allows product developers to explore and develop new technologies prior to product testing and registration under parts 7080.1605 to 7080.1625. The PDP is not an alternative to testing and registration.*

**Justification**

This section establishes a discretionary product development permit (PDP), administered by the local permitting authority, to allow a manufacturer or other entity with a system under development to gather information about the product's field performance. Successful completion of data gathering will not lead directly to product registration. It is proposed as a process for gathering sufficient data on a treatment product to enable the proponent to decide if the product shows significant merit to initiate the process leading to product registration. The process will enable a manufacturer or other entity to collect data on their systems under real conditions.

**300. Proposed Change - new part 7080.1655, subpart 2, item A.**

*Subp. 2. Application contents. An application for a PDP must include:*

*A. proof of an existing conforming system in compliance with all local requirements or a permit for a conforming system. The conforming system must be installed in its entirety before the PDP becomes valid;*

**Justification**

Before a product development permit could be issued for a property, the on-site system would need to be in compliance with local requirements. This is needed to prevent the widespread use of unproven technologies where there are questionable systems or in an attempt to create new lots for homes and businesses. If an unproven product was found to be ineffective, and a conforming system could not be installed, the only option may be to install a holding tank, creating a new set of issues for the owner (expensive) and local permitting authority (ensure holding tank wastes are properly disposed). We would propose a conforming system be installed or in place before the product testing be performed. If, in the event the product was found to be ineffective, no detrimental environmental effects would be expected and

the product could be altered by the manufacturer or other entity or simply removed. If the product was found to be effective, the manufacturer could proceed to install it on additional systems through the PDP process, or proceed to full testing through the formal registration process.

**301. Proposed Change - new part 7080.1655, subpart 2, item B.**

*B. a description of the product under development, including performance goals and a description of how the system will be used to treat sewage;*

**Justification**

The manufacturer or other entity would need to provide a description of the product that they are developing. The description would provide a technical summary of the product, including how it is expected to perform in removing sewage contaminants. A description of how the system will be used to treat sewage would be included with the application submittal.

**302. Proposed Change - new part 7080.1655, subpart 2, item C.**

*C. documentation of financial assurance that will cover the correction of any potential public health threats or environmental damage resulting from the use of the product under development. Instruments of financial assurance include: an irrevocable letter of credit in the amount required by the local unit of government issued by an entity authorized to issue letters of credit in Minnesota; cash or a security deposit payable to the local unit of government in the amount required by the local unit of government; or any other financial assurance that satisfies the local unit of government;*

**Justification**

Financial assurance is needed to protect the owner of the system where the product is being tested during the development phase. In the event the product fails to perform and harms the on-site system, some form of financial assistance is readily available to the owner where the damages occurred.

**303. Proposed Change - new part 7080.1655, subpart 2, item D.**

*D. documentation signed by the owner of the proposed product development site allowing access to the local unit of government and the Agency and its employees or agents for inspection of the site;*

**Justification**

The owner of the property, where the product is being tested, needs to provide a signed statement allowing access to the site by the local unit of government. A local unit of government may wish to visit the system periodically to evaluate overall performance.

**304. Proposed Change - new part 7080.1655, subpart 2, item E.**

*E. an agreement to obtain all other required permits;*

**Justification**

Some type of documentation is needed with the application to ensure the required permits are obtained prior to issuance of a product development permit.

**305. Proposed Change - new part 7080.1655, subpart 2, item F.**

*F. a declaration that the applicant meets all state requirements; and*

**Justification**

A statement by the applicant is needed to ensure all applicable state requirements are met before issuance of product development permits.

**306. Proposed Change - new part 7080.1655, subpart 2, item G.**

*G. other information required by the local unit of government.*

**Justification**

If the local unit of government requires additional information, this provides them with the flexibility to request additional information.

**307. Proposed Change - new part 7080.1655, subpart 3.**

*Subp. 3. Additional requirements.*

*A. The local unit of government may stipulate additional requirements for a PDP necessary to ensure the performance of the conforming system, including, but not limited to, providing performance data to the local unit of government.*

*B. The system owner shall consent in writing to allow the manufacturer access to the system for the duration of the permit.*

*C. The product tester shall agree in writing to contact utility companies before excavation.*

*D. The manufacturer and product tester shall agree in writing to hold harmless, indemnify, and defend the Agency and local unit of government from any conduct by the manufacturer or product tester that causes harm or injury to the site owner's property and indemnifies the Agency and local unit of government from such claims. Product listing by the MPCA and/or the local unit of government does not insure product performance. Owners need to consider system options that are the most appropriate for their individual situation and needs.*

**Justification**

The local unit of government can require additional requirements as part of the product development permitting process. The additional requirements may include the submittal of testing data on the systems. Furthermore, the local unit of government needs to be assured that the owner will allow access to the property over the duration of the permit to ensure the system can be maintained and that utility's will be identified prior to construction. Both the Agency and the local unit of government are not responsible for any damages to the property as a result of testing and evaluating the product.

**308. Proposed Change - new part 7080.1655, subpart 4.**

*Subp. 4. PDP required for each site. A PDP is a site-specific permit. Product development at multiple sites requires a PDP for each site.*

### Justification

A product development permit is needed for each system. It is not a blanket permit for the use of the technology in the jurisdiction of the local unit of government at multiple sites. It is expected to be a site-specific permit issued by the local unit of government.

#### **309.** Proposed Change - new part 7080.1655, subpart 5.

*Subp. 5. Product developer has control. During the term of the PDP, product development, testing, and sampling are under the full control of the product developer and all data collected is considered proprietary information.*

### Justification

Since the proprietary product is still in the development phase, the data collected by the manufacturer or other entity would be considered proprietary trade secret and confidential business information by the Agency. The data would not be required to be submitted to the Commissioner. However, the manufacturer may be requested to submit the information as supporting information at the time of formal product registration.

#### **310.** Proposed Change - new part 7080.1655, subpart 6.

*Subp. 6. PDP duration. A PDP is valid for one year and may be renewed by the local unit of government.*

### Justification

The permit for product development issued by the local unit of government would be valid for one year. It could be renewed by the local unit of government if, for example, permit conditions are met. The local unit of government is responsible for the renewal of product development permits.

#### **311.** Proposed Change - new part 7080.1655, subpart 7.

*Subp. 7. End of PDP period. The product development period is over when the original PDP or any subsequently renewed permits have expired. At that time, the product developer shall, at the direction of the local unit of government, remove the product under development from the site, restore the real property to its original condition, and reestablish all appropriate plumbing and power connections for the conforming system. The developer may also subject the product to performance testing described in parts 7080.1600, subpart 2, and 7080.1645, subpart 1, to allow the product to be eligible for product registration with the Agency.*

### Justification

When the product is no longer being tested, there needs to be a process to describe what needs to be done with the product. The manufacturer or other entity will be required to remove the product no longer being tested and restore modifications made to the conforming system. During the time the product was being tested, some piping and electrical changes may have taken place. These changes would need to be restored when the product is removed and the conforming system is made fully functional, with oversight provided by the local unit of government.

After the product has been tested at a site or at a number of sites, and the product has completed the product development process, the manufacturer or other entity may choose to begin the full testing and

registration process. This would require that the product is ready to be marketed as a viable treatment product and would require testing by an independent, third party evaluation process as identified in the rules.

**312. Proposed Change - new part 7080.1655, subpart 8, item A.**

*Subp. 8. Revocation or amendment of PDP. The local unit of government may revoke or amend a PDP:*

*A. if the continued operation or presence of the product under development presents a risk to the public health or the environment, causes adverse effects on the proper function of the conforming system on the site, or leaks or discharges sewage on the surface of the ground;*

Justification

The local unit of government may need to revoke a product development permit. Revocation would be needed if, for example, the product causes the system to malfunction, if it harms it, causes it to back up into the structure or discharge onto the surface. The local unit of government would determine if the permit would be revoked or if it should be amended with additional requirements.

**313. Proposed Change - new part 7080.1655, subpart 8, item B.**

*B. if the product developer fails to comply with any requirements stipulated on the permit by the local unit of government; or*

Justification

The local unit of government may need to revoke a product development permit if the manufacturer or other entity does not fulfill the requirements of the product development permit.

**314. Proposed Change - new part 7080.1655, subpart 8, item C.**

*C. upon request of the site owner.*

Justification

The owner has the right to request the discontinuation of the use of the product being tested or modification of the use of the product on their property.

**315. Proposed Change - new part 7080.1655, subpart 9.**

*Subp. 9. Fees. The local unit of government may charge fees adequate to administer the PDP program.*

Justification

Local units of government will probably need to charge a fee to cover the costs associated with issuing product development permits, keeping track of them, and providing periodic inspections. Local units of government should be able to recover costs from the product developer, if needed to cover the administration of the PDP program.

## **MINN. R. 7080.1660 - PRODUCT REGISTRATION CONTESTED CASE HEARING**

A person is afforded an opportunity for a contested case hearing under Minnesota Statutes, chapter 14, for an approval, denial, or other action in relation to product registration or renewal, within 30 days of the action.

### Justification

Due process is being provided to settle issues related to the product registration process through the contested case hearing process rather than thru extended lawsuits.

## **MINN. R. 7080.1670 PROFESSIONAL REQUIREMENTS**

### **316. Proposed Change new part 7080.1670.**

Systems must be designed, installed, inspected, operated, and maintained by appropriately licensed businesses and certified professionals according to part 7083.0700, as published in the State Register, volume ..., page ..., and any other applicable state requirements.

### Justification

This language is proposed to be added to highlight that professional licensing is required to conduct the work specified in this chapter. Professional licensing is a required under Minn. Stat. § 115.56.

## **MINN. R. 7080.1700 - DESIGN PHASE I: SITE EVALUATION**

### **317. Proposed Change part current 7080.1700.**

Site evaluations consisting of preliminary and field evaluations according to parts 7080.1710 and 7080.1720 must be conducted for all proposed sites for ISTS. The site evaluation is considered the first phase of an ISTS design.

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

## **MINN. R. 7080.1710 PRELIMINARY EVALUATION**

### **318. Proposed Change - new part 7080.1710, item A, formerly 7080.1700, subpart 2a, item A.**

A preliminary evaluation shall consist of the determination, location, or existence of the following items:  
A. flow amounts for the dwelling or dwellings;

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

### **319. Proposed Change - new part 7080.1710, item B, formerly 7080.1700, subpart 2a, item B. to K.**

B. proposed or existing;

- (1) water supply wells within 100 feet of the proposed ISTS;
- (2) noncommunity transient public water supply wells within 200 feet of the proposed ISTS if alternative local standards are in effect;
- (3) a community or noncommunity nontransient water supply in a drinking water supply management area if alternative local standards are in effect;
- (4) existing and proposed buildings or improvements on the lot; and
- (5) buried water supply pipes within 50 feet of the proposed system;
- C. easements on the lot;
- D. the ordinary high water level of public waters;
- E. floodplain designation and flooding elevation from published data or data that is acceptable to and approved by the local unit of government or the Department of Natural Resources;
- F. property lines;
- G. all required setbacks from the system;
- H. determination of the soil characteristics at the proposed soil treatment and dispersal areas as obtained from the soil survey report, if available;
- I. a legal description and lot dimensions;
- J. names of property owners;
- K. the inner wellhead management zone or wellhead protection area of a public water supply; and
- L. a determination of whether a wetland delineation has been conducted or whether a regulatory body will require a wetland delineation to be conducted on the lot.

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

An additional provision (item L) is proposed to account for requirements of Minn. R. ch. 8420 which prohibits the placement of a SSTS on a new lot in a wetland. Therefore, the designer needs to know if the site is a wetland. It is reasonable to require the designer to check with the local wetland administrator to determine if there are wetland concerns. The Agency anticipates that the wetland administrator is already aware of any possible concerns due to other permits needed to be issued for the platting of the lot, filling for road construction, etc... . This would just be one more piece of information the designer would need to gather to ensure compliance, and could be sought when the designer is at the local permitting authority office gathering other information required in this part.

**MINN. R. 7080.1720 FIELD EVALUATION**

**320.** Proposed Change - new part 7080.1720, subpart 1 , formerly 7080.0110, subpart 4.

Subpart 1. Scope. A field evaluation consists of the items described in subparts 2 to 7.

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**321.** Proposed Change - new part 7080.1720, subpart 2, formerly 7080.0110, subpart 4, item A.

Subp. 2. Lot lines. Lot lines shall be established to the satisfaction of the property owner or the property owner's agent. Lot improvements, required setbacks, and easements must be identified.

## Justification

The Agency has been made aware that a number of SSTS have been placed outside the property boundaries of the dwelling served. This has caused many problems determining who is responsible to ensure the system is to be placed within property boundaries. The proposed modification to the former provision clearly places that responsibility on the property owner. This is not intended that the property owner provide a legal survey with boundary corners marked by a surveyor. The decision on the extent of work needed to establish property lines is made by the property owner, likely determined by how close the system is proposed to be to the property line, the property owners knowledge of the property line location and the comfort of risk if the line is improperly established. In addition the local permitting authority, in reviewing the plans, may require a legal establishment of the property line. Please refer to comment 7 of Exhibit 10 and comment 9 of Exhibit 11.

### **322. Proposed Change - new part 7080.1720, subpart 3, formerly 7080.0110, subpart 4, item B.**

In addition to reformatting, the language has changed as follows:

Subp. 3. **Surface features.** *The following surface features must be described:*

A. *the percent and direction of the slope at the proposed system location;*

B. *vegetation types;*

C. *any evidence of cut or filled areas or disturbed or compacted soil;*

D. *the flooding or run-on potential; and*

E. *a geomorphic description*

## Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. Please refer to comment 1 of Exhibit 15.

### **323. Proposed Change - new part 7080.1720, subpart 4, formerly 7080.0110, subpart 4, item C.**

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

A. *the soil observations must be conducted within or on the borders of the proposed site;*

B. *the soil observations must be performed in an exposed pit or by hand augering or probing;*

C. *the soil observation method must allow observation of the different soil horizons that constitute the soil profile and must allow the observation of undisturbed soil structure;*

D. *underground utilities must be located before soil observations are undertaken;*

E. *required safety precautions must be taken before entering soil pits;*

F. *soil observations must be conducted prior to any required percolation tests to determine whether the soils are suitable to warrant percolation tests and, if suitable, at what depth percolation tests shall be conducted; and*

G. *the minimum depth of the soil observations must be to the seasonally saturated layer, to the bedrock, or three feet below the proposed depth of the system, whichever is less.*

## Justification

The first change deals with the required number of soil borings to adequately determine the soil conditions at the proposed soil dispersal system site. The current requirement states that a minimum of

one boring is necessary, but the ultimate number is based on the professional judgment of the individual. The Agency has been told that designers interpret the current language to mean that in most cases only one boring is needed. In many cases this is not sufficient as in most areas of Minnesota the soil can change quite dramatically over a short distance. Therefore, it is proposed to require multiple borings, ensuring that at least two borings will be conducted. It is intended to keep the provision that the ultimate number of borings is still the responsibility of the designer. Therefore, the provisions should be interpreted to say that the designer must make a proper soil identification using a minimum of two borings. Both conditions must be met and are enforceable offenses. Please refer to comment 8 of Exhibit 10.

The second change deals with the location of the soil borings in relation to the location of the proposed soil dispersal system. The Agency periodically receives design plans from designers for a complementary review. A surprising number of plans indicate that the soil borings were not conducted near the site of the proposed soil dispersal system. Therefore, a provision appears to be necessary to state that the soil investigation needs to be done where the system is proposed to be located. In addition, the Agency has been told on various occasions that designers locate their soil borings to identify the best soils of a proposed site, but do not investigate the degree or extent of the less suitable soils of the proposed site. The system is expected to be designed based upon the most limiting condition, and this condition needs to be identified for proper design.

The last change states that the soil structure needs to be identified. Soil structure is the natural aggregation of primary soil particles into large shapes which promote the transmission of liquids and gasses. Systems are sized on this transmission rate, and this rate can be reasonably estimated by examining the soil structure. Currently the rule allows the sizing of systems by using soil structure or a percolation test. The proposed rules makes a slight modification to this by saying that a determination will always be made using the soil structure and a percolation test can be used as a check of the soils ability to transmit fluids. Therefore, identification of the soil structure (must examine undisturbed soil) is necessary. In discussing this issue with professional soil scientists, it is unclear if soil structure can be identified in a soil sample that has been augured or a small diameter (3/4") probe. Because of this uncertainty, no methodology is proposed to be placed in the rule at this time, but will be left up to the professional judgment of the individual or the local permitting authority based on local soil conditions. If the Agency were to prescribe a known and undisputed methodology, it would be the examination of the soil in a soil pit. However, the Agency is unwilling to prescribe that soil pits should always be required due to the expense and difficulty of excavating soil pits on small lots or on existing lots with established lawns and landscaping. Please refer to comment 19 of Exhibit 79.

The remaining changes are grammatical in nature for clarity. These changes are not meant to alter the meaning or intent of the provisions.

Please refer to comment 2 of Exhibit 8.

**324. Proposed Change - new part 7080.1720, subpart 5, formerly 7080.0110, subpart 4, item D.**

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

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**325.** Proposed Change - new part 7080.1720, subpart 5, item A, formerly 7080.0110, subpart 4, item D, subitem (1).

*A. the depth of each soil horizon measured from the ground surface. Soil horizons are differentiated by changes in texture, color, redoximorphic features, bedrock, structure, consistence, and any other characteristic that may affect water movement or treatment of effluent;*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**326.** Proposed Change - new part 7080.1720, subpart 5, item B, formerly 7080.0110, subpart 4, item D, subitem (2).

In addition to reformatting, the language has changed as follows:

*B. a description of all soil colors for each horizon according to the Munsell Soil Color Charts, Revised Edition, Munsell Color Corporation (1992), or equivalent. The color charts are incorporated by reference, are available through the Minitex interlibrary loan system, and are not subject to frequent change;*

Justification

This is a current provision that has been moved with an update in the reference for the Munsell Color Charts.

**327.** Proposed Change - new part 7080.1720, subpart 5 item C, formerly 7080.0110, subpart 4, item D, subitem (3).

In addition to reformatting, the language has changed as follows:

*C. a description of the soil texture, structure, and consistence using the United States Department of Agriculture (USDA) soil classification system as specified in the Field Book for Describing and Sampling Soils, which is incorporated by reference under part 7080.1100, subpart 40;*

Justification

Please refer to the justification for Minn. R. 7080.1100 with an update in the reference for the USDA Field Book.

**328.** Proposed Change - new part 7080.1720, subpart 5, item D, formerly 7080.0110, subpart 4, item D, subitem (4).

*D. depth to the bedrock;*

Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**329.** Proposed Change - new part 7080.1720, subpart 5, item E, formerly 7080.0110, subpart 4, item subitem (5).

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

(1) in subsoil and parent material, redoximorphic features include:

(a) distinct redoximorphic iron accumulations or distinct redoximorphic iron depletions;

(b) a gleyed or depleted soil matrix or

redoximorphic mottles having a color chroma of two or less or a depleted matrix or redoximorphic mottles having a color hue of 5Y and a chroma of three or less; or

(c) faint redoximorphic concentrations or faint redoximorphic depletions in subsoil or parent material with a hue of 7.5YR or redder;

(2) in lower topsoil layers that are deeper than 12 inches from the surface and are immediately followed in depth by a seasonally saturated horizon, redoximorphic features include:

(a) soil colors with a redoximorphic chroma of two or less; or

(b) redoximorphic accumulations or depletions;

(3) in the upper 12 inches of the topsoil layer immediately followed by a seasonally saturated horizon, the depth of seasonal saturation may be determined by indicators in units (a) to (e):

(a) soil colors with a chroma of zero;

(b) organic soil textures or mineral soil textures with an organic modifier;

(c) dominance of hydrophilic vegetation;

(d) the soil treatment area at or near the elevation of the ordinary high water level of a surface water or the soil treatment area in a depressional landscape position; or

(e) the soil expressing indicators of seasonal saturation as determined in Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, USDA Natural Resource Conservation Service (2003). The field indicators are incorporated by reference, are available through the Minitex interlibrary loan system, and are subject to frequent change;

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**330.** Proposed Change - new part 7080.1720, subpart 5, item F, formerly 7080.011, subpart 4, item D, subitem (6).

F. depth to the seasonally saturated soil for all existing systems, determined by redoximorphic features in item E, except subitems (2), unit (a), and (3), units (a), (c), and (d), as measured outside the area of system influence in an area of similar soil;

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**331.** Proposed Change - new part 7080.1720, subpart 5, item G, formerly 7080.0110, subpart 4, item D, subitem (7).

G. depth of standing water in the soil observation excavation, measured from the soil surface, if observed; and

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 332.** Proposed Change - new part 7080.1720, subpart 5, item H, formerly 7080.0110, subpart 4, item D, subitem (8).

*H. any other soil characteristic that may need to be described to properly design a system, such as hardpans or restrictive layers. These other characteristics must be classified according to the Field Book for Describing and Sampling Soils, which is incorporated by reference under part 7080.1100, subpart 40.*

### Justification

This is a current provision that has been moved with a minor language change to reference the USDA Field Book and a format change due to rule restructuring. Please see the justification for Minn. R. 7080.1100, subp. 86.

- 333.** Proposed Change - new part 7080.1720, subpart 6, formerly 7080.0110, subpart 4, item E.

*Subp. 6. Percolation tests. Percolation tests, when desired or required to supplement the soil texture, structure, and consistence determination, must be made as described in items A to H.*

### Justification

This is a current provision that has been moved with a minor language change to include the sizing of systems by use of texture, structure, and consistence. Please see the fourth justification for new Minn. R. 7080.1720, subp. 4.

- 334.** Proposed Change - new part 7080.1720, subpart 6, items A and B, formerly 7080.0110, subpart 4, item E, subitems (1) and (2).

*A. Each test hole must be six to eight inches in diameter, have vertical sides, and be located in the soil treatment. For mounds and at-grade systems, the bottom of each test hole must be in the upper 12 inches of the original soil. For trenches and seepage beds, the bottom of each test hole shall be at the depth of the absorption area.*

*B. Soil texture descriptions for percolation test holes must note the depths from the ground surface where texture changes occur.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

- 335.** Proposed Change - new part 7080.1720, subpart 6, item C, formerly 7080.0110, subpart 4, item E, subitem (3).

*C. The bottom and sides of the hole must be carefully scratched to remove any smearing and to provide a natural soil surface into which water may penetrate. The scarification must not result in the hole having a diameter of greater than eight inches.*

## Justification

The change to the former provision is to add the clarification that the scarification shall not result in the hole having a diameter of greater than eight inches, as it is not clear if the dug percolation hole or the final scarified hole is to be a maximum of eight inches in diameter. The change is not meant to alter the meaning or intent of the provision.

### **336.** Proposed Change - new part 7080.1720, subpart 6, items D to H, formerly 7080.0110, subpart 4, item E, subitems (4) to (8).

*D. All loose material must be removed from the bottom of the test hole and two inches of one-fourth to three-fourths inch gravel or clean sand must be added to protect the bottom from scouring.*

*E. The hole must be carefully filled with clear water to a minimum depth of 12 inches from the bottom of the test hole and maintained for no less than four hours for saturation to occur. The soil must then be allowed to swell for at least 16, but no more than 30, hours. In sandy soils, the saturation and swelling procedure is not required and the test may proceed if the initial filling of the hole with 12 inches of water seeps away in less than ten minutes.*

*F. In sandy soils, water depth must be adjusted to eight inches over the soil at the bottom of the test hole. From a fixed reference point, the drop in water level must be measured in inches to the nearest 1/16 inch at approximately ten-minute intervals. A measurement may also be made by determining the time it takes for the water level to drop one inch from an eight-inch reference point. If eight inches of water seeps away in less than ten minutes, a shorter interval between measurements must be used, but water depth must not exceed eight inches. The test must continue until three consecutive percolation rate measurements do not vary by more than ten percent. In other soils, the water depth must be adjusted to eight inches over the soil at the bottom of the test hole. From a fixed reference point, the drop in water level must be measured in inches to the nearest 1/16 inch at approximately 30-minute intervals and refilled between measurements to maintain an eight-inch starting head. If water seeps away in less than 30 minutes, a shorter time interval between measurements must be used, but water depth must not exceed eight inches. The test must continue until three consecutive percolation rate measurements do not vary by more than ten percent. The percolation rate may also be determined by observing the time it takes the water level to drop one inch from an eight-inch reference point if a constant water depth of at least eight inches has been maintained for at least four hours prior to the measurement.*

*G. The time interval must be divided in minutes by the drop in water level in inches to obtain the percolation rate in minutes per inch. The percolation rates that are within the ten percent provision determined for each test hole must be averaged to determine the final percolation rate for that hole. The slowest final percolation rate for all holes within the soil treatment and dispersal area must be used for design.*

*H. A percolation test must not be run where frost exists within 12 inches of the bottom of the percolation test hole.*

## Justification

This is a current provision that has been moved with a format change due to rule restructuring.

### **337.** Proposed Change - new part 7080.1720, subpart 7, formerly 7080.0110, subpart 4, item F.

In addition to reformatting, the language has changed as follows:

*Subp. 7. Site protection. The proposed soil treatment and dispersal area site shall be protected from disturbance, compaction, or other damage by staking, fencing, posting, or other effective method.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. Please refer to comment 11 of Exhibit 11.

### **MINN. R. 7080.1730 PHASE I; SITE EVALUATION REPORTING**

#### **338. Proposed Change - new part 7080.1730, item A, formerly 7080.0110, subpart 5a, item A.**

*A written report on the site evaluation must be prepared and include the following:*

*A. preliminary and field evaluation results from parts 7080.1710 and 7080.1720;*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **339. Proposed Change - new part 7080.1730, items B to H, formerly 7080.0110, subpart 5a, items B to H.**

*B. dates of preliminary and field evaluations;*

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

*(1) horizontal and vertical reference points of the proposed soil treatment and dispersal areas, soil observations, percolation tests, and distance from the proposed ISTS to all required setbacks, lot improvements, easements, ordinary high water mark of public waters, property lines, and direction and percent slope;*

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

*(3) the access route for system maintenance;*

*D. the estimated depth of seasonally saturated soil layer, bedrock, or flood elevation, if appropriate;*

*E. the proposed elevation of the bottom of the soil treatment and dispersal system;*

*F. the final soil sizing factor. If there is a discrepancy between the soil texture, structure, and consistence determination and any percolation rates measured in Table IX in part 7080.2150, subpart 3, item F, the larger soil sizing factor must be used or a justification for a smaller sizing must be submitted in the design report. Soil sizing determined using soil texture, structure, and consistence must be based on an undisturbed soil sample from which an evaluation of the soil structure and consistence can be made;*

*G. anticipated construction-related issues;*

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

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

#### **340. Proposed Change - new part 7080.1730, item I.**

*I. an assessment of how known or reasonably foreseeable land use changes may affect system performance, including, but not limited to, changes in drainage patterns, increased impervious surfaces, and proximity of new water supply wells;*

### Justification

This new provision is proposed so a designer gives consideration of how the system will function, operate, and be maintained once the property is fully developed. Problems that can be encountered can include the placement of storm water from roofs onto the system which may severely impact the hydraulic functioning of the system, or lot improvements which may hinder future access to the system for maintenance or repairs. Please refer to comment 3 of Exhibit 8.

#### **341. Proposed Change - new part 7080.1730, item J.**

*J. a narrative explaining any difficulties encountered during the site evaluation, including but not limited to, identifying and interpreting soil and landform features and how the difficulties were resolved; and*

### Justification

This new provision is proposed to be used as a tool to determine a possible cause if the soil or site determination is ever to be found in error. When doing investigations of poor soil or site investigation, one main issue is the conditions during the time of the investigation. Problematic conditions include poor light conditions, frozen soil, heavy wooded vegetation, and more.

#### **342. Proposed Change - new part 7080.1730, item K, former 7080.0110, subpart 2a, item H.**

*K. an explanation of any differences between observed soil characteristics and those identified in the soil survey report.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

## **MINN. R. 7080.1750 DESIGN PHASE II**

#### **343. Proposed Change - new part 7080.1750, subpart 1, formerly 7080.0115, subpart 1.**

### Justification

This provision has been shortened from the former language with some minor grammatical changes for clarity.

#### **344. Proposed Change - new part 7080.1750, subpart 2, formerly 7080.0115, subpart 2.**

*Subp. 2. Compliance. Designs for new construction or replacement ISTS must comply with applicable requirements and any other applicable codes, rules, and laws.*

### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**FORMER MINN. R. 7080.0120 BUILDING SEWERS**

**345. Proposed Change - former 7080.0120.**

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

Justification

It is proposed to delete all references to the plumbing code to avoid duplication and confusion between the two rules and to eliminate any possibility that the two rules would conflict, as it has happened in the past.

**MINN. R. 7080.1850 SEWAGE FLOW DETERMINATION FOR DWELLINGS**

**346. Proposed Change - new part 7080.1850, subpart 1, formerly 7080.0125, subpart 1.**

~~*Subpart 1. **System sizing.** If construction of additional dwellings or bedrooms, the installation of water-using devices, or other factors likely to affect the operation of the ISTS can be reasonably anticipated, the system must be designed to accommodate these factors.*~~

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**347. Proposed Change - new part 7080.1850, subpart 2, formerly 7080.0125, subpart 2.**

~~*Subp. 2. **Design flow.** Average daily flow must be used to size soil treatment and dispersal systems. The estimated average daily flow for any dwelling must provide for at least two bedrooms. For multiple or multifamily dwellings, the average design flow consists of the sum of the average daily flows for each individual unit. 7080.1860*~~

AVERAGE DAILY FLOW (GALLONS PER DAY).

TABLE IV

Number of    Classification of dwelling  
bedrooms

	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	
	<u>Gallons per day</u>				
<u>2 or less</u>	<u>300</u>	<u>225</u>	<u>180</u>	<u>*</u>	<u>-</u>
<u>3</u>	<u>450</u>	<u>300</u>	<u>218</u>	<u>*</u>	
<u>4</u>	<u>600</u>	<u>375</u>	<u>256</u>	<u>*</u>	
<u>5</u>	<u>750</u>	<u>450</u>	<u>294</u>	<u>*</u>	
<u>6</u>	<u>900</u>	<u>525</u>	<u>332</u>	<u>*</u>	

~~*\* Flows for Classification IV dwellings are 60 percent of the values as determined for Classification I, II, or III systems. For more than six bedrooms, the average daily flow is determined by the following formulas:*~~

~~*Classification I: Classification I dwellings are those with more than 800 square feet per bedroom, when the dwelling's total finished floor area is divided by the number of bedrooms, or where more than two of the following water-use appliances are installed or anticipated: clothes washing machine, dishwasher, water conditioning unit, bathtub greater than 40 gallons, garbage disposal, or self-cleaning humidifier in furnace.*~~

The average daily flow for Classification I dwellings is determined by multiplying 150 gallons 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 finished floor area is divided by the number of bedrooms, and where no more than two of the water-use appliances listed in Classification I are installed or anticipated. The average daily flow for Classification II dwellings is determined by adding one to the number of bedrooms and multiplying this result by 75 gallons.

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

Classification IV: Classification IV dwellings are dwellings designed under part 7080.2240.:

#### Justification

This is a current provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

### **MINN. R. 7080.1880 SEWAGE FLOW DETERMINATION FOR OTHER ESTABLISHMENTS**

Average daily sewage flow and waste concentration levels for other establishments with a flow of 2,500 gallons per day or less shall be determined by part 7081.0130, as published in the State Register, volume ..., page ...

#### Justification

It is proposed to reference the flows for other establishments with the chosen flow values in new Minn. R. ch. 7081 to avoid duplication. Please see the justification for Minn. R. ch. 7081.

### **MINN. R. 7080.1900 SEWAGE TANKS - GENERAL**

#### **348. Proposed Change - new part 7080.1900, formerly 7080.0130, subpart 1.**

Sewage tanks serving ISTS must meet or exceed the applicable requirements of parts 7080.1910 to 7080.2030 unless otherwise approved by a licensed professional engineer and approved by the local unit of government.

#### Justification

This is a modification of the former language with the addition that these specifications can be disregarded if the design is approved by a professional engineer if a unique situation or new technology is proposed. However, this professional design must be allowed by the permitting authority who may or may not want to allow variation to the tank specifications in this chapter. See Exhibit 472.

### **MINN. R. 7080.1910 TANK STRENGTH**

#### **349. Proposed Change - new part 7080.1910, subpart 1, formerly 7080.0130, subpart 1, item C.**

Subpart 1. Requirements. Tanks, fittings, risers, and apertures must:

A. be capable of supporting long-term vertical loads for the conditions in which the tank will be placed. These loads include, but are not limited to, saturated soil load, based on 130 pounds per cubic foot, and concentrated wheel load of 1,800 pounds;

#### Justification

This provision is new and replaces the old provision which required that all tanks withstand seven feet of saturated earth cover. The new provision requires that tanks must meet the strength requirements for the conditions where the tank will be placed. This is reasonable because the rule is promoting shallower tank placement, and concrete tanks do not meet the seven-foot strength requirements, but they have generally demonstrated adequate strength requirements at shallower depths. Therefore, concrete tanks can be considered as more of a standard tank at shallower depths.

The 130 lbs/cubic foot requirement was derived by the maximum weight of soil with a particle size density of 2.65 grams/cubic centimeter, a 30 percent pore space filled with water, with the water having a density of 1 gram/ cubic centimeter. The concentrated wheel load of 1800 pounds is the standard AASTHO H - 20, a full traffic load. Please refer to comment 12 of Exhibit 11.

**350.** Proposed Change - new part 7080.1910, subpart 1, item B, formerly 7080.0130, subpart 1, item B.

B. be capable of withstanding a lateral load for the conditions the tank will be placed, with a minimum lateral load of 62.4 pounds per cubic foot;

#### Justification

The 62.4 lbs./cubic foot requirement appears to be based on the density of water and appears to be the common standard used for lateral load requirements. See Exhibits 462 and 463. This provision is replacing a general strength requirement in the former rule.

**351.** Proposed Change - new part 7080.1910, subpart 1, item C.

C. be capable of withstanding any other loads or stresses placed upon the tank;

#### Justification

This provision is given as a general performance specification to be determined by professional engineering. Please refer to comment 2 of Exhibit 31.

**352.** Proposed Change - new part 7080.1910, subpart 1, item D, formerly 7080.0130, subpart 1, item D.

D. not be subject to excessive corrosion and degradation from sewage or sewage gases, including risers and maintenance hole covers; and

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**353. Proposed Change - new part 7080.1910, subpart 1, item E.**

*E. be structurally capable of withstanding exposure and stresses from freezing conditions.*

**Justification**

This provision is required for the national ASTM standard for precast concrete tanks – ASTM C-1227 5.4.1. It involves the use of air-entraining admixtures so freezing water within the concrete can expand into the empty air spaces so as not to crack the concrete. This appears to be a necessary and reasonable requirement as septic tanks are subject to freeze/thaw cycles in Minnesota. Please refer to comment 13 of Exhibit 11.

**354. Proposed Change part 7080.1910, new subpart 2.**

*Subp. 2. Poured-in-place concrete tanks. Poured-in-place concrete tanks must be designed to meet each requirement of subpart 1 and be designed by a Minnesota licensed professional engineer.*

**Justification**

It is proposed to require all poured-in-place tanks to be designed by a professional engineer or to follow an accepted standard. This is to ensure that all facets of tank geometry, materials, reinforcement, curing, storage, and construction be adequate to meet the provisions of this part. Please refer to comment 14 of Exhibit 11.

**MINN. R. 7080.1920 SEPTIC TANK DESIGN**

**355. Proposed Change new part 7080.1920, item A, formerly 7080.0130, subpart 2 A and subpart 3.**

*Septic tanks must:*

*A. have a liquid depth of at least 30 inches. Any liquid depth that is greater than 78 inches must not be used when calculating the septic tank liquid capacity;*

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring. Please refer to Exhibits 213, 219 and Exhibit 299.

**356. Proposed Change new part 7080.1920, item B, formerly 7080.0130, subpart 2, item K.**

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

**Justification**

This requirement is greater than the current requirement of a minimum of four feet from the inlet to the outlet baffle (former Minn. R. 7080.0130, subp. 2 [K]). It is generally understood that the length of the septic tank is an important design parameter to facilitate maximum settling of sewage solids. It was a recommendation from the precast concrete tank manufacturers that a six foot inlet and outlet spacing be required. It is also understood from meetings with the precast concrete tank manufacturers that most

tanks serving dwellings meet this new requirement of six feet. Please refer to comments 1 and 5 of Exhibit 31.

**357. Proposed Change new part 7080.1920, item C.**

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

**Justification**

Current rule requires the inlet and outlet to be on the opposite ends of the long axis of the tank. On occasion the Agency is asked if the inlet and outlet of septic tanks needs to be on the opposite ends of the long axis of the tank, due to site constraints. The precast concrete tank manufacturers indicated that placing holes on the side of the tank would not hurt settling performance as long as the holes are six feet apart in accordance with item B. Therefore, the Agency is proposing that holes may be placed on the sides of the tank. Inlet and outlet holes are allowed on the sides of tanks by Florida's SSTS code (Exhibit 51). Please refer to comment 7 of Exhibit 31.

**358. Proposed Change part 7080.1920, new item D, formerly 7080.0130, subpart 2, item J.**

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

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring.

**359. Proposed Change new part 7080.1920, item E, formerly 7080.0130, subpart 2, item D.**

*E. have a reserve or storage space between the liquid surface and the top of the inlet and outlet baffles of not less than eight inches or 100 gallons, whichever is greater.*

**Justification**

This is a change from the current rule provision which requires a surge capacity of 20 percent or the liquid depth. This change was recommended by the precast concrete tank manufacturers. They recommended that this volume is sufficient for septic tanks serving dwellings. Please refer to Exhibit 432.

**MINN. R. 7080.1930 SEPTIC TANK CAPACITY**

**360. Proposed Change part 7080.1930, new subpart 1, formerly 7080.0130, subpart 3, item A.**

*Subpart 1. Dwellings. The liquid capacity of septic tanks must be at least as large as the liquid capacities given in Table V.*

**TABLE V**

<u>Number of bedrooms</u>	<u>Septic tank liquid minimum capacities (gallons)</u>
<u>3 or less</u>	<u>1,000</u>
<u>4 or 5</u>	<u>1,500</u>
<u>6 or 7</u>	<u>2,000</u>
<u>8 or 9</u>	<u>2,500</u>

Where more than nine bedrooms are present, the septic tank capacity must be calculated by the following formula:  $2,500 + ([\# \text{ of bedrooms} - 9] \times 250)$ .

#### Justification

The tank volumes in table V have been increased from the former rule. For example, for two or less bedrooms the tank sizing increased from 750 gallons to 1,000 gallons. For a four bedroom dwelling, the size increased from 1,000 gallons to 1,500 gallons. This is proposed due to the reports that solids are commonly being found in dosing chambers and gravity drop boxes. Interested parties have been favorable to this change. Please refer to Exhibit 59 for a comparison of the current requirement with the proposed requirement.

Septic tank sizing is also needed to be specified for dwellings for over nine bedrooms. Tank sizing per bedroom does slightly decrease as the dwelling becomes larger. Therefore, it is proposed to require 250 gallons of tank capacity for each bedroom over nine bedrooms. This 250 gallon volume is slightly less than the 278 gallon/bedroom requirement for a nine bedroom dwelling. See Exhibit 59.

#### **361.** Proposed Change part 7080.1930, new subpart 2, formerly 7080.0130, subpart 3, item B.

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

#### Justification

It is proposed to require the installation of an effluent screen if a garbage disposal is used. The Agency has received many reports over the years of solid materials escaping the tank and filling up dosing chambers or drop boxes. The installation of a garbage disposal increases the amount of solids, the size of the solids, and the amount of water used (to operate the grinder). An effluent screen is a non-mechanical filter used to trap suspended solids. Test data for the screens indicate good removal of these solids. Costs to purchase, install, and maintain the filter are small. The financial benefit of an extended soil dispersal and treatment system life are anticipated to be great. Lastly, an alarm is proposed to be required because if the screen plugs, effluent may back-up into the dwelling causing damage. The alarm will be set to activate during tank surging, well before back-up will occur. Please refer to comment 3 of Exhibit 88, Exhibit 371, Exhibit 394 and comment 1 Exhibit 501.

#### **362.** Proposed Change part 7080.1930, new subpart 3, formerly 7080.0130, subpart 3, item C.

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

#### Justification

The following provisions are proposed to be deleted:

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

~~-(1) If the liquid capacity is determined by item~~

~~A, the dosing volume to the tank shall not exceed one percent of the liquid volume capacity of the tank. If multiple tanks or compartments are used, the dose volume shall not exceed one percent of the first compartment or tank.~~

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

The issues with pumping of raw sewage are very similar to that of using a garbage disposal. The former provision was difficult to understand and implement and was not effective. Please see the justification for new subpart 2 above.

**363. Proposed Change part 7080.1930, new subpart 4, formerly 7080.0130, subpart 3, item D.**

Subp. 4. Sewage pumping and garbage disposals. If conditions in both subparts 2 and 3 apply to a dwelling, the mitigative requirements of either subpart 2 or 3 apply; the requirements of both subparts 2 and 3 need not be additive.

Justification

The following provisions are proposed to be deleted:

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

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

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

~~(3) meet the requirements of item C.~~

Justification

It is anticipated that if both a garbage disposal and pumping of sewage are employed in the dwelling, that just the mitigation provided for one of the situations will be sufficient to minimize the transfer of solid from the tank to the soil dispersal and treatment system. The effluent filter is expected to provide a strong safeguard to solids retention.

**364. Proposed Change part 7080.1930, new subpart 5.**

Subp. 5. Systems serving multiple dwellings. For systems serving multiple dwellings with a common septic tank, the liquid capacity must be determined by adding the capacities for each dwelling as determined in this part.

Justification

This provision is added to make it clear that if dwellings share a common tank, the capacity of that common tank needs to have the same volume (i.e., retention time) as the comparable number of individual tanks to retain solids.

**365. Proposed Change part 7080.1930, new subpart 6.**

Subp. 6. Prior to other treatment devices. Septic tank liquid capacity prior to other treatment devices must accord with manufacturer's requirements or accepted engineering principles.

### Justification

The septic tank capacities described in this rule do not apply if another treatment device is to be employed in addition to septic tanks. Some treatment units need sufficient organic materials to maintain the community of bacteria in their devices which provide biochemical treatment. Therefore, it is proposed that if these treatment devices are employed, the manufacturer of these devices must specify the correct tank capacities and subsequent organic loading.

### **MINN. R. 7080.1940 MULTIPLE TANKS**

#### **366. Proposed Change new part 7080.1940, items A and B, formerly 7080.0130, subpart 2, item O**

*A. If more than one septic tank is used to obtain the required liquid capacity as determined in part 7080.1930, septic tanks may be connected in series or employ multiple collection systems or employ effective flow splitting to operate multiple tanks in parallel if approved by the local unit of government.*

*B. If tanks are connected in series, no tank or compartment may be less than 25 percent of the required total liquid capacity. For new construction, the first tank must be equal to or larger than any subsequent tank in the series.*

### Justification

These are current requirements, except that the new rule will now allow tanks to be run in parallel if the collection system is designed as such or if effective flow splitting devices are employed. An example of an effective flow splitting device would be one that distributes the flow equally. This was a recommendation from MPCA engineering staff (see Exhibit 424). Please refer to Exhibit 36 for the tank sizes required by this provision and Exhibits 35 and 40 for common large tank geometries currently produced in Minnesota.

### **MINN. R. 7080.1950 COMPARTMENTATION OF SINGLE TANKS**

#### **367. Proposed Change new part 7080.1950, item A, formerly 7080.0130, subpart 2, items B and N.**

*If septic tanks are compartmentalized, items A to E apply.*

*A. When septic tanks are divided into compartments, the volume of the first compartment must be equal to or larger than any succeeding compartments. No compartment may be less than 25 percent of the total required liquid capacity. No compartment may have an inside horizontal dimension less than 24 inches.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

#### **368. Proposed Change new part 7080.1950, item B, formerly 7080.0130, subpart 2, item N, subitem (3).**

*B. Flow between compartments can be achieved by an unbaffled transfer hole with a minimum size of 50 square inches located in the clarified liquid zone or a transfer hole located above the clarified liquid zone, that is baffled according to part 7080.1960. The final compartment of a tank that employs a transfer hole in the clarified zone shall not be used as a dosing chamber.*

### Justification

This is a new proposal to allow the transfer of sewage from one compartment to another to be accomplished by a hole in the compartment wall. This proposal was brought to the Agency by the precast concrete tank manufacturers. The manufacturers represent that this method is equal to or superior than the current practice of having the compartment wall hole be at the tank's liquid level and the hole be baffled. The SSTS Advisory Committee, made up of a broad spectrum of SSTS professionals, disagrees with this recommendation. In consideration of allowing new technologies and flexibility, MPCA staff conclude that the rule above should be changed as it is expected that a transfer hole located in the clarified liquid will operate just as effectively as a higher hole which is baffled. Currently the state of Florida, the ASTM specification C-1227 septic tank specification (and likely others) allows the transfer hole as proposed in this chapter. (See Exhibits 51 and 53).

**369.** Proposed Change new part 7080.1950, item C, formerly 7080.0130, subpart 2, item J.

*C. Septic tanks must have at least a two-inch drop between the invert of the inlet to the invert of the outlet. No liquid level drop is required between the compartments.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**370.** Proposed Change new part 7080.1950, item D, formerly 7080.0130, subpart 2, item N, subitem 4.

*D. Adequate venting must be provided between compartments by baffles or by an opening of at least 12 square inches near the top of the compartment wall.*

### Justification

The former requirement is to have 50 square inches of venting area and it is proposed to reduce that to 12 square inches (the size of a four-inch hole). This is a recommendation from the precast concrete tank manufacturers. Because tanks are ultimately vented through the four-inch building sewer to the plumbing vent, the reduction here to 12 square inches should not present a problem. Therefore, a four-inch vent opening in the tank should be sufficient. A four-inch vent opening is allowed by ASTM Specification C-1227 (Exhibit 53).

**371.** Proposed Change new part 7080.1950, item E.

*E. All compartmental walls must be strong enough to bear the weight of the effluent against an empty compartment.*

### Justification

This provision is necessary because many tanks are now produced with one-half of the tank being used as a settling tank (septic tank) and the other compartment being a dosing chamber with a pump. After the pump discharges effluent, the second compartment is nearly empty while the first compartment is still full. Therefore, the compartment wall needs to be able to withstand the weight of the effluent while unsupported by effluent in the second compartment.

## **MINN. R. 7080.1960 SEPTIC TANK BAFFLES**

### **372. Proposed Change new part 7080.1960.**

*All septic tanks must be baffled according to items A to G. Effluent screens may be substituted for outlet baffles.*

#### Justification

Please see the justification for Minn. R. 7080.1100 subp. 8.

### **373. Proposed Change new part 7080.1960, item A, formerly 7080.0130, subpart 2, item C.**

*A. Baffles must be installed at each inlet and outlet of septic tanks. Outlet baffles are required on compartment walls if the transfer hole is at the liquid level.*

#### Justification

There are minor grammatical changes for clarity and to accommodate the new provision in Minn. R. 7080.1950 item B.

### **374. Proposed Change new part 7080.1960, item B, formerly 7080.0130, subpart 2, item E.**

*B. Baffles must be constructed of acid-resistant concrete, acid-resistant fiberglass, or plastic resistant to corrosion or decay. Inlet baffles must not restrict the movement of solids.*

#### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

### **375. Proposed Change new part 7080.1960, item C, formerly 7080.0130, subpart 2, item F.**

*C. Baffles must be integrally cast with the tank or affixed at the top and bottom with connectors that are not subject to corrosion or decay. Baffles for fiberglass-reinforced polyester tanks may be resin bonded or secured with suitable structural adhesive. Sanitary tees used as baffles must be affixed to the inlet or outlet pipes with a permanent waterproof adhesive.*

#### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

### **376. Proposed Change new part 7080.1960, item D, formerly 7080.0130, subpart 2, item G.**

*D. The inlet baffle must extend at least six inches, but not more than 20 percent of the total liquid depth, below the liquid surface and at least six inches above the liquid surface.*

#### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**377. Proposed Change new part 7080.1960, item E, formerly 7080.0130, subpart 2, item H.**

*E. The outlet baffle and any baffles between compartments must extend below the liquid surface a distance equal to 40 percent of the liquid depth, except that the penetration of the indicated baffles or sanitary tees for horizontal cylindrical tanks must be 35 percent of the total liquid depth. They must also extend above the liquid surface as required in item D. In no case may these baffles extend less than six inches above the liquid surface.*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**378. Proposed Change new part 7080.1960, item F, formerly 7080.0130, subpart 2, item I.**

*F. There must be at least one inch between the underside of the top of the tank and the highest point of the inlet and outlet baffles.*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**379. Proposed Change new part 7080.1960, item G, formerly 7080.0130, subpart 2, item L.**

*G. The nearest point on the inlet baffles other than sanitary tees must be no less than six inches and no more than 12 inches from the end of the inlet pipe. The nearest point on the outlet baffle, other than sanitary tees, may be no closer than six inches and no more than 12 inches from the beginning of the outlet pipe to the baffle. Sanitary tees used as inlet or outlet baffles must be at least four inches in diameter.*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**MINN. R. 7080.1970 SEPTIC TANK ACCESS**

**380. Proposed Change new part 7080.1970 item A, formerly 7080.0130, Subpart 2, item M, subitems (1) and (5).**

*A. There must be a maintenance hole with a minimum diameter of 20 inches (least dimension) over all baffles, screens, pumps, or other devices that may need inspection, maintenance, or repair. Enough maintenance holes must be provided so access can be gained within six feet of all walls for solids removal of each compartment.*

**Justification**

These are former requirements, except the new provision that maintenance holes must be placed over all apertures which may need service or repairing. This is reasonable and necessary, so repairs can be made without entering the tank. Despite the contention of some interested parties that servicing a broken component by entering the tank is not uncommon or dangerous, there appears to be evidence that deaths have occurred from entering septic tanks due to poisonous gasses and OSHA classifies entering septic

tanks as confined space entry (Exhibit 506). Therefore, the provision is included to avoid the necessity of entering the tank.

The inspection pipe provision is no longer needed because a maintenance hole brought to the ground surface is required over the baffles.

Some negative consequences of additional maintenance hole openings are that more infiltration of rainwater can occur with more openings and riser joints, there is more heat loss, and the poor aesthetics of more maintenance hole covers at the ground surface. Because of these reasons, the SSTS Advisory committee was not in favor of this proposal. However, the precast concrete tank manufacturers were in favor because they said the heat loss and infiltration can be mitigated by the increased tank requirements proposed for this chapter. Agency staff decided that the benefits of easily finding and maintaining the tank outweighed the possible negative impacts. Please refer to comment 12 of Exhibit 10, comment 6 of Exhibit 31 and comment 2 of Exhibit 294.

**381.** Proposed Change new part 7080.1970 item B, formerly 7080.0130, subpart 2, item M, subitems (1) and (5).

*B. All maintenance hole risers must extend through the tank cover to or above finished grade.*

#### Justification

Formerly the rule allows maintenance holes from septic tanks to be at the ground surface or shallowly buried, and requires maintenance holes from dosing chambers to be at the ground surface. The different requirements were due to the perceived maintenance requirement differences between septic tanks and dosing chambers, as dosing chambers may require pump replacement. Interested parties have indicated to the Agency a desire to have all maintenance hole covers at the ground surface. This is due to being able to locate the tank and maintenance hole for pumping and allowing access when the ground is frozen. MPCA staff agree with this proposal.

**382.** Proposed Change new part 7080.1970 item C, subitem (1), formerly 7080.0130, Subpart 2, item M, subitem (2).

*C. Covers for maintenance holes must:*

*(1) be secured by having sufficient weight or bolted, locked, or secured by other methods approved by the local unit of government; be leak resistant; and be designed so the cover cannot be slid or flipped, which could allow unauthorized access to the tank;*

#### Justification

The former rule states that if the maintenance hole is located at the ground surface, then it must be “secure” to prevent unauthorized access. This was for safety reasons; to prevent curious children from removing the tank cover and being exposed to a dangerous situation. It is proposed to embellish the term secure to provide more guidance on preventing unauthorized access. It is also proposed to require that the lid not be subject to removal by sliding, or being flipped. Therefore, to remove the cover it would have to be lifted off the riser, again, to promote safety and prevent unauthorized access. See Exhibits 490 and 504.

It is also proposed to require that the interface between the cover and the riser be leak resistant. This is to minimize the extraneous water that can leak into the tank from precipitation. The extraneous water can hinder the settling of solids and contribute additional flow to the soil treatment system in which it was not

designed to handle. The term “resistant” is used instead of “water tight,” as the cover should not be permanently sealed to the riser.

**383.** Proposed Change new part 7080.1970 item C, subitem (2), formerly 7080.0130, Subpart 1, item H.

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

#### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**384.** Proposed Change new part 7080.1970, item C, subitem (3).

*(3) be capable of withstanding a load that the cover is anticipated to receive. The cover must maintain the load rating and not be subject to loss of integrity or strength over time or changes in climatic temperature; and*

#### Justification

It is prudent and necessary to stipulate the strength requirements for an exposed tank cover. The former rule does not address this issue. Please refer to Exhibits 196, 250, 394, 402, 433, and 486.

**385.** Proposed Change new part 7080.1970, item C, subitem (4).

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

#### Justification

It has been brought to the Agency’s attention that some plastic used for tank covers may not be suitable for outdoor conditions as strength may change due to temperature, or over time, with exposure to sunlight. Therefore, this provision is reasonable to include to increase reliability.

### **MINN. R. 7080.1980 TANK CONSTRUCTION**

**386.** Proposed Change new part 7080.1980 item A.

*A. All precast reinforced concrete sewage tanks should be constructed according to the National Precast Concrete Association, Septic Tank Manufacturing: A Best Practices Manual (1998). The manual is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change. If a conflict exists between the manual and this chapter, this chapter applies.*

#### Justification

This new requirement is permissive in nature. It is hoped that these standards will be voluntarily applied by tank manufacturers to see if any modifications should be made before this standard is required to be followed. In addition, local permitting authorities can require these procedures to be followed if they so desire. Lastly, a group of precast concrete tank manufacturers are in the planning stages of a Minnesota precast concrete tank manufacturers plant certification program, in which quality control/quality assurance of the certified plant will be checked to determine quality with manufacturing standards. Please refer to Exhibit 49.

**387. Proposed Change new part 7080.1980, item B**

*B. Fiberglass-reinforced polyester and polyethylene tanks should meet the construction standards in International Association of Plumbing and Mechanical Officials (IAPMO), Material and Property Standards for Prefabricated Septic Tanks, Standard PS 1-2003 (2003). The standard is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change. If conflicts exist between the standard and this chapter, this chapter applies.*

**Justification**

This new requirement is permissive in nature. It is hoped that these standards will be voluntarily applied by tank manufacturers to see if any modifications should be made before this standard is required to be followed. In addition, local permitting authorities can require these procedures to be followed if they so desire. Please refer to Exhibit 46.

**388. Proposed Change former part 7080.0130, Subpart 1, item I.**

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

**Justification**

MPCA staff conclude that with the more embellished standards proposed, block tanks will not meet these standards. For example, a block tank will likely not meet the watertightness test proposed in new Minn. R. 7080.2010, and therefore, will not be used.

**MINN. R. 7080.1990 TANK STORAGE, TRANSPORT AND USE**

**389. Proposed Change new part 7080.1990, Subpart 1, item A.**

*Subpart 1. Precast reinforced concrete tanks. Precast reinforced concrete tanks must:  
A. have inserts embedded in the concrete to lift the tank that are designed for an ultimate load that is four times the working load;*

**Justification**

Correct design and manufacturing of tanks does not ensure that the tank will be sound if storage and transport are not properly done. Therefore, the tank needs to have inserts which will ensure that the tank can be lifted without tank damage. This specification came from ASTM specification C - 1227.

**390. Proposed Change new part 7080.1990, Subpart 1, item B.**

*B. undergo proper curing to achieve a compressive strength of 4,000 pounds per square inch before transport, placement, or use; and*

**Justification**

Precast concrete tanks gain strength as the concrete cures with time. Therefore, precast concrete tanks should not be transported and used until proper curing has taken place. The Agency has received reports of “green tanks” collapsing once buried. The 4,000 pounds per square inch compressive strength value

was derived from National Precast Concrete Association Septic Tank Manufacturing Best Practices Manual. Please refer to Exhibit 49.

**391. Proposed Change new part 7080.1990, Subpart 1, item C.**

*C. have no pipe penetration points or openings in the exterior walls or tank bottom below the tank liquid level.*

**Justification**

This provision is proposed to ensure that holes are not placed in the tank bottom to allow for drainage of storm water while the tank is being stored in the yard, and to prohibit any other placement of holes, for whatever reason, below the liquid operating depth. Most of the precast concrete tank manufacturers indicated that these holes cannot be adequately sealed over the long-term life of the tank, and strongly support this provision. The manufacturers who no longer place drainage holes stated that they do not place drainage holes because of future follow-up visits which indicated that the hole sealing was no longer watertight.

**392. Proposed Change new part 7080.1990, Subpart 2.**

*Subp. 2. Other tanks. Fiberglass-reinforced polyester or polyethylene tanks must be protected against deterioration during storage.*

**Justification**

If non-concrete tanks are subject to deterioration from environmental stresses during storage, the tanks should be stored in such a manner that they maintain their long-term design integrity.

**MINN. R. 7080.2000 LOCATION AND INSTALLTION OF TANKS**

**393. Proposed Change new part 7080.2000, item A, formerly 7080.0130, subpart 4.**

*A. Sewage tanks must not be placed in areas with obstructions that prohibit the removal of solids and liquids from the tank according to this part.*

**Justification**

This is a former requirement that has been moved from the former subpart 4 with minor language changes for clarity. Please refer to comment 18 of Exhibit 11.

**394. Proposed Change new part 7080.2000, item B.**

*B. Sewage tanks must not be placed in areas where vertical or horizontal distances prohibit the ability of pump trucks to remove the solids and liquids according to this part.*

**Justification**

Septic tank pumping trucks have limited vacuum capacity to remove solids and liquids during tank cleaning. Therefore, a stipulation needs to be made to ensure that the tank is not placed in a location where the distance to the tank and/or the vertical lift required from where the truck needs to be parked, does not exceed the truck's capacity to remove the material.

**395. Proposed Change new part 7080.2000, item C, formerly 7080.0130, subpart 4.**

*C. Sewage tanks must be set back as specified in Table VII in part 7080.2150, subpart 2, item F.*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**396. Proposed Change new part 7080.2000, item D.**

*D. The top of sewage tanks should not be buried deeper than four feet and must not be buried deeper than seven feet from final grade for new dwellings. Tanks shall not be buried deeper than the tanks' maximum designed depth. The minimum depth of soil cover over the insulation on the top of the tank is six inches.*

**Justification**

This proposed requirement came from interested parties who claim that tanks that are buried deep in the ground cannot be adequately cleaned by pumping through a small maintenance hole. In addition, tanks buried too deep are likely placed into a groundwater situation, in which groundwater can seep into the tank and cause over loading of the soil treatment system. Those who pump tanks initially proposed that the maximum depth of burial be limited to two-feet below final grade. Their claim is that a two-foot depth plus an additional 40 to 60” of tank height, puts the bottom of the tank at a depth of 64 to 84 inches in depth, which is hard to remove solid material.

The other side of the argument was to keep the former requirement which allows the tank to be buried up to seven feet from final grade. This argument came from SSTS professionals and local permitting authorities in the southern and western part of the state. Their concern was that a basement sump would be needed to lift the sewage from basement plumbing fixtures to a shallow tank. However data from Nicollet county indicates that most tanks are buried shallower than four feet. (See Exhibit 445.) However, most of these systems in southern and western Minnesota also need an above ground system which requires a dosing chamber with a pump. Therefore, some systems in southern and western Minnesota would now require two pumps. This group thought that requiring two pumps would be totally unacceptable to the public. Please refer to comment 3 of Exhibit 369.

As a compromise, the proposed rule includes a voluntary maximum depth of burial of four feet from final grade. The only rationale is that it is a mid-point between what the pumpers vs. the installers desire. There is a concern that this compromise does not serve the needs of either group, as pumpers wanted two feet buried depth and the western Minnesota group said that a six foot the burial depth is needed in most cases to avoid two pumps. Pumpers who wish to limit the maximum depth of burial to less than four feet, can lobby their respective county boards to amend the local ordinance to make this provision more restrictive, as allowed under Minn. Stat. § 115.55. See comment 2 of Exhibit 501.

**397. Proposed Change new part 7080.2000, item E, formerly 7080.0130, subpart 4.**

*E. Sewage tanks must not be placed in floodways, drainageways, or swales. Upslope drainage must be diverted away from the location of all tanks. A tank's final cover must be crowned or sloped to shed surface water.*

### Justification

Most of these requirements are in the former rule. The new requirements are the prohibition of tanks placed in drainageways or swales, and providing upslope diversion of storm water. These prohibitions are necessary in order to minimize the possible addition of precipitation in the event the tank, risers, or other joints may leak. These concepts have been taught at U of M training workshops for many years and are generally accepted.

#### **398. Proposed Change new part 7080.2000, item F.**

*F. Sewage tanks must not be placed in areas subject to vehicular traffic unless engineered for the anticipated load.*

### Justification

This is a necessary provision because the standard tank strength requirements do not include excessive vehicle weights. This condition may become more frequent as small lots with failing tanks need to be upgraded with little replacement room and may need to be placed in areas with vehicular traffic. Currently the precast concrete tank manufacturers build tanks, upon special order, if the tank is to be placed in an area with vehicular traffic. This provision was derived from Tennessee's state SSTS code.

#### **399. Proposed Change new part 7080.2000, item G, formerly 7080.0130, subpart 4.**

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

*G. Sewage tanks must be placed on firm and evenly compacted soil and with the soil level in all directions. The bottom shall be excavated in a manner so the vertical load is borne by the tank walls and not the tank bottom. If the bottom of the tank excavation contains rocks, bedding material must be used according to manufacturer's instructions. The soil beneath the tank must be capable of bearing the weight of the tank and its contents.*

### Justification

Many of these requirements are former provisions that have been moved, however, there are two new requirements to discuss. The first new requirement is that the bottom of the excavation for the tank must be slightly concave so the tank walls, not the tank bottom, is supporting the overburden weight. This was a recommendation by the precast concrete tank manufacturers group. The second new requirement is derived from the fact that many manufacturers installation guides formerly required bedding if the native soil material contains rocks. The concern is that the tank bottom may subject to pressure from a rock in contact with the tank bottom. The Agency has received reports of tank bottoms cracking. Please refer to comment 2 of Exhibit 31, Exhibits 66 and 67.

#### **400. Proposed Change new part 7080.2000, item H.**

*H. Backfilling around sewage tanks must be made in lifts no greater than 12 inches in loose thickness and placed nearly equally around the tank. Backfill material must be free of large stones, frozen soil material, or other debris. Backfill material must be brought to near natural density in a manner that avoids undue strain on the tank. For fiberglass-reinforced polyester or polyethylene tanks, the height of the backfill material must not exceed the height of water in the tank.*

### Justification

Correct tank backfilling is important so as not to damage the tank. The proposed requirements are a compilation of tank manufacturers recommendations. Please refer to comment 15 of Exhibit 10.

#### **401. Proposed Change new part 7080.2000, item I.**

I. Sewage tanks and risers must be installed according to manufacturer's requirements and in a structurally sound and watertight fashion.

### Justification

In addition to the requirements of items G, H and I, all other manufacturer's installation requirements should be met to insure water tightness and tank integrity.

#### **402. Proposed Change new part 7080.2000, item J.**

J. If the top of a sewage tank is to be less than two feet from final grade, the lid of the tank must be insulated to an R-value of ten. Maintenance hole covers must be insulated to an R-value of ten. Maintenance hole risers may be insulated to an R-value of ten. All insulating materials must be resistant to water absorption.

### Justification

Since some tanks need to be buried shallow due to high watertable, high bedrock or site topography, it is prudent to try to maintain as much heat in the tank as possible to have warm effluent reach the soil treatment system. This is in response to the past few winters in which little to no snow cover existed and many systems froze. An R-value of ten was chosen so the amount of insulation above the tank (plus any soil cover) would be somewhat equivalent with four feet of soil cover, which is a typical frost depth encountered. Please refer to comment 16 of Exhibit 10, Exhibit 75, comment 19 of Exhibit 11, comment 18 of Exhibit 79, comment 1 of Exhibit 80, and comment 3 of Exhibit 501.

#### **403. Proposed Change new part 7080.2000, item K formerly 7080.0130, subpart 1, item G.**

K. Sewage tanks placed below the level of the seasonally saturated soil must be anchored or have sufficient weight to protect against flotation under high-water table conditions when the tank is empty.

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

#### **404. Proposed Change new part 7080.2000, item L, formerly 7080.0130, subpart 1, item A.**

L. Connections between the concrete tank and the building sewer or supply pipe must meet the requirements of American Society for Testing and Materials, Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals, ASTM C923 (2002), or equivalent. The standard is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change.

### Justification

The former rule provides a general requirement that joints must be watertight. This proposed change part is to reference a national specification developed to achieve this goal. Please refer to Exhibit 76.

#### **405. Proposed Change new part 7080.2000, item M formerly 7080.0130, subpart 1, item A.**

##### 7080.2000 Location and Installation of Tanks.

*M. Joints of concrete tanks and concrete tank lids must be sealed using a bonding compound that meets American Society for Testing and Materials, Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants, ASTM C990 (2003). The standard is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change.*

### Justification

The Agency has received many complaints that joints on precast concrete tanks are seldom watertight. Therefore, it is proposed to require and cite a national specification concerning this issue.

### **MINN. R. 7080.2010 TANK TESTING**

#### **406. Proposed Change new part 7080.2010, Subpart 1 item A, formerly 7080.0130, subpart 1, items A and B.**

##### *Subpart 1. General.*

*A. All sewage tanks must be watertight, including at all tank and riser joints, riser connections, and pipe connections.*

*B. Testing of all models of sewage tanks to be used must be conducted to determine:*

*(1) the structural integrity of the tank design; and*

*(2) the adequacy of the manufacturing process of watertightness.*

### Justification

The general requirement that all tanks are to be water tight was moved from subpart 1.

It is proposed that the new standards proposed in this chapter be verified that they are being met with testing requirements. This proposal is supported by the precast concrete tank manufacturers group. The testing requirements are intended to provide minimal tank verification. Please refer to comment 8 of Exhibit 31 and Exhibit 44.

#### **407. Proposed Change new part 7080.2010, Subpart 1, item C.**

*C. Sewage tanks, including riser joints, riser connections, and pipe connections must be designed, manufactured, and installed to be watertight for 25 years under normal use.*

### Justification

It is prudent and necessary to specify a design life for tanks, otherwise the market would likely dictate tanks with short tank integrities. A 25 year life was chosen, as it seemed to be a common standard for

capital components. The precast concrete tank manufacturer's group was concerned with the language, as some might construe that the tank manufacturers must provide a 25-year guarantee. This is not the intent of this language. The intent is that under normal operating conditions the tank will likely maintain integrity and be watertight below the operating depth for 25 years.

**408. Proposed Change new part 7080.2010, Subpart 2 formerly 7080.0130, subpart 1, item F.**

*F. not be constructed on site when saturated soil conditions during construction are closer than three inches to the bottom of the excavation;*

Justification

This was a requirement for pour-in-place tanks which has now been replaced by a requirement that the tank must be designed by a professional engineer. Please see justification for Minn. R. 7080.1910, subp. 2.

**409. Proposed Change new part 7080.2010, Subpart 2.**

*Subp. 2. Structural integrity of design test. The structural integrity of each model of tank produced must be verified to determine the horizontal and vertical loads that the tank can withstand when empty. Tanks must be reverified for structural integrity if the design, materials, or construction methods are modified. A licensed professional engineer shall certify in writing if different models are similar enough so that the structural integrity information for one model is valid for other models. Verifications must be submitted to the Commissioner. The Commissioner shall maintain and make available the verifications upon request. All poured-in-place tanks must be verified.*

Justification

The first testing requirement is one for structural integrity. It shall determine the strength of the tank against the designed strength. The amount of stress placed on the tank to determine its structural integrity shall be determined by a professional engineer or by strength testing. This is a one-time determination per model to ensure that the engineering design, materials selection, manufacturing process, and curing are sufficient to meet the intended design. It is prudent to require retesting if the design, materials, or construction practices change. The precast concrete tank manufacturers group inquired if some tank models are similar, if only one model would need to be tested. The proposed rule provides that may be the case if a professional engineer reviews the different models and determines that they are similar enough so that verification of the various models would be duplicative and unnecessary. The Commissioner shall maintain the testing records and provide the results to local permitting authorities. It is proposed that all poured-in-place tanks be tested at the site because construction may be more difficult than in a controlled setting at a factory. Please refer to comment 11 of Exhibit 10 and Exhibit 472.

The new requirements for poured-in-place tanks require the tank to be designed by a professional engineer and be tested for strength and watertightness.

**410. Proposed Change new part 7080.2010, Subpart 3., item A.**

*Subp. 3. Watertightness test. A. Of all sewage tanks manufactured, every 25th tank produced must be tested for watertightness. At least one tank per year, per model, must be tested for watertightness. All poured-in-place tanks shall be tested for watertightness. Records of testing must be maintained by the*

*manufacturer for three years and must be available to the Commissioner and local unit of government if requested. Tanks must be tested and meet or exceed the requirements of subitems (1) to (3):*

Justification

The second tank testing method will be for water tightness, to ensure that the manufacturing process is meeting its intended goals. The testing frequency is proposed to be every 25<sup>th</sup> tank. This is not solely to mean four percent of the tanks, as a manufacture could test the first four percent of the anticipated tanks to be manufactured and then not test again for a very long period of time. The testing frequency is also meant to say every 25<sup>th</sup> tank, regardless of model number. For example, if an manufacturer makes 24 of model “A” and the 25<sup>th</sup> tank is model “B,” then model “B” tank needs to be tested. However, to ensure that all models will be tested, it is proposed that every model get tested at least once per year, except if that tank is not manufactured in that year. If a small production model gets tested before the 25<sup>th</sup> tank, the counting of when the next tank is to be tested will start over from the last tank tested. For example:

Tank No.	Tank Model	Tested	Tank No.	Tank Model	Tested
1	A	y	17	A	
2	A		18	A	
3	A		19	A	
4	C (only a few produced per year, so it was decided to test)	y	20	A	
5	A		21	A	
6	A		22	A	
7	A		23	A	
8	A		24	A	
9	A		25	A	
10	A		26	A	
11	A		27	<u>A</u>	
12	A		28	<u>A</u>	
13	A		29	<u>A</u>	y
14	A		30	<u>A</u>	
15	A		31	<u>A</u>	
16	A		32	<u>A</u>	

This is a minimal requirement, as national groups and some groups in Minnesota advocate that every tank should be tested for watertightness. The proposed rule starts with this testing frequency, and MPCA will monitor results and discuss the frequency with interested parties to see this frequency of testing appears to be adequate, or needs to be changed in future rule revisions. Please refer to comment 17 of Exhibit 10.

**411. Proposed Change new part 7080.2010, Subpart 3, item A. item (1).**

*(1) when empty, a tank must maintain a vacuum of at least two inches of mercury for five minutes, without loss of pressure;*

Justification

This is the procedure used by the state of Wisconsin in their SSTS code (Exhibit 54). The Agency has received comments that the vacuum test does not accurately test for watertightness, as a vacuum measures air entering the tank. The commentator’s concern is that as air enters the tank, dust particles, get sucked into

the holes and plug them, falsely indicating watertightness. The commenter indicated that the only accurate test is to fill the tank with water and check for water loss. The Agency has no knowledge that a vacuum test is inaccurate and vacuum tests are allowed by other state rules.

**412. Proposed Change new part 7080.2010, Subpart 3, item A, subitem (2).**

*(2) concrete tanks must hold water for one hour, without loss, after the tank has been filled with water to the top of the tank, let stand for 24 hours, and then refilled to the same level; and*

**Justification**

This is the procedure used by the state of Wisconsin in their SSTS code and the national standard , ASTM C – 1227. (Exhibits 53 and 54).

**413. Proposed Change new part 7080.2010, Subpart 3, item A., subitem (3).**

*(3) fiberglass-reinforced polyester or polyethylene sewage tanks must hold water without loss for one hour after being filled.*

**Justification**

This requirement is similar to the concrete tank watertight testing requirements, except that the 24 hour presoak for concrete tanks is not necessary for fiberglass or plastic tanks, as they do not absorb water as concrete tanks do. The precast concrete tank manufacturers do not agree with this provision and would require the same water testing procedure for all septic tanks (i.e the 24 hour presoak), regardless of the materials used.

This requirement is necessary so the manufacturer is given a procedure in the event that the tank fails its watertight test. Tanks can adequately be repaired to meet all requirements of this chapter.

**414. Proposed Change new part 7080.2010, Subpart 3, item B.**

*B. Sewage tanks that do not pass the tests listed in item A, subitems (1) to (3), must not be used until repaired and retested. The repair and retest procedure must be repeated until the tank passes the test or the tank must not be used.*

**Justification**

It is necessary to stipulate what must be done if a tank should fail the watertight testing. Tanks that leak can be repaired to a watertight state.

**MINN. R. 7080.2020 TANK IDENTIFICATION**

**415. Proposed Change new part 7080.2020, item A, formerly 7080.0130, Subpart 1, item E.**

*A. Sewage tanks must be marked near the outlet with:*

*(1) the manufacturer's name;*

*(2) model number*

*(3) liquid capacity;*

*(4) date of manufacture; and*

*(5) maximum depth of burial.*

### Justification

Some of the requirements are existing. Date of manufacture is a new proposed requirement so the installer and inspector know whether the tank has adequately cured and is strong enough to be installed (see comment 2 of Exhibit 369). Maximum depth of burial is necessary because the rule now states that tanks need to be manufactured in conjunction with intended depth of burial (i.e., tanks have no minimum strength requirements). Therefore, the installer and inspector need to know the maximum depth of burial to determine if the tank has been buried to an appropriate depth to corresponds to the design. The model number is proposed to help installers and inspectors determine if the tank model is a model which meets the criteria in the rule. The agency will maintain and make available a list of tanks meeting the requirements.

#### **416. Proposed Change new part 7080.2020, item B.**

*B. The tank inlet or outlet must be clearly marked.*

### Justification

The Agency has been informed on a few occasions that septic tanks have been installed backwards with the outlet toward the dwelling. This make for improper hydraulic flow-through. Therefore, it is proposed to have the inlet and outlets marked. The marking can be done in any manner (such as spray painted) and does not need to be a permanent marking.

#### **417. Proposed Change new part 7080.2020, item C.**

*C. The installer shall submit the information in item A with the as-built drawing.*

### Justification

It is proposed that the installer provide the information in item A with the as-built drawing. This is a prudent requirement as this information may be helpful in future compliance inspections and trouble shooting.

### **MINN. R. 7080.2030 EFFECTIVE DATE.**

#### **418. Proposed Change new part 7080.2030.**

*Sewage tanks must meet the requirements of parts 7080.1910 to 7080.2020 within three years of the effective date of this chapter. Tanks produced and installed within this three-year period must meet the requirements of Minnesota Rules 2005, part 7080.0130.*

### Justification

This lag time before implementation is prudent for manufacturers to eliminate past inventory, get engineering review, modify construction practices and purchase testing equipment.

### **FORMER MINN. R. 7080.0130 SUBPART 6.**

#### **419. Proposed Change former part 7080.0130, subpart 6.**

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

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

B. Aerobic tanks shall comply with the 1999 version of the National Sanitation Foundation International Standard (NSF International), No. 40, which is incorporated by reference. The publication is available through the National Sanitation Foundation International, P.O. Box 130140, Ann Arbor, Michigan 48113. The publication can be found at the Minnesota State Law Library, Judicial Center, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155 and is not subject to frequent change. Effluent quality shall meet or exceed NSF International No. 40 class II standards.

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

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

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

#### Justification

Aerobic tank requirements will now be located in the Agency's product registration requirements. Please see justification for Minn. R. 7080.1600.

### **MINN. R. 7080.2050 DISTRIBUTION OF EFFLUENT**

**420.** Proposed Change new part 7080.2050, subpart 1, formerly 7080.0150, subpart 1.

Subpart 1. General. Distribution of effluent for ISTS must meet or exceed the requirements of this part.

#### Justification

General provision to indicate scope of the requirements.

**421.** Proposed Change new part 7080.2050, subpart 2, item A, formerly 7080.0130, subpart 2 P. (2)

Subpart 2. Supply pipes.

A. The supply pipe extending from the septic tank to the undisturbed soil beyond the tank excavation must meet the strength requirements of American Society for Testing and Materials (ASTM), Schedule 40 Pipe. The schedule is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change.

#### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**422.** Proposed Change new part 7080.2050, Subpart 2, item B, subitem (1), formerly 7080.0130, subpart 2 E. (1).

B. Supply pipes must:

(1) be made from materials resistant to breakdown from sewage and soil;

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. Please refer to Exhibit 284.

**423.** Proposed Change new part 7080.2050, subpart 2, item B, subitem (2).

*(2) be watertight, including all joints;*

### Justification

This requirement is not currently found in the rule, but is critical that this obvious condition must be met. The Agency has received reports that joints have failed in pressure distribution lines due to improper pipe cleaning or gluing, or use of improper fittings.

**424.** Proposed Change new part 7080.2050, subpart 2, item B, subitem (3).

*(3) be durable for a 25-year design life;*

### Justification

This provision is to be consistent with the other longevity requirements for other structural components. Please see Minn. R. 7080.2050, subp. 2(B)(3) and 7080.2150, subp. 3(B).

**425.** Proposed Change new part 7080.2050, subpart 2, item B, subitem (4), formerly 7080.0150, subpart 1, item A.

*(4) not deflect, buckle, crush, or longitudinally bend;*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. Please refer to Exhibits 1, 2, and 4.

**426.** Proposed Change new part 7080.2050, Subpart 2, item B, subitem (5).

*(5) be resistant to pressures, fatigue, and strain for the application;*

### Justification

This provision is a general performance requirement to alert the designer/installer that the conditions on the site should be reviewed and suitable pipe chosen for the application.

**427.** Proposed Change new part 7080.2050, Subpart 2, item B, subitem (6).

*(6) be installed according to ASTM Standard for underground installation of thermoplastic pipe sewers and other gravity-flow applications – ASTM D2321 (2005). The standard is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change;*

### Justification

The former rule does not describe the proper procedure for installation and burial of pipes. During the past few winters there has been many systems that have frozen. Reports to the Agency seem to indicate that the major problem with freezing is with sags in the pipe which hold effluent and subsequently freeze. This is a widespread and major problem. Therefore, it is proposed to require pipe installation and burial in accordance with a national specification. This method has been taught the past few years at the U of M continuing education workshops, and has not been subject to controversy.

- 428.** Proposed Change new part 7080.2050, subpart 2, item B, subitem (7) formerly 7080.0150, subpart 1, item A.

*(7) be designed, installed, and protected so that effluent will not freeze in the pipe;*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 429.** Proposed Change new part 7080.2050, Subpart 2, item B, subitem (8).

*(8) not be closer than six inches from final grade. Pipes susceptible to freezing shall be insulated; and*

### Justification

The agency has observed some situations in which the supply pipes were exposed to the ground surface. Nothing in the former rule prohibits this from occurring. The pipes should be covered for protection from damage and for frost protection. The designer should determine if the pipes should be insulated and concurrence should be sought from the local permitting authority.

- 430.** Proposed Change new part 7080.2050, subpart 2, item B, subitem (9) formerly 7080.0150, subpart 1, item A.

*(9) be set back from water supply wells and water service pipes according to chapter 4715.*

### Justification

This provision is added to alert the professional that pipes containing sewage must comply with Minnesota Department of Health regulations. This requirement is also found in Table IV. Please refer to comment 18 of Exhibit 10.

- 431.** Proposed Change new part 7080.2050, Subpart 2, item C.

*C. The minimum slope for gravity supply pipes is one percent (1/8 inch per linear foot). There is no maximum slope. Pipe restraints must be used for slopes greater than 20 percent or where fluid velocities in the pipe exceed 15 feet per second. For pressure systems, the slope shall be sufficient to allow quick drainback to the dosing chamber.*

### Justification

Currently there is no minimum or maximum slope requirements in the rule. The Agency is asked on occasion about the correct slope of the pipe. MPCA staff researched this issue and determined that a one percent slope is appropriate. Please refer to Exhibits 3, 77, and 499 for the research conducted to make this determination.

**432.** Proposed Change new part 7080.2050, subpart 2, item D.

*D. Access to each supply pipe must be provided for cleanout. The cleanout point must be accessible from final grade.*

Justification

It is prudent to require some sort of access to the supply pipes in the event they get plugged or become frozen. If the pipe can be effectively accessed through the last tank (jetting or snaking not obstructed by a baffle), that shall be considered acceptable access. Please refer to comment 1 of Exhibit 9, Exhibit 71 and comment 8 to Exhibit 369.

**433.** Proposed Change new part 7080.2050, Subpart 3, item A, formerly 7080.0150, sSubpart 2, item A.

*Subpart 2.3 Gravity distribution.*

*Subp. 3. Gravity distribution.*

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

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**434.** Proposed Change new part 7080.2050, subpart 3, item B, subitems (1) to (3), formerly 7080.0150, subpart 2, item B, subitems (1) to (3).

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

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

*(2) The invert of the inlet supply pipe must be at least one inch higher than the invert of the outlet supply pipe to the next drop box.*

*(3) The invert of the outlet supply pipe to the next drop box may be no greater than two inches higher than the crown of the distribution pipe serving the trench in which the box is located.*

Justification

These are former provisions that have been moved with a language change for clarity and a format change due to rule restructuring.

- 435.** Proposed Change new part 7080.2050, subpart 3, item B subitem (4), formerly 7080.0150, subpart 2, item B, subitem (4).

*(4) When sewage tank effluent is delivered to the drop box by a pump, the pump discharge must be directed against a wall or side of the box on which there is no outlet or directed against a deflection wall, baffle, or other energy dissipater. The pump must discharge at a rate at least ten percent greater than the water supply flow rate but no faster than the rate at which effluent will flow out of the distribution device. The supply pipe must drain after the pump shuts off.*

#### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. The one addition is the provision that the supply pipe must drain after the pump shuts off. This provision is necessary because the pipe must completely drain, otherwise during the winter months standing water in the pipe may freeze over repeated pump cycles causing system back-up and damage to the pump. Please refer to comment 11 of Exhibit 8.

- 436.** Proposed Change new part 7080.2050, subpart 3, item B, subitems (5) and (6), formerly 7080.0150, subpart 2, item B, subitems (5) and (6).

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

*(6) The drop box must be placed on firm and settled soil.*

#### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 437.** Proposed Change new part 7080.2050, subpart 3, item C, formerly 7080.0150, subpart 2, item C.

*C. If valve boxes are used, all requirements of item B apply to valve boxes.*

#### Justification

This is a former provision that has been moved and shortened by referencing standards for drop boxes.

- 438.** Proposed Change new part 7080.2050, subpart 3, item D, formerly 7080.0150, subpart 2, item D.

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

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

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

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

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

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

*(6) When sewage tank effluent is delivered by pump, a baffle wall must be installed in the distribution box or the pump discharge must be directed against a wall, baffle, side of the box on which there is no outlet, or directed against a deflection wall, baffle, or other energy dissipater. The baffle must be secured to the box*

and extend at least one inch above the crown of the inlet pipe. Pressure must not build up in the box during pump discharge.

Justification

Format changes except for the additional last line. This proposed change is a recommendation from an interested party as they have observed pressure build up in drop boxes, which the boxes were not designed to handle. If pressure is built-up in the box, effluent may seep from the box causing sewage to come to the ground surface.

**439.** Proposed Change new part 7080.2050, subpart 3, item E, formerly 7080.0150, subpart 2, item E.

E. Nonpressurized distribution pipes must meet the requirements of subitems (1) to (4) and subpart 2, item B, subitems (1) and (3) to (5).

Justification

Some of the same attributes of supply pipes are also required for distribution pipes, as they carry-out similar functions.

**440.** Proposed Change new part 7080.2050, subpart 3, item E, subitem (1) formerly 7080.0150, subpart 2, item E, subitem (1)

(1) Distribution pipes used for gravity distribution must be at least four inches in diameter.

Justification

The strength requirements have been deleted from this section and replaced by similar requirements in Minn. R. 7080.2050, subp. 2(B).

**441.** Proposed Change new part 7080.2050, subpart 3, item E, subitem (2) formerly 7080.0150, subpart 2 item E, subitem (2)

(2) Distribution pipes used for gravity distribution must have at least one row of holes of no less than one-half inch in diameter spaced no more than 40 inches apart.

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**442.** Proposed Change new part 7080.2050, subpart 3, item E, subitem (3) formerly 7080.0150, subpart 2, item E, subitem (3)

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

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 443.** Proposed Change new part 7080.2050, subpart 3, item E, subitem (4) formerly 7080.0150, subpart 2, item E, subitem (4)

*(4) Distribution pipes for gravity distribution in seepage beds must be uniformly spaced no more than five feet apart and not more than 30 inches from the side walls of the seepage bed.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 444.** Proposed Change new part 7080.2050, subpart 4, item A, subitems (1) and (2), formerly 7080.0150, subpart 3, item A, subitems (1) and (2).

*Subp. 4. Pressure distribution.*

*A. Pressure distribution must pressurize the entire distribution system and must be used for:*

*(1) mound systems;*

*(2) at-grade systems;*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 445.** Proposed Change new part 7080.2050, Subpart 4, item A, subitem (3), formerly 7080.0150, subpart 3, item A, subitems (3)

*(3) all seepage beds placed in soils with a sizing classification of 1 or 2 in Table IX in part 7080.2150, subpart 3, item F;*

Justification

The reason that pressure distribution is required for sandy soils is due to overloading of the soil before the biomat is formed which provides even distribution. University of Minnesota SSTS staff recommend that fine sands also be included with the sandy soils that require pressure distribution, as they transmit sewage effluent faster than the soil's ability to provide treatment before biomat formation. Please refer to Exhibits 326, 327, and 328. The sandy soil criteria is now more adequately described in updated table IX.

- 446.** Proposed Change new part 7080.2050, Subpart 4, item A, subitem (4).

*(4) all seepage beds with a width greater than 12 feet;*

Justification

One of the main treatment components is the biological decomposition of organic material which occurs in the presence of oxygen. If soil systems become too wide, there is a problem with the transfer of oxygen to underneath the system. To aid in facilitation of oxygen transfer under the system, pressure distribution is proposed to be required as the system drains after a dose, oxygen can be transmitted through the bed into the underlying soil and sewage effluent.

- 447.** Proposed Change new part 7080.2050, Subpart 4, item A, subitem (5), formerly 7080.0150, subpart 3, item A, subitems (3).

*(5) all trench systems if the trenches are at the same elevation and placed in soils with a sizing classification of 1 or 2 in Table IX in part 7080.2150, subpart 3, item F;*

Justification

This is a former provision with minor language changes for clarity and reformatting of the rule. Please refer to comment 22 of Exhibit 11.

- 448.** Proposed Change new part 7080.2050, subpart 4, item A, subitem (6), formerly 7080.0150, subpart 3, item A, subitem (4).

*(6) systems receiving an organic load of less than 25 percent of values in Table VIII in part 7080.2150, subpart 3, item C; and*

Justification

This change is to embellish the former requirement, to clearly identify when a clogging mat will not form, as in the past rule it was not clearly determined. The clogging mat is important as when it develops it facilitates even distribution of effluent across the entire absorption area. If a clogging mat does not form, due low organic loadings to the soil, effluent will infiltrate in only a small portion of soil. The heavy “point load” of effluent overloads the soil’s ability to remove contaminants.

- 449.** Proposed Change new part 7080.2050, Subpart 4, item A, subitem (7).

*(7) all systems where the distribution network is installed above the original grade.*

Justification

The former rule required that all standard above ground systems (mound systems and at-grade systems) require pressure distribution as recommended by the University of Wisconsin. It is proposed to extend that requirement to any other non-standard soil system which may be attempted, as it will likely have the same gravity distribution problems as encountered with mound and at-grade systems.

- 450.** Proposed Change new part 7080.2050, subpart 4, item B, formerly 7080.0150, Subpart 3, item B.

*B. Pressurized distribution pipes must conform to the requirements of subpart 2, item B, subitems (1) and (3) to (5).*

Justification

The applicable new pipe specifications as stated in new part Minn. R. 7080.2050 subp. 2(B) are also needed to be applied to pressurized pipes. Please see justification for new Minn. R. 7080.2050 subp. 2(B).

- 451.** Proposed Change new part 7080.2050, subpart 4, item C, formerly 7080.0150, subpart 3, item C.

*C. Pressure distribution pipes and associated fittings must be properly joined together. The pipe and connections must be able to withstand a pressure of at least 40 pounds per square inch.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. Please refer to comments 3 and 4 of Exhibit 15.

**452.** Proposed Change new part 7080.2050, Subpart 4, item D.

D. The distribution network must be designed so there is less than a ten percent variance in flow for all perforations.

Justification

The purpose of the pressure network is to provide even distribution due to problem soil conditions or system geometry. Failure to provide even distribution can result in hydraulic failure (surface seeping) or groundwater contamination. Therefore, a tolerance needs to be placed on the maximum variance in flow per perforation. The ten percent variance requirement has been taught in the U of M sewage treatment workshops for many years without controversy.

**453.** Proposed Change new part 7080.2050, Subpart 4, item E, formerly 7080.0150, Subpart 3, item D.

E. Perforations must be no smaller than one-eighth inch diameter and no larger than one-quarter inch diameter. The number of perforations, perforation spacing, and pipe size for pressure distribution must be in accordance with Table VI. The friction loss in any individual perforated lateral must not exceed 20 percent of the average pressure head on the perforations.

TABLE VI  
MAXIMUM NUMBER OF PERFORATIONS PER LATERAL

<u>1/4 inch holes</u>					
<u>Pipe diameter in inches</u>					
	<u>1</u>	<u>1.25</u>	<u>1.5</u>	<u>2</u>	<u>3</u>
<u>Perforation</u>					
<u>spacing in feet</u>					
<u>2</u>	<u>10</u>	<u>13</u>	<u>18</u>	<u>30</u>	<u>60</u>
<u>2.5</u>	<u>8</u>	<u>12</u>	<u>16</u>	<u>28</u>	<u>54</u>
<u>3</u>	<u>8</u>	<u>12</u>	<u>16</u>	<u>25</u>	<u>52</u>
<u>3/16 inch holes</u>					
<u>Pipe diameter in inches</u>					
	<u>1</u>	<u>1.25</u>	<u>1.5</u>	<u>2</u>	<u>3</u>
<u>Perforation</u>					
<u>spacing in feet</u>					
<u>2</u>	<u>12</u>	<u>18</u>	<u>26</u>	<u>46</u>	<u>87</u>
<u>2.5</u>	<u>12</u>	<u>17</u>	<u>24</u>	<u>40</u>	<u>80</u>
<u>3</u>	<u>12</u>	<u>16</u>	<u>22</u>	<u>37</u>	<u>75</u>
<u>1/8 inch holes</u>					
<u>Pipe diameter in inches</u>					
	<u>1</u>	<u>1.25</u>	<u>1.5</u>	<u>2</u>	<u>3</u>
<u>Perforation</u>					
<u>spacing in feet</u>					
<u>2</u>	<u>21</u>	<u>33</u>	<u>44</u>	<u>74</u>	<u>149</u>

<u>2.5</u>	<u>20</u>	<u>30</u>	<u>41</u>	<u>69</u>	<u>135</u>
<u>3</u>	<u>20</u>	<u>29</u>	<u>38</u>	<u>64</u>	<u>128</u>

Justification

The change to the former language includes the use of 1/8-inch perforation size. This is a reduction in perforation size from the current minimum of 3/16-inch. This change is supported by the industry and would allow smaller pumps to be employed or the same pump to be employed with closer spacing of perforations which is preferred for treatment. More perforations would provide more points of distribution, as the effluent from each perforation infiltrates and travels laterally in a limited soil area below each perforation. Therefore, more perforations would equate to more wetted soil area for treatment. See Exhibit 505.

**454. Proposed Change new part 7080.2050, Subpart 4, item F, formerly 7080.0150, Subpart 3, item E.**

*F. Perforation holes must be drilled straight into the pipe and not at an angle. Pressurized distribution laterals must be installed level. Perforation holes must be free of burrs. Holes may be spaced no more than three feet apart. A method to introduce air into the pipe after dosing must be provided. The pipes must completely drain after the pump turns off.*

Justification

It is also proposed to reduced the spacing of the laterals and perforations, from one perforation per 25 ft<sup>2</sup> to one perforation per 9 ft<sup>2</sup>. This is proposed to increase the amount of soil in contact with sewage. If perforations are too widely spaced, the soil in between perforations does not receive sewage, thereby overloading the soil which does receive sewage. The University of Wisconsin recommends a perforation every 4 ft<sup>2</sup>, and the U of M training workshops have recommended and taught a perforation spacing of 9 ft<sup>2</sup>. This recommendation is widely used and it is the understanding of MPCA staff that a 9 ft<sup>2</sup> spacing is the industry norm. Therefore, no additional cost should occur due to this proposed rule change. MPCA staff investigated the cost difference to go from 9 ft<sup>2</sup> to 4 ft<sup>2</sup> and the average response from SSTS installers was \$500. MPCA staff felt that is additional cost was not cost effective and is proposing a 9ft<sup>2</sup> perforation spacing. Please refer to comment 5 of Exhibit 15.

**455. Proposed Change new part 7080.2050, subpart 4, item G, formerly 7080.0150, subpart 3, item F.**

*G. Pressure distribution laterals must be spaced no further than 36 inches apart in seepage beds and mound absorption beds, and no further than 24 inches from the outside edge of the bed.*

Justification

Please see the justification for the reduced perforation spacing to a maximum of three feet in item F immediately above. Please refer to comment 23 of Exhibit 11.

**456. Proposed Change new part 7080.2050, subpart 4, item H, formerly 7080.0150, subpart 3, item G.**

*H. Pressure distribution laterals must be connected to a header or manifold pipe that is of a diameter such that the friction loss in the header or manifold will be no greater than five percent of the average head at the perforations. The header or manifold pipe must be connected to the supply pipe from the pump.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 457.** Proposed Change new part 7080.2050, sSubpart 4, item I, formerly 7080.0150, Subpart 3, item H.

*I. Perforated laterals must not be installed closer than 12 inches from the edges of the absorption bed and perforations must not be installed closer than 12 inches from the ends of the absorption bed.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 458.** Proposed Change new part 7080.2050, subpart 4, item J.

*J. Pressure distribution pipe cleanouts must be provided to check the system for proper operation and cleaning of plugged perforations. Cleanouts must be accessible from final grade.*

### Justification

This change is proposed to ensure that maintenance can be performed on the pressure distribution system. Nationally this concept has been heavily promoted. Plugging of the perforations can cause pump failure or hydraulic failure, which can be costly, while providing access to the system and the cost of cleaning is relatively inexpensive. Please refer to comment 5 of Exhibit 15.

## **MINN. R. 7080.2100 DOSING OF EFFLUENT**

- 459.** Proposed Change new part 7080.2100, subpart 1, formerly 7080.0160, subpart 1

*Subpart 1. General. When dosing is necessary, it must comply with this part.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 460.** Proposed Change new part 7080.2100, subpart 2, item A, formerly 7080.0160, subpart 1a.

*Subp. 2. Dosing chambers.*

*A. Dosing chambers shall meet or exceed the requirements of parts 7080.1910, 7080.1970, and 7080.1980 to 7080.2020. All dosing chambers must be vented.*

### Justification

This change is to reference the applicable new standards for tanks.

**461.** Proposed Change new part 7080.2100, subpart 2, item C, formerly 7080.0160, subpart 1a, item E.

*B. The pump, pump controls, and pump discharge line must be installed to allow access for servicing or replacement without entering the dosing chamber.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**462.** Proposed Change new part 7080.2100, subpart 2, item C, formerly 7080.0160, subpart 1a., item C.

*C. The dosing chamber must either include an alternating two-pump system or have a minimum total capacity of 500 gallons for average daily flow valves of 600 gallons per day or less or 100 percent of the average daily flow for average daily flow valves of greater than 600 gallons per day.*

Justification

This provision proposes to reduce the dosing chamber capacity for a four bedroom dwelling from the former 600 gallon per day capacity to 500 gallons per day. The reason is that most septic tank manufacturers build a 1500 gallon tank verses a 1600 gallon tank. Therefore, this change will reduce the reserve capacity by 100 gallons. This reduction should not substantially increase the threat of overflow or backup if the pump should fail. If this is a concern, the dosing floats can be set to dose more frequently to maintain the same reserve capacity as with the 600 gallon dosing chamber. Please refer to Exhibits 70, 286, 287, 357, 358, and 362 for comments on this provision.

**463.** Proposed Change new part 7080.2100, subpart 2, item D, formerly 7080.0160, subpart 1a., item D.

*D. An ISTS with a pump must employ an alarm device to warn of failure.*

Justification

For justification for deleting the siphon provision from this requirement, please refer to the justification for former Minn. R. 7080.0020, subp. 15.

**464.** Proposed Change new part 7080.2100, subpart 2, items E and F, formerly 7080.0160, subpart 1a., items E. and F.

*E. The inlet of pumps must be elevated at least four inches from the bottom of the dosing chamber or protected in some other manner to prevent the pump from drawing excessive settled solids.*

*F. Electrical installations must comply with applicable laws and ordinances including the most current codes, rules, and regulations of public authorities having jurisdiction and with part 1315.0200, which incorporates the National Electrical Code.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**465.** Proposed Change new part 7080.2100, subpart 3, items A and B, formerly 7080.0160, subpart 2, items A to D.

*Subp. 3. Pumps for gravity distribution. If a pump is used to lift effluent into a gravity distribution system, items A to C apply.*

*A. The pump must discharge at least ten gallons per minute but no more than 45 gallons per minute.*

*B. The pump must be constructed and fitted with sound, durable, and corrosion-resistant materials.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. The substantive change is the deletion of requirements for siphons. Please refer to the justification for former Minn. R. 7080.0020, subp. 15 in this SONAR. Please also refer to Exhibit 284.

**466.** Proposed Change new part 7080.2100, subpart 3, item C, formerly 7080.0160, subpart 2, item E.

*C. The pump must have sufficient dynamic head for both the elevation difference and friction loss.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**467.** 10) Proposed Change new part 7080.2100, Subpart 4, items A to D, formerly 7080.0160, subpart 3, items A to D.

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

*A. Pumps must be constructed and fitted with sound, durable, and corrosion-resistant materials.*

*B. The pump discharge capacity must be based on the perforation discharges for a minimum average head of 1.0 foot. Perforation discharge is determined by the following formula:*

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

*where: Q = discharge in gallons per minute*

*c = 0.60 = coefficient of discharge*

*d = perforation diameter in inches*

*h = head in feet.*

*C. The pump discharge head must be at least five feet greater than the head required to overcome pipe friction losses and the elevation difference between the pump and the distribution device.*

*D. The quantity of effluent delivered for each pump cycle must be no greater than 25 percent of the average daily flow.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**468.** Proposed Change former part 7080.0160, subpart 3, item E

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

### Justification

For justification for these changes please refer to the justification for former Minn. R. 7080.0020, subp. 15 in this SONAR.

## **MINN. R. 7080.2150 FINAL TREATMENT AND DISPERSAL**

### **469. Proposed Change new part 7080.2150, Subpart 1, item A, formerly 7080.0170, Subpart 1, item A**

Subpart 1. **In general.**

*Subpart 1. General. Treatment and dispersal of all sewage for new construction or replacement ISTS must be in compliance with this part and parts 7080.2200 to 7080.2400, as adopted into local ordinances.*

### Justification

It is necessary to state that this part is exclusively describing criteria for new construction or replacement of any major portion and not for existing systems which are currently in use.

### **470. Proposed Change new part 7080.2150, subpart 2, item A, formerly 7080.0179, subpart 2, item A-**

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

*A. All treatment and dispersal methods must be designed to conform to all applicable federal, state, and local regulations.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

### **471. Proposed Change new part 7080.2150, subpart 2, item B, formerly 7080.0179, subpart 2, item B subitem (2).**

*B. Treatment and dispersal processes must prevent sewage or sewage effluent contact with humans, insects, or vermin.*

### Justification

Additional language is added to the former provision that sewage cannot be in contact with insects and vermin which can be a mode for human exposure.

### **472. Proposed Change new part 7080.2150, subpart 2, item C, formerly 7080.0179, subpart 2, item B, subitem (4).**

*C. Treatment and dispersal of sewage or sewage effluent must be in a safe manner that adequately protects from physical injury or harm.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 473.** Proposed Change new part 7080.2150, subpart 2, item D, formerly 7080.0179, subpart 2, item C, subitem 1.

*D. An unsaturated zone in the soil must be maintained between the bottom of the soil treatment and dispersal system and the seasonally saturated soil or bedrock during loading of effluent.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 474.** Proposed Change new part 7080.2150, subpart 2, item E, formerly 7080.0179, subpart 2, item C, subitem (4) and former 7080.0179, subpart 2, item C, subitem 3.

*E. Local units of government may also require additional standards for local resource protection, such as limits for nitrogen and phosphorus compounds.*

Justification

The nutrient provisions were moved with grammatical changes for clarity. Please refer to Exhibits 122 and 376, comment 5 of Exhibit 398, and Exhibits 422 and 435.

- 475.** 12) Proposed Change new part 7080.2150, subpart 2, item F, formerly 7080.0170, subpart 1, item C. -

*F. Soil treatment and dispersal systems must not be designed in floodways. Soil treatment and dispersal systems installed in flood fringes must meet the requirements in part 7080.2270. Soil treatment and dispersal systems should not be placed in areas subject to excessive run-on. All soil treatment systems located in areas subject to excessive run-on must have a diversion constructed upslope from the system.*

Justification

The substantive change is to drop the requirement that all systems placed on a slope of greater than one percent need an upslope diversion of precipitation/run-on. The proposed change is an attempt to provide some flexibility and discretion if a diversion is actually needed on a site with a slope over one percent. The Agency has received complaints saying the former provision of requiring a diversion is not necessary in all circumstances. Please refer to comment 7 of Exhibit 398.

- 476.** Proposed Change new part 7080.2150, Subpart 2, item G, formerly 7080.0170, Subpart 1 F.

*G. ISTS components must be set back as specified in Table VII. This chapter does not require a setback to a wetland, but a local setback may exist.*

**TABLE VII**  
**MINIMUM SETBACK DISTANCES (FEET)**

<u>Feature</u>	<u>Sewage tank, holding tank, or sealed privy</u>	<u>Absorption area or unsealed privy</u>	<u>Building sewer or supply pipes</u>
<u>Water supply wells</u>	*	*	*
<u>Buried water lines</u>	*	*	*
<u>Buildings**</u>	<u>10</u>	<u>20</u>	
<u>Property lines***</u>	<u>10</u>	<u>10</u>	

Ordinary high water  
level of public waters      \*\*\*\*      \*\*\*\*

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

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

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

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

#### Justification

This is a former provision that has been moved with a format change due to rule restructuring. Please refer to comment 15 of Exhibit 120 and comment 4 of Exhibit 369.

#### **477.** Proposed Change new part 7080.2150, Subpart 3.

Subp. 3. Other technical requirements for systems. Requirements in items A to K will be required for specific designs as determined in parts 7080.2200 to 7080.2400.

#### Justification

This subpart is provided so the system designs in the succeeding subparts can reference these required general specifications as appropriate. Justification for each requirement follows below.

#### **478.** Proposed Change new part 7080.2150, Subpart 3, item A.

A. Employ components registered under part 7080.1600 that are installed, used, and operated according to conditions placed on registration.

#### Justification

It is proposed that all product types subject to product registration, must be registered before use by the permitting authority. This provision is reasonable to ensure that devices and components meet environmental and public health requirements.

#### **479.** Proposed Change new part 7080.2150, Subpart 3, item B.

B. Employ structural components and joint sealants that meet or exceed a 25-year design life.

#### Justification

It MPCA staff's understanding that most structural components for wastewater treatment facilities are designed for a longevity of 25 years. Therefore, a 25-year life was chosen.

#### **480.** Proposed Change new part 7080.2150, Subpart 3, item C.

C. Systems must not be designed, installed, or operated to exceed the loadings in part 7081.0270, subpart 6, as published in the State Register, volume ..., page ....

### Justification

One critical area to ensure a long life on a soil treatment and dispersal system is the organic loading rate to the soil. To achieve a long hydraulic life of the drainfield, a maximum BOD loading per square foot of soil should be specified. The chosen BOD loading rate is the loading rate for conventional designs, which have been observed to have good longevity. Please refer to comment 10 of Exhibit 398.

#### **481.** Proposed Change new part 7080.2150, Subpart 3, item D.

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

### Justification

The requirements here highlight the combination of factors needed so the soil can provide adequate treatment and dispersal. These factors have been found in previous rule versions and are the basis for conventional SSTS treatment and dispersal.

#### **482.** Proposed Change new part 7080.2150, subpart 3, item D. subitem (1), formerly 7080.0178, subpart 2, item A.

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

### Justification

General introduction to this section. The three-foot zone has been used as the necessary separation distance since the rule's inception in 1978.

#### **483.** Proposed Change new part 7080.2150, Subpart 3, item D., subitem (1), unit (a), formerly 7080.0178, Subpart 2., item A.

*(a) the zone must be above the seasonally saturated soil and bedrock. The zone must be continuous and not be interrupted by seasonal zones of saturation;*

### Justification

The new provision in this requirement is that the three-foot zone must not be interrupted by zones of seasonal saturation (i.e., perched watertables). This is proposed because saturated conditions will exist before treatment is complete and the untreated effluent/groundwater may travel offsite in an uncontrolled environment and could impact a water supply well.

#### **484.** Proposed Change new part 7080.2150, subpart 3 item D. subitem (1) unit (b), formerly 7080.0178 subpart 2. item A.

*(b) any soil layers with a sizing classification of 1 in Table IX in item F must not be credited as part of the necessary three-foot zone; and*

### Justification

Some language changes are included to provide clarity over the former language. The former provision is unclear whether coarse sand layers are a limiting layer that requires a three-foot setback. This proposed language is intended to clearly state that coarse sand layers are not limiting layers, but are layers that cannot be counted as a treatment zone, due to the limited treatment abilities of the coarse material. Therefore, if a non-coarse layer is found below the coarse layer and this non-coarse layer is seven feet above final grade (see unit [c]) and is above the seasonally saturated soil, it can be counted as part of the treatment zone.

Coarse sand materials have a smaller surface area to volume ratio, thereby reducing the surface area the sewage can come in contact with. The high surface area is needed to provide the retention time and provide a home for biological and chemical processes to remove contaminants from the sewage effluent. Much of the research on soil treatment of sewage effluent has been focused on earthen materials with a size of 2mm or less. Therefore, since sewage treatment efficiencies are known at that particle size, that size has been chosen to be included in this rule.

**485. Proposed Change new part 7080.2150, subpart 3, item D, subitem (1), unit (c).**

*(c) the entire treatment zone depth must be within seven feet from final grade.*

**Justification**

This provision is a not a new requirement as the former rule stated that the maximum depth of the system is four feet from final grade, thereby making the three-foot treatment zone within seven feet from final grade. This is based on the need for oxygen to provide biochemical decomposition of contaminates. Oxygen is provided to the soil treatment system from the atmosphere above the soil. This oxygen gets diffused into the soil as a gradient is formed when oxygen in the soil is consumed by microbes when breaking down the sewage. This replenishment of oxygen in the soil is dependent on how deep the system is buried in the soil as it takes longer to diffuse gasses into the deeper layers of soil. Therefore, a maximum depth is proposed to ensure an adequate supply of oxygen into the soil and to the soil treatment system.

**486. Proposed Change new part 7080.2150, Subpart 3, item D., subitem (2).**

*(2) The distribution system must not place a hydraulic head greater than 30 inches over the treatment zone.*

**Justification**

One of the many factors that make soil treatment an effective process is the slow unsaturated movement of effluent. One factor that affects this rate is the pressure head of the height of effluent over the trench bottom. The higher the height of effluent, the greater the rate of water movement. This is one reason why seepage pits and cesspools are not considered a good treatment system due to the many feet of water that can pond over the pit bottom. Therefore, a maximum ponding depth should be provided. A height of 30 inches was chosen because it reflects the design standards of a conventional system. Please refer to comment 10 of Exhibit 88.

**487. Proposed Change new part 7080.2150, Subpart 3, item E, formerly 7080.0170, Subp. 2 D (1), 7080.0170, Subp. 5 A (2), and 7080.0170, Subp. 6 A (1)**

*E. The system's absorption area must be original soil.*

Justification

Language change due to consolidation of the various parts.

**488. Proposed Change new part 7080.2150, Subpart 3, item F.**

*F. The system's absorption area must be sized according to Table IX.*

TABLE IX

SOIL SIZING FACTORS FOR DETERMINING BOTTOM AREA FOR TRENCHES AND SEEPAGE BEDS USING DETAILED SOIL DESCRIPTIONS OR PERCOLATION TEST AND ABSORPTION RATIOS FOR DETERMINING MOUND ABSORPTION AREAS USING DETAILED SOIL

DESCRIPTIONS

<u>Sizing</u>	<u>Soil</u>	<u>Soil</u>	<u>Percolation</u>	<u>Soil sizing</u>	<u>Absorption</u>
<u>classi-</u>	<u>texture</u>	<u>structure*</u>	<u>rate</u>	<u>factor</u>	<u>ratio for</u>
<u>fication</u>		<u>(minutes</u>	<u>(square feet</u>	<u>mounds</u>	
		<u>per inch)</u>	<u>of trench or</u>	<u>seepage bed</u>	
			<u>bottom per</u>	<u>gallon of</u>	
			<u>average</u>	<u>design flow</u>	
			<u>per day)</u>		

<u>1</u>	<u>Coarse</u> <u>sand</u>	<u>Single</u> <u>grain</u>	<u>faster than</u> <u>0.1</u>	<u>.83</u>	<u>1.0</u>
<u>2</u>	<u>Medium</u> <u>sand,</u> <u>loamy</u> <u>sand*</u>	<u>Single</u> <u>grain</u>	<u>0.1 to 5</u>	<u>.83</u>	<u>1.0</u>
<u>3</u>	<u>Fine</u> <u>sand,</u> <u>loamy</u> <u>fine</u> <u>sand</u>	<u>Single</u> <u>grain</u>	<u>0.1 to 5</u>	<u>1.67</u>	<u>1.0</u>
<u>4</u>	<u>Sandy</u> <u>loam</u>	<u>Weak to</u> <u>strong</u>	<u>6 to 15</u>	<u>1.27</u>	<u>1.5</u>
<u>5</u>	<u>Sandy</u> <u>loam</u>	<u>Massive</u> <u>or platy</u>	<u>16 to 30</u>	<u>1.67</u>	<u>2.0</u>
<u>6</u>	<u>Loam</u>	<u>Moderate</u> <u>to strong</u>	<u>16 to 30</u>	<u>1.67</u>	<u>2.0</u>
<u>7</u>	<u>Loam</u>	<u>Weak or</u> <u>platy</u>	<u>31 to 45</u>	<u>2.0</u>	<u>2.4</u>
<u>8</u>	<u>Loam</u>	<u>Massive</u>	<u>46 to 60</u>	<u>2.2</u>	<u>3.0</u>

<u>9</u>	<u>Silt loam</u>	<u>Moderate to strong</u>	<u>31 to 45</u>	<u>2.0</u>	<u>2.4</u>
<u>10</u>	<u>Silt loam</u>	<u>Weak or platy</u>	<u>46 to 60</u>	<u>2.2</u>	<u>3.0</u>
<u>11</u>	<u>Silt loam</u>	<u>Massive</u>	<u>61 to 85</u>	<u>3.0</u>	<u>3.6</u>
<u>12</u>	<u>Sandy clay loam, clay loam, silty clay loam</u>	<u>Moderate to strong</u>	<u>46 to 60</u>	<u>2.2</u>	<u>2.6</u>
<u>13</u>	<u>Sandy clay loam, clay loam, silty clay loam</u>	<u>Weak or platy</u>	<u>61 to 85</u>	<u>3.0</u>	<u>3.8</u>
<u>14</u>	<u>Sandy clay loam, clay loam, silty clay loam</u>	<u>Massive slower</u>	<u>121 or</u>	<u>-</u>	<u>-</u>
<u>15</u>	<u>Sandy clay, clay, silty clay</u>	<u>Strong</u>	<u>86 to 120</u>	<u>4.2</u>	<u>5.0</u>
<u>16</u>	<u>Sandy clay, clay, silty clay</u>	<u>Weak to moderate, massive, or platy</u>	<u>121 or</u>	<u>-</u>	<u>-</u>

\* The soil structure must have a moist consistency of loose, very friable, friable, or firm as determined by the Field Book for Describing and Sampling Soils, which is incorporated by reference under part 7080.1100, subpart 40.

## Justification

This chart is very similar to the sizing chart found in the former rule with a few exceptions.

First soil consistence (the degree of cohesion and resistance to deformation and rupture of soil peds) is proposed to be the soil property used to identify hardpans or slowly permeable layers caused by excessive cementation by iron or other agents. This excessive cementation lowers the porosity and permeability. Use of former Table Va (new modified Table IX) without using consistence will not adequately identify hardpan situations and if systems are placed in these conditions they will likely transmit water slowly and could cause premature hydraulic failure. Consistence will be measured per USDA Natural Resource Conservation Service criteria which is used for soil criteria throughout this chapter.

The second change is the addition of more soil groupings with the corresponding sizing factors. This is due to using more soil textural groupings and structural conditions than the previous rule. The new sizing factors were calculated from the former sizing factors.

The third change is to now group the various soil textures for ease of referencing in the body of the rule.

### **489. Proposed Change part former 7080.0170, Subpart 2, item C, subitems (2) and (3)**

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

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

## Justification

Please refer to the justification for the Minn. R. 7080.1050 and 7080.1640 concerning the removal of drainfield media from the rule.

### **490. Proposed Change new part 7080.2150, Subpart 3, item G, formerly 7080.0170, Subpart 2 D, item (8).**

G. If drainfield rock medium is employed, a durable, nonwoven geotextile fabric must be used to cover the distribution rock medium. The fabric must be of sufficient strength to undergo installation without rupture. The fabric must permit passage of water without passage of overlying soil material into the rock medium.

## Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. Please refer to Exhibits 1 and 2.

### **491. Proposed Change new part 7080.2150, Subpart 3, item H., formerly 7080.0170, Subp. 2, item B, subitem (4), and 7080.0170, Subpart 5, item B, subitem (9).**

H. All excavation into the absorption area, or surface preparation of the upper 12 inches of absorption area, must be in a manner to expose the original soil structure in an unsmeared and uncompacted

condition. Excavation is only allowed when the soil moisture content is at or less than the plastic limit and is not frozen or freezing.

Justification

This provision has been consolidated and reworded from various locations in the former rule.

- 492.** Proposed Change new part 7080.2150, Subpart 3, item I., formerly 7080.0170, Subpart 2 item D, subitem (5), and 7080.0170, Subpart 5, item B, subitem (11).

I. Excavation equipment or other vehicles must not be driven on the excavated or prepared absorption area. Foot traffic on these areas must be minimized and not cause undue compaction. The exposed areas must be immediately covered with media or the designed coverage materials. If the areas are exposed to direct rainfall, they must be allowed to dry and must be re-prepared according to item H.

Justification

This provision has been consolidated and reworded from various locations in the former rule.

- 493.** Proposed Change new part 7080.2150, Subpart 3, item J, formerly 7080.0170, Subpart 5, item B, subitem (23), and 7080.0170, Subpart 6, item C, subitem (6).

J. A minimum of six inches of topsoil borrow shall be placed over the system.

Justification

This provision has been consolidated and reworded from various locations in the former rule.

- 494.** Proposed Change new part 7080.2150, Subpart 3, item K., formerly 7080.0170, Subpart 2 item D, subitem (11), 7080.0170 subpart 5, item B, subitem (24), and 7080.0170, subpart 6, item C, subitem (8).

K. A close-growing, vigorous vegetative cover must be established over the soil treatment and dispersal system and other vegetatively disturbed areas. The sodding, seeding, or other vegetation establishment shall begin immediately after the placement of the topsoil borrow. The soil treatment and dispersal system must be protected from erosion and excessive frost until a vegetative cover is established. The vegetative cover established must not interfere with the hydraulic performance of the system and shall provide adequate frost and erosion protection. Trees, shrubs, deep-rooted plants, or hydrophilic plants should not be planted on the system.

Justification

This provision has been consolidated and reworded from various locations in the former rule. Please refer to comment 25 of Exhibit 11 and comment 6 of Exhibit 15.

**MINN. R. 7080.2200 TYPE I SYSTEMS**

- 495.** Proposed Change new part 7080.2200.

Systems designed according to parts 7080.2200 to 7080.2240 are considered Type I systems.

## Justification

It was initially proposed to eliminate the former classification system (Standard, Alternative, Other, and Performance systems) and not to have any classification system, i.e., not to categorize and label the various systems, but just to list them in various subparts. With this system in place, it was thought that the local units of government (LUG) could just choose the individual (not group) systems they wish to allow at the local level. Originally, the thought was to eliminate the classification system because of the difficulty that arises when a system can be classified based on multiple criteria. For example, if a classification system is based on treatment performance and operational requirements, in order to attain a certain classification, the system needs to perform at high levels in all categories. So, if a system is not ranked in a high category, the user does not know which reason (treatment performance or operational requirements) was the limiting factor in deciding the classification. Additionally, if a LUG prohibits the use of an entire group of systems, but yet desires to use one of those systems in that classification, they would be prohibited from doing so. Please see Exhibits 444 and 477.

However, after much deliberation with interested parties, it was decided to keep a classification system, as it was useful in determining which type of business license holders could work on what types of systems, and that LUG personnel could understand the reason why a system was classified as it was and could make a decision if they would allow that system to be used, regardless of its classification.

This item will also contain the design requirements that must be followed as listed in subparts 2 and 3 to avoid duplication of common design requirements under each system's subpart.

## **MINN. R. 7080.2210 TRENCHES AND SEEPAGE BEDS**

### **496. Proposed Change new part 7080.2210, Subpart 1, item A**

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

*A. employ flow values in part 7080.1850;*

## Justification

Requiring trenches and seepage beds to be designed using the flow values in Minn. R. 7080.1850 is not a change from the former rule (see former Minn. R. 7080.0020, subp. 45).

### **497. Proposed Change new part 7080.2210, Subpart 1, item B.**

*B. meet or exceed applicable technical requirements of parts 7080.1900 to 7080.2030, 7080.2050, and 7080.2100;*

## Justification

Requiring trenches and seepage beds to be designed using the tank and distribution requirements in Minn. R. 7080.1900 to 7080.2030 is not a change from the former rule (see former Minn. R. 7080.0020, subp. 45).

### **498. Proposed Change new part 7080.2210, Subpart 1, item B.**

*C. provide flow measurement if a pump is to be employed;*

### Justification

This is a new requirement. When trouble shooting a hydraulically failed system, the most important piece of information is the quantity of flow to the system. In past rule revisions it was proposed to require flow measurement on all systems. However, interested parties have consistently disagreed with this requirement. The main reason for the disagreement is that for gravity distribution systems, the only flow measuring method is a flow meter located inside the dwelling. The industry representatives have argued that they are not plumbers and similarly, the inspectors are not trained or authorized to inspect plumbing. This is a valid argument, so these proposed revisions only require flow measurement on pressure fed systems because they employ a pump. The flow delivered by a pump can be easily and inexpensively measured with an event counter or running time clock, or if desired, more expensive and elaborate methods can be employed. Please refer to comment 10 of Exhibit 10 and comment 1 of Exhibit 12, comment 2 of Exhibit 16, Exhibit 17, comment 16 to Exhibit 79 and the first comment of Exhibit 453.

#### **499. Proposed Change new part 7080.2210, Subpart 1, item D.**

*D. meet or exceed the requirements of part 7080.2150, Subparts 2 and 3; and*

### Justification

Requiring trenches and seepage beds to be designed meeting the requirements of Minn. R. 7080.2150, subp. 2 and 3, is not a change from the former rule (see former Minn. R. 7080.0020, subp. 45, and Minn. R. 7080.0060).

#### **500. Proposed Change new part 7080.2210, Subpart 1, item E.**

*E. meet the requirements of Subparts 2 to 4.*

### Justification

Subparts 2 to 4 are the requirements for trenches and beds as required in the former rule, except as modified and justified in this SONAR.

#### **501. Proposed Change new part 7080.2210, Subpart 2, formerly 7080.0170, Subpart 2.**

*Subp. 2. Seepage bed construction. Seepage bed construction must be limited to areas having natural slopes of less than six percent. Seepage beds and trenches must not be placed in soils with a sizing classification of 13 to 16 on Table IX in part 7080.2150, Subpart 3, item F. Seepage beds must not be located in floodplains.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring

#### **502. Proposed Change former 7080.0170, subpart 2, item B.**

~~*B. Distribution medium for trenches and seepage beds.*~~

~~*(1) General. Distribution medium shall consist of soil dispersal and treatment system rock, gravelless soil dispersal and treatment system pipe, or a chambered system.*~~

~~*(2) Soil dispersal and treatment system rock.*~~

~~— (a) Soil dispersal and treatment system rock used as a distribution medium shall be igneous rock, or similar insoluble, durable, and decay resistant material between three-fourths inch and 2 1/2 inches in size, with no more than five percent by weight passing a three-fourths inch sieve and no more than one percent by weight passing a No. 200 sieve. Materials greater than 2 1/2 inches in size shall not exceed five percent by weight.~~

~~(b) There shall be a layer of at least six but no more than 24 inches of soil dispersal and treatment system rock below the distribution pipe. The soil dispersal and treatment system rock shall completely encase the top and sides of the distribution pipes to a depth of at least two inches. The total thickness of rock-filled trenches shall not exceed 30 inches.~~

~~(3) Gravelless soil dispersal and treatment system pipe. Gravelless soil dispersal and treatment system pipe including appurtenances shall be:~~

~~(a) of commercially fabricated corrugated pipe completely encased by the manufacturer in a geotextile wrap specific to this purpose;~~

~~(b) an eight-inch or ten-inch nominal ID pipe that conforms to subunits i and ii and meets the requirements of American Society of Testing Materials (ASTM) F667, which is incorporated by reference. The annual book of ASTM standards F667 “Standard Specification for Large Diameter Corrugated Polyethylene Tubing and Fittings” was issued in 1985 and is available at ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. The standards can be found at the Minnesota State Law Library, Judicial Center, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155, and are not subject to frequent change.~~

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

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

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

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

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

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

~~(b) of materials resistant to sewage;~~

~~© with an open bottom;~~

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

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

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

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

## Justification

The allowable drainfield media will be determined by the proposed rule’s new product registration process. Please refer to the justification for 7080.1600.

### **503. Proposed Change new part 7080.2210, Subpart 3, item A.**

#### Subp. 3. Sizing of trenches and seepage beds.

A. The system’s proposed absorption area must meet sizing classifications 2 to 10 or 12 on Table IX in part 7080.2150, Subpart 3, item F. The trench bottom area is calculated by multiplying the average daily flow by the appropriate soil sizing factor in Table IX in part 7080.2150, Subpart 3, item F. If gravity distribution is used in seepage beds, the seepage bed absorption area is calculated by multiplying the average daily flow by the soil sizing factor in Table IX in part 7080.2150, Subpart 3, item F, multiplied by 1.5. If pressure distribution is used in seepage beds, the seepage bed absorption area is determined by multiplying the soil sizing factor in Table IX in part 7080.2150, Subpart 3, item F, by the average daily flow.

### Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information please refer to the justification for Minn. R. 7080.1600, subp. 1. In addition, the criteria in this section is unchanged from the former rule, but the language is greatly modified to account for change in terms and reformatting.

**504.** Proposed Change new part 7080.2210, Subpart 3, item B, formerly 7070.0170, Subpart 2, item C, subitem (1), unit (b).

*B. The minimum sidewall absorption shall be six inches. The bottom absorption area may be reduced, for trenches only, by 20 percent for loading 12 inches of sidewall absorption below the distribution pipe, 34 percent for 18 inches, and 40 percent for 24 inches. Reductions may be interpolated for other depths of sidewall absorption.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**505.** Proposed Change former part 7070.0170, Subpart 2, item D, subitem (1), units (a) to (c).

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

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

~~© for chambered media, the entire slatted sidewall must be below the original grade, and effluent must be loaded the entire depth of the slatted sidewall.~~

### Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for Minn. R. 7080.1600, subp. 1.

**506.** Proposed Change new part 7080.2210, Subpart 4, item A, formerly 7070.0170, Subpart 2, item D, subitem (1).

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

*A. Trenches must be no more than 36 inches wide. Any excavation wider than 36 inches shall be considered a seepage bed. No seepage bed may be wider than 12 feet if gravity distribution is used and 25 feet if pressure distribution is used. Natural, undisturbed soil must exist between multiple trenches. Multiple seepage beds must be spaced at one-half the bed width. Multiple units may need to be designed based on linear loading rates as described in part 7080.2220, Subpart 3, item B.*

### Justification

It is proposed to eliminate the minimum trench width of 18 inches. The Agency could find no reason or past justification for this requirement except that past excavation buckets may have been a minimum of

18 inches wide. This requirement does not coincide with the current use of plastic media (gravelless pipe, some narrow chambers and drip dispersal) which are less than 18 inches wide but which have not had performance problems due to their width. See comment 4 of Exhibit 501.

The former and proposed rule states that standard trenches must be placed in natural soil (new Minn. R. 7080.2150 subp. 3[E]), therefore, the minimum space between trenches is what can be excavated and yet retain natural soil. The Agency has heard of no problems in this area, so it is proposed to make it clear that the minimum trench spacing is whatever distance it takes to place the system in natural soil.

Spacing multiple beds equal to ½ the bed width is meant to provide adequate oxygen beneath the wider bed systems.

**507. Proposed Change former part 7080.0170, Subpart 2, item D, subitem (3).**

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

**Justification**

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for Minn. R. 7080.1600, subp. 1.

**508. Proposed Change new part 7080.2210, Subpart 4, item B, formerly 7070.0170, Subpart 2, item D, subitem (6).**

*B. A vertical inspection pipe at least 1-1/2 inches in diameter must be installed and secured in the distribution medium of every trench or seepage bed. The inspection pipe must be located at an end opposite from where the sewage tank effluent enters the medium. The inspection pipe must have three-eighths inch or larger perforations spaced vertically no more than six inches apart. At least two perforations must be located in the distribution medium. No perforations may be located above the geotextile cover or wrap. The inspection pipe must extend to the bottom of the distribution medium, be secured, and be capped flush with or above finished grade.*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**509. Proposed Change new part 7080.2210, Subpart 4 item C, formerly 7070.0170, Subpart 2, item D, subitem (7).**

*C. The top and bottom of the distribution medium must be level in all directions. Sidewalls must be as vertical as practical and not intentionally sloped.*

**Justification**

This former provision has the added requirement that the sidewalls not be intentionally sloped. The Agency has been made aware of instances in which the sidewalls of seepage beds have been intentionally sloped for the purposes of saving on media material or for aesthetic purposes for beds in mound systems. This practice has caused disputes between inspectors and installers. Therefore, the purpose of this language is to make it clear that the sidewalls of the media shall be vertical. Sloping this material will

reduce the storage of effluent in the media. This provision was not necessary in the past, as SSTS professionals assumed that the media must be in a vertical alignment.

**510.** Proposed Change new part 7080.2210, Subpart 4, item D, formerly 7070.0170, Subpart 2, item D, subitem (9).

*D. The minimum depth of soil cover, including topsoil borrow, over the distribution medium is 12 inches.*

Justification

It is proposed to require an additional 6 inches of soil cover over the soil treatment system from the former rule. This proposed change to this part is a result of the many systems which have frozen over the past few winters. The additional soil cover should help reduce the potential for frost penetrating into the system. This provision is not intended to require an additional six inches of native soil for purposes of meeting the required vertical separation distance, as the additional six inches of soil cover can be placed above the natural grade in a low mounded fashion. Please refer to comment 15 of Exhibit 398.

**511.** Proposed Change new part 7080.2210, Subpart 4, item E, formerly 7070.0170, Subpart 2, item D, subitem (10).

*E. Trenches or seepage beds must be backfilled and crowned above finished grade to allow for settling. The top six inches of the backfill must have the same texture as the adjacent soil.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**512.** Proposed Change former part 7080.0170, Subpart 2, item D, subitems (12) and (13).

~~*(12) All joints for gravelless drainfield pipes or chambered systems must be secured as recommended by the manufacturer.*~~

~~*(13) Backfilling for gravelless drainfield pipe and chambered systems shall not crush or damage the medium.*~~

Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for Minn. R. 7080.1600, subp. 1.

**513.** Proposed Change part former 7080.0170, Subpart 3.

~~*Subpart 3. Dual field systems.*~~

~~*A. Dual field systems shall be used only where the soil sizing factor is greater than 0.83 square feet per gallon per day in Table V or Va, unless the provisions of subpart 4 are employed.*~~

~~*B. Dual field systems shall be sized, designed, and constructed as set forth above for standard systems except as follows:*~~

~~*(1) The soil treatment area shall be divided into two or more parts.*~~

~~*(2) Alternating soil treatment areas shall each be connected to a valve box outlet.*~~

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

### Justification

It is proposed to delete this subpart for two reasons. First, dual field systems are rarely used in Minnesota, and second, the provisions are fairly obvious and straightforward if someone wants to construct a dual field system. The requirements for dual field systems could be placed in guidance documents for those wishing to construct dual field systems.

### **MINN. R. 7080.2220 MOUNDS**

#### **514. Proposed Change new part 7080.2220, Subpart 1, items A and B.**

*Subpart 1. Mound system requirements. To qualify as a mound system, the system must meet or exceed the following requirements:*

*A. employ flow values in part 7080.1850;*

*B. meet or exceed applicable technical requirements of parts 7080.1900 to 7080.2030, 7080.2050, and 7080.2100;*

### Justification

Please see the justification for Minn. R. 7080.2150, Subp. 1(A) and (B), as the justification is also true for mound systems.

#### **515. Proposed Change new part 7080.2220, Subpart 1, item C.**

*C. meet or exceed the requirements of part 7080.2150, Subparts 2 and 3;*

### Justification

Please see the justification for Minn. R. 7080.2210, subp. 1(D), as the justification is also true for mound systems.

#### **516. Proposed Change new part 7080.2220, Subpart 1, item D.**

*D. employ flow measurement; and*

### Justification

Please see justification for Minn. R. 7080.2210, Subp. 1(C).

#### **517. Proposed Change new part 7080.2220, Subpart 1 item E.**

*E. meet the requirements of Subparts 2 and 3.*

### Justification

Subparts 2 and 3 are the requirements for mound systems as required in the former rule, except as modified and justified in this SONAR.

**518.** Proposed Change former part 7080.0170, Subpart 5, item A, subitem (1). -

*Mounds must with provide at least 36 inches of vertical separation between the bottom of the drainfield rock bed and saturated soil or bedrock*

Justification

This provision has been expanded and moved to Minn. R. 7080.2150, Subp. 3(E).

**519.** Proposed Change new part 7080.2220, Subpart 2, item A, formerly 7080.1070, Subpart 5, item A, subitem (2).

Subp. 2. Location of mounds.

*A. The upper 12 inches of the original soil absorption area must be in soil sizing categories 1 to 13 or 15 in Table IX in part 7080.2150, subpart 3, item F. The upper 12 inches of the absorption area must also be above the seasonally saturated soil or bedrock.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**520.** Proposed Change new part 7080.2220, Subpart 2, item B, formerly 7080.1070, Subpart 5, item A, subitem (3).

*B. Setbacks must be according to Table VII in part 7080.2150, Subpart 2, item G. Setbacks must be measured from the original soil absorption area.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**521.** Proposed Change new part 7080.2220, Subpart 2, item C, formerly 7080.1070, Subpart 5, item A, subitem (4).

*C. On slopes of one percent or greater and where the original soil absorption area sizing classification is 11, 13, or 15 in Table IX in part 7080.2150, subpart 3, item F, mounds must not be located where the ground surface contour lines that lie directly below the long axis of the rock bed represent a swale or draw, unless the contour lines have a radius of curvature greater than 100 feet. Mounds must never be located in swales or draws where the radius of curvature of the contour lines is less than 50 feet.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**522.** Proposed Change new part 7080.2220, Subpart 3, item A, formerly 7080.1070, Subpart 5, item B, subitem (1).

Subp. 3. Mound design and construction.

A. The mound bed absorption area consists of bottom area only and must be calculated by multiplying the average daily flow by 0.83 square feet per gallon per day.

Justification

This is a former provision that has been moved with a minor language change for clarity, a format change due to rule restructuring and removal of proprietary product language.

**523.** Proposed Change new part 7080.2220, Subpart 3, item B, formerly 7080.1070, Subpart 5, item B, subitem (2).

B. The mound bed absorption area must be as long and narrow as practical. Mound absorption beds must be no wider than ten feet. Mound bed absorption widths must be determined by relationship between the vertical and horizontal water movement based on the following soil conditions:

(1) the permeability difference between the original soil absorption area and slower permeability horizons below the original soil absorption area;

(2) the depth between the original soil absorption area and the change in permeability described in subitem (1); and

(3) the land slope.

Justification

The substantive change is to replace the former requirement of sizing the width of the mound using the linear loading rate concept versus using the linear loading rate terminology. The replacement language is intended to provide the same results, which are systems designed to be long and narrow, however, the proposed rule language does not use numerical concepts, as the former language does. The reason to drop the former numerical language is that defensible numeric standards have not been developed. The safeguard for making systems long and narrow is the maximum 10 foot wide rockbed which was set in an earlier version of this rule, and based on what installers could reasonably construct without damaging the infiltrative surface of the soil absorption area.

**524.** Proposed Change new part 7080.2220, Subpart 3, item C, formerly 7080.1070, Subpart 5, item B, subitem (3).

C. Clean sand must be used to elevate the mound bed absorption area and must consist of sound, durable material that conforms to the following requirements:

<u>Sieve Size</u>	<u>Percent Passing</u>
<u>No. 4</u>	<u>95-100</u>
<u>No. 8</u>	<u>80-100</u>
<u>No. 10</u>	<u>0-100</u>
<u>No. 40</u>	<u>0-100</u>
<u>No. 60</u>	<u>0-40</u>
<u>No. 200</u>	<u>0-5</u>

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

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 525.** Proposed Change new part 7080.2220, Subpart 3, item D, formerly 7080.1070, Subpart 5, item B, subitem (4).

*D. The original soil absorption area is determined by multiplying the original soil absorption length by the original soil absorption width. The original soil absorption width is calculated by multiplying the mound bed absorption width by the absorption ratio. The absorption ratio of the upper 12 inches of soil in the proposed absorption area shall be determined according to Table IX in part 7080.2150, Subpart 3, item F.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 526.** Proposed Change new part 7080.2220, Subpart 3, item E, formerly 7080.1070, Subpart 5, item B, subitem (12).

*E. The required original soil absorption width for mounds constructed on slopes from zero to one percent must be centered under the mound bed absorption width. The required original soil absorption width for mounds constructed on slopes greater than one percent must be measured downslope from the upslope edge of the mound bed absorption width and measured in the direction of the original land slope and perpendicular to the original contours.*

Justification

This provision has been moved from old subitem (12) for clarity and to make a sequential list of the design and construction processes. The one substantive change in the proposed part above, is to change the slope requirements from greater than one percent to one percent or greater. This is to be a bit more conservative in attempting to determine effluent movement on the original soil absorption area.

- 527.** Proposed Change new part 7080.2220, Subpart 3, item F, formerly 7080.1070, Subpart 5, item B, subitem (5).

*F. The side slopes on the mound must not be steeper than three horizontal units to one vertical unit and shall extend beyond the required original soil absorption area, if necessary.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 528.** Proposed Change new part 7080.2220, Subpart 3, item G, formerly 7080.1070, Subpart 5, item B, subitem (6).

*G. Distribution of effluent over the mound absorption bed must be by level perforated pipe under pressure according to parts 7080.2050 and 7080.2100.*

Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have

those products registered under the new product registration program. For more information, please refer to the justification for Minn. R. 7080.1600, subp. 1.

**529.** Proposed Change new part 7080.2220, Subpart 3, item H, formerly 7080.1070, Subpart 5, item B, subitem (7).

*H. The supply pipe from the pump to the original soil absorption area must be installed before surface preparation of the original soil absorption area. The trench excavated for the supply pipe must be carefully backfilled and compacted to prevent seepage of effluent.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**530.** Proposed Change new part 7080.2220, Subpart 3, item I, formerly 7080.1070, Subpart 5, item B, subitem (8).

*I. Vegetation in excess of two inches in length and dead organic debris including leaf mats, must be removed from the original soil absorption area. Trees must be cut nearly flush with the ground and stumps must not be removed.*

Justification

This is former language with the addition that leaf mats must also be removed from the absorption area. The Agency has been asked by installers if leaf mats are to be removed during the site preparation of mound absorption areas. The Agency has received reports that if the leaf mat is not removed a slimy barrier develops when effluent mixes with the leaf mat causing surface sealing and effluent breakout.

**531.** Proposed Change new part 7080.2220, Subpart 3, item J, formerly 7080.1070, Subpart 5, item B, subitem (10).

*J. The original soil absorption area must be roughened by backhoe teeth, moldboard, or chisel plow. The soil must be roughened to a depth of eight inches. Discing is allowed if the upper eight inches of soil has a texture of sandy loam or coarser. If plowed, furrows must be thrown uphill and there must not be a dead furrow in the original soil absorption area. A rubber-tired tractor may be used for plowing or discing.*

*Rototilling or pulverizing the soil is not allowed. The original soil must not be excavated or moved more than one foot from its original location during soil surface preparation.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**532.** Proposed Change new part 7080.2220, Subpart 3, item K, formerly 7080.1070, Subpart 5, item B, subitem (6).

*K. Prior to placement of six inches of clean sand, no vehicle may be driven on the original soil absorption area before or after the surface preparation is completed. The clean sand must immediately be placed on the prepared surface.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 533.** Proposed Change new part 7080.2220, Subpart 3, item L, formerly 7080.1070, Subpart 5, item B, subitem (13).

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

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 534.** Proposed Change new part 7080.2220, Subpart 3, item M, formerly 7080.1070, Subpart 5, item B, subitem (14).

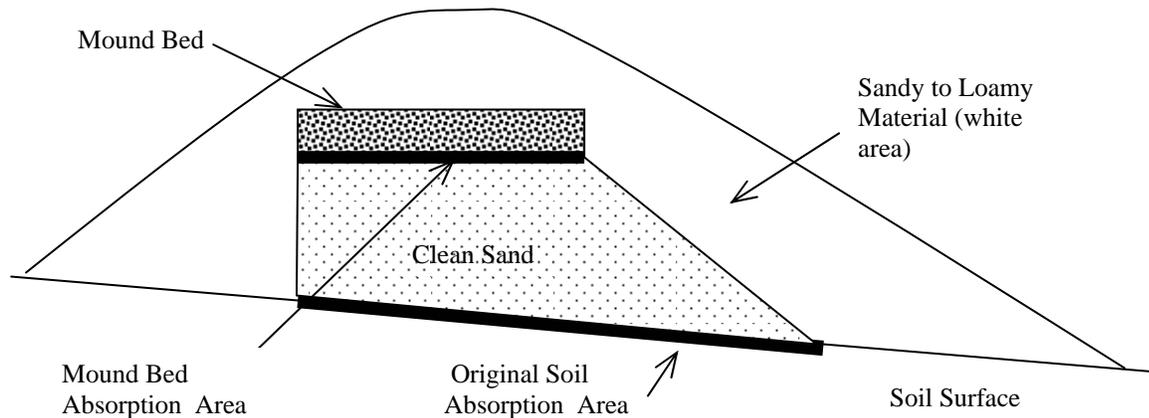
*M. A minimum of 12 inches of clean sand must be placed in contact with the bottom area of the mound bed absorption area and must be uniformly tapered to cover the entire original soil absorption area. Other sandy materials may be used outside of this area to complete construction of the mound.*

*A minimum of 12 inches of clean sand must be placed in contact with the bottom area of the mound bed absorption area ~~where the rock bed is to be located~~ and must be uniformly tapered to cover the entire original soil absorption area. Other sandy to loamy materials may be used out-side of this area to complete the construction of the mound.*

### Justification

The Agency receives many phone calls concerning where clean sand needs to be placed in a mound system, as the former language appears to be unclear to the users of the rule. The proposed language intends to make clear exactly where the clean sand needs to be placed and what materials can be used outside the absorption area. In the meetings with interested parties, there appeared to be little disagreement on the proposed placement of the clean sand. A diagram is provided to aid in this

determination. Clean sand is an expensive portion of the mound cost, so this clarification is intended to save on the cost of the clean sand. Please refer to comment 23 of Exhibit 398.



- 535.** Proposed Change new part 7080.2220, Subpart 3, item N, formerly 7080.1070, Subpart 5, item B, subitem (15).

*N. The top of the clean sand layer upon which the mound bed absorption area is placed must be level in all directions.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 536.** Proposed Change new part 7080.2220, Subpart 3, items O and P, formerly 7080.1070, Subpart 5, item B, subitems (16) and (17).

*O. A vertical inspection pipe at least 1-1/2 inches in diameter must be installed and secured at the distribution medium and sand interface. The inspection pipe must have three-eighths inch or larger perforations spaced vertically no more than six inches apart. At least two perforations must be located in the distribution medium. No perforation may be located above the permeable synthetic fabric, if used. The inspection pipe must extend to the bottom of the distribution medium, be secured, and be capped, flush with or above finished grade.*

*P. On slopes of one percent or greater, the upslope edge of the mound absorption bed must be placed on the contour.*

Justification

This is a former provision that has been moved with a minor language change for clarity, a format change due to rule restructuring and removal of proprietary products from this section.

- 537.** Proposed Change new part 7080.2220, Subpart 3, item Q, formerly 7080.1070, Subpart 5, item B, subitem (18).

*Q. The mound absorption bed must completely encase the top and sides of the distribution pipes to a depth of at least one inch above the pipe. The mound absorption bed must extend six inches below the pipe. The sidewalls of the mound absorption bed must be as vertical as practical and not intentionally sloped.*

#### Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for Minn. R. 7080.1600, subp. 1.

It is also proposed to allow the mound absorption bed to be thinner, as it is felt that the former thickness is not necessary. It is intended that the thickness below the pipe be the same as in-ground trenches and beds, which only require six inches. This will effectively reduce the storage capacity from 2.2 days to 1.5 days, which should be sufficient. In fact, U of M SSTS staff indicates that if the mound absorption bed does indeed pond effluent, the mound is considered failed, therefore to reduce the volume is justified. It is also proposed to reduce the cover over the pipe from two inches to one inch. It is MPCA staff's understanding that the two-inch requirement was derived for pipe protection if the system was ever driven on. This concern may be valid for an in-ground system, but it does not seem likely that heavy equipment will ever be driven on the top of a mound system. Therefore, the mound may be four inches shorter than the current mounds, reducing material quantities and making the system more aesthetically pleasing.

It is also proposed to prohibit the sloping of the edges of mound absorption beds, as some installers are in the practice of doing. Current language does not prohibit this practice but the installers who practice this sloping are in contention with local inspectors who view mound absorption beds in the classic sense of having vertical sidewalls. The rationale for not allowing tapering of the sidewalls is that it is uncertain on how much tapering can be allowed without affecting system performance.

- 538.** Proposed Change new part 7080.2220, Subpart 3, item R, formerly 7080.1070, Subpart 5, item B, subitem (19).

*R. The top of the mound absorption bed must be level in all directions.*

#### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

- 539.** Proposed Change new part 7080.2220, Subpart 3, item S, formerly 7080.1070, Subpart 5, item B, subitem (22).

*S. A minimum of six inches of sandy to loamy soil material must be placed on the top of the mound absorption bed and sloped upwards toward the center of the mound a minimum of ten horizontal units to one vertical unit.*

### Justification

The former provision had specific crown heights which have served well in the design and installation of mound systems when all mound systems were built with a 10-foot wide rockbed (as was taught in the U of M workshops). However, with the current encouragement to make systems as long and narrow as possible, the provision of requiring 12-inches of cover material on a mound with a narrow absorption bed, makes the mound aesthetically unappealing. The purpose of the cover is to shed precipitation, so it was determined that the same slope percentage should be followed for the narrow rock beds. The current slope provision for a 10-foot wide rockbed is a 10 to 1 slope, therefore, it is proposed to require the same slope percentages for narrower mounds. This proposal was offered by Mower county SSTS staff. Please refer to Exhibits 26, 27 and 442.

- 540.** Proposed Change new part 7080.2220, Subpart 3, item T, formerly 7080.1070, Subpart 5, item B, subitem (20).

*T. Construction vehicles must not be allowed on the distribution media until backfill is placed as described in item S.*

### Justification

This is a former provision that has been moved with a minor language change for clarity, the removal of media products, and a format change due to rule restructuring.

- 541.** Proposed Change new part 7080.2220, Subpart 3, item U, formerly 7080.1070, Subpart 5, item B, subitem (23).

*U. A minimum of six inches of topsoil borrow must be placed over the entire mound.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

## **MINN. R. 7080.2230 AT-GRADE SYSTEMS**

- 542.** Proposed Change new part 7080.2230, Subpart 1, item A

*Subpart 1. At-grade system. To qualify as an at-grade system, the system must meet or exceed the following requirements:*

*A. employ flow values in part 7080.1850;*

### Justification

Please see the justification for Minn. R. 7080.2210 new subp.1(A), as the justification is also true for at-grade systems.

- 543.** Proposed Change new part 7080.2230, Subpart 1, item B.

*B. meet or exceed applicable technical requirements of parts 7080.1900 to 7080.2030, 7080.2050, and 7080.2100;*

### Justification

Please see the justification for Minn. R. 7080.2210 new subp. 1(B), as the justification is also true for at-grade systems.

**544.** Proposed Change new part 7080.2230, Subpart 1, item C.

*C. meet or exceed the requirements of part 7080.2150, Subparts 2 and 3;*

Please see the justification for Minn. R. 7080.2210 new subp. 1(D), as the justification is also true for at-grade systems.

**545.** Proposed Change new part 7080.2230, Subpart 1, item D.

*D. employ flow measurement; and*

### Justification

Please see justification for Minn. R. 7080.2210 new subp. 1(C).

**546.** Proposed Change new part 7080.2230, Subpart 1, item E.

*E. meet the requirements of Subparts 2 and 3.*

### Justification

Subpart 2 and 3 are the requirements for at-grade systems as required in the former rule, except as modified and justified in this SONAR.

**547.** Proposed Change new part 7080.2230, Subpart 2, item A, formerly 7080.0170, Subpart 6, item A, subitem (2).

*A. The upper 12 inches of the absorption area must be original soil with a sizing classification of 2 to 10 or 12 as shown in Table IX in part 7080.2150, Subpart 3, item F.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**548.** Proposed Change new part 7080.2230, Subpart 2, item B, formerly 7080.0170, Subpart 6, item A, subitem (3).

*B. At-grade systems must not be installed in areas with slopes greater than 25 percent.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 549.** Proposed Change new part 7080.2230, Subpart 2, item C, formerly 7080.0170, Subpart 6, item A, subitem (4).

*C. Setbacks must be according to part 7080.2150, Subpart 2, item G. Setbacks must be measured from the absorption area.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

- 550.** Proposed Change new part 7080.2230, Subpart 3, item A, formerly 7080.0170, Subpart 6, item B, subitem (1).

*Design and construction of at-grade systems.*

*A. The at-grade bed absorption width must be determined according to part 7080.2220, subpart 3, item B, and must not exceed a width of 15 feet. The at-grade bed absorption width for slopes of one percent or greater does not include any width of the media necessary to support the upslope side of the pipe.*

Justification

For justification on the removal of the linear loading rate concept from the former rule, please refer to Minn. R. 7080.2220, subp. 3(A). Along with this concept it is proposed to limit the bed width to 15 feet, due to concerns of oxygen transfer beneath the system, groundwater mounding, lateral transmissivity of the soil, and constructability without damaging the absorption area. Please see the justification for Minn. R. 7080.2220, subp. 3(A) for the change to the slope requirement of greater than one percent to one percent or greater. Please refer to Exhibits 385, 389, and 443 and 482.

- 551.** Proposed Change new part 7080.2230, Subpart 3, item B, formerly 7080.0170, Subpart 6, item B, subitem (2).

*B. The at-grade absorption length must be calculated by multiplying the soil sizing factor found in Table IX in part 7080.2150, Subpart 3, item F, for the upper 12 inches of soil, by the average daily flow and dividing by the absorption bed width.*

Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for part Minn. R. 7080.1600, subp. 1.

- 552.** Proposed Change new part 7080.2230, Subpart 3, item C, formerly 7080.0170, Subpart 6, item B, subitem (3).

*C. At-grade systems must employ pressurized distribution by meeting or exceeding the applicable requirements of parts 7080.2050 and 7080.2100. At-grade systems located on slopes of one percent or greater require only one distribution pipe located on the upslope edge of the distribution media, with the absorption bed width being measured from the distribution pipe to the downslope edge of the media. Multiple distribution pipes may be used to provide even distribution, if necessary, based on site conditions.*

### Justification

The proposed substantive change from the former provision is to make clear that only one distribution pipe is required for an at-grade system on a sloping site. The use of one distribution pipe is the recommendation of the University of Wisconsin Small Scale Waste Management Project (the system inventor), and is the design standard for the state of Wisconsin. The use of one distribution pipe has been used in Minnesota since the first use of at-grade systems in the 1990's. The last change is to allow the pressurization of the at-grade system to be the same as a mound system (with multiple distribution pipes) if the at-grade system is located on a flat site. This is proposed because the at-grade criteria for sloping sites requires only one distribution pipe which is placed on the upslope edge of the media. Consequently, gravity is the force to provide even distribution over the absorption area. However, on a flat site, it is believed that the effluent may not spread evenly if a definite slope is not present to provide a known route for the effluent to spread. Please refer to comment 28 of Exhibit 398.

**553.** Proposed Change new part 7080.2230, Subpart 3, item D, formerly 7080.0170, Subpart 6, item C, subitem (3).

*D. The upslope edge of an at-grade absorption bed must be installed along the natural contour.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**554.** Proposed Change new part 7080.2230, Subpart 3, item E, formerly 7080.0170, Subpart 6, item C, subitem (4).

*E. The absorption bed must completely encase the top and sides of the distribution pipe to a depth of at least two inches above the pipe. There must be at least six inches from the bottom of the pipe to the absorption area.*

### Justification

The former language contained a description of the soil treatment and dispersal system media product to be used. It is proposed to remove all soil treatment and dispersal media products from this rule and have those products registered under the new product registration program. For more information, please refer to the justification for part Minn. R. 7080.1600, subp. 1.

It is proposed to reduce the depth of distribution media from nine inches to six inches in an attempt to reduce the height of the at-grade. This is consistent with the at-grade design standards for the state of Wisconsin. See Exhibit 463.

**555.** Proposed Change new part 7080.2230, Subpart 3, item G.

*F. At-grade materials must be placed by using construction techniques that minimize compaction.*

### Justification

This is a new requirement and is general in nature, as specific at-grade construction methods currently do not exist in the rule. SSTS installers have asked the Agency for specific methods of correct placement of materials and if the adsorption area can be driven on during material placement. The Agency contacted

the state of Wisconsin, the University of Wisconsin's Small Scale Waste Management Project, and local installers, but could not arrive at an acceptable method. Please refer to comment 28 of Exhibit 11.

**556.** Proposed Change new part 7080.2230, Subpart 3, item H, formerly 7080.0170, Subpart 6, item C, subitem (6).

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

Justification

This is a former provision that has been moved with language changes for clarity and a format change due to rule restructuring.

**557.** Proposed Change new part 7080.2230, Subpart 3, item I, formerly 7080.0170, Subpart 6, item C, subitem (7).

*H. Three vertical inspection pipes of at least 1.5 inches in diameter must be installed and evenly spaced along the downslope portion of the absorption bed. The inspection pipes must have three-eighths inch or larger perforations spaced vertically no more than six inches apart. No perforations may exist above the distribution medium. The inspection pipes must extend to the absorption bed/soil interface and must be secured and capped flush with or above finished grade.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**MINN. R. 7080.2240 GREYWATER SYSTEMS**

**558.** Proposed Change new part 7080.2240, subpart 1, item A, formerly 7080.0170, subpart 7, item E.

*Subpart 1. General. To qualify as a greywater system, the system must meet or exceed the following requirements:*

*A. employ 60 percent of the flow values in part 7080.1850;*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**559.** Proposed Change new part 7080.2240, Subpart 1, item B

*B. meet or exceed applicable technical requirements of parts 7080.1900 to 7080.2030, 7080.2050, and 7080.2100, except as modified in this part;*

Justification

It is proposed to require greywater systems to follow applicable requirements of the tank and distribution sections. The former rule required greywater systems to follow Minn. R. 7080.0150 (see former Minn. R.

7080.0170, subp. 7[F]), and it is commonly understood that greywater designs likely would follow other conventional design standards. Some modification to these parts due to the reduced flow and waste characterization. For example, due to the lower waste loads, the septic tank capacity can be reduced as determined in this part. If conventional methods are not followed, the system must be designed under an appropriate subpart under this part.

**560. Proposed Change new part 7080.2240, Subpart 1, item C**

*C. provide flow measurement if a pump is to be employed;*

Justification

Please see justification for Minn. R. 7080.2210, subp. 1(C).

**561. Proposed Change new part 7080.2240, Subpart 1, item D**

*D. meet or exceed the requirements of parts 7080.2210 to 7080.2230;*

Justification

It is proposed to require all greywater systems to utilize the appropriate design standards of trenches, beds, mound systems and at-grade systems, only at a reduced scale, due to the reduced waste load and flow. This is typically the current method used to design these systems as stipulated in former Minn. R. 7080.0170, subp. 7(G). If these design standards are not intended to be followed, then the system may be designed as a Type V system versus a type I system.

Justification

**562. Proposed Change new part 7080.2240, Subpart 1, item E**

*E. meet or exceed applicable requirements of part 7080.2150, Subparts 2 and 3; and*

Justification

It is proposed that all systems must be in compliance with Minn. R. 7080.2150, subp. 2, as those are the basic, minimal public health and environmental standards for sewage treatment. Compliance with requirements in Minn. R. 7080.2150, subp. 3 is proposed because it is commonly understood that greywater designs likely would follow other conventional design standards. Some modification to these parts will need to be made due to lower flow amounts and waste strength. If conventional methods are not followed, the system must be designed under an appropriate subpart under this part.

**563. Proposed Change new part 7080.2240, Subpart 1, item F.**

*F. meet the requirements of Subparts 2 and 3.*

Justification

Subparts 2 and 3 are the requirements for greywater systems as required in the former rule, except as modified and justified in this SONAR.

**564. Proposed Change new part 7080.2240, Subpart 2.**

Subp. 2. **Toilet waste.** No toilet waste may enter a greywater system.

Justification

It is proposed to delete the list of toilet devices that may be used found in the former language. This is due to a possible conflict with the Minn. R. ch. 4715 which regulates such devices. The real intent of what is needed for proper operation of a greywater system is now clearly stated in this part.

**565. Proposed Change new part 7080.2240, Subparts 3 and 4.**

~~Greywater system plumbing. The drainage system in a dwelling or other establishments served by a greywater system shall be based on a pipe diameter of two inches to prevent installation of a water flush toilet. There shall be no openings or connections to the drainage system, including floor drains, larger than two inches in diameter. The existing drainage system may be used if a greywater system is to be installed for an existing dwelling.] Garbage disposals shall not be connected to the greywater system. Building sewer. The building sewer shall meet all requirements of part 7080.0120, except that the building sewer for a greywater system shall be no greater than two inches in diameter.~~

Justification

All devices and requirements dealing with plumbing are proposed to be deleted as they are covered in Minn. R. ch. 4715. Duplication in this code causes confusion.

**566. Proposed Change new part 7080.2240, Subpart 5.**

Subp. 3. Sewage tank. Greywater septic tanks must meet the requirements of part 7080.1900, except that the liquid capacity of a greywater septic tank serving a dwelling must be based on the number of bedrooms existing and anticipated in the dwelling served and shall be at least as large as the capacities given in Table X.

TABLE X

<u>Number of bedrooms</u>	<u>Tank liquid capacity</u>
<u>(gallons)</u>	
<u>3 or less</u>	<u>750</u>
<u>4 or 5</u>	<u>1,000</u>
<u>6 or 7</u>	<u>1,250</u>
<u>8 or 9</u>	<u>1,500</u>

For ten or more bedrooms, the greywater septic tank shall be sized as: (1,500 + ((# or bedrooms - 9) x 150)).

Justification

Greywater sewage tanks need to meet the same requirements as septic tanks, as they perform the same function and are placed under the same site and soil conditions.

The proposed language is just an extension of the 150 gallon per bedroom requirement that is found in Table X. This is an increase from 125 gallon per bedroom requirement contained in the former rule, to be consistent with the increased tank capacity in new part Minn. R. 7080.1930, subp 1. Please refer to comment 32 of Exhibit 398.

## **MINN. R. 7080.2250 TYPE II SYSTEMS**

### **567. Proposed Change new part 7080.2250.**

*Systems designed according to parts 7080.2260 to 7080.2290 are considered Type II systems.*

#### Justification

This new category is simply a renaming of the former Alternative classification in former Minn. R. 7080.0172, which was made up of a variety of systems with moderately well proven design specifications for unique site conditions.

## **MINN. R. 7080.2260 RAPIDLY PERMEABLE SOILS**

### **568. Proposed Change new part 7080.2260, Subpart 1.**

*Subpart 1. General. A system must be designed under this part if the soil in the proposed absorption area, or within three vertical feet of the absorption area, has a system sizing factor of 1 to 3 in Table IX in part 7080.2150, Subpart 3, item F. The system must meet or exceed the following requirements:*

#### Justification

This introductory statement is necessary to explain the soil conditions in which this section applies. This may be new language, but this is the criteria that commonly has applied to these systems in the past.

### **569. Proposed Change new part 7080.2260, Subpart 1, item A.**

*A. employ the design flow values in part 7080.1850;*

#### Justification

The former chapter does not specify a flow value to be used. This is an oversight and is proposed to be corrected. In common practice, flow values in Minn. R. 7080.1850 (formerly Minn. R. 7080.0125) are used for design purposes.

### **570. Proposed Change new part 7080.2260, subpart 1, item B.**

*B. meet or exceed applicable technical requirements of parts 7080.1900 to 7080.2030, 7080.2050, and 7080.2100, except as modified in this part;*

#### Justification

The former chapter does not specify tank or dosing requirement. This is an oversight and this part is proposed to correct that. The common practice is to use these design requirements for rapidly permeable soil systems.

### **571. Proposed Change new part 7080.2260, Subpart 1, item C.**

*C. provide flow measurement if a pump is to be employed;*

### Justification

Please see the justification for Minn. R. 7080.2210, subp. 1(C).

#### **572. Proposed Change new part 7080.2260, Subpart 1, item D.**

*D. meet or exceed the requirements of parts 7080.2210 to 7080.2230;*

### Justification

The former chapter does not specify a specific soil treatment system configuration. This is an oversight and is proposed to be corrected. It is common practice to use the conventional design requirements of mounds, trenches, at-grades for rapidly permeable soil systems.

#### **573. Proposed Change new part 7080.2260, Subpart 1, item E.**

*E. meet or exceed applicable requirements of part 7080.2150, Subparts 2 and 3, except as modified in this part; and*

### Justification

Please see the justification for Minn. R. 7080.2210, subp. 1(D), as that justification is applicable to rapidly permeable soil systems.

#### **574. Proposed Change new part 7080.2260, Subpart 1, item F.**

*F. meet the requirements of Subparts 2 and 3.*

### Justification

Subparts 2 and 3 are the requirements for rapidly permeable soil systems as required in the former rule, except as modified and justified in this SONAR.

#### **575. Proposed Change former part 7080.0170, Subpart 4, item A.**

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

### Justification

It is proposed to substitute the vertical separation term with a more complete description of the soil treatment process and parameters which is (proposed to be) found in Minn. R. 7080.2150, subp. 3(E) in the following new section.

#### **576. Proposed Change new part 7080.2260, Subpart 2, formerly 7080.0170, Subpart 4, item B.**

*Subp. 2. Contact with soil. The distribution media must not be in contact with soils with a sizing classification of 1 as listed in Table IX in part 7080.2150, Subpart 3, item F.*

### Justification

The first provision has been reworded for clarity from provisions in former Minn. R. 7080.0170, subp. 4(B). The prescription design for very fast rate percolation soils in this former section have been moved to Minn. R. 7080.2260, subp 1(E).

**577.** Proposed Change new part 7080.2260, Subpart 3, formerly 7070.0170, Subpart 4, item A, subitems (1) and (2).

*Subp. 3. Treatment techniques. If the distribution media is in contact with soil with a sizing classification of 2 or 3 in Table IX in part 7080.2150, Subpart 3, item F, one of the following treatment techniques must be used:*

*A. employ pressure distribution as specified in part 7080.2050, Subpart 4; or*

*B. divide the total soil treatment and dispersal system into at least four parts with no part larger than 25 percent of the area required by part 7080.2210, Subpart 3, item A, with the parts constructed for serial distribution.*

### Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

## **7080.2270 FLOODPLAIN AREAS**

**578.** Proposed Change new part 7080.2270, Subpart 1.

*Subpart 1. General. ISTS must be designed under this part if the system is proposed to be located in a floodplain. A system located in a floodplain must meet or exceed the following requirements:*

### Justification

This general statement is provided to alert the user of when these provisions must be employed.

**579.** Proposed Change new part 7080.2270, Subpart 1, item A

*A. employ flow values in part 7080.1850;*

### Justification

The former chapter does not specify that the code derived flow values in Minn. R. 7080.1850 must be used. This is an oversight and is proposed to be corrected. It is common practice to use the conventional flow values in designing floodplain systems as water use does not change for dwellings located in floodplains.

**580.** Proposed Change new part 7080.2270, Subpart 1, item B

*B. meet or exceed applicable technical requirements of parts 7080.1900 to 7080.2030, 7080.2050, and 7080.2100, except as modified in this part;*

### Justification

The former chapter does not specify that conventional tank, distribution and dosing methods must be used. This is an oversight and is proposed to be corrected. It is common practice to use the conventional tank, distribution and dosing methods in designing floodplain systems as conditions in floodplains do not change the basic design requirements for non-floodplain systems.

#### **581. Proposed Change new part 7080.2270, Subpart 1, item C**

*C. provide flow measurement if a pump is to be employed;*

### Justification

Please refer to the justification for Minn. R. 7080.2210, subp. 1(D).

#### **582. Proposed Change new part 7080.2270, Subpart 1, item D.**

*D. meet or exceed the requirements of parts 7080.2210 to 7080.2230;*

### Justification

The former chapter does not specify a specific soil treatment system configuration. This is an oversight and is proposed to be corrected. It is common practice to use the conventional design requirements of mounds, trenches, at-grades for rapidly permeable soil systems as conditions in floodplains do not change the basic design requirements for non-floodplain systems.

#### **583. Proposed Change new part 7080.2270, Subpart 1, item E.**

*E. meet or exceed applicable requirements of part 7080.2150, Subparts 2 and 3, except as modified in this subpart; and*

### Justification

Please refer to the justification for Minn. R. 7080.2210, subp. 1(D).

#### **584. Proposed Change new part 7080.2270, Subpart 1, item F.**

*F. meet the requirements of subparts 2 to 11.*

### Justification

These are the former requirements for floodplain systems except as modified and justified in this SONAR.

#### **585. Proposed Change new part 7080.2270, Subpart 2.**

*Subp. 2. State and local requirements. The allowed use of systems in floodplains must be according to state and local floodplain requirements.*

## Justification

It is proposed to state clearly that any technical specifications offered in this chapter can only be used if the system is allowed under other applicable requirements.

### **586.** Proposed Change new part 7080.2270, Subparts 3 to 11, formerly 7080.0172, Subpart 1.

Subp. 3. **Location of system.** An ISTS must not be located in a floodway and, whenever possible, placement within any part of the floodplain should be avoided. If no alternative exists, a system may be placed within the flood fringe if the requirements in Subparts 4 to 9 are met.

Subp. 4. **Openings.** There must be no inspection pipe or other installed opening from the distribution media to the soil surface.

Subp. 5. **Highest ground.** An ISTS must be located on the highest feasible area of the lot and must have location preference over all other improvements except the water supply well. If the ten-year flood data are available, the bottom of the distribution media must be at least as high as the elevation of the ten-year flood.

Subp. 6. **Pump.** If a pump is used to distribute effluent to the soil treatment and dispersal system, provisions shall be made to prevent the pump from operating when inundated with floodwaters.

Subp. 7. **Raising elevation.** When it is necessary to raise the elevation of the soil treatment system to meet the vertical separation distance requirements, a mound system as specified in part 7080.2220 may be used with the following additional requirements:

A. the elevation of the bottom of the mound bed absorption area must be at least one-half foot above the ten-year flood elevation if ten-year flood data are available;

B. inspection pipes must not be installed unless the top of the mound is above the 100-year flood elevation; and

C. the placement of clean sand and other fill must be done according to any community-adopted floodplain management ordinance.

Subp. 8. **Inundation of top.** When the top of a sewage tank is inundated, the dwelling must cease discharging sewage into it.

Subp. 9. **Backflow.** Backflow prevention of liquid into the building when the system is inundated must be provided. If a holding tank is used, the system must be designed to permit rapid diversion of sewage into the holding tank when the system is inundated.

Subp. 10. **Holding tank.** If a holding tank is used to serve a dwelling, the holding tank's liquid capacity must equal 100 gallons times the number of bedrooms times the number of days between the ten-year stage on the rising limb of the 100-year flood hydrograph and the ten-year stage on the falling limb of the hydrograph, or 1,000 gallons, whichever is greater. The holding tank must be accessible for removal of tank contents under flooded conditions.

Subp. 11. **Water level above top.** Whenever the water level has risen above the top of a sewage tank, the tank must be pumped to remove all solids and liquids after the flood has receded and before use of the system is resumed.

## Justification

These are former provisions that have been moved with minor language changes for clarity and a format change due to rule restructuring.

### **MINN. R. 7080.2280 PRIVIES**

#### **587.** Proposed Change new part 7080.2280.

A. To qualify as a privy, the system must:  
(1) meet or exceed the requirements of part 7080.2150, Subpart 2;

*(2) have soil beneath the bottom of the pit that meets or exceeds the requirements of part 7080.2150, Subpart 3, item D, or employ a watertight tank meeting applicable requirements of parts 7080.1900 to 7080.2030; and*

*(3) meet the requirements of items B to E.*

*B. Pits or vaults must have sufficient capacity for the dwelling they serve, but must have at least 25 cubic feet of capacity.*

*C. The sides of the pit must be curbed to prevent cave-in.*

*D. The privy must be easily maintained and insect proof. The door and seat must be self-closing. All exterior openings, including vent openings, shall be screened.*

*E. Privies must be adequately vented.*

#### Justification

These are former provisions that have been moved with minor language changes for clarity and a format change due to rule restructuring. The solids removal provisions have been moved to Minn. R. 7080.2450, subp. 4(B).

### **MINN. R. 7080.2290 HOLDING TANKS**

**588.** Proposed Change new part 7080.2290, item A., subitem (1).

*A. To qualify as a holding tank, the system must:*

*(1) meet or exceed applicable requirements of parts 7080.1900 to 7080.2030;*

This provision is replacing the similar provision in former Minn. R. 7080.0172, subp. 3(B).

**589.** Proposed Change new part 7080.2290, item A., subitem (2).

*(2) meet or exceed the applicable requirements of part 7080.2150, Subpart 2;*

#### Justification

It is intended to reference this subpart because this subpart contains the basic public health and environmental standards that all systems must follow.

**590.** Proposed Change new part 7080.2290, item A., subitem (3).

*(3) meet or exceed the requirements of part 7080.2150, Subpart 3, item B; and*

#### Justification

It is proposed that the holding tank should be designed and constructed for a 25-year life. This requirement is reasonable, because lots that require the use of holding tanks typically do not have suitable soils for sewage treatment and dispersal. Therefore, if the tank leaks, the sewage will be entering soils with little ability to attenuate contaminants and absorb more water, causing health concerns.

**591.** Proposed Change new part 7080.2290, item A., subitem (4).

*(4) meet the requirements of items B to F.*

### Justification

Items B to F are the requirements for holding tanks as required in the former rule, except as modified and justified in this SONAR.

#### **592. Proposed Change former part 7080.0172, Subpart 3, item A**

*~~A. Holding tanks for new construction are prohibited unless approved by the permitting authority, with a monitoring and disposal contract signed by the owner and a licensed pumper. The contract must guarantee the removal of the tank contents prior to overflow or any discharge.~~*

### Justification

This provision is proposed to be deleted because it is intended to remove all administrative provisions from the chapter and place them in proposed chapter 7082.0100, Subpart 3, item A, subitem (7).

#### **593. Proposed Change new part 7080.2290, item B, formerly 7070.0172, Subpart 3, item B.**

*B. All tanks used as holding tanks must be tested for watertightness as specified in part 7080.2010, Subpart 3.*

### Justification

It is proposed to require all holding tanks be tested for watertightness. The rationale is that these tanks are used specifically to retain the sewage usually due to poor soil or site conditions. Therefore, it is prudent to require that each of the tanks used as a holding tank be tested.

#### **594. Proposed Change new part 7080.2290, item C, formerly 7070.0172, Subpart 3, item C.**

*C. A cleanout pipe of at least six inches in diameter must extend to the ground surface and be provided with seals to prevent odor emissions and exclude insects and vermin. A maintenance hole of at least 20 inches in least dimension must extend through the cover to a point within 12 inches, but no closer than six inches, below finished grade. If the maintenance hole is covered with less than six inches of soil, the cover must be secured according to part 7080.1970.*

### Justification

It is proposed to increase the cleanout pipe from four to six inches for ease of cleaning. It is intended to cite the new and expanded tank lid security requirements in new Minn. R. 7080.1970.

#### **595. Proposed Change new part 7080.2290, item D, formerly 7070.0172, Subpart 3, item D.**

*D. For a dwelling, the minimum size is 1,000 gallons or 400 gallons times the number of bedrooms, whichever is greater. For other establishments, the minimum capacity shall be at least five times the average daily flow. Tank sizing for floodplain areas must be calculated according to part 7080.2270, Subpart 10.*

### Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**596. Proposed Change new part 7080.2290, item E, formerly 7070.0172, Subpart 3, item E.**

*E. Holding tanks must be located in an area readily accessible to the pump truck under all weather conditions and where accidental spillage during pumping will not create a nuisance and must meet the setback requirements as specified in Table VII in part 7080.2150, Subpart 2, item G.*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**597. Proposed Change former part 7070.0172, Subpart 3, item F.**

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

**Justification**

This provision is proposed to be deleted because it is intended to remove all administrative provisions from the chapter and place them in proposed Minn. R. 7082.0100, subp. 3(A)(7).

**598. Proposed Change new part 7080.2290, item F, formerly 7070.0172, Subpart 3, item E.**

*F. Holding tanks must have an alarm device to minimize the chance of accidental sewage overflows unless regularly scheduled pumping is used. An alarm device shall identify when the holding tank is at 75 percent capacity.*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**MINN. R. 7080.2300 TYPE III SYSTEMS**

**599. Proposed Change new part 7080.2300.**

*A system designed according to this part is considered a Type III system. The system must:*

**Justification**

A Type III system is proposed to replace the “Other System” category in former Minn. R. 7080.0178.

**600. Proposed Change new part 7080.2300, item A.**

*A. employ design flow values in part 7080.1850;*

**Justification**

It is proposed to require all Type III systems to utilize conventional flow values. These are the flow amounts currently being used to design these systems. Local permitting authorities are comfortable in using these flow amounts. If local authorities do not wish to use these flow values, then the system may be designed under one of the other less prescriptive design options provided in this chapter.

**601. Proposed Change new part 7080.2300, item B.**

*B. meet or exceed applicable technical requirements of part 7080.2050, Subpart 4, item A;*

**Justification**

It is proposed to require this grouping of systems use general conventional distribution methods. This is proposed because these systems are commonly constructed in this manner, have a known degree of reliability if distribution systems are conventional, and it is anticipated that local permitting authorities will be more comfortable with this practice.

**602. Proposed Change new part 7080.2300, item C, formerly 7080.0178, Subpart 2, item C.**

*C. provide flow measurement;*

**Justification**

This is a former provision that has been moved with a format change due to rule restructuring.

**603. Proposed Change new part 7080.2300, item D.**

*D. meet or exceed the requirements of part 7080.2150, Subpart 2; and*

**Justification**

It is proposed to require that all conditions of this subpart be met, because this subpart contains the basic public health and environmental standards.

**604. Proposed Change new part 7080.2300, item E.**

*E. meet or exceed the requirements of part 7080.2150, Subpart 3, items A, B, D, and K.  
If smaller soil sizing factors are used than required in Table IX in part 7080.2150, Subpart 3, item F, an assessment must be made to determine if the absorption area can effectively infiltrate the effluent and justify or compensate for the loss of vertical separation distance from the system bottom to the seasonally saturated soil due to increased groundwater mounding. A minimum soil sizing factor of 0.5 square feet per gallon per day must be used.*

**Justification**

Please refer to the justification for new Minn. R. 7080.0170, subp. 3(A), for justification of the first provision.

It is proposed to require Type III systems to have structural components and soil dispersal systems that will last 25 years. This was expected for the former “Other systems” as these designs commonly follow conventional designs as much as possible, except when unusual site conditions dictate that conventional design parameters cannot be met. To achieve a 25-year life on the drainfield, the BOD loadings must not be exceeded.

It is further proposed that soil treatment (versus mechanical treatment) be employed for “other systems.” This is not a change from the former requirements for “other systems.”

Lastly, it is required that if the system needs to be made smaller than requirements in Minn. R. 7080.2150, subp. 3(F), then the designer needs to take special precautions to determine: (1) if the soil can infiltrate the designed flow, (2) if the underlying soil can transmit the effluent away, and (3) what effect the increased flow will have on the vertical separation distance needed to remove pathogenic organisms. The Agency will develop guidance for designers on how to compensate for increased loading to the system.

## **MINN. R. 7080.2350 TYPE IV SYSTEMS**

### **605. Proposed Change new part 7080.2350, subpart 1.**

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

#### Justification

The criteria in this new subpart has been derived by proposed criteria for the state of Washington to provide guidance on how to balance the treatment effectiveness from pretreatment devices to be registered by the Commissioner, with a chosen level of soil based treatment.

### **606. Proposed Change new part 7080.2350, subpart 1, item A.**

*A. employ design flow values in part 7080.1850;*

#### Justification

It is proposed to require these systems to use conventional flow values. This is necessary because treatment devices to be employed will be rated by the manufacturer or others for a certain flow amount to achieve the stated treatment levels.

### **607. Proposed Change new part 7080.2350, subpart 1, item B.**

*B. meet or exceed applicable technical requirements of parts 7080.1900 to 7080.2030, 7080.2050, and 7080.2100;*

#### Justification

It is proposed to require conventional tank, distribution, and dosing requirements. This is proposed so a portion of the system will be conventional in nature which would provide some degree of safety if the remaining components have a lesser-known performance record.

### **608. Proposed Change new part 7080.2350, subpart 1, item C.**

*C. meet or exceed the requirements of part 7080.2150, Subpart 2;*

#### Justification

It is proposed to require that all conditions of this subpart be met or exceeded, because this subpart contains the basic public health and environmental standards.

**609.** Proposed Change new part 7080.2350, subpart 1, item D.

*D. meet or exceed the requirements of part 7080.2150, Subpart 3, item A; and*

Justification

It is proposed that all product types subject to product registration, must be registered before use by the permitting authority. This provision is reasonable to ensure that devices and components meet environmental and public health requirements.

**610.** Proposed Change new part 7080.2350, subpart 1, item E.

*E. meet or exceed the requirements of Tables XI and XII in subparts 2 and 3.*

Subp. 2. Table XI.

TABLE XI  
TREATMENT COMPONENT PERFORMANCE LEVELS AND  
METHOD OF DISTRIBUTION BY SOIL GROUP<sup>1</sup>

<u>Vertical separation (inches)</u>	<u>Soil group</u>		
	<u>1,2</u>	<u>3-6</u>	<u>7,8</u>
-----			
<u>12 \AF \a18</u>	<u>Treatment Level A</u>	<u>Treatment Level B</u>	<u>Treatment Level B</u>
	<u>Pressure Distribution</u>	<u>Pressure Distribution</u>	<u>Pressure Distribution</u>
	<u>Timed Dosing</u>	<u>Timed Dosing</u>	<u>Timed Dosing</u>
<u>\Ac \a 18 \AF \a24</u>	<u>Treatment Level B</u>	<u>Treatment Level B</u>	<u>Treatment Level B</u>
	<u>Pressure Distribution</u>	<u>Pressure Distribution</u>	<u>Pressure Distribution</u>
	<u>Timed Dosing</u>	<u>Timed Dosing</u>	
<u>\Ac \a 24 \AF \a36</u>	<u>Treatment Level B</u>	<u>Treatment Level C</u>	<u>Treatment Level C</u>
	<u>Pressure Distribution</u>	<u>Pressure Distribution</u>	<u>Pressure Distribution</u>
	<u>Timed Dosing</u>		

<sup>1</sup> *The treatment component performance levels correspond with those established for treatment components under the product testing requirements in Table III in part 7080.1620.*

Subp. 3. Table XII.

TABLE XII  
SOIL GROUPING DESCRIPTIONS AND MAXIMUM HYDRAULIC  
LOADING RATE TO THE ABSORPTION AREA

<u>Soil group</u>	<u>Soil texture (type)</u>	<u>Soil structure (grade)</u>	<u>Soil structure (factor)</u>	<u>Minimum soil sizing (ft<sup>2</sup>/gal./day)</u>

---

1	<u>Coarse sands,</u> <u>medium sands,</u> <u>loamy coarse</u> <u>sands, loamy</u> <u>medium sands</u>	<u>Single grain</u> <u>Structureless</u>	<u>0.63</u>
2	<u>Fine sands,</u> <u>very fine</u> <u>sands, loamy</u> <u>fine sands,</u> <u>loamy very</u> <u>fine sands</u>	<u>Single grain</u> <u>Structureless</u>	<u>1.0</u>
3	<u>Coarse sandy</u> <u>loam, sandy</u> <u>loam</u>	<u>Massive</u> <u>Structureless</u> <u>Platy</u> <u>Weak,</u> <u>moderate, strong</u>	<u>1.67</u> <u>2.0</u>
	<u>Prismatic,</u> <u>blocky,</u> <u>granular</u>	<u>Weak</u> <u>Moderate, strong</u>	<u>1.42</u> <u>1.0</u>
4	<u>Fine sandy</u> <u>loam, very</u> <u>fine sandy</u> <u>loam</u>	<u>Massive</u> <u>Structureless</u> <u>Platy</u> <u>Weak,</u> <u>moderate, strong</u>	<u>2.0</u> <u>---</u>
	<u>Prismatic,</u> <u>blocky,</u> <u>granular</u>	<u>Weak</u> <u>Moderate, strong</u>	<u>1.67</u> <u>1.25</u>
5	<u>Loams</u>	<u>Massive</u> <u>Structureless</u> <u>Platy</u> <u>Weak,</u> <u>moderate, strong</u>	<u>2.0</u> <u>---</u>
	<u>Prismatic,</u> <u>blocky,</u> <u>granular</u>	<u>Weak</u> <u>Moderate, strong</u>	<u>1.67</u> <u>1.25</u>
6	<u>Silt loams</u>	<u>Massive</u> <u>Structureless</u> <u>Platy</u> <u>Weak,</u> <u>moderate, strong</u>	<u>5.0</u> <u>---</u>
	<u>Prismatic,</u> <u>blocky,</u> <u>granular</u>	<u>Weak</u> <u>Moderate, strong</u>	<u>1.67</u> <u>1.25</u>
7	<u>Sandy clay</u>	<u>Massive</u> <u>Structureless</u>	<u>---</u>

<u>loams, clay</u>			
<u>loams, silty</u>	<u>Platy</u>	<u>Weak,</u>	
<u>clay loams</u>		<u>moderate, strong</u>	<u>---</u>
	<u>Prismatic,</u>	<u>Weak</u>	<u>3.33</u>
	<u>blocky,</u>		
	<u>granular</u>	<u>Moderate, strong</u>	<u>1.67</u>
8	<u>Sandy clay,</u>	<u>Massive</u>	<u>Structureless</u>
	<u>clay,</u>		<u>---</u>
	<u>silty clays</u>	<u>Platy</u>	<u>Weak,</u>
		<u>moderate, strong</u>	<u>---</u>
	<u>Prismatic,</u>	<u>Weak</u>	<u>---</u>
	<u>blocky,</u>		
	<u>granular</u>	<u>Moderate, strong</u>	<u>3.33</u>

Justification

These design standards were developed from proposed rules for the state of Washington (Table VII), and the EPA’s On-site Wastewater Treatment Systems Manual – 2002. Please see Exhibits 464 to 465.

**MINN. R. 7080.2400 TYPE V SYSTEMS**

**611. Proposed Change new part 7080.2400**

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

Justification

This category is proposed to replace the former “Performance” systems found in former Minn. R. 7080.0179.

**612. Proposed Change new part 7080.2400, item A.**

A. employ design flow values in part 7080.1850;

Justification

It is proposed that conventional flow values be employed. This is necessary because determining the correct flow amount is the most critical design value as the size of each component is dependant on the flow amount.

**613. Proposed Change new part 7080.2400, item B.**

B. meet or exceed the requirements of part 7080.2150, Subpart 2; and

Justification

It is proposed to require that all conditions of subpart 2 be met, because subpart 2 contains the basic public health and environmental standards.

**614.** Proposed Change new part 7080.2400, item C formerly 7080.0179, Subpart 2, item C, subitem (2).

*C. be designed with a vertical separation that ensures adequate sewage treatment and dispersal. Design factors to consider include, but are not limited to, effluent quality, loading rates, loading methods, and soil conditions. ISTS must not contaminate undergroundwaters or zones of seasonal saturation with viable fecal organisms.*

Justification

As stated above, this category is proposed to replace the former “Performance” systems found in Minn. R. 7080.0179. The main premise of this category is that minimal soil treatment is employed in lieu of advanced treatment technologies. Therefore, a statement needs to be made that some separation distance is required so effluent is not discharged directly into the saturated zone as prohibited by Minn. R. ch. 7060. The needed separation distance will be determined by the design factors to determine what separation distance will be needed to remove pathogenic organisms.

**MINN. R. 7080.2430 REPORTING**

**615.** Proposed Change new part 7080.2430.

*Phase II design reports must include drawings, design flows, system component sizing and calculations, hydraulic and organic loading rates, setbacks, construction considerations, and management plans as described in part 7082.0600, Subpart 1, as published in the State Register, volume ..., page ..., and a certified statement.*

Justification

It is necessary that all design work completed be required to be recorded, reported (per Minn. R. ch. 7082 and 7083), and verified by a statement indicating that the work was done in compliance with applicable requirements.

**MINN. R. 7080.2450 MAINTENANCE**

**616.** Proposed Change new part 7080.2450, Subpart 1, formerly 7080.0175, Subpart 1.

7080.2450 MAINTENANCE.

Subpart 1. General. All ISTS must be operated under the regulatory requirements of 7082.0600 ~~a management plan~~, as published in the State Register, volume ..., page .... ~~A local operating permit is required for Types IV and V systems and for holding tanks.~~ ISTS and all components must be maintained in compliance with this chapter and manufacturer requirements. Subparts 2, item A, and 6 are intended to apply to ISTS and systems that do not qualify as an ISTS, but receives sewage such as cesspools, drywells, leaching pits, or other pits.

Justification

It is proposed that all systems be operated under management plans. For more details please refer to the justification for Minn. R. 7082.0100, subp. 3(A)(10).

It is proposed to ensure that solids and liquids removed from devices similar in nature to SSTS are properly treated and disposed. Formerly the rule only requires proper disposal of these solids and liquids from those devices that qualify as an SSTS. It is further proposed that a general statement be made to make the user aware that all maintenance must be provided by a licensed business regulated under new proposed Minn. R. 7083. Please refer to comment 15 of Exhibit 79.

**617.** Proposed Change new part 7080.2450, Subpart 2, item A, formerly 7080.0175, Subpart 2, item A.

*Subp. 2. Frequency of assessment. The owner of an ISTS or the owner's agent shall regularly, but in no case less frequently than every three years:*

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

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**618.** Proposed Change new part 7080.2450, Subpart 2, item B, formerly 7080.0175, Subpart 2, item B.

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

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**619.** Proposed Change new part 7080.2450, Subpart 3, items A and B, formerly 7080.0175, subpart 3, items A and B.

*A. All solids and liquids must be removed by pumping from all tanks or compartments in which the top of the sludge layer is less than 12 inches from the bottom of the outlet baffle or transfer hole or whenever the bottom of the scum layer is less than three inches above the bottom of the outlet baffle or transfer hole.*

*B. Removal of accumulated sludge, scum, and liquids from septic tanks and dosing chambers must be through the maintenance hole, except for holding tanks that can be pumped through the cleanout pipe.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**620.** Proposed Change new part 7080.2450, Subpart 3, item C, formerly 7080.0175, Subpart 3, item C.

*C. If no maintenance hole exists on a sewage tank that is perceived to be watertight below the designed operating depth, the owner or the owner's agent shall install one or more maintenance holes in sewage tanks according to part 7080.1970 to allow for maintenance to take place through the maintenance hole. The removal of solids from any location other than the maintenance hole is not a compliant method of solids removal from a sewage tank, and therefore, does not fulfill the solids removal requirement of this part or a management plan.*

### Justification

The former language requires a maintenance hole to be placed on all tanks which do not have a maintenance hole. This requirement can be interpreted to mean all tanks such as cesspools and seepage pits, which are non-compliant systems. The adding of a maintenance hole to these systems is not necessary, as those type of tanks shall need to be totally replaced. The next proposed provision is to change the mandatory requirement that a maintenance hole be placed on a watertight tank to a permissive condition. The Agency has received complaints on how to implement this procedure. In addition, it is assumed that not many complying tanks exist without a maintenance hole.

It is also proposed to not allow maintainers to pump solids from inspection pipes, even if the homeowner refuses to allow the tank lid to be dug-up. This provision is to be replaced by a provision which clearly states that if tank cleaning is done through an inspection pipe, it does not qualify as maintenance to fulfill requirements of the system's management plan. This hopefully will compel system owners to allow access to the maintenance hole. This is especially important in the seven-county metropolitan area, in which management plans are enforced by local authorities. Please refer to comment 8 of Exhibit 15.

#### **621. Proposed Change new part 7080.2450, Subpart 3, item D.**

*D. After removal of solids and liquids, the system shall be brought into compliance with part 7080.1970, items B and C. Covers secured by screws shall be refastened in all screw openings.*

### Justification

It is proposed to require all maintenance holes to meet the requirements of new sewage tanks, by requiring that they be brought to the ground surface and meet the security provisions. This may be a controversial requirement as system owners will now have covers exposed at final grade. MPCA staff believes, as supported by some sectors of the industry, that access points for tank cleaning should be easily found in the yard and allow easy access to the tank. Currently, maintainers may have no idea of tank location and have to probe the yard to try to find the tank and then probe or dig in the vicinity of the tank to attempt to determine the number and location of the maintenance holes. In some cases this is nearly impossible to find if the tank is buried many feet below the final grade.

#### **622. Proposed Change new part 7080.2450, Subpart 3, item E.**

*E. Dosing Chambers. Dosing chambers shall also be maintained in accordance with this part. Sludge shall be removed if within one inch of the pump intake.*

### Justification

It is proposed to require similar maintenance for dosing chambers. This is proposed due to the fact that septic tanks do not provide complete solids removal and solids get washed into the dosing chamber. This has been anticipated in dosing chamber design as the pump must be located four inches above the floor of the dosing chamber (Minn. R. 7080.2100, subp. 2[E]). If the solids are close to or inundate the intake of the pump, the solids will be pumped to the soil treatment system which will clog the absorption area and cause premature hydraulic failure.

#### **623. Proposed Change part former 7080.2450 subpart 4 item A, formerly 7080.0175, Subpart 4.**

*Subp. 4. Toilet waste treatment devices and privies.*

A. For primitive dwellings using toilet waste treatment devices in low dwelling density areas, septage disposal from these devices by the owner must be in accordance with local ordinances. If no ordinance exists, the septage must not be discharged to surface waters, drainageways, steeply sloping areas, or wet areas in a manner or volume that is harmful to the environment or public health or that creates a nuisance. The material must be buried or covered with soil. For site conditions not met in this subpart, the solids disposal from toilet waste treatment devices shall be according to Subpart 6 by a licensed maintenance business.

#### Justification

The former provision included a proposal for system maintenance and is proposed to be deleted, as this is more of a plumbing compliance issue, rather than an SSTS issue. The remaining changes to this subpart are grammatical in nature for clarity.

#### **624. Proposed Change new part 7080.2450, Subpart 4, item B, formerly 7080.0172, Subpart 2 item G.**

B. When the privy is filled to one-half of its capacity, the solids must be removed. Abandoned pits must have the sewage solids and contaminated soil removed and must be filled with clean earth and slightly mounded to allow for settling. Removed solids shall be disposed of according to Subpart 6.

#### Justification

The substantive change to this item states that the solids must be removed when the privy is one-half full. This change is due to comments received from maintainers that indicate that the waste in the holding tank is lower in water content and water must be added in order pump the material out of the tank. Therefore, empty tank volume must be available to add the necessary water. For justification for the abandonment provision of this item please refer to the justification for subpart 6.

#### **625. Proposed Change new part 7080.2450, Subpart 5, formerly 7080.0175, Subpart 5.**

Subp. 5. Additives. ISTS additives, which are products added to the sewage or to the system with the intent to lower the accumulated solids in sewage, must not be used as a means to reduce the frequency of proper maintenance and removal of sewage solids from the sewage tanks as specified in this part. The use of additives does not fulfill the solids removal requirement of this part or a management plan. ISTS additives that contain hazardous materials must not be used in an ISTS.

#### Justification

The first change is to add the definition to this subpart, with more descriptive language to replace the statement “improve the performance of a subsurface sewage treatment system.” A new clarifying statement is proposed stating that the use of additives is not considered as proper maintenance, which was the intention of the original first sentence. This provision can be used as an enforceable tool against system owners who claim that the use of additives qualifies as proper solids removal.

#### **626. Proposed Change new part 7080.2450, Subpart 6, formerly 7080.0175, Subpart 6.**

Subp. 6. Septage disposal. Septage or any waste mixed with septage must be disposed of in accordance with state, federal, or local requirements for septage and other wastes. If septage is disposed of into a municipal sewage treatment facility, a written agreement must be provided between the accepting facility and the maintenance business.

### Justification

The Agency is aware that when pumping tanks, sewage can be mixed with non-sewage wastes. Therefore, some guidance must be provided for these situations. It is prudent to require that all wastes containing sewage be disposed of in accordance with sewage disposal methods. It is also prudent to require that the other waste be disposed of properly. It is assumed that if conflicting requirements exist for the disposal of each waste, that the more restrictive requirements apply.

### **627.** Proposed Change new part 7080.2450, Subpart 7, formerly 7080.0175, Subpart 7.

Subp. 7. Use of soil treatment site. Activities on the current soil treatment and dispersal system or the reserve soil treatment and dispersal area as specified in part 7082.0100, Subpart 3, item B, subitem (5), as published in the State Register, volume ..., page ..., that may impair the current or future treatment abilities or hydraulic performance of the soil treatment and dispersal system are prohibited. This includes, but is not limited to, covering all or part of the soil treatment system with an impermeable surface as determined by the local unit of government.

### Justification

The first two changes to this former part are grammatical in nature for clarity.

The remaining change is to provide guidance on what is included as acceptable activities over the soil treatment concerning covering the soil treatment system with an impermeable surface, such as a driveway or patio. Activities should not take place on the soil treatment system which impair the transfer of oxygen to the soil treatment system, since it is the oxygen that provides biochemical decomposition of the organic sewage constituents. It may be difficult to determine the degree of impairment, so the measuring point chosen is a vegetative surface

### **628.** Proposed Change new part 7080.2450, Subpart 8, item A, formerly 7080.0175, Subpart 8, item A.

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

A. not be used on a system failing to protect groundwater unless the activities meet the requirements of parts 7080.2350 and 7080.2400;

### Justification

The proposed change is due to the renaming of failing systems to systems failing to protect groundwater. The change is not meant to alter the meaning or intent of the provision. Please refer to Exhibit 434.

### **629.** Proposed Change former part 7080.0175, subpart 8, item B.

B. not decrease the required vertical separation;

### Justification

This provision is proposed to be deleted because there is no rejuvenation methods that decrease the vertical separation distance.

**630.** Proposed Change new part 7080.2450, subpart 8, item B, formerly 7080.0175, Subpart 8, item C.

*B. not cause preferential flow from the soil treatment and dispersal system bottom to the seasonally saturated soil or bedrock; and*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**631.** Proposed Change new part 7080.2450, Subpart 8, item C, formerly 7080.0175, Subpart 8, item D.

*C. be conducted by an appropriately certified qualified employee or an appropriately licensed business as specified in chapter 7083, as published in the State Register, volume ..., page ....*

*Any substance added with the intent to increase the infiltration rate of the soil treatment and dispersal system must not contain hazardous substances.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring. In addition, a new provision is proposed which states that a hazardous substance may not be added to the system to increase performance. This is reasonable as the system is not designed to adequately treat the waste which could result in groundwater contamination.

**MIN. R. 7080.2500 SYSTEM ABANDONMENT**

**632.** Proposed Change new part 7080.2500, Subpart 1, formerly 7080.0176, Subpart 1.

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

Justification

The first change to this former subpart is to clarify that if the system is not currently in use, but is intended to be used in the future, then the system does not need to be abandoned. Please refer to comment 9 of Exhibit 15.

The remaining changes are grammatical in nature for clarity.

**633.** Proposed Change new part 7080.2500, Subpart 1, item A, formerly 7080.0176, Subpart 1, item A.

*A. All solids and liquids must be removed and disposed of according to part 7080.2450, Subpart 6, by a licensed maintenance business.*

Justification

This is a former provision that has been moved with a minor language change for clarity and a format change due to rule restructuring.

**634. Proposed Change new part 7080.2500, Subpart 1, item B.**

*B. All electrical devices and devices containing mercury must be removed and disposed of according to applicable regulations.*

Justification

Some float controls used in dosing chambers contain mercury. Mercury laden items should not be buried if the tank is to be left in place, instead the mercury laden components should be removed and properly disposed of in accordance with applicable requirements. Also modern electrical components (such as small computer chips) should not be buried with the tank and should be properly disposed.

**635. Proposed Change new part 7080.2500, Subpart 1, item C, formerly 7080.0176, Subpart 1, items B and C.**

*C. Abandoned tanks or any other underground cavities must be removed or remain in place and crushed with the remaining cavity filled with soil or rock material.*

Justification

The difference in this revised provision is that all tanks would need to be crushed, regardless of depth of burial. This is prudent as all the tank bottoms should be crushed in order to allow the drainage of water.

**636. Proposed Change new part 7080.2500, Subpart 2, formerly 7080.0176, Subpart 2.**

*Subp. 2. Future discharge. Access for future discharge to the system must be permanently denied.*

Justification

This is a former provision that has been moved with a format change due to rule restructuring.

**637. Proposed Change new part 7080.2500, Subpart 3, formerly 7080.0176, Subpart 3.**

*Subp. 3. Removal of system. If soil treatment and dispersal systems are removed, contaminated materials shall be properly handled to prevent human contact. Contaminated materials include distribution media, soil or sand within three feet of the system bottom, distribution pipes, tanks, and contaminated soil around leaky tanks. Contaminated material also includes any soil that received sewage from a surface failure. Contaminated materials must be disposed of according to items A to D.*

Justification

If system components are to be removed, proper handling of those components is important for public health and environmental protection, as the components can contain pathogenic organisms and nutrients. Contaminated materials, from a pathogen standpoint, are materials that have been in contact with sewage before the sewage has passed through 3 feet of soil, as the soil is the disinfection media of SSTS.

**638. Proposed Change new part 7080.2500, Subpart 3, item A.**

*A. Contaminated materials disposed of off-site must be disposed of according to part 7080.2450, Subpart 6.*

### Justification

Contaminated materials as described in subpart 3 have the same treatment and disposal issues as solids and liquids removed from sewage tanks, therefore, similar disposal requirements should apply.

#### **639.** Proposed Change new part 7080.2500, Subpart 3, item B.

*B. If contaminated material is to be spread or used on-site within one year of contact with sewage, the material must be placed in an area meeting the soil requirements described in part 7080.2150, Subpart 3, item D, and the material must be covered with a minimum of six inches of uncontaminated soil and protected from erosion. After one year following contact with sewage, the material may be spread in any location, covered with a minimum of six inches of uncontaminated soil, and protected from erosion. After one year following contact with sewage, the material may be used to fill in the abandoned in-place sewage tanks.*

### Justification

It is felt that fresh contaminated material should be treated the same as an operating SSTS. Therefore, if the material is to be spread on the site, the material needs to meet all the siting and soils requirements of an SSTS. The system requirements most appropriate to cite in this circumstance are the requirements for at-grade systems since they are built on the natural ground surface, the same as the contaminated material to be spread. These requirements especially include all setbacks and soil criteria. The one year criteria was derived by conversation with Dr. Dean Cliver, formerly of the University of Wisconsin, who indicated that a one year time frame would be sufficient for die-off and inactivation of most pathogenic species. The required coverage over the contaminated material is to ensure that direct contact cannot be made from those who may be playing in the yard or lawn situation.

#### **640.** Proposed Change new part 7080.2500, Subpart 3, item C.

*C. Contaminated pipe, geotextile fabric, or other material must be dried and disposed of in a mixed municipal solid waste landfill.*

### Justification

Removed contaminated materials which cannot be land spread, should be considered a solid waste and disposed of by those requirements.

#### **641.** Proposed Change new part 7080.2500, Subpart 3, item D.

*D. The person or business abandoning the system must complete and sign a record of abandonment that states the system was abandoned according to this part. The record must be sent to the local unit of government within 90 days of abandonment.*

### Justification

The new compliance standards for ISTS (Minn. R. 7080.1500) are proposed to require that systems no-longer-in-use be properly abandoned. If not properly abandoned, they are to be considered non-conforming. Therefore, it is important that records be kept indicating that the system was properly abandoned so future transfer of the property can take place without concern if the system was properly abandoned. Please refer to comment 14 of Exhibit 8.

## **MINN. R. 7080.0178 OTHER SYSTEMS**

### **642. Proposed Change former part 7080.0178.**

It is proposed to delete this part and move the applicable requirements to Type III systems found in new Minn. R. 7080.2300.

### **643. Proposed Change former part 7080.0178, subpart 1.**

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

#### Justification

The administrative directive of the first sentence will be moved to new Minn. R. ch. 7082, which provides the administrative requirements for local units of government. The former requirement that Other Systems (now proposed as Type III) must be operated under a monitoring and mitigation plan (Minn. R. 7080.0310), will be changed to require Type III systems to be operated under a management plan. The reasonable assurance language of the last sentence is now found in Minn. R. 7083.0740, subp.2(B).

### **644. Proposed Change former part 7080.0178, Subpart 2, item A.**

~~*Subpart 2. Minimum requirements. Systems designed, constructed, and operated under this part shall meet the requirements of part 7080.0179, subpart 2, items B<sub>1</sub> and D, and:  
—A. be designed with a vertical separation of three feet or greater and with a soil texture of medium sand or finer immediately below the distribution medium;*~~

#### Justification

The provisions referenced in former subpart 2 were moved to Minn. R. 7080.2150, subp.2 and 3(E).

### **645. Proposed Change former part 7080.0178, Subpart 2, item B.**

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

#### Justification

This provision was moved to new Minn. R. 7080.2300, item E, and modified. Please see the justification for Minn. R. 7080.2300, item E.

### **646. Proposed Change former part 7080.0178, Subpart 2, item C.**

~~*C. provide flow measurement.*~~

#### Justification

This provision was moved to new Minn. R. 7080.2300, item C.

**647. Proposed Change former part 7080.0178, Subpart 3**

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

Justification

This provision is now found in Minn. R. 7080.1500, subp.4(C).

**MINN. R. 7080.0179 PERFORMANCE SYSTEMS**

Systems previously designed under this former part are proposed to be designed under Type V systems in new Minn. R. 7080.2400.

**648. Proposed Change former part 7080.0179 subpart 1.**

~~Subpart 1. Incorporation by reference of this part. Past or current incorporation by reference of this chapter into a local ordinance does not include adoption of this part. If a local unit of government chooses to adopt this part, it must do so expressly. The local unit of government may use the following format: "Minnesota Rules, part 7080.0179, is incorporated by reference into Ordinance ....."~~

Justification

This provision is proposed to be replaced by similar language in new Minn. R. ch. 7082.

**649. Proposed Change former part 7080.0179, Subpart 2, item A.**

~~Subp. 2. **Performance systems.**~~

~~A. Each system's design report, monitoring plan, and mitigation plan under this part must be operated under the permit requirements of part 7080.0310, subpart 6. Reasonable assurance of performance of the system must be submitted to the local unit of government. The engineering design of the system must be submitted and approved by the local unit of government.~~

Justification

The operating permit requirement was moved to new Minn. R. ch. 7082. The reasonable assurance requirement is proposed to be moved to Minn. R. 7083.0740, subp. 2(C). The design submittal to the LUG has been moved to Minn. R. ch. 7082.

**650. Proposed Change former part 7080.0179, Subpart 2, item B, subitem (1).**

~~Systems designed, constructed, and operated under this part shall meet or exceed the following requirements:~~

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

Justification

This provision was moved to the third paragraph of Minn. R. 7080.1050 and 7080.1550.

**651. Proposed Change former part 7080.0179, Subpart 2, item B, subitem (2).**

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

Justification

This provision was moved to new Minn. R. 7080.2150, subp.2(B).

**652. Proposed Change former part 7080.0179, Subpart 2, item B, subitem (3).**

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

Justification

This provision was moved to Minn. R. 7080.2150 new subp. 2(B), with language modifications for clarity.

**653. Proposed Change former part 7080.0179, Subpart 2, item B, subitem (4).**

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

Justification

This provision was moved to Minn. R. 7080.2150 new subp. 2(C).

**654. Proposed Change former part 7080.0179, Subpart 2, item B, subitem (5).**

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

Justification

This provision was moved to Minn. R. 7080.2150 new subp. 2(A).

**655. Proposed Change former part 7080.0179, Subpart 2, item B, subitem (6).**

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

Justification

This provision was moved to Minn. R. 7080.2450, subp. 1.

**656. Proposed Change former part 7080.0179, Subpart 2, item C, subitems (1) and (2).**

~~—C. Groundwater and surface water protection.~~

~~—(1) soil treatment systems must be designed with a vertical separation appropriate for the sewage treatment system design, including effluent quality, loading rates, loading methods, soil conditions, and~~

~~other site specific considerations as established in the operating permit. An unsaturated zone must be maintained between the bottom of the soil treatment system and the seasonally saturated soil or bedrock during loading of effluent.~~

~~—(2) The sewage effluent/groundwater plume shall contain no viable fecal organisms 25 feet horizontally from the soil treatment area. This limit shall not be exceeded during typical periods of climatic stress and/or under typical maximum designed flow volumes.~~

#### Justification

Provisions of these subitems have moved to new Minn. R. 7080.2400.

#### **657. Proposed Change former part 7080.0179, Subpart 2, item C, subitem (3).**

~~—(3) If the system is located on a lot which adjoins a lake, the sewage effluent/groundwater plume shall:~~  
~~—(a) have a total phosphorus concentration of 1 mg/l or less 50 feet or greater from the soil treatment area; or~~  
~~—(b) have concentrations of total phosphorus less than 1 mg/l above background concentrations 50 feet or greater from the soil treatment area.~~

#### Justification

This provision was replaced by Minn. R. 7080.2150, subp. 2(E). It is proposed to have the local units of government determine if a phosphorus requirement will be necessary for subsurface sewage treatment systems. The Agency is planning to provide a guidance document for local units of government to make a determination if a phosphorus assessment is necessary. Please refer to comment 5 of Exhibit 398.

#### **658. Proposed Change former part 7080.0179, Subpart 2, item C, subitem (4).**

~~—(4) Local units of government may enact nitrogen standards for sewage effluent/groundwater plumes from an SSTS. Local units of government may also require additional standards for local resource protection.~~

#### Justification

This provision was moved to Minn. R. 7080.2150, subp. 2(E).

#### **659. Proposed Change former part 7080.0179, Subpart 2, item D, subitem (1).**

~~**D. Long-term performance.**~~

~~—(1) Designers of systems designed under this part shall provide to the local unit of government and the property owner the following:~~  
~~—(a) estimated costs for construction, operation, monitoring, service, component replacement, and management;~~  
~~—(b) anticipated system life; and~~  
~~—(c) hydraulic and organic loading rates to all components of the system~~

#### Justification

This subitem was moved to Minn. R. 7083.0740, subp. 2.

**660. Proposed Change part former 7080.0179, Subpart 2, item D, subitem (2).**

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

Justification

This part was moved to Minn. R. 7080.2400, item A.

**MINN. R. 7080.0305 GENERAL REQUIREMENTS FOR LOCAL ORDINANCES**

The requirements for local ordinances are proposed to be moved to new chapter 7082. This section of the SONAR will direct where each section is proposed to be placed in chapter 7082. Provisions proposed to be moved will be justified in the new location in Minn. R. ch. 7082 of this SONAR. Provisions proposed to be deleted and not moved into new chapter 7082 will be justified in this section of the SONAR.

**661. Proposed Change part former 7080.0305, Subpart 1.**

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

Justification

These provisions were moved to Minn. R. 7082.0030, subp. 1.

**662. Proposed Change part former 7080.0305, Subpart 2.**

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

Justification

The first provision has been moved to Minn. R. 7082.0030, subp. 2(A). The second provision was moved to Minn. R. 7082.0050, subp. 5.

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

Justification

This provision was moved to Minn. R. 7082.0040, subp. 2(A).

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

### Justification

This provision was moved to Minn. R. 7082.0100, subp. 5.

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

### Justification

This provision was modified and moved to Minn. R. 7082.0100, subp. 1(E).

~~D. Design options under part 7080.0172 may be employed unless specifically prohibited, in whole or in part, by local ordinance.~~

### Justification

This provision was moved to Minn. R. 7082.0100, subp. 3A(3).

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

### Justification

This provision was moved to Minn. R. 7082.0100, subp. 2.

~~Subpart 3. Variances.~~

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

### Justification

This provision was modified and moved to Minn. R. 7082.0500, subp. 3.

~~B. Variances to technical standards and criteria may be granted by the local unit of government if applicable local variance procedures are followed. Less restrictive vertical separation is allowed if the requirements of Minn. Stat. § , section 115.55, subdivision 7, are met or if the requirements in part 7080.0179 are met.~~

### Justification

This provision was modified and moved to Minn. R. 7082.0300, subp. 3.

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

### Justification

This provision was moved to Minn. R. 7082.0300, subp. 2(C).

~~Subpart 4. Administrative requirements for local ordinances.  
Administration of local ordinances regulating subsurface sewage treatment systems shall comply with parts 7080.0305 to 7080.0315. Local ordinances shall include items A to H.~~

Justification

This provision was modified and moved to Minn. R. 7082.0100, subp. 1 and 3.

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

Justification

This provision was modified and moved to Minn. R. 7082.0100, subp. 1(B).

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

Justification

This provision was moved to Minn. R. 7082.0100, subp. 1(C).

~~C. A provision requiring that the owner has five years from the date of the bedroom addition permit issuance to upgrade, replace, repair, or discontinue use of the system.~~

~~This upgrade criterion applies only if:~~

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

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

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

~~(4) the system does not comply with part 7080.0060; and~~

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

Justification

These provisions were moved to Minn. R. 7082.0100, subp. 1(D).

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

Justification

This proposal is proposed to be deleted to avoid redundancy with former subpart 2.

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

### Justification

This provision was modified and moved to Minn. R. 7082.0100, subp. 3(A) (1).

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

### Justification

This provision was modified and moved to Minn. R. 7082.0030, subp. 3(A)(6).

~~G. — A provision that requires abandonment in accordance with part 7080.0176 of an existing subsurface sewage treatment system, or part thereof, that will no longer be used.~~

### Justification

This provision was modified and moved to Minn. R. 7082.0100, subp.3(A)(2).

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

### Justification

This provision was modified and moved to Minn. R. 7082.0100, subp. 3(A)(7).

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

### Justification

This provision was modified and moved to Minn. R. 7082.0040, subp. 1(A), 7083.0050, subp. 2, and 7083.0100, subp. 2.

~~Subpart 6. **Requirements for alternative local standards.**~~

~~Counties may adopt and enforce by ordinance alternative local standards for an existing system or new construction or replacement. The alternative local standards must protect public health and the environment in accordance with Minn. Stat. § , section 115.55, subdivision 7, paragraphs (a) and (b), and must comply with items A to E.~~

~~A. — Alternative local standards shall not apply to SWF.~~

~~B. — Any alternative local standard must include references to requirements under other state laws or rules or local ordinances.~~

~~C. — Local ordinances with alternative local standards for existing systems must include a time period to upgrade, replace, or discontinue use of a failing system. The draft local ordinance, including the alternative local standards, shall be submitted to the commissioner for comment prior to adoption to demonstrate that, based on local circumstances in that jurisdiction, the alternative local standards~~

~~adequately protect public health and the environment. Justification for the alternative local standard for existing systems may include:~~

- ~~(1) — soil separation;~~
- ~~(2) — soil classification;~~
- ~~(3) — vegetation;~~
- ~~(4) — system use;~~
- ~~(5) — localized well placement and construction;~~
- ~~(6) — localized density of systems and wells;~~
- ~~(7) — extent of area to be covered by the alternative local standard;~~
- ~~(8) — ground water flow patterns; and~~
- ~~(9) — existing natural or artificial drainage systems.~~

~~D. — Alternative local standards for new construction or replacement. Counties may adopt alternative local standards for new construction or replacement in areas of sustained and projected low population density where conditions render conformance to this chapter difficult or otherwise inappropriate. Counties seeking to adopt alternative local standards for new construction or replacement must submit the following information:~~

- ~~(1) — population density of the area covered by the alternative local standard;~~
- ~~(2) — reasons why conformance to this chapter is difficult or otherwise inappropriate;~~
- ~~(3) — a description of the hardship that would result from strict adherence to this chapter;~~
- ~~(4) — evidence of sustained and projected low population density;~~
- ~~(5) — evidence that the proposed alternative local standard provides cost effective and long term treatment alternatives;~~
- ~~(6) — a map delineating the area of the county to be served by the local standard; and~~
- ~~(7) — justification should also include item C, subitems (1) to (9).~~

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

### Justification

These provisions were modified and moved to Minn. R. 7082.0050, subp. 5.

~~Subpart 7. [Repealed, 24 SR 426]~~

~~Subpart 8. [Repealed, 24 SR 426]~~

~~Subpart 9. **Enforcement of local ordinances.** Local units of government shall enforce local ordinances that regulate subsurface sewage treatment systems through permitting programs that meet the minimum requirements under part 7080.0310 and inspection programs that meet the minimum requirements under part 7080.0315. Local units of government may also enforce local ordinances under Minn. Stat. § , section 115.071, subdivisions 3 and 4.~~

### Justification

This provision was modified and moved to Minn. R. 7082.0030, subp. 5.

*Subpart 10. Incorporation by reference part 7080.0179. Past or future incorporation by reference into a local ordinance of all or part of this chapter does not include adoption of part 7080.0179, the part establishing standards for performance or part 7080.0170, subpart 2, item C, subitem (1), unit (b), Table Va. If a local unit of government chooses to adopt that part, it must do so expressly. The local unit of government may use the following format: “Minnesota Rules, part 7080.0179, is incorporated by reference into Ordinance .....”*

#### Justification

This provision has been dropped because the amendments to chapter Minn. R. 7080.1730, item F will now require designers to assess the soil conditions against any data generated by percolation tests if required by the LUG.

### **MINN. R. 7080.0310 PERMIT PROGRAM FOR SUBSURFACE SEWAGE TREATMENT SYSTEMS**

The requirements for local permit programs are proposed to be moved to new Minn. R. ch. 7082. This section of the SONAR will direct where each section is proposed to be placed in chapter 7082. Provisions proposed to be moved will be justified in the new location in chapter 7082 of this SONAR. Provision proposed to be deleted and not moved into new chapter 7082 will be justified in this section of the SONAR.

#### **663. Proposed Change part former 7080.0310**

##### *Subpart 1. ~~General requirements for permit program.~~*

*A. — A local unit of government with a local ordinance to regulate subsurface sewage treatment systems must have a permit program that specifically addresses the following:*

#### Justification

This provision was modified and moved to Minn. R. 7082.0500, subp. 1(A).

- (1) — permit application requirements;*
- (2) — permit review and approval requirements and procedures;*
- (3) — record keeping; and*
- (4) — reporting.*

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

#### Justification

These provisions were modified and moved to Minn. R. 7082.0500, subp.1(B).

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

#### Justification

These provisions were modified and moved to Minn. R. 7082.0500, subp. 1(C).

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

#### Justification

These provisions were modified and moved to Minn. R. 7082.0500, subp. 2(A).

~~Subpart 3. **Permit approval requirements and procedures.** The permit program must include the requirements in items A to C.~~

~~A. — A qualified employee or licensee who is a designer~~

~~I or inspector and who is authorized by the local unit of government must review the permit application and Exhibits to determine whether the proposed system will meet applicable requirements.~~

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

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

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

#### Justification

These provisions were modified and moved to Minn. R. 7082.0500, subp. 3.

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

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

~~B. design reports for items identified in part 7080.0115;~~

~~C. as built;~~

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

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

#### Justification

These provisions were modified and moved to Minn. R. 7082.0300, subp. 4.

~~Subpart 5. **Reporting requirements.** Local units of government must submit annual reports to the commissioner to demonstrate enforcement of the local ordinance. The reports shall contain information from the previous calendar year and shall be received by the commissioner no later than February 1 of each succeeding year. At a minimum, the reports must include:~~

- ~~A. a copy of the standard permit and inspection forms;~~
- ~~B. the name and address of the program administrator, all qualified employees and contracted licensees authorized by the local unit of government;~~
- ~~C. the number of permits issued and the percent of systems field inspected;~~
- ~~D. the number and type of systems, including number of mound systems; at grade systems; seepage beds; gravelless, chamber, and drainfield rock trenches; alternative, and performance systems; and other systems; estimated total number of systems and estimated percentage in compliance within their jurisdictional boundaries; and~~
- ~~E. for counties, the names of cities and townships that have local ordinances within the county.~~

#### Justification

These provisions were modified and moved to Minn. R. 7082.0040, subp. 5.

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

~~At a minimum, the operating permit shall include:~~

- ~~A. maintenance requirements;~~
- ~~B. monitoring and mitigation plans as described in subpart 7;~~
- ~~C. compliance limits and compliance boundaries;~~
- ~~D. reporting frequency, not less than annually;~~
- ~~E. requirements that the permittee notify the local unit of government when monitoring plan requirements are not met; and~~
- ~~F. disclosure of the status and condition of replacement SSTs.~~

#### Justification

These provisions were modified and moved to Minn. R. 7082.0050, subp. 5(E) and Minn. R. 7083.0100, subp. 3(A)(11).

~~Subpart 7. **Monitoring and mitigation plans.**~~

~~A. — General.~~

~~(1) Local units of government must require monitoring and mitigation plans for systems designed under part~~

~~7080.0178 and 7080.0179.~~

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

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

~~B. — Monitoring plan.~~

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

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

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

#### Justification

It is proposed to change monitoring and mitigation plans into management plans, and require them for all systems. Please see justification for Minn. R. ch. 7082 subp. 3, item A, subitem 10.

### **MINN. R. 7080.0315 INSPECTION PROGRAM FOR INDIVIDUAL SEWAGE TREATMENT SYSTEMS**

The requirements for local inspection programs are proposed to be moved to new Minn. R. ch. 7082. This section of the SONAR will direct where each section is proposed to be placed in chapter 7082. In many cases the language changes are proposed for clarity or due to the format changes in the rule. Provisions proposed to be moved and modified will be justified in the new location in chapter 7082 of this SONAR. Provision proposed to be deleted and not moved into new chapter 7082 will be justified in this section of the SONAR.

#### **664. Proposed Change part 7080.0315, Subparts 1 and 2.**

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

#### Justification

This provision was modified and moved to Minn. R. 7082.0700, subp. 1.

~~Subpart 2. **Compliance inspection.** A compliance inspection shall be conducted:~~

~~A. — to ensure compliance with applicable requirements. Persons conducting compliance inspections for disclosures shall also meet the requirements of item F;~~

~~B. — to ensure compliance before issuance of a permit or variance for the addition of a bedroom on property served by a system, if the local unit of government issues permits for the addition of a bedroom, unless the requirements under part 7080.0310, subpart 3, item C, are met;~~

~~C. — for all new construction or replacement;~~

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

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

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

### Justification

These provisions were modified and moved to Minn. R. 7082.0700, subp. 2.

#### ~~Subpart 3. Certificate of compliance; notice of noncompliance.~~

##### ~~A. — General.~~

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

### Justification

This provision was modified and moved to Minn. R. 7082.0700, subp.4.

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

### Justification

This provision was modified and moved to Minn. R. 7082.0700, subp. 3(E).

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

### Justification

This provision was moved to Minn. R. 7082.0700, subp. 3(F).

~~(4) — If a compliance inspection indicates that the system is not in compliance with part 7080.0060 or presents an imminent threat to public health or safety, the notice must also contain a statement to this effect and specify why the owner must upgrade, replace, or discontinue use of the system.~~

### Justification

This provision was moved to Minn. R. 7082.0700, subp. 3(G).

##### ~~B. — New construction or replacement.~~

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

### Justification

This provision was moved to Minn. R. 7082.0700, subp. 3(A) and (D).

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

### Justification

This provision was moved to Minn. R. 7082.0700, subp. 3(H).

~~C. — Existing systems.  
(1) — An inspection report for existing systems shall include the methodology used to determine vertical separation, tank leakage, and whether an imminent threat to public health or safety exists. If the original installation took place under a local unit of government permit process that included the following verification procedure, then there is no further need to verify the vertical separation for the life of the system. Under the local permit process, this verification must be made by in-field measurements of the redoximorphic features determined and documented during the original soil testing, governmental review and as-builts, or by documentation of in-field measurements of the redoximorphic features and the in-place systems determined during a construction inspection.~~

~~(2) — Certificates of compliance for existing systems remain valid for three years from the date of issuance unless the local unit of government finds evidence of an imminent threat to public health or safety.~~

### Justification

These provisions were expanded, modified and moved to Minn. R. 7082.0700, subp. 4.

## **MINN. R. 7080.0600 OTHER ESTABLISHMENTS**

The technical standards of other establishments are proposed to be moved to new Minn. R. ch. 7081. This section of the SONAR will direct where each section is proposed to be placed in chapter 7081. In many cases the language changes are proposed for clarity or due to the format changes in the rule. Provisions proposed to be moved and modified will be justified in the new location in chapter 7081 of this SONAR. Provision proposed to be deleted and not moved into new chapter 7082 will be justified in this section of the SONAR.

### **665. Proposed Change part former 7080.0600, Subpart 1.**

#### ***Subpart 1. General.***

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

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

### Justification

This provision was moved to Minn. R. 7081.0050 and 7081.0270, subp. 1.

**666. Proposed Change part former 7080.0600, Subpart 2, item A.**

~~—Subpart 2. Administration by state agencies.~~

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

Justification

This provision was moved to Minn. R. 7081.0040, subp.2(B).

**667. Proposed Change part former 7080.0600, Subpart 2, item B**

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

Justification

This provision was moved to Minn. R. 7081.0040, subp. 1(B).

**668. Proposed Change part former 7080.0600, Subpart 2, item C.**

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

- ~~(1)a site evaluation according to part 7080.0110;~~
- ~~(2)a description of methods to meet or exceed permit standards for down gradient ground water quality;~~
- ~~(3)an evaluation of ground water conditions and ground water impacts, and a ground water monitoring and mitigation plan addressing those conditions and impacts;~~
- ~~(4 )a plan to identify and eliminate discharges of wastewater other than sewage;~~
- ~~(5 )a plan to prevent future discharges of wastewater other than sewage;~~
  
- ~~(6 )flow measurements;~~
- ~~(7) an operation and maintenance plan;~~
- ~~(8) a septage disposal plan; and~~
- ~~(9) for joint systems, a statement signed by all owners of dwellings or other establishments planned to be connected to collection systems that they agree to be part of the system, to participate in the construction projects, and to participate in and finance future operation, maintenance, and replacement of the system.~~

Justification

These provisions are proposed to be deleted and not moved to proposed Minn. R. ch. 7081. These provisions govern systems which require a permit and this rule is proposed to govern systems which fall beneath the permit threshold. MPCA permitting, technical review and enforcement staff were asked if systems requiring a permit should be included in this rule or another chapter, and their response was such systems from should not be included in this rule or another chapter, because all necessary administrative, submittal and review procedures can be handled through requirements of the permit.

**669. Proposed Change part former 7080.0600, Subpart 3.**

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

- ~~A. Facility name.~~
- ~~B. Facility location by, at a minimum, section, township, range, and quarter, preferably including longitude and latitude coordinates.~~
- ~~C. A map showing the location of the system, property lines, adjacent surface waters, wellhead protection areas, and existing and proposed water supply wells within 100 feet of the system.~~
- ~~D. Name and address of facility owner or owner's agent and contact person.~~
- ~~E. Type of facility and chemicals and processes used.~~
- ~~F. Facility average and maximum design flow in gallons per day.~~
- ~~G. Chemical composition of waste stream.~~
- ~~H. Operating status of the system.~~
- ~~I. Certification by the owner or owner's agent that the submitted information is correct.~~
- ~~J. Additional information as required by the commissioner or the United States Environmental Protection Agency.~~

Justification

This provision was moved to Minn. R. 7081.0050, subp. 2.

**670. Proposed Change part former 7080.0600, Subpart 4.**

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

Justification

This provision will be modified to reference the new technical standards developed for MSTs which are found in proposed Minn. R. 7081.0180 and 7080.0230. Development of technical standards for MSTs is the main reason for these amendments.

**671. Proposed Change part former 7080.0600, Subpart 4, item A.**

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

Justification

This provision was moved to Minn. R. 7081.0230, subp. 4.

**672. Proposed Change part former 7080.0600 subpart 4 item B subitem (1).**

~~B. Design flows.  
(1) For multifamily dwellings, the average design flow shall consist of the sum of the average design flows for each individual unit as described in part 7080.0125, subpart 2. Flow determination for systems~~

~~designed to serve more than ten dwellings may consider classification I dwellings as classification II dwellings.~~

Justification

This provision was moved to Minn. R. 7081.0120, subp. 1 and 7081.0120, subp. 3(B).

Proposed Change part former 7080.0600, Subpart 4, item B, subitem (2) -

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

Justification

The first provision (sentence) was moved to Minn. R. 081.0270, subp. 1.

The second provision (sentence) is proposed to be deleted. It is proposed in new Minn. R. ch. 7081 to use only one design flow value (i.e., average daily flow). Formerly, there are two design flows used, a maximum flow for septic tank sizing and an average flow for soil treatment systems. The problem lies in what flow to use for other design areas, such as when a state permit is required, for contaminant calculations, or for ground water mounding assessment. Therefore, to eliminate the current confusion by the industry, it is proposed to use only one flow value and add any factors of safety to the design parameters of concern, instead of adding the safety factors by varying the flow amounts.

The last provision was moved to Minn. R. 7081.0270, subp 1.

**673.** Proposed Change part former 7080.0600, Subpart 4, item B, subitem (2), unit (a).

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

Justification

This provision was moved with modifications to Minn. R. 7081.0130, subp. 3.

**674.** Proposed Change part former 7080.0600, Subpart 4, item B, subitem (2), unit (a), subunit i.

~~(b) Measured average and maximum design flows:  
--(i) the measured average design flow  
shall be determined by averaging the measured daily flows for a  
consecutive seven day period in which the establishment is at  
maximum capacity or use; and~~

Justification

This provision was modified and moved to Minn. R. 7081.0130, subp. 2.

**675.** Proposed Change part former 7080.0600, Subpart 4, item B, subitem (2), unit (a), subunit ii.  
ii. the measured maximum design flow  
shall be the measured peak daily flow.

Justification

This provision is proposed to be deleted, please see the second justification for Minn. R. 7080.0600, subp. 4 B (2).

**676.** Proposed Change part former 7080.0600, Subpart 4, item B, subitem (3).

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

Justification

This provision was moved to Minn. R. 7081.0130, subp. 4.

**677.** Proposed Change part former 7080.0600, Subpart 4, item C, subitem (1).

~~*C. Septic tanks and holding tanks.  
(1) A septic tank larger than 3,000 gallons shall be divided into two or more compartments or multiple tanks shall be used.*~~

Justification

It is proposed to delete this provision for two reasons. First, this provision was included in past rules because a supporting wall was necessary to support the lid of the larger span of larger tanks. Under the new tank standards, the tank will need to be designed by an engineer, so they will make the determination of what structural support is necessary for the lid. Secondly, the efficacy of compartments to remove solids is now in question, as it is now thought that maybe larger volumes may do a better job of settling solids. Please see Exhibit 39.

**678.** Proposed Change part former 7080.0600, Subpart 4, item C, subitem (2), units (a) and (b).

~~*(2) Septic tank liquid capacity must be in accordance with units (a) and (b).  
(a) Sufficient capacity shall provide a septic tank detention period of not less than 36 hours in the tank for maximum design flow of less than 1,500 gallons per day, but in no instance shall the liquid capacity be less than 750 gallons.  
(b) For maximum design flows greater than 1,500 gallons per day, the minimum liquid capacity shall equal 1,125 gallons plus 75 percent of the maximum design flow.*~~

Justification

These provisions are proposed to be deleted. These subitems will be replaced by a new provision which is justified in Minn. R. 7081.0240, subp. 2.

**679.** Proposed Change part former 7080.0600, Subpart 4, item C, subitem (2), unit (c).

~~*(c) Sufficient detention time or pretreatment must be provided to produce an effluent quality suitable for discharge to a soil treatment system as defined in part 7080.0170, subpart 1, item D.*~~

Justification

This provision was modified to place limits on solids loading per square foot of absorption area. Please see the justification for new Minn. R. 7081.0270, subp.6(A).

**680.** Proposed Change part former 7080.0600, Subpart 4, item C, subitem (3).

~~(3)For laundromats, the outlet baffle of all septic tanks and baffles between compartments must be submerged to a depth of 50 percent of the liquid depth of the tank.~~

Justification

This provision was moved with modifications to Minn. R. 7081.0240, subp. 3 .

**681.** Proposed Change part former 7080.0600, Subpart 4, item C, subitem (4).

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

Justification

This provision was moved to Minn. R. 707081.0240, subp. 2(E).

**682.** Proposed Change part former 7080.0600, Subpart 4, item D, subitem (1).

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

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

Justification

This provisions was moved to Minn. R. 7081.0260.

**683.** Proposed Change part former 7080.0600, Subpart 4, item D, subitem (2).

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

Justification

This provision was moved to Minn. R. 7080.0150 new subp. 3(B)(4) and it is also referenced in Minn. R. 7081.0260 for MSTs.

**684.** Proposed Change part former 7080.0600, Subpart 4, item D, subitem (3).

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

## Justification

This provision was moved to Minn. R. 7080.0160, subp.1a(E) and referenced in Minn. R. 7081.0260 for MSTs.

### **685. Proposed Change part former 7080.0600, Subpart 4, item E, subitem (1).**

*E. Conventional collector system design.*

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

## Justification

It is proposed to delete all design standards for collection systems. This is due to the reason that complete and nationally recognized design criteria for small diameter collection systems is lacking. So providing partial standards, as in the current rule, may not be prudent. In addition, professional engineers may be required to design a collection system for an MSTs, therefore, the design will be governed by engineering principles.

### **686. Proposed Change part former 7080.0600, Subpart 4, item E, subitem (2).**

*(2) Collection systems shall be designed based on the sum of all flows for dwellings and other establishments as described in item B. Flows shall be increased to allow for 200 gallons of infiltration per inch of pipe diameter per mile per day. If the system is designed with each dwelling having a sewage tank, or designed with a common sewage tank serving ten bedrooms or more or serving another establishment, the liquid capacity of the tanks shall be in accordance with item C. All sewage tanks shall meet the applicable requirements of part 7080.0130.*

## Justification

The collection system provision was moved to Minn. R. 7081.0140. The septic tank capacity provision was modified and moved to Minn. R. 7081.0240.

### **687. Proposed Change part former 7080.0600, Subpart 4, item E, subitems (3) to (9).**

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

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

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

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

*(7) There shall be no physical connection between sewers and water supply systems. Sewers shall be set back from water supply systems and piping as required for building sewers.*

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

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

Justification

Please refer to the justification for Minn. R. 7080.0600, subp. 4(E)(1).

**688. Proposed Change part former 7080.0600, Subpart 4, item E, subitem (10).**

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

Justification

This provision was modified and moved to Minn. R. 7081.0240, subp. 2(B).

**689. Proposed Change part former 7080.0600, Subpart 4, item E, subitem (11).**

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

Justification

This provision was modified and moved to Minn. R. 7081.0310.

**MINN. R. 7080.0700 LICENSES**

The requirements for professional licensing and certification are proposed to be moved to new Minn. R. ch. 7083. This section of the SONAR will direct where each section is proposed to be placed in chapter 7083. In many cases the language changes are proposed for clarity or due to the format changes in the rule. Provisions proposed to be moved and modified will be justified in the new location in chapter 7083 of this SONAR. Provision proposed to be deleted and not moved into new chapter 7082 will be justified in this section of the SONAR.

**690. Proposed Change part former 7080.0700, Subpart 1.**

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

~~\_\_\_\_\_ A. an industry individual who is a qualified employee performing work as directed by a state or local government employer;~~

~~\_\_\_\_\_ B. an individual who, after obtaining a signed design report from a designer I or II, constructs a system on land that is owned or leased by the individual and functions solely as a dwelling or seasonal dwelling for that individual. The system must be inspected before being covered and a certificate of~~

~~compliance or notice of noncompliance must be provided to the local unit of government after the inspection;~~

~~\_\_\_\_\_ C. an individual who performs labor or services as an employee of a licensee;~~

~~\_\_\_\_\_ D. a farmer who pumps septage from subsurface sewage treatment systems from dwellings or other establishments that are owned or leased by the farmer and disposes septage on land that is owned or leased by the farmer; or~~

~~\_\_\_\_\_ E. a property owner who personally gathers information, evaluates, or investigates the SSTS on or serving the property to provide a disclosure as defined under part 7080.0020, subpart 12b.~~

#### Justification

These provisions were moved to Minn. R. 7083.0700, subp. 1.

#### **691. Proposed Change part former 7080.0700, Subpart 2.**

~~Subpart 2. **State license categories.** The commissioner may issue the following licenses:~~

~~A. \_\_\_\_\_ designer I license for activities listed in items B and E;~~

~~B. \_\_\_\_\_ designer II license for designing SSTS and issuing and maintaining design reports;~~

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

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

~~E. \_\_\_\_\_ inspector license for evaluating site evaluations and designs; conducting compliance inspections and permitting and inspection activities; issuing written certificates of compliance and notices of noncompliance; and issuing and maintaining inspection reports.~~

#### Justification

This provision were modified, expanded and moved to Minn. R. 7083.0710 to 7083.0780.

#### **692. Proposed Change part former 7080.0700, Subpart 3.**

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

#### Justification

These provisions were moved to Minn. R. 7083.0790.

**693. Proposed Change part former 7080.0700, Subpart 4.**

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

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

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

*C. ~~as a method to limit the scope of the work to be conducted under the license to coincide with restrictions placed on the designated registered professional in accordance with part 7080.0860, subpart 6.~~*

Justification

These provisions were moved to Minn. R. 7083.0800.

**694. Proposed Change part former 7080.0705, Subpart 1.**

~~7080.0705 APPLICATION FOR LICENSE; FEES; RENEWAL.~~

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

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

~~B. ~~general liability insurance as required by part 7080.0710; and~~~~

~~C. ~~a corporate surety bond as required by part 7080.0710.~~~~

~~Subpart 2. **Requirements for obtaining or renewing licenses.**~~

~~A business that meets the eligibility requirements under subpart 1 may apply for or renew a license on forms provided by the commissioner. The application must be submitted no later than 60 days prior to the expiration/renewal date. Issuance of new licenses will also require a 60-day review and approval period.~~

~~Subpart 3. **Fees.** The annual license fee is \$100 for each license category under part 7080.0700, subpart 2.~~

~~Subpart 4. **Issuance.** Upon the commissioner's approval of the license application and payment of the license fees, a license will be issued to the proprietor for a sole proprietorship, the partners of a partnership, or the corporate chief executive officer or a qualifying person in Minnesota designated by a corporation.~~

~~Subpart 5. **Term.** The license is valid for one year after the date of issuance. License renewals may be requested for longer periods up to three years. The fee is determined by multiplying the approved number of years by the fee in subpart 3.~~

~~Subpart 6. **Denial.** The commissioner shall deny an application for issuance or renewal of a license if the applicant is not eligible under subpart 1. A license application may also be denied as the result of an enforcement action under part 7080.0900.~~

Justification

These provisions were modified and moved to Minn. R. 7081.0900.

~~7080.0710 BONDING AND INSURANCE FOR LICENSES.~~

**695.** Proposed Change part former 7080.0710, Subpart 1.

~~Subpart 1. **Submittal.** At the time an application for an initial or renewal license is submitted to the commissioner, the applicant must show proof of holding a corporate surety bond in the amount of at least \$10,000, and proof of general liability insurance meeting the following requirements:~~

~~A. the bond must be submitted to the commissioner on the bond form provided in part 7080.0920, and must name the applicant as the principal;~~

~~B. the bond must be signed by an official of the business who is legally authorized to represent the business;~~

~~C. the bond must cover work to be done under all subsurface sewage treatment system licenses to be held by the business; and~~

~~D. proof of general liability insurance must be evidenced by a notarized certificate of insurance form which shows the minimum coverage that will be in effect for at least the term of the license.~~

Justification

These provisions were modified and moved to Minn. R. 7083.1000.

**696.** Proposed Change part former 7080.0710, Subpart 2.

~~Subpart 2. **Multiple licenses.** If a business holds more than one license, one bond and one general liability insurance policy will fulfill the bond and insurance requirement for all the licenses.~~

Justification

This provision was moved to Minn. R. 7083.1000, subp. 1(A) and 7083.1000, subp.1(C).

**697.** Proposed Change part former 7080.0710, Subpart 3.

~~Subpart 3. **Bond use.** The bond must be conditioned on the principal faithfully performing the duties and in all things complying with all laws, ordinances, and rules pertaining to the license applied for and all contracts entered into.~~

Justification

This provision was moved to Minn R. 7083.1000, subp. 2.

**698.** Proposed Change part former 7080.0710, Subpart 4.

~~Subpart 4. **Term of bond.** The term of the bond must be continuous with the term of the license. The penal sum of the bond is noncumulative and is not to be aggregated every year that the bond is in force.~~

Justification

This provision was moved to Minn. R. 7083.1000, subp. 3.

**699.** Proposed Change part former 7080.0710, Subpart 5.

~~Subpart 5. **Bond components.** The bond must be written by a corporate surety licensed to do business in Minnesota. The corporate surety shall be responsible for providing 30 days' written notice to the commissioner of cancellation of a licensee's bond. If a bond is canceled, a licensee must not perform work requiring the bond as a condition of SSTS license until the licensee obtains another bond meeting the requirements of this part.~~

Justification

This provision was modified and moved to Minn. R. 7083.1000, subp.1(B) and (D) and 7083.1000, subp. 4.

**700.** Proposed Change part former 7080.0715, Subpart 1, item A.

~~Subpart 1. **General license conditions.** All SSTS licenses shall include the following conditions. The licensee must:~~

~~A. —ensure that all work to design, install, maintain, repair, pump, or inspect an SSTS is done according to applicable requirements;~~

Justification

This provision was moved to Minn. R. 7083.0720, item A.

**701.** Proposed Change part former 7080.0715, Subpart 1, item B.

~~B. —ensure that the designated registered professionals fulfill the conditions under subpart 2;~~

Justification

This provision was moved to Minn. R. 7083.0720, item B.

**702.** Proposed Change part former 7080.0715, Subpart 1, item C.

~~C. —designate an adequate number of registered professionals to meet the requirements under subpart 2;~~

Justification

This provision was moved to Minn. R. 7083.0720, item C.

**703.** Proposed Change part former 7080.0715, subpart 1, item D.

~~D. —notify the commissioner within 30 days after any change in the registered professional designations; and~~

Justification

This provision was modified and moved to Minn. R. 7083.0720, item F.

**704.** Proposed Change part former 7080.0715, subpart 1, item E.

~~E. — maintain the bond and insurance required under part 7080.0710.~~

#### Justification

This provision was moved to Minn. R. 7083.0720, item D.

#### **705. Proposed Change part former 7080.0715, Subpart 2, item A, subitems (1) and (2).**

~~Subpart 2. **Conditions for designated registered professional.**~~

~~A. — General designated registered professionals in all specialty areas are subject to all the obligations of the license under which they work and must:~~

~~(1) — provide direction and personal supervision to other employees working on an subsurface sewage treatment system;~~

~~(2) — ensure the work completed meets applicable requirements; and~~

#### Justification

These are former requirements which have been moved to Minn. R. 7083.0730.

#### **706. Proposed Change part former 7080.0715, Subpart 2, item A, subitem (3).**

~~(3) — complete a certified statement for design reports, as builds, pumping records, inspection reports, and other formal work products.~~

#### Justification

This is a former requirement which was moved to Minn. R. 7083.0730, item C.

#### **707. Proposed Change part former 7080.0715, Subpart 2, item B, subitem (1).**

~~B. **Requirements for designated registered professionals in each specialty area.**~~

~~(1) — Designers I and II must review designs by nonregistered employees. This review includes both verification of field observations and conclusions and design assumptions and calculations. All inspections under a designer I specialty must follow subitem (3).~~

#### Justification

This is a former requirement which was expanded, modified and moved to Minn. R. 7083.0740, subp. 3.

#### **708. Proposed Change part former 7080.0715, Subpart 2, item B, subitem (2).**

~~(2) — Installers must:~~

~~(a) — Ensure a compliance inspection is conducted prior to completion and covering work;~~

~~(b) — be on the worksite:~~

~~i. — to meet supervision needs as determined by the training and experience level of the crew;~~

~~ii. — to make determinations about material quality, work methods, and problem detection when activities are being performed that are critical to the installation; and~~

*iii.—at any other time that is appropriate to ensure compliance with applicable requirements.*

Justification

These provisions were expanded, modified and moved to Minn. R. 7083.0760, subp.3.

**709.** Proposed Change part former 7080.0715, Subpart 2, item B, subitem (3).

*(3)—All inspections must be conducted by designated registered professionals.*

Justification

This provision was moved to Minn. R. 7083.0750, subp. 3.

**710.** Proposed Change part former 7080.0715, Subpart 2, item B, subitem (4).

*(4)—Pumpers must verify the adequacy of pumpouts and land application or septage disposal. This verification may be fulfilled by periodic evaluations. Pumpers must provide a report to the property owner that includes the pumpout date, gallons removed, tank leakage, access point used to remove the septage, location and method of land application or disposal, and any troubleshooting or repairs conducted.*

Justification

This provision was moved to Minn. R. 7083.0770, subp. 3.

**711.** Proposed Change part former 7080.0720.

7080.0720 QUALIFIED EMPLOYEE.

*A qualified employee must fulfill the conditions under part 7080.0715, subpart 2, that are applicable to the work being performed. Qualified employees must be registered on the SSTS professional register with specialty area endorsements applicable to the work being conducted. A qualified employee may be an apprentice if the individual has specialty area endorsements applicable to the work to be completed, has fulfilled the contractual requirement under part 7080.0815, subpart 1, item B or C, and has been issued performance restrictions.*

Justification

This provision was moved to Minn. R. 7083.1010, subp. 1.

**712.** Proposed Change part former 7080.0800, Subpart 1.

7080.0800 SSTS PROFESSIONALS REGISTRATION PROGRAM REVIEW.

*Subpart 1. **Purpose.** Parts 7080.0800 to 7080.0820 establish the SSTS professional registration and training program. This program establishes training, experience, and examination requirements for SSTS professional registration.*

*Individuals may be registered in the following specialty areas:*

- A. ~~designer I;~~
- B. ~~designer II;~~
- C. ~~installer;~~
- D. ~~pumper; and~~
- E. ~~inspector.~~

Justification

This provision was modified and moved to Minn.R. 7083.1020, subp.1.

**713.** Proposed Change part former 7080.0800, Subpart 2.

*Subpart 2. **Program components.** Individuals must successfully complete the following components for a specialty area to qualify for registration in that specialty area:*

- A. ~~training, described under part 7080.0805;~~
- B. ~~examination, described under part 7080.0810;~~
- C. ~~experience, described under part 7080.0815; and~~
- D. ~~continuing education, described under part 7080.0820.~~

Justification

This provision was moved to Minn. R. 7083.1020, subp.2.

**714.** Proposed Change part former 7080.0800, Subpart 3.

*Subpart 3. **Record keeping.** Individuals that complete subpart 2, items A to C, for a specialty area can apply to be registered by the commissioner as a professional and to have their progress recorded by the commissioner according to part 7080.0850. Individuals that complete subpart 2, items A and B, for a specialty area can apply to receive an apprentice designation and to have their progress recorded by the commissioner according to part 7080.0855.*

Justification

This provision was moved to Minn. R. 7083.1020, subp.3.

**715.** Proposed Change part former 7080.0800, Subpart 4.

*Subpart 4. **Registration period.** Registrations issued by the commissioner shall be issued for a three-year period.*

Justification

This provision was modified and moved to Minn. R. 7083.1020, subp. 4.

**716.** Proposed Change part former 7080.0800, Subpart 5.

*Subpart 5. **Applicable registration specialty area.** In the case of SSTS work not described under part 7080.0850, subpart 5, the commissioner shall determine which registration specialty area is applicable.*

Justification

This provision was moved to Minn. R. 7083.1020, subp. 5.

**717.** Proposed Change part former 7080.0805, Subparts 1 and 2.

~~7080.0805 TRAINING.~~

~~Subpart 1. **Required training.** To fulfill the training requirement for one or more specialty areas under the registration and training program, an individual must successfully complete:~~

~~A. — course work that covers basic knowledge regarding subsurface sewage treatment system and soil treatment theory; design and construction fundamentals; SSTS law and rule updates; technology updates; and state licensing requirements, standards, and criteria for systems under this chapter; and~~

~~B. — course work that provides the knowledge necessary to fulfill the responsibilities under part 7080.0850, subpart 5, and includes skills appropriate for each specialty area.~~

~~Subpart 2. Accreditation of training. Training used to fulfill the requirements under subpart 1 and part 7080.0820 must be accredited by the commissioner as provided under part~~

Justification

These provisions were modified and moved to Minn. R. 7083.1030.

**718.** Proposed Change part former 7080.0810, Subpart 1.

~~7080.0810 EXAMINATION.~~

~~Subpart 1. **Examinations.** An examination for basic information regarding subsurface sewage treatment systems and each of the specialty areas under part 7080.0800, subpart 1, will be offered by the commissioner at least annually. The examinations will be based on the skill, knowledge, experience, and education that a person must have to perform the duties and responsibilities under part 7080.0850, subpart 5, for each specialty area. An individual must successfully complete the basic and specialty area examinations to qualify for registration and apprentice designation.~~

Justification

This provision was modified and moved to Minn. R. 7083.1040, subp. 1.

**719.** Proposed Change part former 7080.0810, Subpart 2.

~~Subpart 2. **Expiration of test score validity.** The validity of the examination score for a specialty area expires if the continuing education requirements under part 7080.0820, subpart 1, are not fulfilled. An individual with an expired examination score must retake the examination.~~

Justification

This provision was modified and moved to Minn. R. 7083.1040, subp 2.

**720.** Proposed Change part former 7080.0810, Subpart 3.

~~Subpart 3. **Failure on examination.** A person who fails an examination is ineligible to retake the same examination for two months unless the person has completed additional training approved by the agency in the subject matter covered by the failed examination in addition to those required under part 7080.0805, subpart 1. Official documentation of this training must be provided at the time the~~

~~examination is retaken. Training hours used to fulfill this reexamination requirement may not be used to fulfill continuing education requirements. Failure to pass the examination in a specialty area or the basic examination does not prevent the person from taking an examination for a different specialty area endorsement.~~

#### Justification

This provision was modified and moved to Minn. R. 7083.1040, subp 3.

#### **721.** Proposed Change part former 7080.0815, Subpart 1, item A.

##### ~~7080.0815 EXPERIENCE.~~

~~Subpart 1. **Options to gain experience.** The experience needed to qualify for a specialty area can be acquired by one of the methods in items A to C.~~

~~A. Experience may be completed at the direction of and under the personal supervision of a designated registered professional who has a specialty area endorsement that is the same as the specialty area sought by the individual acquiring the experience. The individual acquiring the experience must be employed by the licensee.~~

#### Justification

This provision was expanded, modified and moved to Minn. R. 7083.1050, subp 3(D).

#### **722.** Proposed Change part former 7080.0815, Subpart 1, item B.

~~B. If the individual obtains a restricted license, qualifying experience may be completed under an experience plan which includes direct and personal supervision with a qualified employee, a designated registered professional who has a specialty area registration endorsement that is the same as the specialty area sought by the individual acquiring the experience, a designer I, or an inspector.~~

#### Justification

This provision was expanded, modified and moved to Minn. R. 7083.1050, subp. 1 to 3.

#### **723.** Proposed Change part former 7080.0815, Subpart 1, item C.

~~C. Experience may be gained by a plan approved by the commissioner.~~

#### Justification

This provision was moved to Minn. R. 7083.1050, subp. 2(D).

#### **724.** Proposed Change part former 7080.0815, Subpart 1a, item A.

~~Subpart 1a. **Experience plans.** Experience plans are required if the options under subpart 1, items B and C, are used.~~

~~A. Experience gained under an experience plan must supplement rule requirements under subpart 2.~~

#### Justification

This provision was expanded, modified and moved to Minn. R. 7083.1050, subp. 3.

**725.** Proposed Change part former 7080.0815, Subpart 1a, item B.

*B. — Designated registered professionals and qualified employees with designer I and inspector endorsements may approve qualifying experience for all specialty area experience plans.*

Justification

This provision was expanded, modified and moved to Minn. R. 7083.2000, subp. 1(A).

**726.** Proposed Change part former 7080.0815, Subpart 1a, item C.

*C. — An apprentice shall not provide direction and personal supervision for someone else to gain experience.*

Justification

This provision was moved to Minn. R. 7083.2000, subp. 1(A).

**727.** Proposed Change part former 7080.0815, Subpart 1a, item D.

*D. — A restricted license must be issued if an individual will be working under an approved experience plan.*

Justification

This provision was modified and moved to Minn. R. 7083.0800, item B.

**728.** Proposed Change part former 7080.0815, Subpart 1b, items A to D.

*Subpart 1b. **Components of experience plans.** Experience plans must include:*

- A. — the number of systems used to obtain experience;*
- B. — the name of the person or persons providing direction and personal supervision, and their specialty area endorsements;*
- C. — a description of the method used for obtaining direction and personal supervision; and*
- D. — any other information as necessary to determine compliance with this part.*

Justification

These provisions were expanded, modified and moved to Minn. R. 7083.1050, subp. 3.

**729.** Proposed Change part former 7080.0815, Subpart 1c, items A to C.

*Subpart 1c. **Approval by commissioner.***

- A. — Experience plans under subpart 1, items B and C, must be submitted to and approved by the commissioner before the application for a restricted license or for the qualified employee apprentice will be approved by the commissioner.*
- B. — The commissioner may monitor progress under the experience plan and may require that the plan be discontinued or modified to correct the problems if the objectives for acquiring experience are not being fulfilled.*

~~C. — The commissioner shall make a final evaluation to determine if the experience gained under the plan successfully fulfilled the experience requirement.~~

Justification

These provisions were modified and moved to Minn. R. 7083.1050, subp. 3(C).

**730.** Proposed Change part former 7080.0815, Subpart 2, items A to C. -

~~Subpart 2. **Basic experience requirements.** All individuals seeking registration must:~~

~~A. — complete the experience requirement in accordance with one of the methods under subpart 1;~~

~~B. — complete the amount of experience required under subparts 3 to 7 for the specialty area endorsement sought;~~

~~C. — complete the documentation requirements under subpart 9;~~

Justification

These provisions were moved to Minn. R. 7083.1050, subp. 1.

**731.** Proposed Change part former 7080.0815, Subpart 2, item D.

~~D. — provide certification that work submitted under subparts 3 to 7 is in compliance with applicable requirements. The certification must be signed by:~~

~~(1) — a designated registered professional or qualified employee with an endorsement in the appropriate specialty area;~~

~~(2) — designated registered professional or qualified employee with an endorsement for an inspector or designer I; or~~

~~(3) — a qualified person approved by the commissioner under subpart 1, item C; and~~

Justification

These provisions were modified and moved to Minn. R. 7083.1050, subp. 4.

**732.** Proposed Change part former 7080.0815, Subpart 2, item E.

~~E. — acquire necessary experience within the six years immediately preceding submittal of the completed professional registration application. Experience gained after April 1, 1996, must have been acquired under a valid license in the appropriate specialty area.~~

Justification

This provision was modified and moved to Minn. R. 7083.1050, subp. 1(C).

**733.** Proposed Change part former 7080.0815, Subparts 3 and 4.

~~Subpart 3. **Designer I.** An individual seeking the endorsement for the designer I specialty area must have completed the experience required under subparts 4 and 7.~~

~~Subpart 4. **Designer II.** An individual seeking the endorsement for the designer II specialty area must have completed a minimum of 15 site evaluations and 15 subsurface sewage treatment system designs.~~

Justification

This provision was modified and moved to Minn. R. 7083.1050, subp.5(A) and (C).

**734. Proposed Change part former 7080.0815, Subpart 5.**

*Subpart 5. ~~Installer.~~ An individual seeking the endorsement for the installer specialty area must have completed a minimum of 15 subsurface sewage treatment system installations.*

Justification

This provision was moved to Minn. R. 7083.1050, subp. 5(B).

**735. Proposed Change part former 7080.0815, Subpart 6.**

*Subpart 6. ~~Pumper.~~ An individual seeking the endorsement for the pumper specialty area must have pumped out and properly disposed of septage from a minimum of 15 subsurface sewage treatment system components.*

Justification

This provision was modified and moved to Minn. R. 7083.1050, subp. 5(D).

**736. Proposed Change part former 7080.0815, Subpart 7.**

*Subpart 7. ~~Inspector.~~ An individual seeking the endorsement for the inspector specialty area must have completed a minimum of 15 subsurface sewage treatment system inspections to determine whether new or existing systems comply with applicable requirements.*

Justification

This provision was moved to Minn. R. 7083.1050, subp. 5(C).

**737. Proposed Change part former 7080.0815, Subpart 8.**

*Subpart 8. ~~Reduction of required experience.~~ The experience requirements under subparts 3 to 7 may be reduced from 15 to ten work products if 12 hours of accredited or authorized training are taken in addition to the training required under parts 7080.0805, subpart 1; and 7080.0820.*

Justification

This provision is proposed to be deleted. The industry has said that more experience should be required for apprentices. MPCA staff agree that the experience requirements are very minimal, and proposes to delete this provision. Please refer to comment 7 of Exhibit 79.

**738. Proposed Change part former 7080.0815, Subpart 9, items A to C.**

*Subpart 9. ~~Documentation.~~ Documentation of experience must include:*

- A. ~~a summary of the work performed that includes dates, type of work done, and locations;~~*

~~B. — the signature and registration number of the designated registered professional or, if under an experience plan under subpart 1, item B or C, a qualified employee who supervised the performed work; and~~

~~C. — a statement that the work was completed in accordance with applicable requirements. The statement must be signed by an inspector, designer I, or by a person with an endorsement in the appropriate specialty area. This person must be the designated registered professional or qualified employee. The statement must be signed by a qualified person approved by the commissioner if experience is gained under subpart 1, item C.~~

#### Justification

These provisions were expanded, modified and moved to Minn. R. 7083.1050, subp. 3 and 4.

#### **739.** Proposed Change part former 7080.0820, Subpart 1, item A.

##### ~~7080.0820 CONTINUING EDUCATION.~~

##### ~~Subpart 1. **Renewal requirements.**~~

~~A. — Individuals registered as professionals and apprentices must complete the applicable hours of continuing education under items B to D that meet the criteria under subpart 2 for each three year period. The continuing education requirement is not increased for multiple specialty area endorsements. Continuing education hours earned in excess of those required under this subpart cannot be carried over to meet the requirements for future three year periods. The three year period begins after an individual has received a passing score on the examination under part 7080.0810 for one specialty area endorsement.~~

#### Justification

This provision was expanded, modified and moved to Minn. R. 7083.1060, subp. 1.

#### **740.** Proposed Change part former 7080.0820, Subpart 1, item B.

~~B. — An individual with a designer I, designer II, installer, or inspector endorsement must complete 12 hours of continuing education training related to subsurface sewage treatment systems. All inspectors, designers I, and designers II who have not taken in-depth soils training after January 1, 1995, must take in-depth soils training by January 1, 2005.~~

#### Justification

This provision was deleted due to the passing of the expiration date for compliance.

#### **741.** Proposed Change part former 7080.0820, Subpart 1, item C.

~~C. — An individual with a pumper endorsement must complete 12 hours of continuing education related in general to subsurface sewage treatment systems or nine hours of continuing education specifically related to pumping subsurface sewage treatment systems or land application of septage. A pumper whose gross annual revenue from pumping systems is \$9,000 or less and whose gross revenue from pumping systems during the year ending May 11, 1994, was at least \$1,000 is not subject to the continuing education requirements.~~

Justification

This provision was modified and moved to Minn. R. 7083.1060, subp. 1(B).

**742.** Proposed Change part former 7080.0820, Subpart 1, item D.

~~—D. In each registration period, individuals must accrue continuing education hours specified in items A to C. At least six hours of this required training must be directly related to the administrative and technical parts of this chapter.~~

Justification

This provision was moved to Minn. R. 7083.1060, subp. 1(E).

**743.** Proposed Change part former 7080.0820, Subpart 2.

~~—Subpart 2. **Criteria for continuing education.** Only programs accredited or otherwise authorized by the commissioner for continuing education credit may be used to maintain a professional registration or apprentice designation.~~

Justification

This provision was expanded, modified and moved to Minn. R. 7083.1060, subp. 2.

**744.** Proposed Change part former 7080.0830, Subpart 1.

~~—7080.0830 ACCREDITATION OF TRAINING PROGRAMS AND AUTHORIZATION OF TRAINING FOR CONTINUING EDUCATION CREDITS.~~

~~—Subpart 1. **Requirements.** To receive SSTS professional training program accreditation for basic, specialty area, or continuing education training, the program sponsor must submit to the commissioner the following:~~

~~—A. a written objective that describes expected outcomes for the participant;~~

~~—B. a summary of the credentials of the persons conducting the training that demonstrates the trainers' knowledge about subsurface sewage treatment systems and specify the specific subject area that the trainers will be responsible for;~~

~~—C. a training plan that demonstrates how the course will meet the requirements in parts 7080.0805, subpart 1, and 7080.0820;~~

~~—D. a method for evaluating successful completion, including the form that will document course participation and successful completion;~~

~~—E. a description of the topics and how much time will be spent on training for each topic during the hours the course is conducted; and~~

~~—F. a document signed by a representative of the sponsoring organization certifying that the sponsor will maintain records of participants, attendance, and successful completions for a minimum of three years.~~

Justification

This provision was moved to Minn. R. 7083.1070, subp. 1.

**745. Proposed Change part former 7080.0830, Subpart 2.**

~~— Subpart 2. **Procedures for approval.** The commissioner shall approve a training course if the information submitted under subpart 1 demonstrates that the course meets the objectives for a specific specialty area under part 7080.0805, subpart 1, or for continuing education under part 7080.0820. The commissioner shall evaluate the submitted information to determine how many continuing education credits will be awarded. The accreditation may be reevaluated by the commissioner at any time. The commissioner may require that the training program be updated to ensure recent industry developments are included. Accreditation may be canceled by the commissioner if the program sponsor does not respond to the commissioner's written request for program information or training course revisions, or if the commissioner determines that the program has not met its training objective.~~

Justification

This provision was moved to Minn. R. 7083.1070, subp. 2.

**746. Proposed Change part former 7080.0830, Subpart 3.**

~~— Subpart 3. **Authorization of training for continuing education credits.** Nonaccredited training may qualify for continuing education credits only if authorized by the commissioner. The person requesting the credits must provide the information requirements of subpart 1, items A to F, for any nonaccredited training attended, and document in written format how the course will meet or has met the requirements under parts 7080.0805, subpart 1, and 7080.0820, including a proof of successful completion of the training. The commissioner may prorate the credit hours granted based on the amount of the training which pertains to the SSTS specialty area for which it is requested.~~

Justification

This provision was moved to Minn. R. 7083.1070, subp. 3.

**747. Proposed Change part former 7080.0850, Subparts 1 to 4.**

**7080.0850 SSTS PROFESSIONAL REGISTRATION.**

~~Subpart 1. **Qualifications.** The commissioner shall register in the appropriate specialty area individuals who successfully satisfy the requirements in parts 7080.0805 to 7080.0820 as applicable to a specialty area in part 7080.0800, subpart 1, and submit a completed application under part 7080.0860, subpart 1, that is approved by the commissioner.~~

~~Subpart 2. **Multiple endorsements.** An endorsement for each specialty area successfully completed shall be added to an individual's registration.~~

~~Subpart 3. **Registration required.** Except as provided under part 7080.0855, subpart 1, designated registered professionals under part 7080.0705, subpart 1, item A; and qualified employees must be registered under this part.~~

~~Subpart 4. **Maintaining registration.** To maintain a professional registration, an individual must fulfill the continuing education requirements under part 7080.0820, complete the renewal requirements under part 7080.0860, subpart 4, and fulfill the responsibilities under subpart 5 that are applicable to earned specialty area endorsements.~~

Justification

This provision was moved to Minn. R. 7083.1080.

**748.** Proposed Change part former 7080.0850, Subpart 5, item A.

~~Subpart 5. **Specific responsibilities.** The requirements in items A to F provide the minimum basis of professional responsibility.~~

~~A. —Inspectors must have the knowledge and ability to assess site evaluations, evaluate designs, evaluate installations and components of installation, assess pumping and septage disposal activities, conduct compliance inspections, conduct permitting activities, issue written certificates of compliance and notices of noncompliance, and maintain inspection reports.~~

Justification

This provision was modified and moved to Minn. R. 7083.1030, subp. 1(B).

**749.** Proposed Change part former 7080.0850, subpart 5, item B.

~~B. —Designer I's must have the knowledge and ability to conduct site evaluations, design SSTS, evaluate installations and components of installation, assess pumping and septage disposal activities, conduct compliance inspections, conduct permitting activities, issue written certificates of compliance and notices of noncompliance, and maintain inspection reports.~~

Justification

It is proposed to delete the Designer I category. For justification for this change, please refer to Minn. R. 7083.0705, subp. 3 .

**750.** Proposed Change part former 7080.0850, Subpart 5, item C.

~~C. —Designer II's must have the knowledge and ability to conduct site evaluations and design SSTS.~~

Justification

This provision was modified and moved to Minn. R. 7083.1030, subp. 1(B).

**751.** Proposed Change part former 7080.0850, Subpart 5, item D.

~~D. —Installers must have the knowledge and ability to construct, install, alter, extend, maintain, abandon, and repair SSTS; ensure all work is done in accordance with a written site evaluation and design report; ensure inspections are conducted for new construction or replacement; ensure site conditions allow for construction; provide evidence to verify compliance with applicable requirements; maintain quality control/quality assurance records; and maintain as-builts of all work.~~

Justification

This provision was modified and moved to Minn. R. 7083.1030, subp. 1(B).

**752.** Proposed Change part former 7080.0850, Subpart 5, item E.

~~E. —Pumpers must have the knowledge and ability to measure scum and sludge depths for the accumulation of solids and, as needed, completely remove, store, and haul septage; properly dispose of septage by land application or disposal in a publicly owned treatment works; identify problems related to~~

~~sewage tanks, baffles, maintenance hole covers, and extensions, and make repairs as necessary; and evaluate sewage tanks, dosing chambers, distribution devices, valve boxes or drop boxes, and properly dispose of septage.~~

Justification

This provision was modified and moved to Minn. R. 7083.1030, subp. 1(B).

**753.** Proposed Change part former 7080.0850, Subpart 5, item F.

~~F. A person who designs, installs, alters, repairs, maintains, pumps, or inspects all or part of an subsurface sewage treatment system shall comply with applicable requirements.~~

Justification

This provision was modified and moved to Minn. R. 7083.0730, item B.

**754.** Proposed Change part former 7080.0850, Subpart 6.

~~Subpart 6. Register maintenance. The commissioner shall assign registration numbers, maintain a statewide register, record training, and monitor performance of all persons registered.~~

Justification

This provision was moved to Minn. R. 7083.1080, subp. 5.

**755.** Proposed Change part former 7080.0855 (all).

~~7080.0855 APPRENTICE.~~

~~Subpart 1. **Qualifications.**~~

~~A. An individual shall be designated as an apprentice if the individual:~~

- ~~(1) successfully completes the requirements in parts 7080.0805 and 7080.0810 for the specialty areas listed in part 7080.0800, subpart 1;~~
- ~~(2) is gaining experience through an approved method in part 7080.0815, subpart 1, item B or C; and~~
- ~~(3) submits a complete application as required in part 7080.0860, subpart 1, that is approved by the commissioner.~~

~~B. An apprentice is eligible to be a designated registered professional under a restricted license or qualified employee under a restricted registration if the individual has a specialty area endorsement that corresponds to the license or registration.~~

~~Subpart 2. [Repealed, 24 SR 426]~~

~~Subpart 3. Maintaining apprentice designation. To maintain an apprentice designation, an individual must: fulfill the continuing education requirements in part 7080.0820; complete the renewal requirements in part 7080.0860, subpart 4; and fulfill the responsibilities in part 7080.0850, subpart 5, that are applicable to earned specialty area endorsements. An endorsement for each specialty area successfully completed shall be added to an individual's registration and apprentice designation.~~

Justification

This provision was moved to Minn. R. 7083.1090.

**756. Proposed Change part former 7080.0860 (all).**

**~~7080.0860 ADMINISTRATION OF PROFESSIONAL REGISTER AND APPRENTICE PROGRAM.~~**

~~Subpart 1. **Application; issuance.** An individual meeting the qualifications in part 7080.0850, subpart 1, or 7080.0855, subpart 1, is eligible to apply for registration or apprentice designation on a form provided by the commissioner. The commissioner requires 60 days for review of applications. A complete application consists of documentation of training and experience or the experience agreement or plan meeting the requirements under part 7080.0815, subpart 1.~~

~~Subpart 2. **Approval of registration or apprentice designation.** Upon the commissioner's approval of the registration or apprentice application, the commissioner shall issue a number and verification of the individual's status.~~

~~Subpart 3. **Registration period.** Registrations issued by the commissioner are valid for three years.~~

~~Subpart 4. **Renewal.** Every three years, the registrant or apprentice shall submit an application for renewal on forms provided by the commissioner no later than 60 days prior to the expiration date. The renewal application must be accompanied by documentation of continuing education under part 7080.0820.~~

~~Subpart 5. **Denial of application.** The commissioner may deny an application or renewal application for a professional registration or apprentice based on evidence of actions listed under part 7080.0900. Notice of the denial shall be served on the applicant by mail.~~

~~Subpart 6. **Restrictions; conditions.** The commissioner may add performance restrictions and training conditions to a professional registration or apprentice designation at any time to address unusual work situations or experience requirements, to take enforcement action under part 7080.0900, or to limit the scope of responsibilities under part 7080.0850, subpart 5, for an individual.~~

Justification

These provisions were moved to Minn. R. 7083.2010 with some modifications on some subparts.

**757. Proposed Change part former 7080.0900, Subpart 1.**

**~~7080.0900 ENFORCEMENT ACTION.~~**

~~Subpart 1. **Business licenses.** The commissioner may deny, suspend, restrict, or revoke a business license issued under part 7080.0705 for any of the following reasons:~~

- ~~A. failure to meet the requirements for a license;~~
- ~~B. failure to comply with applicable requirements;~~
- ~~C. submission of false or misleading information or credentials in order to obtain or renew a license;~~
- ~~D. failure to provide adequate supervision to nonregistered SSTS employees; or~~
- ~~E. incompetence, negligence, or inappropriate conduct in the performance of the duties of an subsurface sewage treatment system professional.~~
- ~~F. failure to comply with soil dispute resolution requirements in 7080.0175 subpart 3.~~

Justification

These provisions were modified and moved to Minn. R. 7083.2020, subp. 1.

**758.** Proposed Change part former 7080.0900, Subpart 2.

~~Subpart 2. **Professional registration; apprentice.** The commissioner may deny, suspend, restrict, or revoke an individual professional registration issued under part 7080.0850 or apprentice designation made under part 7080.0855 for any of the following reasons:~~

- ~~A. failure to meet the registration requirements;~~
- ~~B. incompetence, negligence, or inappropriate conduct in the performance of the duties on an SSTS professional;~~
- ~~C. failure to comply with applicable requirements; or~~
- ~~D. submission of false or misleading information or credentials in order to obtain or renew professional registration.~~

Justification

This provision was modified and moved to Minn. R. 7083.2020, subp. 2.

**759.** Proposed Change part former 7080.0900, Subpart 3.

~~Subpart 3. **License complaints.** Upon receiving a signed written complaint that alleges the existence of grounds for enforcement action against a business or an individual under subpart 1, the commissioner shall initiate an investigation.~~

- ~~A. The complaint must contain the name, address, and telephone number of the complainant, the name of the alleged violators, the alleged violations, dates, locations, and any other pertinent information to demonstrate the validity of the complaint.~~
- ~~B. The commissioner shall evaluate the results of the investigation and determine whether enforcement actions are necessary.~~
- ~~C. Enforcement actions may not be taken before written notice is given to the licensee or individual and an opportunity is provided for a contested case hearing complying with Minn. Stat. §, chapter 14.~~

Justification

These provisions were modified and moved to Minn. R. 7083.2020, subp. 3.

**760.** Proposed Change part former 7080.0900, Subpart 4.

~~Subpart 4. **Enforcement action.** If the commissioner finds that enforcement action is necessary, the actions described in items A to C shall be taken.~~

- ~~A. A written notice shall be mailed to the licensee, registered individual, or apprentice. The written notice shall contain, as applicable, the effective date of the enforcement action, the nature of the violations constituting the basis for the enforcement action, the facts which support the conclusion that violations have occurred, specific actions necessary to fulfill the terms of the notice, and a statement that a licensee or registered individual who desires a contested case hearing, must within ten calendar days, exclusive of the day of service, file a written request with the commissioner.~~
- ~~B. If a hearing is requested, the enforcement action shall be stayed pending the outcome of the hearing. If the licensee or registered individual does not request a hearing, the individual shall forfeit any opportunity for a hearing.~~
- ~~C. A licensee or registered individual whose license or registration has been revoked shall not be entitled to apply for a license or registration for at least one year following the effective date of revocation or for any longer period of time specified in the revocation notice. A licensee~~

~~or registered individual with a revoked or suspended license or registration shall return the license or registration identification card to the commissioner.~~

Justification

This provision was moved to Minn. R. 7083.2020, subp. 4.

**761.** Proposed Change part former 7080.0900, Subpart 5.

~~Subpart 5. **Enforcement; general.** General agency enforcement authority under innesota Statutes, sections 115.03, 115.071, 115.072, 115.56, 116.071, 116.072, and 116.073, is also available for enforcement actions under this program.~~

Justification

This provision was moved to Minn. R. 7083.2020, subp. 5.

**762.** Proposed Change part former 7080.0920.

~~7080.0920 MINNESOTA POLLUTION CONTROL AGENCY SURETY BOND FORM.~~

~~Bond No. \_\_\_\_\_~~

~~MINNESOTA POLLUTION CONTROL AGENCY  
SUBSURFACE SEWAGE TREATMENT SYSTEM (SSTS) PROFESSIONAL  
SURETY BOND~~

~~KNOW ALL PERSONS BY THESE PRESENTS:~~

~~THAT \_\_\_\_\_~~

~~(Name of Licensee)~~

~~doing business as ..... at~~

~~\_\_\_\_\_, Minnesota, as Principal, and (Address)~~

~~\_\_\_\_\_, a corporation authorized (Name of Surety)~~

~~to do surety business in the State of Minnesota, as Surety, are hereby held and firmly bound to the Commissioner of the Minnesota Pollution Control Agency State of Minnesota and any persons aggrieved by reason of the Principal's failure to faithfully perform the duties, and in all things comply with all laws, ordinances, and rules, pertaining to the Principal's license or any permit applied for and all contracts entered into, in the sum of TEN THOUSAND DOLLARS (\$10,000.00). For the payment of this sum, Principal and Surety bind themselves, their heirs, representatives, successors and assigns, jointly and firmly by these presents.~~

~~THE CONDITION of the above obligation is such, that WHEREAS the said Principal is making application with the Minnesota Pollution Control Agency to be licensed as, or has been licensed as, an SSTS Professional:~~

~~.....~~

~~(specific licenses).~~

~~—NOW THEREFORE, if said Principal shall faithfully and lawfully perform the duties, and in all things comply with the laws and ordinances, including all Amendments thereto, appertaining to the license or permit applied for, then this obligation shall be void; otherwise to remain in full force and effect.~~

~~—The aggregate liability of the Surety, regardless of the number of claims made against the bond or the number of years the bond remains in force, shall in no event exceed the amount set forth above. Any revision of the bond amount shall not be cumulative. This bond may be canceled by the Surety as to future liability by giving written notice to the Minnesota Pollution Control Agency, stating the date of~~

~~cancellation, which in no event shall be less than thirty (30) days after the mailing of said notice; however, the Surety shall remain liable for any and all acts of the Principal covered by this bond up to the date of cancellation.~~

~~— PROVIDED, it is the intention of the parties that this bond be continuous. This bond may be canceled at any time upon giving the said Principal and the Minnesota Pollution Control Agency 30 days written notice, said notice to be served by registered mail, whereupon, except as to any liabilities or indebtedness incurred prior to the termination of this said 30 days notice, the liability of the Surety under this bond shall cease.~~

~~— By their signatures below, the parties certify that the wording of this surety bond is identical to the wording specified in Minnesota Rules, part 7080.0920, as the rules were constituted on the date the parties executed the bond.~~

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Signed, sealed and delivered in the presence of:

\_\_\_\_\_  
~~(Witness as to Principal) (Licensee name)~~

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
~~(Witness as to Surety) (Name of Surety Company)~~

\_\_\_\_\_  
By \_\_\_\_\_  
(Attorney in Fact)

**INDIVIDUAL OR PARTNERSHIP ACKNOWLEDGMENT**

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )

On the \_\_\_\_\_ day of \_\_\_\_\_, 19/20 \_\_\_\_\_, before me, a Notary Public within and for said county, personally appeared, \_\_\_\_\_ to me known to be the person(s) described in and who executed the foregoing instrument, as Principal(s), and acknowledged to me that \_\_\_\_\_ s/he executed the same as her/his free act and deed.

Notary Public, \_\_\_\_\_  
County, \_\_\_\_\_  
My Commission Expires \_\_\_\_\_  
(Notarial Seal)

**CORPORATE ACKNOWLEDGMENT**

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )

On the \_\_\_\_\_ day of \_\_\_\_\_, 19/20 \_\_\_\_\_, before me personally appeared, \_\_\_\_\_ to me, who being duly sworn, did depose and say: that s/he resides in \_\_\_\_\_ the s/he is the \_\_\_\_\_ President of the \_\_\_\_\_ the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said

~~instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation; and that s/he signed her/his name thereto by like order.~~

~~Notary Public, \_\_\_\_\_  
County, \_\_\_\_\_  
My Commission Expires \_\_\_\_\_~~

~~\_\_\_\_\_ (Notarial Seal)~~

~~\_\_\_\_\_ ACKNOWLEDGMENT OF CORPORATE SURETY  
STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )~~

~~On the \_\_\_\_\_ day of \_\_\_\_\_, 19/20 \_\_\_\_\_ before me personally appeared, \_\_\_\_\_ to me known, who being duly sworn, did say: that s/he resides in \_\_\_\_\_ the s/he is the aforesaid officer or attorney in fact of \_\_\_\_\_ a corporation; that the seal affixed to the foregoing instrument is the corporate seal of said corporation; and that said instrument as signed and sealed in behalf of said corporation by the aforesaid officer, by authority of its board of directors; and the aforesaid officer acknowledged said instrument to be the free act and deed of said corporation.~~

~~\_\_\_\_\_  
Notary Public, \_\_\_\_\_  
County, \_\_\_\_\_  
My Commission Expires \_\_\_\_\_~~

~~\_\_\_\_\_ (Notarial Seal)~~

~~\*\*\*SURETY COMPANY POWER OF ATTORNEY MUST BE ATTACHED\*\*\*~~

Justification

This provision was moved to Minn. R. 7083.2030.

**MINN. R. 7080.2250 SEEPAGE PITS, DRYWELLS, AND LEACHING PITS**

**763. Proposed Change new part 7080.2250, Subpart 1, formerly 7080.0950, Subpart 1.**

Subpart 1. Intended use of this part. This part must be used when conducting existing system compliance inspections. This part defines what constitutes seepage pit, drywell, or leaching pit systems. Seepage pit, drywell, or leaching pit systems are not considered compliant systems as determined in part 7080.1500, Subpart 4, item B, but these existing systems may be allowed continued use under Minnesota Statutes, section 115.55, Subdivision 5a, paragraph (f), by local units of government that have adopted alternative local standards for these systems under part 7082.0040, as published in the State Register, volume ..., page ....

Justification

Please refer to the justification for Minn. R. 7080.1100, subp. 75.

**764.** Proposed Change new part 7080.2250, Subpart 2, formerly 7080.0950, Subpart 2.

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

A. has a sewage tank that does not obviously leak below the designed liquid capacity preceding the pit;

B. has a pit that is not located in a geologic formation that is used as a source of drinking water;

C. has at least three feet of vertical separation from the bottom of the pit to the seasonally saturated soil or bedrock;

D. has an absorption area that has been determined by multiplying the average daily flow under Table IV in part 7080.1860 by the soil sizing factor under Table IX in part 7080.2150, Subpart 3, item F, based on the weighted average of each vertical stratum penetrated by the seepage pit, drywell, or leaching pit;

E. has a pit that has not been placed in a soil stratum with a sizing classification of 1 in Table IX in part 7080.2150, Subpart 3, item F;

F. has a pit with a minimum inside diameter of five feet; and

G. meets all setback requirements.

Justification

This is a former provision that was moved with a format change due to rule restructuring.

## AMENDMENTS TO INDIVIDUAL SECTIONS OF PROPOSED CHAPTER 7081

### MINN. R. 7081.0010 PURPOSE AND INTENT

#### 765. Proposed Change part 7081.0010 first paragraph.

The proper location, design, installation, use, and maintenance of mid-sized subsurface sewage treatment systems (MSTS) protects the public health, safety, and general welfare by the discharge of adequately treated sewage to the ground water. In accordance with the authority granted in Minnesota Statutes, chapters 103F, 103G, 115, and 116, the Pollution Control Agency, hereinafter referred to as the agency, provides minimum environmental protection standards for MSTS as defined in this chapter.

#### Justification

The initial language is language that is found in former Minn. R. 7080.0010. The addition is that this new chapter will specifically address systems receiving sewage between 2,500 gallons to 10,000 gallons per day.

Setting the system size to be governed by this chapter was difficult. The attempt was made to try to set limits to be consistent with other state and federal rules. Much discussion took place with interested parties concerning the lower size of systems to be regulated under this chapter. The results of the discussion ranged from 2 to 10 dwellings. The Agency chose a point partway in between the discussed values. The state of Washington has recently developed rules for MSTS and their range goes from 3,500 to 14,500 gallons per day, which is similar to this chapter's proposal. Please refer to Exhibit 194. Currently, MSTS are being designed and installed in Minnesota under existing rules which have little detail regarding MSTS. Installers generally follow U of M recommendations. (See Exhibit 450).

#### 766. Proposed Change part 7081.0010 second paragraph.

These standards shall be adopted countywide and administered and enforced by local units of government as directed by chapter 7082, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55.

#### Justification

It is intended that Minn. Stat. § 115.55 applies to MSTS as this MSTS is a subdivision of the term individual sewage treatment system (ISTS) as it was used in Minn. Stat. § 115.55.

#### 767. Proposed Change part 7081.0010 third paragraph.

This chapter does not regulate subsurface treatment systems that do not receive sewage as defined in this chapter. If systems regulated under this chapter receive both sewage and nonsewage, the requirements of this chapter apply, plus any additional requirements governing the nonsewage portion of the wastewater.

#### Justification

It is not intended that this chapter be used for subsurface systems which do not treat sewage. Such waste streams include waste from dog kennels, milk houses, slaughter houses, food processing, etc.... These various waste streams may have much different environmental concerns which may not be adequately treated with the design standards in this chapter.

**768. Proposed Change part 7081.0010 fourth paragraph.**

*This chapter does not contain design standards for sewage treatment systems that discharge to the ground surface or surface waters. Those systems require a National Pollution Discharge Elimination Systems permit.*

**Justification**

This is a similar provision as former Minn. R. 7080.0030, subp.1a, as this chapter does not regulate surface discharging systems.

**769. Proposed Change part 7081.0010 fifth paragraph.**

*Primarily, this chapter provides measurable performance outcomes for MSTs, but this chapter also includes limited design, construction, inspection, and operational standards that are believed to reasonably protect surface water, ground water, public health, safety, general welfare, and the environment.*

**Justification**

Chapter 7080, which contains ISTS regulations, includes many reliable prescriptive subsurface sewage treatment system designs. This approach is appropriate and scientifically sound at lower flow values. However, at larger flow values the hydraulic functioning of the system is more complex and more work is needed to determine the proper design. Since one system component affects the workings of the other components, a complicated relationship exists in which the designer needs to create many designs before all the components are found to be compatible. Therefore, this rule will mainly highlight the public health and environmental concerns which the designer will need to accommodate in the design. The Agency and the U of M plans to provide the training needed for the designers to design an MSTs.

**770. Proposed Change part 7081.0010 sixth paragraph, formerly 7080.0020 third paragraph.**

*In conjunction with these standards, the agency encourages the use of advanced treatment methods and waste reduction to further reduce the discharge of contaminants.*

**Justification**

This is a current provision for ISTS that is proposed to also apply to MSTs, as it is readily, and equally applicable to all SSTS.

**771. Proposed Change part 7081.0010 fourth paragraph.**

*Other chapters that have a bearing on MSTs are standards for individual subsurface sewage treatment systems in chapter 7080, administrative requirements for subsurface sewage treatment systems local permit and inspection programs in chapter 7082, as published in the State Register, volume ..., page ..., and certification and licensing requirements for those who design, install, inspect, maintain, or operate subsurface sewage treatment systems in chapter 7083, as published in the State Register, volume ..., page ....*

**Justification**

This language is offered to inform the user of the other SSTS and MSTs program rules.

## MINN. R. 7081.0020 DEFINITIONS

### 772. Proposed Change part 7081.0020, subp. 1.

*Subpart 1. Certain terms. In addition to the definitions in chapters 7080, 7082, and 7083, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55, the terms used in this chapter have the meanings given them. For the purpose of this chapter, if a term used in this chapter is defined in chapter 7080, 7082, or 7083, as published in the State Register, volume ..., page ..., it shall apply to MSTs and other SSTs if referenced in other chapters. Certain terms or words used in this chapter must be interpreted as follows: the words "shall" and "must" are mandatory and the words "should" or "may" are permissive. All distances specified in this chapter are horizontal distances unless otherwise specified.*

#### Justification

Many of the terms used in proposed Minn. R. ch. 7080, 7081, 7082, and 7083 will be the same. Therefore, it is proposed to reference the definition parts of each chapter in all chapters. The one problem with this method is that some of the definitions may use the specific term "individual sewage treatment system" (chapter 7080) or "mid-sized sewage treatment" (chapter 7081). The specific use of these two terms would seem to exclude the other and therefore, it would seem that the definition would seem not to apply. However, it is the intent of this subpart to allow the definition to apply to the other type of treatment system, if that term is used in the text of each chapter. This method is proposed to avoid duplication of definitions in each chapter. Please refer to comment 4 of Exhibit 8.

### 773. Proposed Change part 7081.0020, subp. 2.

*Subp. 2. Capillary fringe. "Capillary fringe" means the soil layer directly above a saturated layer in which the pore spaces are nearly filled with water as water is drawn upward due to adhesive and cohesive forces.*

#### Justification

This term is used in the rule and it is not a familiar concept to non-soil scientists. The concept is important because unsaturated soil is needed for treatment of contaminants in sewage. If additional water (via sewage) is added to a partially saturated soil, the unsaturated zone could rise unexpectedly high, which can reduce the treatment abilities of the soil. Research has shown that a 0.3 cm addition of water in a partially saturated soil can rise saturated conditions by 30 cm. See Exhibit 480. (print hard copy from <http://www.csa.com/partners/viewrecord.php?requester=gs&collection=ENV&recid=8402900> xx)

### 774. Proposed Change part 7081.0020, Subpart 3.

*Subp. 3. Ground water mound. "Ground water mound" means the rise in height of the seasonally saturated soil or regional water table caused by the addition of sewage effluent from a subsurface sewage treatment system into the soil.*

#### Justification

This term is used in the rule and it is not a familiar concept to non-hydrologists. The concept is important because unsaturated soil is needed for treatment of contaminants in sewage. If additional water (via sewage) is added, the ground water will rise reducing the soils ability to treat and transport the sewage into the soil.

775. Proposed Change part 7081.0020, Subpart 4.

*Subp. 4. Midsized subsurface sewage treatment systems or MSTs. "Midsized subsurface sewage treatment systems" or "MSTS" means a sewage treatment and dispersal system, or part thereof, that employs sewage tanks or other treatment devices with final discharge into the soil below the natural soil elevation or elevated final grade. MSTs are systems designed to receive sewage from:*

*A. four or more dwellings with an average daily sewage flow from all dwellings not to exceed 10,000 gallons per day;*

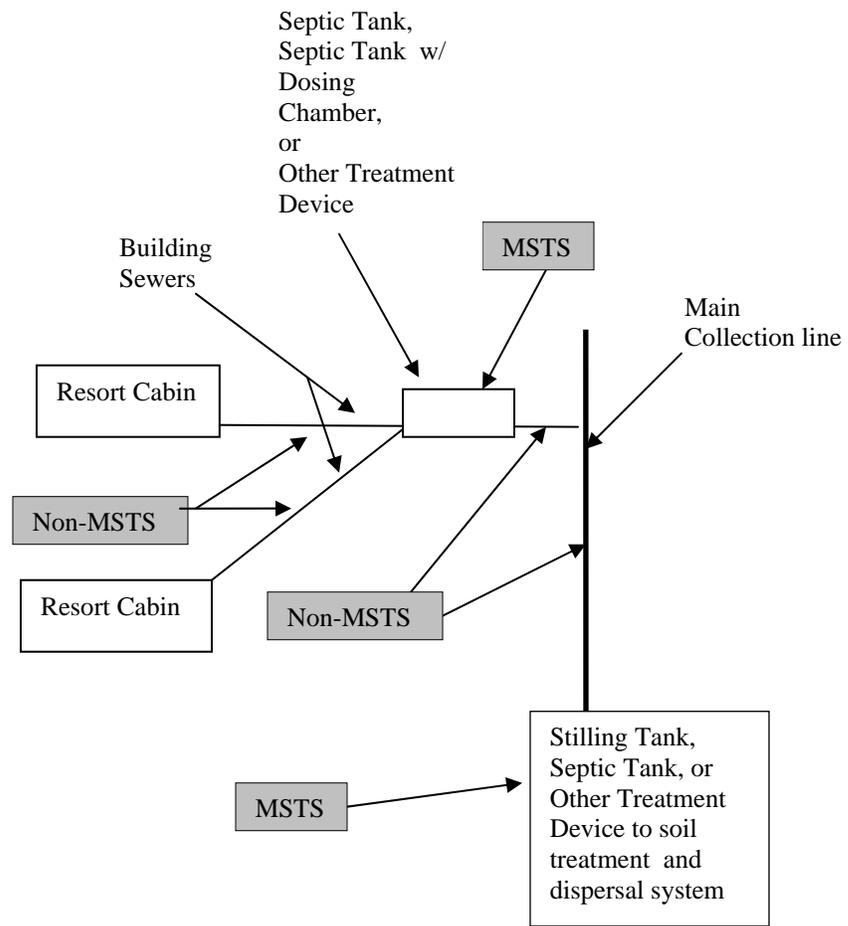
*B. other establishments with an average daily sewage flow of greater than 2,500 gallons per day and less than or equal to 10,000 gallons per day; or*

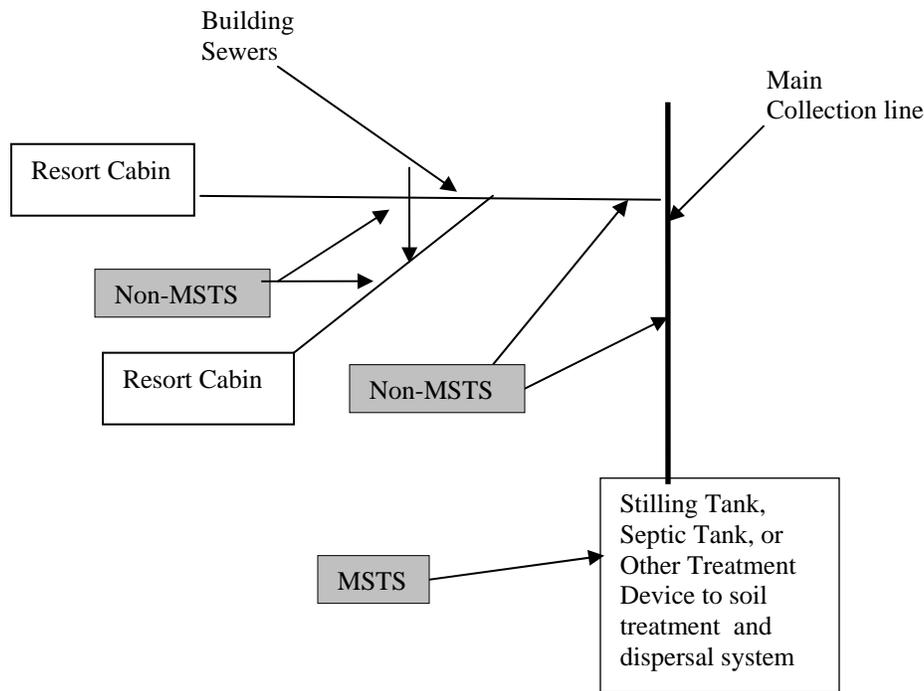
*C. a combination of other establishments and dwellings with an average daily sewage flow of greater than 2,500 gallons per day and less than or equal to 10,000 gallons per day.*

*Average daily sewage flows must be determined by part 7081.0110. MSTs also includes on-lot septic tanks discharging to a sewage collection system and holding tanks and privies that serve these same facilities. MSTs does not include those components defined as plumbing under chapter 4715 or sewage collection systems.*

Justification

The treatment and disposal system description is a requirement in former Minn. R. 7080.0020, subp. 21. The size thresholds were arrived at after considerable discussions with many interested parties. Various factors were considered when setting the thresholds. These factors included review of other applicable regulations – such as what size of system requires professional engineering, or the threshold set by the EPA for Class V injection wells.





Please refer to comments 2 and 3 of Exhibit 279.

**776. Proposed Change part 7081.0020, Subpart 5.**

*Subp. 5. NPDES permit. "NPDES permit" means a national pollutant discharge elimination system permit, issued by the agency.*

This term has been moved from former part Minn. R. 7080.0020, subp. 45a.

**777. Proposed Change part 7081.0020, Subpart 6, formerly part 7080.0020, Subpart 25.**

*Subp. 6. Other establishment. "Other establishment" means any public or private structure other than a dwelling that generates sewage that discharges to an MSTs.*

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

**778. Proposed Change part 7081.0020, Subpart 77.**

*Subp. 7. Sewage collection system. "Sewage collection system" means the piping, lift stations, and other means, devices, or components that receives and conveys sewage to the inlet of a common sewage tank. Sewage collection system does not include the piping, or other means, devices, or components that are regulated under chapter 4715.*

**Justification**

This term is necessary to draw a distinction between what is a MSTs and what is considered the collection system. Please see the justification for subpart 5.

**779. Proposed Change part 7081.0020, Subpart 8.**

Subp. 8. SDS permit "SDS permit" means a state disposal system permit issued by the agency.

Justification

This term has been moved from former Minn. R. 7080.0020, subp. 45a.

**780. Proposed Change part 7081.0020, Subpart 9.**

Subp. 9. Well capture zone. "Well capture zone" means the surface and subsurface area that supplies water to a water supply well.

Justification

This term is used in the rule and it is not a familiar concept to non-hydrologists. The concept is important because it denotes the volume of ground water that is readily to be used as water supply and must be protected from contamination.

**MINN. R. 7080.0040 AGENCY REGULATION**

**781. Proposed Change part 7081.0040, Subpart 1, item A.**

Subp.1. Agency regulation

A. All MSTs must be designed and operated according to this chapter, except as modified through an ordinance in compliance with chapter 7082, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55. All MSTs must be designed, installed, inspected, pumped, and operated by licensed businesses meeting the qualifications in chapter 7083, as published in the State Register, volume ..., page .... All MSTs must conform to applicable state statutes and rules.

Justification

Please refer to comment 116 of Exhibit 120.

**782. Proposed Change part 7081.0040, Subpart 1, item B, formerly 7080.0600, Subpart 2, item B.**

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

Justification

The 10,000 gallons per day threshold for other establishments in item (b) is the same as in former Minn. R. 7080.0600. Please refer to Exhibit 393, comment 1 of Exhibit 339, 487, and 528.

**783. Proposed Change part 7081.0040 subpart 1 item C.**

C. An SDS permit may be required for any subsurface sewage treatment system or group of subsurface sewage treatment systems that the commissioner has determined may cause adverse public health or

environmental impacts if not regulated under a state permit. Conditions for these discretionary permits include, but are not limited to, systems in environmentally sensitive areas, unsubstantiated or unexpected flow volumes, and systems requiring exceptional operation, monitoring, and management.

This is a new provision which the commissioner is authorized to issue a state permit under certain conditions in which state oversight may be necessary to ensure environmental protection. This is prudent in areas of high sensitivity, or for systems that are new, innovative and unproven, which are growing in numbers every year.

**784. Proposed Change part 7081.0040, Subpart 1, item D.**

D. Flow amounts to calculate whether an SDS permit is required must be determined according to part 7081.0110. The highest calculated value of the various methods in Table I under part 7081.0130, Subpart 1, must be used to make this determination, with no reduction allowed.

Justification

It is important that flow values contained in this chapter be used to determine if a permit is necessary. The Agency has gotten reports that local permitting authorities have given reductions in flow amounts to avoid the necessity of a state SDS permit.

In the current rule, it is unclear if additional flows from safety factors or infiltration and inflow amounts would be counted as flow which could trip the permit threshold. It is the intention of the proposed rule that these values do count as flow to determine if a state permit is necessary. Please refer to comment 6 of Exhibit 120 and Exhibit 405.

There have been situations in which stage growth has occurred, with the overall plan that a system would be designed and receive over 10,000 gallons per day. Therefore, the first stages, which fell beneath the permit threshold, did not apply for a state permit. This proposed language above is intended to require a permit for the first and all stages. This has been the Agency's policy since 2002. Please see Exhibit 222.

**785. Proposed Change part 7081.0040, Subpart 2, item A.**

Subp. 2. Other state regulations.

A. MSTs must conform to all applicable state statutes and rules.

Justification

It is important to note that in addition to this chapter, MSTs must meet all other requirements such as the well code, shoreland regulations, floodplain regulations, wetland rules, etc.... Please refer to Exhibit 387.

**786. Proposed Change part 7081.0040, Subpart 2, item B, formerly part 7080.0600, Subpart 2, item A.**

B. MSTs serving establishments licensed or regulated by the state of Minnesota, or MSTs owned by the state of Minnesota, must conform to this chapter.

Justification

This provision has been moved. Additional language has been added to indicate that all systems owned by the state shall also conform to the requirements of this chapter. Systems are owned by the Minnesota Department of Natural Resources and Minnesota Department of Transportation.

## MINN. R. 7081.0050 FEDERAL REGULATION

### 787. Proposed Change part 7081.0050, item A, formerly 7080.0030, Subpart 1.

*A. All subsurface sewage treatment systems serving two-family dwellings or larger, and systems serving other sewage generating establishments that serve more than 20 people are regulated by the United States Environmental Protection Agency as Class V injection wells under Code of Federal Regulations, title 40, parts 144 and 146. Systems designed under this chapter may require additional design requirements under Code of Federal Regulations, title 40, parts 144 and 146. In addition, single-family dwelling systems that receive nonsewage wastewater are regulated by these federal regulations. All systems that receive hazardous wastes are regulated by the United States Environmental Protection Agency as Class IV injection wells. Disposal of hazardous waste must be according to state and federal regulations.*

#### Justification

Language changes were made to the former text to reflect an update in the federal regulations and to make it clear what types of systems are regulated under the federal rules. Please refer to Exhibit 240.

### 788. Proposed Change part 7081.0050, item B.

*B. The owner or owner's agent of a system classified as a Class V injection well shall submit to the commissioner of the Pollution Control Agency and the United States Environmental Protection Agency the inventory information specified in Code of Federal Regulations, title 40, section 144.26.*

#### Justification

This provision has been moved from former Minn. R. 7080.0600, subp. 3.

### 789. Proposed Change part 7081.0050, item C.

*C. All septage generated from MSTs must be treated and dispersed according to applicable standards for septage in Code of Federal Regulations, title 40, part 503, and any local requirements.*

#### Justification

It is proposed to inform the user that federal regulations exist for the proper treatment and disposal practices for septage. The language is worded in a manner that a violation of these regulations is in violation of this chapter, making it locally enforceable if this language is adopted into the local ordinance.

## MINN. R. 7080.0060 LOCAL REGULATION

### 790. Proposed Change part 7081.0060.

*MSTs must be regulated under local ordinances in compliance with this chapter as described in Minnesota Statutes, section 115.55. Local administrative requirements for design review, construction permit issuance, construction inspections, variance procedures, enforcement, operational requirements, and other administrative processes must be according to chapter 7082, as published in the State Register, volume ..., page ....*

## Justification

This chapter is intended to contain only technical standards for MSTs. It is important to identify the administrative context that these standards are to be applied.

### **MINN. R. 7081.0070 VARIANCE PROCEDURES**

#### **791. Proposed Change part 7081.0070.**

*Parts 7081.0080 to 7081.0310 are provided to be incorporated into a local ordinance according to chapter 7082, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55. Variance requests to these design standards as adopted into local ordinances made by an owner or owner's agent must be issued or denied by the local unit of government. Variances may not be issued by the local unit of government for the minimal environmental protection outcomes in part 7081.0080, subparts 2 to 5.*

## Justification

This subpart is intended to alert the user to the local permitting authorities administrative provisions, and to indicate that the variance procedures can be found in proposed chapter 7082. It is proposed that local permitting authorities issue variances to these technical standards, but are not allowed to issue variances to the minimal environmental outcomes contained Minn. R. 7081.0060, subp. 2 and 3. For more information on variances please see chapter 7082.

### **Minn. R. 7081.0080 PERFORMANCE AND COMPLIANCE CRITERIA**

#### **792. Proposed Change part 7081.0080, Subpart 1.**

*Subpart 1. General. New construction, replacement, or existing MSTs designed under this chapter or existing MSTs constructed before the effective date of this chapter are considered conforming if they meet the requirements of this part.*

## Justification

Introductory statement.

#### **793. Proposed Change part 7081.0080, Subpart 2, formerly 7080.0060, Subpart 1.**

*Subp. 2. Treatment required. All sewage discharged from a dwelling or other establishment not served by a system issued a permit containing effluent and discharge limits or specific monitoring requirements by the agency must be treated according to local ordinances that comply with this chapter, chapter 7082, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55.*

## Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

#### **794. Proposed Change part 7081.0080, Subpart 3.**

*Subp. 3. Public health and safety; imminent threat.*

*A. To be in compliance, all MSTs must:*

*(1) have treatment processes and devices that do not allow sewage or sewage effluent contact with humans, insects, or vermin;*

(2) disperse sewage effluent into soil or sand below final grade, with the effluent remaining below final grade;

(3) not discharge to drainage tile, the ground surface, or surface water or back up sewage into dwellings or other establishments;

(4) treat and disperse sewage effluent in a safe manner, including protection from physical injury and harm; and

(5) not have received hazardous material.

B. MSTs may be deemed an imminent threat to public health or safety for noncompliance with item A and any other condition that if not followed, poses an imminent threat as determined by a qualified employee inspector or licensed inspection business.

#### Justification

This provision is an embellishment of Minn. Stat. § 115.55, subd. 5a (b)(1) to (4).

For the last provision, Minn. Stat. § 115.55 subd. 5a (b)(4) gives discretion to inspectors regarding other situations that can be classified as an imminent threat to public health or safety. Systems known to have impacted a water supply well above drinking water standards, clearly pose a significant health risk to the users of the well. This provision is not meant to require testing of wells for a compliance inspection of a MSTs, but if testing is conducted as part of a compliance inspection, or for any other reason, and the well is contaminated from the system, then the system should be considered an imminent threat to public health or safety.

It also needs to be stated that Minn. Stat. § 115.55 subd. 5a (b)(4) gives discretion to inspectors to identify other situations which pose an imminent threat to public health or safety. Systems known to have received hazardous wastes clearly pose a significant risk to ground water resources. The EPA classifies such systems as Class IV injection wells.

**795.** Proposed Change part 7081.0080, subpart 4, items A and B, formerly 7080.0020, subpart 16b, and former 7080.0060, subpart 3, item A, subitem (2).

Subp. 4. Ground water protection. To be in compliance, all MSTs must:

A. maintain a zone of unsaturated soil between the bottom of the soil treatment and dispersal system and the seasonally saturated soil or bedrock during loading of effluent, as described in part 7081.0270, subpart 7;

B. not be seepage pits, cesspools, drywells, leaching pits, sewage tanks, and treatment vessels that observably leak below the designated operating depth;

#### Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

**796.** Proposed Change part 7081.0080, Subpart 4, item C., formerly 7080.0179, Subpart 2, item C, subitem (2).

C. not allow viable fecal organisms to contaminate underground waters or zones of seasonal saturation; and

#### Justification

This provision has been changed from the former provision in chapter 7080. The former provision stated that viable fecal organisms could not travel more than 25 feet under normal stressful periods. Comments

to the Agency indicate that this was difficult to understand, so this simplified provision is proposed to clarify that compliance must be assessed during periods of non-stress. MSTs are expected to remove all pathogenic and pathogenic indicator organisms before reaching the seasonally saturated soil during non-stressful periods.

**797.** Proposed Change part 7081.0080, Subpart 4., item D, formerly 7080.0179, Subpart 2, item C, subitem (4).

*D. employ nitrogen reduction processes that reduce nitrogen contribution to ground water as determined in subitems (1) or (2).*

*(1) If the discharge from a MSTs will impact water quality of an aquifer, as defined in part 4725.0100 subpart 21, the effluent from a MSTs, in combination with the effective recharge to the groundwater, must not exceed a concentration of total nitrogen (as nitrogen) of greater than 10 mg/l at the property boundary or nearest receptor, whichever is closest.*

*(2) If the discharge from a MSTs will not impact water quality of an aquifer, as defined in Chapter 4725.0100 subpart 21, best management practices developed by the commissioner to mitigate water quality impacts to groundwater must be employed.*

Justification

SSTS have limited ability to treat for nitrogen compounds. Therefore, treated effluent entering the ground water can be in excess of the 10 mg nitrate/l drinking water standard. ISTS systems (small systems) do not have any nitrogen reduction standards because the plumes are small and dispersed among many small systems. LSTS (large systems) are required to meet the drinking water standard at the property boundary or nearest receptor, whichever is closest. Mid-sized systems (MSTs) are proposed to have increased nitrogen requirements, as the risks of contaminating a water supply aquifer increase.

Minnesota has many and varied ground water conditions as it relates to SSTS. In many cases, the ground water conditions are a near surface seasonally saturated soil which has a strong lateral gradient to a nearby surface water, wetland, or other discharge area. In these areas it is anticipated that the recharge to a drinking water aquifer is limited. Therefore, in these conditions, less nitrogen mitigation seems appropriate. However, in areas which recharge a drinking water aquifer, it is proposed that MSTs meet the rigorous standards of an LSTS.

To implement this requirement, the Agency intends to develop technical criteria to aid designers and local units of government concerning adequate ground water protection. The agency has decided not to place this criteria into the rules at this time due to the variety of conditions (flow, soil and ground water conditions and different types of treatment devices) affecting the rigor of nitrogen mitigation.

Please refer to comment 1 of Exhibit 120 and Exhibits 229, 320 321, 322, 376, 447, 481, 492, 522 to 527 and 529.

**798.** Proposed Change part 7081.0080 subpart 4., item E., formerly 7080.0179, subpart 2, item C, subitem (3).

*E. not exceed a ground water discharge of phosphorus to a surface water which exceeds the phosphorus standard to the receiving water.*

Justification

It is reasonable to require that MSTs be held to phosphorus standards, as would be the case for surface discharging wastewater treatment plants. Typically soil based treatment systems will adequately treat for phosphorus, however, if the system is close to a surface water with soil conditions with limited ability to

attenuate phosphorus, impacts to the surface water can occur. Please see the justification for Minn. R. 7081.0160, item F.

**799.** Proposed Change part 7081.0080, subpart 5, item A, formerly 7080.0060.

*Subp. 5. Other conformance. To be in compliance, MSTs must meet the requirements of items A and B. A. All methods and devices used to treat and disperse sewage must be designed to conform to all applicable federal, state, and local regulations.*

#### Justification

It is reasonable to require that systems regulated under this rule also abide by all other applicable requirements.

**800.** Proposed Change part 7081.0080, subpart 5, item B, formerly 7080.0060, subpart 3 E.

*B. Systems no longer in use must be abandoned according to part 7080.2500, as published in the State Register, volume ..., page ....*

#### Justification

A system no longer in use and not properly abandoned is proposed to be a non-compliant system to avoid any future safety concerns with a tank that may collapse and to prohibit any future discharge of contaminants into the system which can impact ground water quality. Please see justification for new Minn. R. 7080.1500, subp. 4(B).

**801.** Proposed Change part 7081.0080, subpart 6, item A, formerly 7080.0060, subpart 3, items D and E.

*Subp. 6. System operation. To be in compliance, an MSTs must meet performance standards and be operated and managed according to its operating permit, as described in part 7081.0290. To be in compliance, an MSTs designed before the effective date of this part must be operated according to applicable requirements of part 7080.2450, as published in the State Register, volume ..., page ....*

#### Justification

This provision has been moved with a format change due to rule restructuring. Please refer to comment 3 of Exhibit 120.

**802.** Proposed Change part 7081.0080, Subpart 7.

*Subp. 7. Compliance criteria for systems receiving replacement components. Components of existing MSTs that cause noncompliance must be repaired or replaced. The repaired or replacement components must meet technical standards and criteria in parts 7081.0110 to 7081.0280. The remaining components of the existing system must comply with subparts 2 to 5.*

#### Justification

This is a new provision to SSTS rules, and it is proposed in response to many questions the Agency receives on this subject. This new requirement is reasonable, because to repair or replace only one system component to allow the continued use of another component which does not provide the basic dispersal and treatment functions, seems inappropriate. For example, if a pipe connected to a cesspool has collapsed, one should not be able to repair the pipe to allow continued discharge into the cesspool.

**803.** Proposed Change part 7081.0080, Subpart 8, item A, formerly 7080.0315, Subpart 3.

*Subp. 8. Upgrade requirements.*

*A. MSTs in compliance with this part shall be issued a certificate of compliance. Systems found not in compliance shall be issued a notice of noncompliance.*

Justification

This is a current provision for ISTS that is proposed to also apply to MSTs, as it is readily and equally applicable to all SSTs.

**804.** Proposed Change part 7081.0080, Subpart 8, item B, formerly 7080.0305, Subpart 4, item B.

*B. MSTs issued a notice of noncompliance based on criteria in subpart 3 shall be repaired or replaced within ten months or as directed by Minnesota Statutes, chapter 145A, whichever is most restrictive.*

Justification

Provision of Minn. Stat. § 115.55, subd. 5a (b)(4).

**805.** Proposed Change part 7081.0080, Subpart 8, item C, formerly 7080.0305, Subpart 4, item A.

*C. MSTs issued a notice of noncompliance based on criteria in Subparts 4 or 5 shall be repaired or replaced according to local ordinance requirements.*

Justification

This is a current provision for ISTS that is proposed to also apply to MSTs, as it is readily and equally applicable to all SSTs.

**806.** Proposed Change part 7081.0080, Subpart 8, item D.

*D. Systems issued a notice of noncompliance based on criteria in Subpart 6 must immediately be maintained, monitored, or managed according to the operating permit.*

Justification

If a system is found to be non-compliant due to an operational violation, it is prudent to require the deficiency to be immediately corrected.

**MINN. R. 7081.0100 PROFESSIONAL REQUIREMENTS**

**807.** Proposed Change part 7081.0100.

*Systems must be designed, installed, inspected, operated, and maintained by appropriately licensed businesses and certified individuals according to chapter 7083, as published in the State Register, volume ..., page ..., and other applicable requirements.*

Justification

The provision is to inform the user of the licensing requirements for those working with MSTs as required by Minn. Stat. § 115.56. A statement is also made that any other applicable licensing

requirements do apply as determined by other possible licensing authorities. The licensing requirements are proposed to be moved from chapter 7080 to proposed chapter 7083. See Exhibit 489.

### **MINN. R. 7081.0110 SEWAGE DETERMINATION**

#### **808. Proposed Change part 7081.0110.**

*The average daily flow is the combined values determined in parts 7081.0120, 7081.0130, and 7081.0140.*

#### **Justification**

Introductory statement.

### **MINN. R. 7081.0120 AVERAGE DAILY FLOW DETERMINATION FOR DWELLINGS**

#### **809. Proposed Change part 7081.0120, Subpart 1, formerly 7080.0600, Subpart 4, item B, subitem (1).**

*Subpart 1. Sum of average daily flow for four to ten existing dwellings ~~or less~~. The average daily flow for MSTs serving four to ten existing dwellings is the sum of the average daily flows for all individual dwellings as determined in part 7080.1850, as published in the State Register, volume ..., page ...*

#### **Justification**

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

#### **810. Proposed Change part 7081.0120, Subpart 2, formerly 7080.0600, Subpart 4, item B, subitem (1).**

*Subp. 2. Sum of average daily flow for 11 existing dwellings to 10,000 gallons per day. The average daily flow for MSTs serving 11 existing dwellings to flow from existing dwellings not exceeding 10,000 gallons per day is determined in part 7080.1850, as published in the State Register, volume .... page .....*  
*Classification I dwellings may be considered as classification II dwellings.*

#### **Justification**

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

#### **811. Proposed Change part 7081.0120, Subpart 3.**

*Subp. 3. New housing developments. For new housing developments, the developer shall determine and restrict the total number of bedrooms for the development and determine the average daily flow by multiplying the total number of bedrooms by 150 gallons for MSTs serving four to 10 proposed dwellings, and by 110 gallons per bedroom for MSTs serving 11 or more proposed dwellings. If the ultimate development of phased or segmented growth meets or exceeds the thresholds in subpart 2, the initial system or systems require a state disposal system permit.*

Justification

This provision is necessary when a MSTS design is needed for a pending subdivision. In this case, a known number of bedrooms must be established in order to properly size the system. Therefore, restrictions must be placed on the total number of bedrooms to be allowed in the subdivision.

The flow values chosen are a realistic values to estimate flow from dwellings. Estimates based on census data indicate that the typical home is one person per bedroom on an average. The estimated typical flow per person is estimated to be 75 gallons per person per day, which equates to 75 gallons per bedroom per day. This amount is an average value, representing only half the dwellings, and does not account for peak flow periods. In an attempt to represent more than 50 percent of the dwellings' flow volumes and to account for a peaking factor it is proposed that 110 gallons per bedroom be used for a design flow value. Therefore, a three bedroom home would be designed for 330 gallons per day. This flow value is consistent with anecdotal information the Agency receives concerning flow values from dwellings.

For a smaller number of dwellings in a proposed subdivision (4 to 10 dwellings), a higher flow amount (150 gallons/bedroom) is chosen. This increased amount has been used for many years in previous rule versions and accounts for higher peak flows which occur as the number of dwellings decrease.

The stage growth provision has been Agency policy since August of 2002 as it seems prudent to design the first stages of a system to meet permit conditions if, in the end, the system will require a state permit. Please see Exhibit 222.

**812. Proposed Change part 7081.0120, Subpart 3, formerly 7080.0125 and 7080.0600, Subpart 4 B.**

*Subp. 4. **Additional capacity.** If construction of additional dwellings or bedrooms, installation of additional water-using devices, or other factors likely to increase the flow volumes can be reasonably anticipated, the MSTS must be designed to accommodate the additional capacity as determined by the local unit of government.*

Justification

This is a current provision for ISTS that is proposed to also apply to MSTS, as it is readily, and equally applicable to all SSTS.

**MINN. R. 7081.0130 FLOW AND WASTE CONCENTRATION DETERMINATION FOR OTHER ESTABLISHMENTS**

**813. Proposed Change part 7081.0130, Subpart 1, formerly 7080.0600, Subpart 4, item B, subitem 2, unit (a).**

*Subpart 1. **Method.** The average daily flow for other establishments is determined by methods in item A or B.*

*A. The average daily flow of sewage for MSTS serving other establishments is estimated using Table I.*

**TABLE I**  
**ESTIMATED SEWAGE FLOW FROM**  
**OTHER ESTABLISHMENTS**

<u>Dwelling units</u> <u>(also see outdoor</u> <u>recreation)</u>	<u>Unit</u>	<u>Average</u> <u>daily</u> <u>flow</u>
<u>Hotel or luxury</u> <u>hotel</u>	<u>guest</u>	<u>55</u>

	<u>square foot</u>	<u>0.28</u>	
<u>Motel</u>	<u>guest</u>	<u>38</u>	
	<u>square foot</u>	<u>0.33</u>	
<u>Rooming house</u>	<u>resident</u>	<u>45</u>	
	<u>add for each nonresident meal</u>	<u>3.3</u>	
<u>Daycare (no meals)</u>	<u>child</u>	<u>19</u>	
<u>Daycare (with meals)</u>	<u>child</u>	<u>23</u>	
<u>Dormitory</u>	<u>person</u>	<u>43</u>	
<u>Labor camp</u>	<u>person</u>	<u>18</u>	
<u>Labor camp, semipermanent</u>	<u>employee</u>	<u>50</u>	
<u>Commercial/Industrial</u>			
<u>Retail store</u>	<u>square foot</u>	<u>0.13</u>	
	<u>customer</u>	<u>3.8</u>	
	<u>toilet</u>	<u>590</u>	
<u>Shopping center</u>	<u>employee</u>	<u>11.5</u>	
	<u>square foot</u>	<u>0.15</u>	
	<u>parking space</u>	<u>2.5</u>	
<u>Office</u>	<u>employee/8-hour shift</u>	<u>18</u>	
	<u>square foot</u>	<u>0.18</u>	
<u>Medical office*</u>	<u>square foot</u>	<u>1.1</u>	
	<u>practitioner</u>	<u>275</u>	
	<u>patient</u>	<u>8</u>	
<u>Industrial building*</u>	<u>employee/8-hour shift</u>	<u>17.5</u>	
	<u>employee/8-hour shift with showers</u>	<u>25</u>	
<u>Laundromat</u>	<u>machine</u>	<u>635</u>	
	<u>load</u>	<u>52.5</u>	
	<u>square foot</u>	<u>2.6</u>	
<u>Barber shop*</u>	<u>chair</u>	<u>68</u>	
<u>Beauty salon*</u>	<u>station</u>	<u>285</u>	
<u>Flea market</u>	<u>nonfood vendor/space</u>	<u>15</u>	
	<u>limited food vendor/space</u>	<u>25</u>	
	<u>with food vendor/space</u>	<u>50</u>	
<u>Eating and drinking establishments</u>			
<u>Restaurant (does not include bar or lounge)</u>	<u>meal without alcoholic drinks</u>	<u>3.5</u>	
	<u>meal with alcoholic drinks</u>	<u>8</u>	
	<u>seat (open 16 hours or less)</u>	<u>30</u>	
	<u>seat (open more than 16 hours)</u>	<u>50</u>	
	<u>seat (open 16 hours or less, single service articles)</u>	<u>20</u>	

<u>seat (open more than 16 hours, single service articles)</u>		<u>35</u>
<u>Restaurant (short order)</u>	<u>customer</u>	<u>7</u>
<u>Restaurant (drive-in)</u>	<u>car space</u>	<u>30</u>
<u>Restaurant (carry out, including caterers)</u>	<u>square foot</u>	<u>0.5</u>
<u>Institutional meals</u>	<u>meal</u>	<u>5.0</u>
<u>Food outlet</u>	<u>square foot</u>	<u>0.2</u>
<u>Dining hall</u>	<u>meal</u>	<u>8.5</u>
<u>Coffee shop</u>	<u>customer</u>	<u>7</u>
<u>Cafeteria</u>	<u>customer</u>	<u>2.5</u>
<u>Bar or lounge (no meals)</u>	<u>customer</u>	<u>4.5</u>
	<u>seat</u>	<u>36</u>
<u>Entertainment establishments</u>		
<u>Drive-in theater</u>	<u>car stall</u>	<u>5</u>
<u>Theater/auditorium</u>	<u>seat</u>	<u>4.5</u>
<u>Bowling alley</u>	<u>alley</u>	<u>185</u>
<u>Country club</u>	<u>member (no meals and showers)</u>	<u>22</u>
	<u>member (with meals and showers)</u>	<u>118</u>
	<u>member (resident)</u>	<u>86</u>
<u>Fairground and other similar gatherings</u>	<u>visitor</u>	<u>1.5</u>
<u>Stadium</u>	<u>seat</u>	<u>5</u>
<u>Dance hall</u>	<u>person</u>	<u>6</u>
<u>Health club/gym</u>	<u>member</u>	<u>35</u>
<u>Outdoor recreation and related lodging facilities</u>		
<u>Campground</u>	<u>person with hook-up</u>	<u>36</u>
	<u>site with hook-up</u>	<u>100</u>
	<u>site without hook-up, with central bath</u>	<u>62</u>
	<u>site to be served by dump station</u>	<u>14.5</u>
<u>Permanent mobile home</u>	<u>mobile home</u>	<u>225</u>
<u>Camp, day without meals</u>	<u>person</u>	<u>20</u>
<u>Camp, day with meals</u>	<u>person</u>	<u>25</u>
<u>Camp, day and night with meals</u>	<u>person</u>	<u>45</u>
<u>Resort/lodge hotel</u>	<u>person</u>	<u>62</u>
<u>Cabin, resort</u>	<u>person</u>	<u>50</u>
<u>Retail resort store</u>	<u>customer</u>	<u>4</u>

<u>Park or swimming pool</u>	<u>guest</u>	<u>10</u>
<u>Visitor center</u>	<u>visitor</u>	<u>13</u>
<u>Transportation</u>		
<u>Gas station/convenience store</u>	<u>customer</u>	<u>3.5</u>
<u>Service station*</u>	<u>customer</u>	<u>11</u>
	<u>service bay</u>	<u>50</u>
	<u>toilet</u>	<u>250</u>
	<u>square foot</u>	<u>0.25</u>
<u>Car wash* (does not include car wash water)</u>	<u>square foot</u>	<u>5</u>
<u>Airport, bus station, rail depot</u>	<u>passenger</u>	<u>5</u>
	<u>square foot</u>	<u>5</u>
	<u>restroom</u>	<u>565</u>
<u>Institutional</u>		
<u>Hospital*</u>	<u>bed</u>	<u>220</u>
<u>Mental health hospital*</u>	<u>bed</u>	<u>147</u>
<u>Prison or jail</u>	<u>inmate</u>	<u>140</u>
<u>Nursing home, other adult congregate living</u>	<u>resident</u>	<u>125</u>
<u>Other public institution</u>	<u>person</u>	<u>105</u>
<u>School (no gym, no cafeteria, and no showers)</u>	<u>student</u>	<u>14</u>
<u>School (with cafeteria, no gym and no showers)</u>	<u>student</u>	<u>18</u>
<u>School (with cafeteria, gym, and showers)</u>	<u>student</u>	<u>27.5</u>
<u>School (boarding)</u>	<u>student</u>	<u>95</u>
<u>Church</u>	<u>seat</u>	<u>4</u>
	<u>add for each meal prepared</u>	<u>5</u>
<u>Assembly hall</u>	<u>seat</u>	<u>4</u>
<u>Miscellaneous</u>		
<u>Public lavatory</u>	<u>user</u>	<u>5</u>
<u>Public shower</u>	<u>shower taken</u>	<u>11</u>

Waste other than sewage may only be discharged into the system if the waste is suitable to be discharged to a subsurface soil treatment and dispersal system. Unless otherwise noted in Table I, the flow values do not include flows generated by employees. A flow value of 15 gallons per employee per eight-hour shift must be added to the flow amount. Average daily flow determination for establishments not listed in Table I shall be determined by the best available information and approved by the local unit of government.

### Justification

This concept for this provision has been moved from Minn. R. 7080.0600, subp. 4 B(2)(a), with the change from using the best available information determination from the Agency (as policy) to actually putting the flow values in the rule itself. This is needed to determine if the SDS Permit threshold has been met, as in the past, system proposers had enough leeway that they could manipulate the best available flow values to avoid a SDS Permit. The flow values were determined from a variety of sources. Please see Exhibits 494 to 498.

#### **814. Proposed Change part 7081.0130, Subpart 1 item B, formerly 7080.0600, Subpart 4. B. (2) (b).**

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

### Justification

This provision has been moved due to rule restructuring and formatting changes. The substantive change is that the maximum daily flow does not need to be measured and recorded because the peaking factor for design has been added to each of the system's component sizing factor.

#### **815. Proposed Change part 7081.0130, Subpart 2, formerly 7080.0600, Subpart 4 B. (3).**

*Subp. 2. Waste concentration. If concentrations of biochemical oxygen demands, total suspended solids, and oil and grease from the sewage are expected to be higher than 175 mg/l, 65 mg/l, or 25 mg/l respectively, an estimated or measured average concentration must be determined and be acceptable to the local unit of government. System design must account for concentrations of these constituents so as not to cause internal system malfunction, such as, but not limited to, clogging of pipes, orifices, treatment devices, or media. Waste strength loading to soil treatment and dispersal systems must not exceed the concentration for these constituents in excess of the values in Table III in part 7081.0270, Subpart 6.*

### Justification

This is a current provision for ISTS that is proposed to also apply to MSTs, as it is readily and equally applicable to all SSTs. Please refer to comment 42 of Exhibit 398.

### **MINN. R. 7081.0140 INFILTRATION**

#### **816. Proposed Change part 7081.0140, formerly 7080.0600, Subpart 4 E (2).**

*The average daily flow must also include 200 gallons of infiltration and inflow per inch of collection pipe diameter, per mile, per day, with a minimum pipe diameter of two inches to be used for the calculation. Flow values may be further increased if the system employs treatment devices that are exposed to atmospheric conditions that will infiltrate precipitation.*

### Justification

The second provision is new language from the former provision. It is necessary to accommodate the additional water to the system from any secondary treatment device which receives and infiltrates precipitation. This infiltration is then discharged to the soil treatment system. The soil treatment system is not designed to infiltrate and transmit this additional water and hydraulic stress, or hydraulic failure can result.

## **MINN. R. 7081.0150 NECESSITY OF SOIL AND SITE EVALUATION**

### **817. Proposed Change part 7081.0150.**

*Soil and site evaluations must be conducted for MSTs design. The evaluations must be conducted according to parts 7081.0160 and 7081.0170. Evaluations must identify and delineate an initial and replacement soil treatment and dispersal area with appropriate system site boundaries.*

#### Justification

The evaluation of the site and the soil is likely the most critical step in designing an MSTs. This provision is required for ISTS in former Minn. R. 7080.0110, subp. 1.

## **MINN. R. 7081.0160 PRELIMINARY EVALUATION**

### **818. Proposed Change part 7081.0160, item A.**

*A preliminary evaluation consists of determining:*

*A. the average daily flow and anticipated effluent concentrations of biological oxygen demand, total suspended solids and fats, oils and grease.*

#### Justification

This information is critical to the sizing of the soil treatment system, and the designer needs to make these determinations before a site and soil evaluation can begin.

### **819. Proposed Change part 7081.0160, item B.**

*B. whether water supply wells may impact the location of the system due to the setback constraints;*

#### Justification

This provision is not meant to determine any possible impacts to any nearby wells. That assessment will take place in Minn. R. 7081.0210. This provision is just to determine if any nearby well is within the legal setback of the proposed system location.

### **820. Proposed Change part 7081.0160, Subpart 2, item C.**

*C. whether buildings or improvements will be within 50 feet of the proposed soil treatment area;*

This is a requirement of former Minn. R. 7080.0110, subp. 2a(B)(2) which was applicable to larger ISTS in former Minn. R. 7080.0600.

### **821. Proposed Change part 7081.0160, item D.**

*D. whether buried water supply pipes will be within 50 feet of the proposed system;*

#### Justification

This is a requirement of former Minn. R. 7080.0110, subp.2a(B)(3), which was applicable to larger ISTS in former Minn. R. 7080.0600.

**822. Proposed Change part 7081.0160, item C.**

*E. whether easements will be within 50 feet of the proposed system;*

Justification

This is a requirement of former Minn. R. 7080.0110, subp. 2a(C) which was applicable to larger ISTS in former Minn. R. 7080.0600.

**823. Proposed Change part 7081.0160, item F.**

*F. whether the ordinary high water level of public waters will be within 500 feet of the proposed soil treatment and dispersal area;*

Justification

The concept for this provision is from former Minn. R. 7080.0110, subp. 2a(D) which was applicable for larger ISTS in former Minn. R. 7080.0600. A specific distance of 500 feet is provided in this section, outside of which placement of a MSTs is not of concern. The issue here is one of phosphorus entering surface waters from MSTs. The distance of 500 feet was determined from a variety of sources. Please see Exhibits 122, 221, 236, 241 to 243, 274, 317, 359, 422, and 435.

**824. Proposed Change part 7081.0160, item G.**

*G. whether the system will be located in a floodplain and the system location in relation to the 100-year flooding elevation from published data if available or data that is acceptable to the local unit of government;*

Justification

This is a requirement of former Minn. R. 7080.0110, subp. 2a(E) which was applicable to larger ISTS in former Minn. R. 7080.0600.

**825. Proposed Change part 7081.0160, item H.**

*H. whether designated wetlands will be within 50 feet of the proposed soil treatment area or whether a wetland delineation has been conducted or is required to be conducted on the property;*

Justification

This is a new requirement which is proposed for two reasons. First, this provides an idea of the natural drainage of the area, which helps to interpret the surrounding soil conditions. Secondly, it may help identify the discharge point of the effluent/ground water mixture. This discharge point determination is critical in determining the possible ground water impacts the system may have. For example, in some areas of Minnesota, the effluent/ground water mixture may discharge quickly to a nearby wetland, as compared to a deep recharge of the ground water which may impact water supply wells.

Please also see the justification for Minn. R. 7080.1710, item L and Exhibits 23 and 387.

**826. Proposed Change part 7081.0160, item I.**

*I. the required setbacks from the proposed soil treatment and dispersal system;*

### Justification

This is a requirement of former Minn. R. 7080.0110, subp. 2a(G) which was applicable to larger ISTS in former Minn. R. 7080.0600.

#### **827. Proposed Change part 7081.0160, item J.**

*J. the soil survey information on the proposed soil dispersal area, including the soil map, map units, landscape position, flooding potential, slope range, seasonally saturated soil level, depth to bedrock, texture of soil horizons, and permeability of soil horizons;*

### Justification

This is a requirement of former Minn. R. 7080.0110, subp. 2a(H) which was applicable to larger ISTS in former Minn. R. 7080.0600. This provision has language changes to be more explanatory of what soil features should be assessed that are applicable to MSTs.

#### **828. Proposed Change part 7081.0160, item K.**

*K. the legal description, dimensions, and size of the proposed soil treatment area;*

### Justification

This is a requirement of former Minn. R. 7080.0110, subp. 2a(I), which was applicable to larger ISTS in former Minn. R. 7080.0600.

#### **829. Proposed Change part 7081.0160, item L.**

*L. Name(s) of property owners; and*

### Justification

This is a requirement of former Minn. R. 7080.0110, subp. 2a(J) which was applicable for larger ISTS in former Minn. R. 7080.0600.

#### **830. Proposed Change part 7081.0160, item M.**

*M. the location of the system on a United States Geological Survey quadrangle map of the proposed soil treatment and dispersal area and the area within one mile.*

### Justification

The quadrangle map requirement can aid in system design with respect to flooding potential, ground water flow direction, area drainage, topography which effects system layout and the distribution system.

## **MINN. R. 7081.0170 FIELD EVALUATION**

#### **831. Proposed Change part 7081.0170, Subpart 1.**

*Subpart 1. Generally. Before conducting a field evaluation, the designer shall confer with the local unit of government to determine the requirements and scope of the evaluation, dependent upon system size, soil conditions, and other applicable factors. At a minimum, the requirements in this part must be met.*

### Justification

This proposed provision is offered to custom design the extent of field investigation so to provide a complete, but not excessive assessment. It is difficult in this chapter to be prescriptive in this and many other areas due to the wide range of systems regulated under this chapter. For example, this chapter regulates systems from a single service station washroom to a restaurant/resort complex at 10,000 gallons per day. Therefore, the extent of the site evaluation should consider this factor, plus the uniformity of the soil conditions in the area. In addition, making this first contact with the local permitting authority is anticipated to lessen the review time and a possible revisit to the site by the designer to gather more information.

#### **832. Proposed Change part 7081.0170, Subpart 2.**

*Subp. 2. Property marks. Property lines must be identified as acceptable to the owner. Lot improvements, required setbacks, and easements must be identified, located, and marked.*

### Justification

This is a requirement of former part Minn. R. 7080.0110, subp. 4(A) which was applicable for larger ISTS in former Minn. R. 7080.0600. This language does not specifically require a survey of the site boundaries, but it is strongly recommended. If not surveyed, the designer should have the system owner sign-off on the estimated location of the property boundaries.

#### **833. Proposed Change part 7081.0170, Subpart 3.**

*Subp. 3. Site area. A general evaluation and description of the proposed soil treatment and dispersal area, including a general geomorphic description, current land use, and past land use, if known, must be provided.*

### Justification

Before getting into a detailed look at the specific site conditions, it is frequently helpful if an overall perspective of the site and surrounding conditions are assessed. Past land use is valuable to make inferences of the soil conditions. For example, if the surrounding area was in a cultivated crop, but the proposed site was always in pasture, it may mean the soil conditions were less favorable. Soil conditions favorable for crop growth are the same soil conditions needed for sewage treatment. Also past land use can identify any soil disturbance or compaction which may impact the soil's infiltrative capacity.

#### **834. Proposed Change part 7081.0170 subpart 4 item A.**

*Subp. 4. Surface features. The following surface features must be identified and described:*  
*A. the dominant vegetation;*

### Justification

This is a requirement of former Minn. R. 7080.0110 subp. 4(B)(2) which was applicable for larger ISTS in former Minn. R. 7080.0600.

#### **835. Proposed Change part 7081.0170 subpart 4 item B.**

*B. evidence of disturbed or compacted soil or flooding or run-on potential; and*

### Justification

This is a requirement of former Minn. R. 7080.0110 subp. 4(B)(3) which was applicable for larger ISTS in former Minn. R. 7080.0600.

#### **836. Proposed Change part 7081.0170 subpart 4 item C.**

*C. landscape position, including landform, slope gradient, slope direction, and surface morphometry as described in the Field Book for Describing and Sampling Soils Version 2.0, September 2002, developed by the National Soil Survey Center and Natural Resources Conservation Service of the United States Department of Agriculture. It is available through the United States Government Printing Office, 710 North Capitol Street NW, Washington, D.C. 20401. The document is subject to frequent change and is available at the Minnesota State Law Library, 25 Dr. Martin Luther King Jr. Blvd., St. Paul, MN 55155. The field book is incorporated by reference.*

### Justification

This is a requirement of former Minn. R. 7080.0110 subp. 4(B)(4) for SSTS and is readily applicable for MSTs. This language is a bit more explanatory than the current language in chapter 7080.

#### **837. Proposed Change part 7081.0170 subpart 5 item A.**

##### *Subp. 5. Soil pits.*

*A. The required number of soil pits must be determined by the professional judgment of the designer as based on the size of the area, consistency of the soil, and approved by the local unit of government.*

### Justification

For MSTs design it is proposed that soil pits are to be required to determine the soil characteristics. This proposal is supported by the Minnesota Association of Professional Soil Scientists and other interested parties. The frequency is to be left up to site specific consideration. Please refer to Exhibits 25 and 352.

#### **838. Proposed Change part 7081.0170 subpart 5 item B.**

*B. Soil borings may be substituted for soil pits if conditions exist where soil pits are not warranted as determined by the local unit of government.*

### Justification

For smaller or less complex systems governed under this rule, it is proposed that soil borings be allowed to determine soil characteristics.

#### **839. Proposed Change part 7081.0170 subpart 5 item C.**

*C. The qualifying soil pits or borings to be used for the MSTs design must be located within or on the borders of the proposed soil treatment and dispersal area. Soil pits or soil borings must be dug outside the soil dispersal area if possible. The soil must be observed and described to a depth of at least three feet below the proposed depth of the system. Other soil observations may be made to supplement the required soil pit information.*

## Justification

The Agency periodically receives design plans from designers for a complementary review. A surprising number of plans indicate that the soil borings were not conducted near the site of the proposed soil dispersal system. Therefore, a provision appears to be necessary to state that the soil investigation needs to be done where the system is proposed to be located. The last proposed is to require pits to be dug outside of the system boundaries so as not to disturb the soil that will be used to treat and disperse the effluent.

A minimum depth is proposed that the designer must assess for MSTs design. This is to ensure that the immediate zone in which the effluent is to be placed is satisfactory from a treatment and dispersal perspective. Also, the soil pit requirement does not prohibit other soil borings from being conducted.

### **840. Proposed Change part 7081.0170 subpart 5 item D, formerly 7080.0170 subpart 4 item C.**

*C. Underground utilities must be located before soil observations are undertaken. Required safety precautions must be taken before entering soil pits.*

## Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

### **841. Proposed Change part 7081.0170 subpart 6 item A .**

#### *Subp. 6. Soil description.*

*A. The soil properties and features in subitems (1) to (13) must be described according to Field Book for Describing and Sampling Soil, version 2, Natural Resources Conservation Service, United States Department of Agriculture (September 2002), for each soil horizon at each qualifying soil pit or boring. The field book is incorporated by reference under subpart 4.*

*(1) Matrix soil color.*

*(2) Soil features that have different colors from the matrix color, including but not limited to clay films, organic stains, silt coats, nodules, and concretions.*

*(3) Abundance, size, and contrast of redoximorphic features.*

*(4) Soil texture, with modifiers.*

*(5) Grade, size, and shape of soil structure.*

*(6) Moist soil consistence.*

*(7) Abundance and size of rock fragments.*

*(8) Abundance and size of roots.*

*(9) Horizon boundary conditions.*

*(10) Parent materials.*

*(11) Pores, quantity and size.*

*(12) Quantity of boulders and tree stumps affecting construction.*

*(13) Any other characteristic or feature that may affect permeability of the soil or treatment of sewage effluent.*

## Justification

Some of these assessments are required in former Minn. R. 7080.0110 subp. 4(D) which was applicable for larger ISTS in former Minn. R. 7080.0600. The additional features required to be assessed for MSTs are: pores, parent material, horizon boundary conditions, roots, rock fragments, and lithochromic mottling. Identification of these additional features are due to the higher flow values involved, which

makes a more critical view of the soil's ability to transmit and treat effluent necessary. In addition, it is anticipated that the safety factors employed for MSTs will not be as great as developed for SSTs as based on chapter 7080 prescriptive designs. Therefore, a better assessment of the soil's abilities needs to be determined.

**842. Proposed Change part 7081.0170 subpart 6 item B.**

*B. The depth of bedrock, if encountered, must be determined by requirements of part 7080.0020, subpart 6.*

Justification

This is a requirement of former Minn. R. 7080.0110 subp. 4(D)(4) which was applicable for larger ISTS in former Minn. R. 7080.0600.

**843. Proposed Change part 7081.0170 subpart 6 item C.**

*C. The elevation of standing water evident in any soil pit or boring must be identified.*

Justification

This is a requirement of former Minn. R. 7080.0110 subp. 4(D)(7) which was applicable for larger ISTS in former Minn. R. 7080.0600.

**844. Proposed Change part 7081.0170 subpart 6 item D.**

*D. The soil must not be described when frozen, at an improper moisture content, or under poor light conditions.*

Justification

Soil must be assessed under the proper environmental conditions, otherwise erroneous interpretations and system design can result. For example soil colors cannot be evaluated properly for redoximorphic features under poor light conditions.

**845. Proposed Change part 7081.0170, Subpart 7.**

*Subp. 7. Method. A method for determining the soil's infiltration capacity in the absorption area and internal water movement of the soil beneath the system must be employed. Both hydraulic conductivity testing, or other equivalent physical measurement of water movement, along with a soil morphological determination of the soil's texture, structure, and consistence, must be employed. Soil sizing factors in part 7080.2150, Subpart 3, item G, as published in the State Register, volume ..., page ..., are recommended if the degree of ground water mounding is found to be acceptable. The frequency of the observations and measurements must be determined by the professional judgment of the designer, dependent on the variation in soil conditions and the system size, with the frequency of the observations and measurements approved by the local unit of government.*

Justification

Soils need to be evaluated for two main reasons, to assess the ability of the soil to remove sewage contaminants and to ascertain the soil's ability to disperse the effluent away from the system. The proposed method requires two hydraulic assessments. First, a detailed assessment is to be required of the internal soil conditions which affect transmission of fluids. This internal assessment is made to estimate pore volume, pore size, and the continuity of the pores. This method is allowed in former Minn. R.

7080.0110. However, for MSTs it is proposed that this assessment be followed up by an actual physical measurement of water being absorbed by the soil, just to ensure that the soil features observed were correct.

**846. Proposed Change part 7081.0170, Subpart 8.**

*Subp. 8. Comparison with soil survey. All field soil information gathered must be compared and evaluated against soil survey information. Any discrepancies shall be identified and justification shall be provided for the information that was chosen for system design.*

**Justification**

This is a requirement of former Minn. R. 7080.0110, subp. 2a(H), which was applicable for larger ISTS in former Minn. R. 7080.0600. Please refer to comment 12 of Exhibit 120.

**MINN. R. 7081.0180 SOIL INTERPRETATION FOR SYSTEM DESIGN**

**847. Proposed Change part 7081.0180, Subpart 1.**

*Subpart 1. Site and soil information. Site and soil information gathered in parts 7081.0160 and 7081.0170 must be interpreted for suitability for MSTs siting, design, and construction, with consideration of the following:*

**Justification**

Conducting a complete and accurate site and soil evaluation is not useful for design purposes unless the information is studied and correctly interpreted for the actual soil behaviors and expected performance.

**848. Proposed Change part 7081.0180, Subpart 1, item A.**

*A. surface features impacts from precipitation, run-on, and interflow;*

**Justification**

An interpretation needs to be made concerning the amount of storm water that may be added to the site. If it is determined that an adverse volume of storm water will affect the system, then an upslope diversion should be employed.

**849. Proposed Change part 7081.0180, Subpart 1, item B.**

*B. cultural features impacts, including, but not limited to, setbacks and easements;*

**Justification**

These site constraints need to be carefully considered, as they cannot be infringed upon.

**850. Proposed Change part 7081.0180, Subpart 1, item C.**

*C. site conditions affecting system layout, distribution system requirements, and constructability;*

### Justification

The designer must assess the topography constraints to keep the system level, on the contour, and to determine if the system can be stepped-down to facilitate gravity distribution.

#### **851. Proposed Change part 7081.0180, Subpart 1, item D.**

##### *D. layers of coarse soil textures that affect treatment;*

### Justification

A part of the soil treatment process is attenuation and retention of contaminants for biodegradation or chemical breakdown. If the soil particle sizes are too large, (coarse sand or gravel particles) surface area and detention time is decreased and adequate contaminant removal may not take place.

#### **852. Proposed Change part 7081.0180, Subpart 1, item E.**

##### *E. disturbed, compacted, cut-filled, or other unnatural condition, if present;*

### Justification

This is a requirement of former 7080.0110, Subpart 4, item B, subitem (3) which was applicable for larger ISTS in former 7080.0600.

#### **853. Proposed Change part 7081.0180, Subpart 1, item F.**

##### *F. the uniformity of the soil over the site;*

### Justification

The designer needs to determine the uniformity of the soil to determine if more soil observations may be necessary to adequately characterize the site.

#### **854. Proposed Change part 7081.0180, Subpart 1, item G.**

##### *G. future surrounding land use changes;*

### Justification

This requirement is proposed as it appears prudent to determine if the site will remain suitable for a MSTs if land use changes occur. For example, the site may be able to adequately drain the limited upslope drainage from a vegetated area, but many not be able to drain the additional run-on if future upslope surfaces are paved. Also, problems can be encountered downslope of the system if water supply wells are installed closer than what was anticipated at design.

#### **855. Proposed Change part 7081.0180, Subpart 1, item H.**

##### *H. soil sizing factor or loading rate; and*

## Justification

This will be one of the more critical factors for system design. Again, conducting tests and generating results are not useful unless the results are adequately interpreted to correctly size the system. With MSTs design, this process may be quite complex as many factors need to be considered in system design.

### **856. Proposed Change part 7081.0180, Subpart 1, item I.**

*A. an approximation of the rise in ground water from system operation as determined by ground water mounding calculations. A narrative evaluation of the accuracy of the approximation must be provided. The approximation must be related to the requirements in part 7081.0270, Subpart 3, item B.*

## Justification

It is proposed that an assessment be conducted to determine the extent of ground water mounding from the MSTs. The concern with ground water mounding is its affects on reducing the designed vertical separation distance from the bottom of the soil treatment system to the seasonally saturated soil, possible hydraulic failure, and break-out of effluent in low areas near the system. Estimates of ground water mounding can be made by a variety of models. These models can be found in the Agency's High Rate Soil Absorption Manual (Exhibit 466), the Guidance for Evaluation of Potential Ground Water Mounding Associated with Cluster and High-Density Wastewater Soil Absorption Systems developed by the Colorado School of Mines (Exhibit 467), and a GUI model entitled GMound developed by Scott County Minnesota (Exhibit 468). The models are only as accurate as the parameters entered into the calculations, so users will need to be trained on how to measure or make reasonable estimates of these parameters. Also see Exhibit 493.

### **857. Proposed Change part 7081.0180, Subpart 2.**

*Subp. 2. **Flood fringes.** Systems proposed to be located in flood fringes must determine feasibility of relocating the system outside the floodplain.*

## Justification

If the system is proposed to be located in the floodplain, it is prudent to require justification as to why the system cannot be relocated outside the floodplain.

### **858. Proposed Change part 7081.0180, Subpart 3.**

*Subp. 3. **Depth.** The limiting layer in the soil shall be determined based on the depth of bedrock or seasonally saturated soil if encountered. The depth to the seasonally saturated soil shall be determined according to part 7080.1720, Subpart 5, item E, as published in the State Register, volume ..., page ..., and the depth of bedrock shall be as defined under part 7080.1100, Subpart 10, as published in the State Register, volume ..., page*

## Justification

The limiting layer determination is likely the most important design factor to be considered. If the limiting layer is misidentified, the system may not adequately treat or disperse the effluent.

## **MINN. R. 7081.0190 SITE PROTECTION**

### **859. Proposed Change part 7081.0190.**

The proposed soil treatment and dispersal area must be protected from disturbance, compaction, or other damage by staking, fencing, posting, or other effective method.

#### Justification

This is a requirement of former Minn. R. 7080.0110, subp. 4(F), which was applicable to larger ISTS in former Minn. R. 7080.0600.

### **MINN. R. 7081.0200 SOIL AND SITE REPORT**

#### **860. Proposed Change part 7081.0200.**

All information required in parts 7081.0150 to 7081.0180 must be submitted for review and approval by the local unit of government prior to final design. The submittal must also contain:

A. a map of the proposed soil treatment and dispersal area, drawn to scale, showing:

(1) features with a setback within 150 feet of the system;

(2) easements within 50 feet of the system;

(3) floodplains, wetlands, and surface waters, within 100 feet of the system;

(4) location and elevation of all soil pits, borings, and hydraulic tests; and

(5) two-foot contour lines, unless use of the contours are not warranted as determined by the local unit of government;

B. dates and weather conditions during the field evaluation;

C. elevations of the seasonally saturated soil or bedrock;

D. proposed depths of the system bottom;

E. proposed soil sizing factor or loading rate;

F. system site boundaries;

G. anticipated construction-related issues;

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

I. a narrative explaining any difficulties encountered during the site evaluation, such as, but not limited to, identifying and interpreting soil and landform features, and how the difficulties were resolved.

#### Justification

These elements are similar to the reporting requirements for SSTS as listed in former Minn. R. 7080.0110, subp. 5a, which was applicable to larger ISTS in former Minn. R. 7080.0600.

### **MINN. R. 7081.0210 GROUND WATER INVESTIGATION**

#### **861. Proposed Change part 7081.0210, Subpart 1.**

Subpart 1. Necessity of investigation. A preliminary ground water evaluation must be conducted for all proposed MSTs according to this part.

#### Justification

Systems designed under chapter 7080 require no ground water investigation, and large SSTS (i.e., LSTS) typically require extensive ground water investigation and monitoring. A simple ground water investigation is proposed to be required for MSTs design. The proposed investigation is limited in nature, relational to the anticipated risks.

**862.** Proposed Change part 7081.0210, Subpart 2.

*Subp. 2. Preliminary investigation. The following information must be ascertained from the best available information:*

Justification

It is not intended at this preliminary point in the design process that a field investigation be conducted. However, it is reasonable to have the designer review available information to determine ground water conditions and possible impacts.

**863.** Proposed Change part 7081.0210, Subpart 2, item A.

*A. the size of the soil treatment and dispersal system, proposed loading rate, and system geometry;*

Justification

One of the main reasons for conducting a ground water investigation is to determine the extent of ground water mounding and the amount and possible transport of contaminants. The first factor to consider in this assessment is the amount of flow and how that flow is proposed to be distributed. The flow is an important consideration for contaminant transport, since most contaminants are reported as concentrations.

**864.** Proposed Change part 7081.0210, Subpart 2, item B.

*B. The legal description of the parcel where the proposed soil treatment site is to be located.*

Justification

This provision is necessary in order to correctly find any available geologic or ground water information about the site.

**865.** Proposed Change part 7081.0210, Subpart 2, item C.

*C. any anticipated discharges from nondomestic sources to the proposed MSTs;*

Justification

The routine assessment of ground water impacts will focus on the typical contaminants of concern, such as nitrates and fecal organisms. However, if discharges of other contaminants are expected, then the ground water assessment must take into account the ground water impacts from those contaminants.

**866.** Proposed Change part 7081.0210, Subpart 2, item D.

*D. the location of the MSTs on a 7.5 minute United States Geological Survey quadrangle topographic map, including the area within a one-mile radius of the proposed soil treatment system;*

Justification

Locating the site on a quadrangle map will aid the designer on some important site conditions including: topography, surface water drainage, flooding potential, ground water flow conditions. And other features that factor into the design.

**867. Proposed Change part 7081.0210, Subpart 2, item E.**

*E. a determination of the general geology, shallow ground water setting, regional ground water setting, and aquifers used for water supply and a description of the general site hydrology characteristics, including, but not limited to, identification and estimated depth measurements to geologic units and aquifers, and identification of ground water confining strata;*

**Justification**

These provisions are proposed to assist in developing a surface and subsurface assessment at the site and surrounding area. This may aid in determining downgradient areas that may be impacted, ground water flow direction and ground water discharge areas.

**868. Proposed Change part 7081.0210, Subpart 2, item F.**

*F. a determination whether the proposed system is in a drinking water supply management area, inner wellhead management zone, source water protection area, or ground water sensitive area;*

**Justification**

The Minnesota Department of Health is establishing drinking water supply management areas. Locating an MSTs in these areas may directly impact a source of drinking water for a public water supply. Therefore, it is prudent to have the designer determine if the MSTs is proposed to be located in a drinking water supply management area.

**869. Proposed Change part 7081.0210, Subpart 2, item G.**

*G. an assessment of all water supply wells within a 300-foot radius of the proposed soil treatment area with a minimum assessment of well locations and casing depths from well construction log records. If no records exist, the well locations and casing depths must be estimated;*

**Justification**

This provision is to determine the possible impacts to wells if a system is sited at the proposed location. The 300 foot determination was made by Agency staff consistent with the proposed water supply well setback for large SSTs (i.e., LSTS). Please see Exhibit 238. This information can be gathered from the county well index which is located on the world wide web at: <http://www.health.state.mn.us/divs/eh/cwi/>.

**870. Proposed Change part 7081.0210, Subpart 2, item H.**

*H. a determination or estimation of ground water flow direction; and*

**Justification**

This provision is critical to determine which direction any contaminant plume may travel and if any downgradient wells may be impacted.

**871. Proposed Change part 7081.0210, Subpart 2, item I.**

*I. An assessment of nitrogen impacts from the system.*

## Justification

One of the main concerns with MSTs is the possible impacts on aquifers with nitrates. The reason being is, sewage effluent contains approximately 45 to 60 mg/l of nitrogen, a properly functioning MSTs converts nitrogen compounds into nitrates, nitrates are soluble in water and are not attenuated by soil, and the drinking water standard is 10 mg/l. Therefore, a properly operating MSTs can impact ground water with nitrates above drinking water standards. It is important, therefore, to attempt to determine what nitrogen impacts to ground water may result from a proposed MSTs.

### **872. Proposed Change part 7081.0210, Subpart 3.**

*Subp. 3. Field or further investigation. The designer must consult with the local unit of government to determine whether the local unit of government will require a field or further ground water investigation and, if so, the extent of the investigation. The field or further investigation must be conducted if information gained in Subpart 2 indicates that a proposed system is a potential contaminant threat to a regional water table, an aquifer, or water supply well(s). The threats of concern include, but are not limited to, fecal organism contamination, nitrate contamination, or phosphorus impacts to surface waters.*

## Justification

After the desktop ground water evaluation is complete, the information gathered should be compiled, assessed, and conclusions drawn on the potential impacts to ground water. The designer must bring the findings to the local permitting authority for a discussion regarding the potential threat(s) of concern. At that point, the local permitting authority will need to decide if any field evaluation or follow-up desktop evaluation needs to be conducted as a rule driven prescriptive methodology on when a field investigation should be conducted is difficult to prescribe. This difficulty is due to the wide variety of pretreatment devices that may drastically reduce contaminant levels before entering the soil, the variation of soil conditions in Minnesota, and the variation in the ground water types that may be impacted (i.e., seasonal or perched aquifers, etc...). The Agency intends to prepare guidance documents to aid local permitting authority in making ground water assessment decisions.

Phosphorus is a limiting nutrient in most Minnesota lakes. Therefore, if phosphorus enters lakes in Minnesota, eutrophication results. Sewage contains concentrations of phosphorus of concern. Therefore, discharge of sewage near lakes needs to be regulated. Most Minnesota soils have a good ability to attenuate phosphorus, however, with the increased flow from MSTs, an assessment should be made to see if the soil's ability to attenuate phosphorus is greater than the phosphorus effluent that will be discharged from the MSTs. The MPCA staff consulted with Dr. Jim Brown, who has studied soil phosphorus issues, to determine what distance from the MSTs to the lake should phosphorus attenuation be of a concern. The distances listed in this subpart reflect his recommendations. Please see (Exhibits 122, 221, 236, 241, 242, 243, 274, 317, comment 5 of Exhibit 398, Exhibit 422 and Exhibit 435). A longer distance is proposed from a system with a secondary treatment device due to the soil treatment system having a longer system life (thus receiving more phosphorus) than a system receiving septic tank effluent.

### **873. Proposed Change part 7081.0210, Subpart 4.**

*Subp. 4. Monitoring. The designer must consult with the local unit of government to determine if the local unit of government will require effluent or ground water monitoring and, if so, the extent of the monitoring. Monitoring should be conducted if information gained in Subparts 2 or 3 indicates that a proposed system is a potential contaminant threat to a regional water table, an aquifer, or a water supply well or impacts surface waters. The potential ground water mound must be monitored under all MSTs during operation.*

### Justification

The MPCA staff intends to prepare guidance documents to aid local permitting authorities in making ground water assessment decisions for design purposes. However, in most cases the extent and impact of ground water mounding, a key factor for groundwater protection, will be uncertain. Therefore the installation of ground water elevation monitoring to ensure compliance is necessary.

#### **874. Proposed Change part 7081.0210, Subpart 5.**

*Subp. 5. Hydrological interpretations. The information gathered in this part must be used to estimate or measure if the system adequately protects the ground water and surface water as prescribed in part 7081.0080, Subpart 4. The interpretation must include a determination of whether contaminant plumes may intersect water supply well capture zones.*

### Justification

The last ground water assessment and requirement proposed is that no system may be placed if contaminant plumes may intersect water supply wells' capture zones. This is a prudent response to protect downgradient ground water users from any impacts from an MSTs. Please see Exhibit 449.

#### **875. Proposed Change part 7081.0210, Subpart 6.**

*Subp. 6. Ground water report. All information required in this part must be submitted for review and approval of the local unit of government prior to final design, including all applicable information delineated on a map.*

### Justification

It is prudent to require that all investigative work be compiled and submitted for review by the local permitting authority for quality assurance completeness and accuracy of interpretations and conclusions.

### **Minn. R. 7081.0230 DESIGN STANDARDS**

#### **876. Proposed Change part 7081.0230, item A.**

*A. The design standards for new construction or replacement MSTs in parts 7081.0240 to 7081.0270 are provided to meet many of the public health and environmental outcomes in part 7081.0080. In some cases, specific engineered methods must be employed in addition to the standards provided in parts 7081.0240 to 7081.0270.*

### Justification

As stated earlier in this SONAR, this chapter will regulate a wide range of systems, both from a flow volume standpoint and a waste strength standpoint, and under a wide variety of soil and ground water conditions. Therefore, it is difficult to provide exact prescriptive standards to meet all the conditions that a designer may encounter. The University of Minnesota training manuals and technical aids developed by the Agency will be the mechanism to provide some needed detail for system design. Please refer to Exhibit 230.

#### **877. Proposed Change part 7081.0230, item B.**

*B. MSTs must not receive storm water or other sources of clean water.*

### Justification

During the design phase of an MSTS, the designer and owner should have a clear understanding that the MSTS will not be designed to receive any sources of clean water, but only the sewage that was estimated to be generated. Sources of clean water can shorten detention time in the septic tanks which can flush stored solids into the soil treatment system. Also, additional clear water can shorten residence time in the soil and flush contaminants from the soil into the ground water.

#### **878.** Proposed Change part 7081.0230, item C.

*C. All structural components of the system and sealants must be designed to meet or exceed a 25-year design life.*

### Justification

Please refer to the justification for Minn. R. 7080.2010, subp. 1(C).

#### **879.** Proposed Change part 7081.0230, item D, formerly 7080.0600, Subpart 4, item A.

*D. A flow measure device must be employed on all MSTS.*

### Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring. Please refer to comment 2 of Exhibit 16, Exhibit 17 and comment 16 of Exhibit 79.

#### **880.** Proposed Change part 7081.0230, item E.

*E. The system must be designed with sufficient access and ports to monitor the system as applicable.*

### Justification

If the local permitting authority requires some sampling, an analytical analysis of the system, the suitable access to sampling must be provided, otherwise sampling cannot take place or may be difficult, which could lead to acquiring a poor sample and possibly erroneous conclusions on the performance of the system.

#### **881.** Proposed Change part 7081.0230, item F.

*F. MSTS must employ components registered under part 7080.1600, as published in the State Register, volume ..., page ..., or have sufficient regulatory oversight in the operating permit.*

### Justification

It is proposed that components used for MSTS be registered with the commissioner to ensure that the component reliably performs as the manufacturer claims. This is only reasonable to have some assurance in the permitting process that the system will adequately perform. It is anticipated that many SSTS components will not be tested for larger systems, so in that event, a component may still be used if sufficient oversight is provided in the operating permit.

## MINN. R. 7081.0240 SEWAGE TANKS

### 882. Proposed Change part 7081.0240, Subpart 1.

*Subpart 1. General. All holding or treatment tanks or vessels, including lined vessels and grease interceptors serving MSTs, must conform to the applicable requirements of parts 7080.1910 to 7080.2020, as published in the State Register, volume ..., page ..., except as modified in this part or as designed by a professional engineer and approved by the local unit of government.*

#### Justification

This is a general introductory statement that identifies the requirements that apply to sewage tanks.

### 883. Proposed Change part 7081.0240, Subpart 2, item A, subitem (1), formerly 7080.0600, Subpart 4, item C, subitem (2), unit (b).

#### Subp. 2. Tank capacity.

A. Total septic tank capacity must be in accordance with this item.

(1) Total septic tank liquid capacity for a common tank serving multiple dwellings under gravity flow to the common tank is determined by multiplying the average daily flow by 3.0.

#### Justification

This provision is replacing the current sizing formula for common septic tank designs which is  $(\text{max daily flow} \times 0.75] + 1125)$ . This new formula greatly increases the tank capacity for common septic tanks over the current formula. The new septic tank formula was designed to provide equal septic tank volumes as compared to using individual septic tanks at each dwelling. This is prudent because MPCA staff know of no efficiency achieved to justify smaller tank capacity if common tanks are used in lieu of individual tanks. In addition, the Agency has received reports that the current tank capacity should be increased due to the flushing of solids from the tanks. A comparison of current and proposed tank sizing for 25 dwellings is provided below.

1. New method (gravity sewer) – 25 dwellings x 335 gpdd x 3 = 25,125 gallons capacity
2. Current method (use Type I flow)  $([25 \text{ dwellings} \times 525 \text{ gpdd} \times 0.75] + 1125) = 11,000$  gallons capacity
3. Current method of using individual tanks – 25 dwellings x 1,000 gallons capacity/dwelling = 25,000 gallons capacity.

Please refer to Exhibits 55 and 334.

### 884. Proposed Change part 7081.0240, subpart 2, item A, subitem (2).

(2) Total septic tank liquid capacity for a common tank serving multiple dwellings under pressure flow to the common tank is determined by multiplying the average daily flow by 4.0.

#### Justification

It is proposed to increase the required volumes as stipulated in subitem (1), if the sewer system is under pressure. This is due to two reasons. First, the solids have been ground into smaller particles by the pump and are more difficult to settle than larger solids. Secondly, effluent traveling with force can hinder the quiescent zone in the tank which is necessary for solids to properly settle. Please refer to Exhibits 309, 311, and 312.

**885.** Proposed Change part 7081.0240, Subpart 2, item A, subitem (3).

*(3) Common multiple septic tanks may be connected in series or multiple tanks may operate in parallel if it can be demonstrated that each tank will be loaded within its design capacity. No tank connected in series or any compartment may have a capacity of less than one-fourth of the required total liquid capacity.*

Justification

The first requirement has been moved from former Minn. R. 7080.0130, subp. 2(O)(1). Some interested parties and MPCA engineering staff have suggested that an allowance should be made to operate tanks in parallel if the collection system is designed in smaller zones and flow can be equally split between the number of tank. The proposed language provides this option. Please refer to comment 43 of Exhibit 398.

**886.** Proposed Change part 7081.0240, Subpart 2, item B.

*B. For MSTs that have individual septic tanks at each dwelling, the individual tanks must meet all the requirements of parts 7080.1910 to 7080.2020, as published in the State Register, volume ..., page .... Stilling tanks should be installed between the individual tanks and the next system component as necessary.*

Justification

If individual septic tanks are to be located at each dwelling, it is only prudent to require the same septic tank capacity as if the soil treatment system was located on the property, as the dynamics of the system appear to be the same. A stilling tank was a requirement under former Minn. R. 7080.0600, subp. 4(E)(10).

**887.** Proposed Change part 7081.0240, subpart 2, item C.

*C. Total septic tank liquid capacity for other establishments is determined by multiplying the average daily flow by 3.0 if receiving sewage under gravity flow, or multiplying the average daily flow by 4.0 if receiving sewage under pressure flow.*

Justification

Please see the justification for Minn. R. 7081.0240, subp. 2(A). See Exhibit 502.

**888.** Proposed Change part 7081.0240, Subpart 2, item D, formerly 7080.0600, Subpart 4, item C, subitem (2), unit (c).

*D. Total septic tank liquid capacity prior to other treatment devices shall be according to manufacturer's requirements or accepted standards.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring. This requirement is also meant to apply in cluster systems serving multiple dwellings if each dwelling is served by its own septic tank.

**889.** Proposed Change part 7081.0240, Subpart 2, item E, formerly 7080.0600, Subpart 4, item C, subitem (4).

*E. Holding tanks serving other establishments must provide storage of at least five times the average daily flow.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **890. Proposed Change part 7081.0240, Subpart 3.**

*Subp. 3. Lint filters, effluent screens and pressure filters. Effluent screens must be used as the outlet baffle on the final septic tank or pressure filters must be used in the dosing chamber if common tanks are employed in series. Alarms must be employed on tanks equipped with effluent screens. Lint filters should be used if the sewage contains laundry waste.*

### Justification

Due to the higher flow volumes, it is proposed to require effluent screens be installed on MSTs. This should ensure minimal solids transfer from the tank to the soil treatment system. Please refer to comment 5 of Exhibit 8, comment 1 of Exhibit 1, comment 17 of Exhibit 79, and Exhibits 371 and 394.

#### **891. Proposed Change part 7081.0240, Subpart 4, item A.**

##### **Sub 4. Tank Geometry.**

*A. For common septic tanks, the maximum liquid depth of septic tanks to determine liquid capacity must be no greater than 84 inches. Septic tanks should have a minimum length-to-width ratio of two to one (2:1) and a minimum length-to-depth ratio of three and a half to one (3.5 : 1). Tanks not meeting these dimensions should be monitored for biological oxygen demand and total suspended solids concentrations for a period of time as determined by the local unit of government.*

### Justification

The maximum depth is to be changed from a maximum of 78 inches to a maximum of 84 inches, as allowed by the state of Florida. The minimum length-to-width and length-to-depth ratio is important to extend the travel length of the effluent to allow for settling of the solids. Allowance will be provided for tanks not meeting this criteria, if they are monitored to determine if the biochemical oxygen demand/total suspended solids (BOD/TSS) removals are meeting designed concentrations as determined by the LUG. Please refer to Exhibits 35, 56, 57, 58, 213, and 219.

#### **892. Proposed Change part 7081.0240, Subpart 4, item B.**

*B. The space in the tank between the liquid surface and the top of the inlet and outlet baffles must not be less than 20 percent of the total required liquid capacity.*

### Justification

This is a requirement from former Minn. R. 7080.0130, subp. 2(D).

#### **893. Proposed Change part 7081.0240, Subpart 5.**

*Subp. 5. Tank testing. All tanks used for MSTs must be tested for watertightness according to part 7080.2010, Subpart 3, as published in the State Register, volume ..., page .... The test shall be conducted to include the watertightness of all connections and risers.*

## Justification

It is proposed in chapter 7080 to require testing for watertightness for every 25<sup>th</sup> tank. However, due to the larger flows and volumes of tanks, the environmental effects of a leaky MSTS tank are much greater. Therefore, it is proposed that all tanks used for a MSTS be tested for watertightness.

### **894. Proposed Change part 7081.0240, Subpart 6.**

*Subp. 6. Liners. Liners used as watertight barriers for treatment devices must be designed and constructed according to liner requirements developed by the commissioner of the Pollution Control Agency. If conflicts exist between this chapter and those requirements, this chapter applies. Compacted soil liners must not be used as watertight barriers for treatment devices. Liners must be tested and must hold water without loss for 24 hours after being filled to the top of the liner.*

## Justification

It is anticipated that many MSTS will employ treatment vessels that will use a lined excavation (i.e., sand filters and constructed wetlands). Therefore, criteria need to be in place to ensure containment of the sewage during the treatment process. The Agency has long-standing guidelines for lined treatment vessels that have proven to be workable and effective. The testing required to prove watertightness shall be the same as what is required for glass-fiber or plastic septic tanks. Please see Exhibits 379, 380, and 382 for the Agency's pond and liner guidelines.

### **895. Proposed Change part 7081.0240, Subpart 7.**

*Subp. 7. External grease interceptors. A commercial or institutional food preparation facility such as, but not limited to, a restaurant, cafeteria, or institutional kitchen, served by a system regulated under this chapter, the system design for which was submitted to the local unit of government after the effective date of this part, shall install an external grease interceptor unless other grease control measures are taken. All existing facilities described in this Subpart should install and maintain an external grease interceptor or other grease control measures. The requirements for external grease interceptors are in chapter 4715.*

## Justification

The Agency has received many reports over the years of systems serving restaurants that hydraulically fail due to plugging of the soil treatment system within a very short time period. Please refer to Exhibit 420. Therefore, it is proposed to require grease interceptors for all establishments that prepare food with liquefied oil, fats or greases that will be discharged into the MSTS. If a facility prepares food which does not generate liquefied oils, fats, or greases, then a grease interceptor may not be needed. It is not required, but recommended, that existing establishments employ a grease interceptor. The requirements for grease interceptors are found in the plumbing code. Please refer to Exhibits 233 and 244.

## **MINN. R. 7081.0250 DISTRIBUTION OF EFFLUENT**

### **896. Proposed Change part 7081.0250.**

*Distribution of effluent into a soil treatment and dispersal system must comply with part 7080.2050, as published in the State Register, volume ..., page ..., or be designed by a registered professional engineer and approved by the local unit of government. MSTS should employ pressure distribution.*

## Justification

Conversations with University of Minnesota Staff Engineers indicate that the distribution requirements for ISTS are readily applicable for MSTs. An exemption for these provisions is provided in the event special circumstances exist and the system needs to be professionally designed. The Agency strongly recommends that all MSTs employ pressure distribution because gravity distribution may not afford even loading of effluent over the entire system. Heavy “point loading” of effluent reduces contact of contaminants with soil and reduces residence time in soils, thereby reducing treatment.

## **MINN. R. 7080.0260 DOSING OF EFFLUENT**

### **897. Proposed Change part 7081.0260, item A.**

*A. Dosing of effluent into a soil treatment and dispersal system must comply with part 7080.2100, as published in the State Register, volume ..., page ..., except as modified in this part.*

## Justification

This is a requirement from former Minn. R. 7080.0600, subp. 4(D).

### **898. Proposed Change part 7081.0260, item B.**

*B. The dosing system must either include an alternating two-pump system or have a minimum total capacity of 100 percent of the average daily flow.*

## Justification

This is the requirement for ISTS found in former Minn. R. 7080.0160, subp. 1a(C), and is applicable to MSTs.

### **899. Proposed Change part 7081.0260, item C.**

*C. The pump discharge capacity must be based on the perforations discharge, with a minimum average head of two feet.*

## Justification

This is a requirement from former Minn. R. 7080.0600, subp. 4(D)(1).

## **MINN. R. 7081.0270 FINAL TREATMENT AND DISPERSAL**

### **900. Proposed Change part 7081.0270, Subpart 1.**

*Subpart 1. General. Final treatment and dispersal should be according to applicable design requirements in chapter 7080, except as modified in this part. Systems designed under this part may require additional design requirements pursuant to Code of Federal Regulations, title 40, parts 144 and 146. As a minimum, flow amounts to be used for the purposes of this part must be derived from part 7081.0110.*

## Justification

There are design portions of Minn. R. 7080.2150 to 7080.2400 that are readily applicable to MSTs. Therefore, to avoid redundancy, it is proposed to cite these parts with needed modifications found in Minn. R. 7081.0270. It is critically important to require that the flows in this chapter be used as a

minimum. In the past, the Agency received reports that reductions in flow amounts were granted with resulting hydraulic failures.

**901. Proposed Change part 7081.0270, Subpart 2.**

*Subp. 2. **Setbacks.** MSTS components must meet the setbacks in Table II. This chapter does not require a setback to a wetland, but a local setback may exist.*

*Table II  
Minimum Setback Distances (feet)*

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

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

*\*\*If setbacks are reduced through local administrative processes, the system shall not be located under or within the structure.*

*\*\*\*This distance may be reduced on a percentage basis by the percent of the total nitrogen that is reduced by a nitrogen reduction treatment device.*

*\*\*\*\*This setback may be reduced for replacement MSTS that cannot meet this setback.*

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

**Justification**

The cited setback distances are referencing other state rules or current setback distances in chapter 7080.

**902. Proposed Change part 7081.0270, Subpart 3 A.**

*Subp. 3. **Soil system sizing and hydraulic performance.***

*A. Effluent loading rates to the soil shall not be in excess of the soil's ability to infiltrate and transmit effluent as determined by the observations and measurements in part 7081.0170, Subpart 7*

**Justification**

This provision is based on the soil's physical ability to infiltrate and transmit effluent. This is a performance goal, and no prescriptive value is provided. This is due to the likely use of many secondary treatment devices that will greatly reduce the clogging phenomena at the infiltrative surface; thereby, the system sizing will need to be based on whether the unclogged infiltrative surface or internal transmissive capacity will be the limiting factor. The designer will be required to conduct soil profile observations and physical testing and the designer will need to interpret such testing into a loading rate for the MSTS. It is

strongly recommended that the conventional sizing factors found in Minn. R. 7080.2150, subp. 3, be employed.

**903. Proposed Change part 7081.0270, Subpart 3, item B.**

*B. The ground water mound formed from an operating MSTs must not infringe on the unsaturated zone beneath the soil system necessary to meet the requirements in part 7081.0080, Subpart 4, item C, and for proper hydraulic functioning.*

Justification

Please refer to the justification for Minn. R. 7081.0210, subp. 2(J).

**904. Proposed Change part 7081.0270, Subpart 3, item C.**

*C. The site of the soil treatment and dispersal system derived from items A and B must be designed and constructed with a 50 percent increase in sizing. In addition to that increase, a 50 percent replacement soil treatment and dispersal land area must be identified and protected for future use if necessary. Replacement MSTs proposed on sites that cannot meet this requirement may be exempt by the local unit of government..*

Justification

This is a current recommendation for large SSTS (i.e., LSTS). It is meant to prolong the life of the soil treatment system by providing periods of rest. The additional sizing can also be used if a peak flow is expected to occur. The remaining 50 percent of the secondary site is in the event one of the three constructed portions becomes damaged. The remaining 50 percent of the secondary site should not be used if more dwellings are to be constructed and hooked-in to the system unless a more suitable replacement area is identified and protected.

**905. Proposed Change part 7081.0270, Subpart 4.**

*Subp. 4. Minimal soil and site conditions. The site proposed to support the soil treatment and dispersal system must:*

- A. have the upper 12 inches of the absorption area:*
  - (1) be original soil;*
  - (2) have a size classification of one to 13 as listed in Table IX, in part 7080.2150, Subpart 3, item G, as published in the State Register, volume ..., page ...; and*
  - (3) be above the seasonally saturated soil or bedrock;*
- B. meet the area size requirements in Subpart 3 and setbacks in Subpart 2 and all easements;*
- C. not be a wetland or floodway;*
- D. not be in an area in which surface runoff of precipitations will concentrate (swale); and*
- E. allow the system to be placed on contour.*

Justification

The proposed site criteria is what is minimal to provide hydraulic performance for the system. This criteria has been used to site ISTS in chapter 7080 for many years and is currently found in new Minn. R. 7080.2150, subp. 2.

**906. Proposed Change part 7081.0270 subpart 5.**

*Subp. 5. Inspection pipes. Inspection pipes must be located to adequately assess the hydraulic performance of the entire soil treatment and dispersal system.*

Justification

Inspection pipes in the soil treatment and dispersal area are needed to assess the infiltration of effluent from the system into the soil. They have been required in chapter 7080 since its inception in 1978. The location of inspection pipes in this chapter will be performance based, as each system may be unique in its inspection pipe requirements.

**907. Proposed Change part 7081.0270, Subpart 6.**

Subp. 6. Soil loading requirements. Loadings of sewage solids per square foot of bottom and side wall absorption area must not be in excess of the most limiting constituent as determined in Table III.

Table III  
Waste Strength Loading Rates

<u>Soil Texture Group**</u>	<u>lbs of BOD/100 ft<sup>2</sup>/day of absorption area*</u>	<u>lbs of TSS/100 ft<sup>2</sup>/day of absorption area*</u>	<u>lbs of oil and grease/100 ft<sup>2</sup>/day of absorption area*</u>
<u>1 and 2</u>	<u>0.13</u>	<u>0.049</u>	<u>0.019</u>
<u>4</u>	<u>0.086</u>	<u>0.032</u>	<u>0.012</u>
<u>3, 5, and 6</u>	<u>0.066</u>	<u>0.024</u>	<u>0.009</u>
<u>7 and 9</u>	<u>0.055</u>	<u>0.020</u>	<u>0.008</u>
<u>8, 10, and 12</u>	<u>0.050</u>	<u>0.018</u>	<u>0.007</u>
<u>11 and 13</u>	<u>0.036</u>	<u>0.014</u>	<u>0.005</u>
<u>15</u>	<u>0.026</u>	<u>0.010</u>	<u>0.004</u>

\*To determine the loading to the soil treatment system, the following calculation must be used: Waste strength loading rate (lbs/ft<sup>2</sup>/day) = constituent concentration (ppm) x .00000834 x hydraulic loading rate of total absorption area/day (gal/ft<sup>2</sup>/day). The constituent concentration for soil treatment and dispersal system design must be the concentration from the pretreatment device according to the device's product registration designation. Constituent concentration loading rate is based on bottom and sidewall absorption area.

\*\*Soil textural groups can be found in Table IX in 7080.2150, Subpart 3, item F.

Justification

A biochemical oxygen demand loading limit is proposed to promote system longevity. These numbers are based on actual (not design) organic loading values for conventional designs, which are expected to perform without hydraulic failure for 25 years or greater. Please see Exhibit 469.

**908. Proposed Change part 7081.0270, Subpart 7.**

Subp. 7. Vertical separation distance. An unsaturated zone must be maintained between the bottom of the soil treatment and dispersal system and the seasonally saturated soil or bedrock during loading of effluent. This operating vertical separation distance must meet the ground water protection objectives in part 7081.0080, Subpart 4, item C. The designed vertical separation distance shall take into consideration:

- A. soil texture in the treatment zone;
- B. effluent loading rate to the soil;
- C. effluent dosing frequency;

D. system width and depth as it effects oxygen transfer from the atmosphere;

E. the height of the capillary fringe in the unsaturated zone;

F. ground water mounding;

G. concentrations of contaminants in the effluent;

H. hydraulic head over bottom absorption area; and

I. a factor of safety.

An observation well to measure the height of the seasonally saturated soil beneath the operating system must be installed and monitored according to the operating permit.

#### Justification

This provision was formerly expressed in former Minn. R. 7080.0179, subp. 2(C), with some additional explanatory language. The provisions presented in this subpart are based on ideas and concepts in Exhibits 480 and 508.

#### **909.** Proposed Change part 7081.0270, Subpart 8.

Subp. 8. Nitrogen reduction. Systems must employ nitrogen mitigation methods to achieve compliance with part 7081.0080, Subpart 4, item D.

#### Justification

Conventional SSTS systems do not provide much nitrogen reduction as the effluent concentrations are four to six times the drinking water standard. Therefore, nitrogen mitigation measures must be in place to comply with any local nitrogen requirements.

#### **910.** Proposed Change part 7081.0270, Subpart 9.

Subp. 9. Phosphorus reduction. Phosphorus mitigation methods must be employed to achieve compliance with part 7081.0080, Subpart 4, item E, if natural processes are found inadequate.

#### Justification

In many cases, it is expected that the phosphorus assessment for systems near surface waters will show sufficient soil attenuation of phosphorus for the hydraulic life of the system. However, in the event that the natural soil is limited in its attenuation abilities, it is prudent to require that a treatment device be employed. The treatment device will not have to be immediately employed, but can be used at a later date when estimation of limited phosphorus attenuation, or ground water monitoring indicates a problem. Please refer to Exhibit 435.

#### **911.** Proposed Change part 7081.0270, Subpart 10.

Subp. 10. Design report. All information required in this part shall be submitted for review and approval by the local unit of government prior to system construction, including all applicable information delineated on a map.

#### Justification

It is only prudent to require all work conducted to arrive at a design conclusion and be submitted for review so the permitting authority has the basis to determine the adequacy of the design and operating permit conditions.

## MINN. R. 7081.0280 CONSTRUCTION REQUIREMENTS

### 912. Proposed Change part 7081.0280, item A.

*A. MSTS construction must be according to applicable construction requirements of chapter 7080.*

#### Justification

Introductory statement.

### 913. Proposed Change part 7081.0280, item B.

*B. The MSTS designer must observe critical periods of system construction. The designer shall prepare a report of observed construction activities and submit the report to the local unit of government prior to final inspection.*

#### Justification

Due to the longer construction period for MSTS, the local permitting authority may not have the resources to conduct as many inspections as necessary to ensure compliance. Therefore, it is proposed that the designer be present during critical periods of construction. This requirement is not to usurp the inspections or authority of the local permitting authority, but to provide supplemental findings for the local permitting authority review and bases of approval. This provision can also be conducted on behalf of the system owner to ensure that the installer is correctly completing all tasks. This type of designer oversight is common in other large construction projects.

## MINN. R. 7081.0290 OPERATION AND MAINTENANCE

### 914. Proposed Change part 7081.0290, items A and B.

*A. System maintenance must be according to part 7080.2450, as published in the State Register, volume ..., page ..., except as modified in this part.*

*B. All external grease interceptors must be routinely inspected to determine the volume present. All external grease interceptors must be cleaned when the volume of external grease equals no more than 50 percent of the liquid capacity of the tank.*

#### Justification

This provision is critical to the performance of grease interceptors, the 50 percent full value was derived from the state of Maine.

### 915. Proposed Change part 7081.0290, item C.

*B. The designer must complete an operation and maintenance manual and the manual must be approved by the local unit of government before system operation. The manual shall include a copy of the plans and specifications, as-built drawings of the system, and information to properly operate the system.*

#### Justification

Proper operation of MSTS is critical for public health and environmental protection. The system operator should have the needed information to properly operate the system. This is especially true with the wide variety of systems that could be designed under this chapter.

**916. Proposed Change part 7081.0290, item D.**

*D. Systems shall be operated under a local operating permit submitted and approved with the design.*

**Justification**

It is proposed that local units of government issue permits to operate MSTs (see chapter 7082). This is reasonable considering the larger size of MSTs and the possible impacts if these systems are not properly maintained. Proper operation and maintenance will extend the life of the system and ensure that the public health, safety, and environment is protected.

**917. Proposed Change part 7081.0290, item E.**

*E. Any operational noncompliance must be immediately corrected and reported by the owner or service provider to the local unit of government.*

**Justification**

It is anticipated that most local permitting authorities will require annual reporting for their operating permits. This appears to be a reasonable reporting frequency. However, if any non-conformance is discovered during an operational inspection, it is reasonable to require that the non-conformance be reported. This will allow follow-up on any adjustments or repairs that can be made and to determine if follow-up observations or sampling will need to be required to ensure the repair or adjustment alleviated the problem condition.

**MINN. R. 7081.0300 SYSTEM ABANDONMENT**

**918. Proposed Change part 7081.0300.**

*MSTs no longer in use must be abandoned according to part 7080.2500, as published in the State Register, volume ..., page ....*

**Justification**

It is reasonable to require that all systems no longer in use be properly abandoned. The abandonment procedures are minimal and would help to ensure the protection of public safety and avoid ground water contamination if implemented.

**MINN. R. 7081.0310 SYSTEM OWNERSHIP AND RESPONSIBILITY**

**919. Proposed Change part 7081.0310, Subpart 1.**

*Subpart 1. Ownership. MSTs may be owned by a sole individual, a group of individuals, or a private management entity or publicly held. The owner or owners are responsible for operation, maintenance, repairs, replacement, and compliance as required by this part.*

**Justification**

The concept behind this requirement is found in former Minn. R. 7080.0600, subp. 4(E)(11), with additional explanatory language for clarity. Please refer to Exhibits 314, 323, and 332.

**920.** Proposed Change part 7081.0310, Subpart 2.

*Subp. 2. Regulation. MSTs serving multiple dwellings must be owned by a legal and responsible entity. The entity must have the ability to perform and must perform the following functions:*

- A. apply for and obtain construction and operating permits;*
- B. ensure submittal of required reporting and compliance status to the local unit of government;*
- C. negotiate contracts as necessary;*
- D. develop administrative processes;*
- E. impose fees for operation, management, and replacement of the system;*
- F. obtain financing;*
- G. provide annual education to users on suitable discharges; and*
- H. monitor compliance with local ordinance requirements.*

Justification

The change to the introductory paragraph is a clarification of the fact that MSTs are actually owned by an entity and in this case “regulated” is not the appropriate term. The list in A to H is what is believed to be the needed attributes of an entity that has possession of, and control over a MSTs. These attributes can be fulfilled if a group organizes into a subordinate service district or sanitary district per Minn. Stat. ch. 375B or 365A. Please refer to Exhibit 186.

**921.** Proposed Change part 7081.0310, Subpart 3, item A.

*Subp. 3. Certification. The owner or owners of MSTs serving multiple dwellings must submit to the local unit of government a certification of financial viability. The certification shall include:*

- A. a copy of the title to all MSTs physical assets; and*

Justification

It is reasonable to require the owners to have proof that they have possession of, and control over the MSTs. It is important that the assets are identified under the ownership and management entities.

**922.** Proposed Change part 7081.0310, Subpart 3, item B.

- B. the method by which the system operation, maintenance, repairs, and replacement will be financed.*

Justification

The ownership should be organized to the degree that a financial plan is developed showing all anticipated expenses and how such expenses shall be paid.

**923.** Proposed Change part 7081.0310, Subpart 4.

*Subp. 4. Sale. The owner or owners of MSTs serving multiple dwellings must not sell, assign, or divest the system without notification to the local unit of government. The system shall be free of any liens, judgments, or encumbrances.*

Justification

If ownership of the MSTs is proposed to be changed, it is prudent to require that the local permitting authority be aware of such change, so they will know who is the responsible entity. The local permitting authority may need to know the ownership of an MSTs in the event of a noncompliance issue, to update

who is the responsible party on the operating permit or to inform the new owner of the conditions of the operating permit.

**924.** Proposed Change part 7081.0310, Subpart 5.

*Subp. 5. Continuation. The owner of MSTs serving multiple dwellings shall provide a financial instrument or mechanism in an amount sufficient to continue the operation, maintenance, management, and repairs of the system for a period of one year if the owner fails to fulfill the owner's or operator's financial support of the system.*

Justification

This proposal is a prudent requirement in the event that the current ownership structure should dissolve. This requirement would ensure that funds are available for one year for system operation and management while new ownership is being established. This provision is currently employed by the state of Alabama. Please see Exhibits 125 and 271.

## AMENDMENTS TO INDIVIDUAL SECTIONS OF PROPOSED CHAPTER 7082

### MINN. R. 7082.0010 PURPOSE AND INTENT

#### 925. Proposed Change part 7082.0010.

*Subp. 1 Effect. The proper location, design installation, use and maintenance of subsurface sewage treatment systems (SSTS) protects the public health, safety and general welfare by preventing the discharge of inadequately treated sewage to the ground surface, surface waters, and groundwaters.*

*Subp. 2. Authority. In accordance with the authority granted in Minnesota Statutes, chapters 103F, 103G, 115, and 116, the Pollution Control Agency provides the minimum standards for local SSTS ordinances and administrative programs. The agency offers these standards to reasonably ensure proper permitting, inspection, and operation of SSTS.*

*Subp. 3. Local ordinances; construction. Local ordinances referencing individual sewage treatment rules issued by the agency shall be construed to mean rules governing both individual subsurface sewage treatment systems and mid-sized subsurface sewage treatment systems as defined in part 7080.1100 subpart 45 and 7081.0020 subpart 4.*

#### Justification

Minn. Stat. § 115.55 requires that the agency adopt rules containing minimum standards and criteria for ISTS. Specifically, Minn. Stat. § 115.55, subd. 3 (a)(2) requires that these rules include "... (2) how local units of government shall enforce ordinances under subdivision 2, including requirements for permits and inspection programs...". In this same part - Minn. Stat. § 115.55, subd. 3 (a)(1) - the agency is directed to also include in the rules, "... (1) how the agency will ensure compliance under subdivision 2..." Subdivision 2 requires counties to adopt ISTS ordinances for all areas not covered by city or town ordinances which comply with the individual treatment system rules and are as strict as the applicable county ordinance. This statute provides the statutory authority for the Agency to dictate the minimum requirements for local governments' SSTS ordinances and administrative permitting programs.

The language of subparts 1 and 2 is largely taken from former Minn. R. 7080.0010. It is updated to reflect the new SSTS terminology. SSTS is a new, more inclusive, term for the types of systems that have always been regulated and within the Agency's statutory authority under Minn. Stat. §§ 115.55 and 115.56 and is parallel to the Purpose and Intent sections of the proposed Minn. R. ch. 7080, 7081, and 7083.

A new subpart 3 is being added to address a concern that there are existing local ordinances that use the term "ISTS" instead of the term "SSTS," which is used throughout the proposed rules. The MPCA believes it is reasonable to provide a clarification that this aspect of existing local ordinances will be consistent with the proposed rules.

### MINN. R. 7082.0020 DEFINITIONS

#### 926. Proposed Change part 7082.0020, Subpart 1.

*Subpart 1. Certain terms. In addition to the definitions in chapters 7080, 7081, and 7083, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55, the terms used in this chapter have the meanings given them. For purposes of these standards, certain terms or words are interpreted as follows: the words "shall" and "must" are mandatory and the words "should" and "may" are permissive.*

Justification

Please see the justification for Minn. R. 7080.1100, subp. 1.

**927. Proposed Change part 7082.0020, Subpart 2, formerly 7080.0020, Subpart 26c.**

Subp. 2. **Permittee.** "Permittee" means a person who is named on and subject to the terms of a permit issued pursuant to local ordinance.

Justification

Subpart 1 indicates that the definitions in Minn. R. ch. 7080, 7081, and 7083 also apply to 7082. However, the term “permittee” is only used in 7082 and so it is defined in this chapter. The proposed definition clarifies who is responsible for performing the duties of the permittee – the person who is named on a permit pursuant to local ordinance.

**MINN. R. 7082.0040 REGULATORY ADMINISTRATION RESPONSIBLITLY**

**928. Proposed Change part 7082.0040, Subpart 1.**

Subpart 1. **Agency responsibilities.** The agency is responsible for providing the framework for local SSTS ordinances along with providing minimum administrative procedures or strategies to ensure effective permitting and inspection of SSTS. The agency is also responsible for reviewing local ordinances to ensure adequate protection of public health and the environment and that local administration is sufficient to ensure compliance.

Justification

This section of rule language provides local governments with a clear understanding of the Agency’s role. Minn. Stat. § 115.55 provides the Agency with the authority to authorize SSTS professionals and regulate local SSTS programs. Minn. Stat. § 115.55, subd. 7 allows counties (not cities or towns) to adopt ordinances that are less restrictive than the state standards in certain circumstances. In these circumstances, MPCA still has responsibility to review the ordinances and ensure that they are protective of public health and the environment.

**929. Proposed Change part 7082.0040, Subparts 2 and 3, formerly 7080.0305, Subparts 1 and 2.**

**Subp. 2. County responsibilities.**

A. All counties must adopt and effectively enforce SSTS ordinances in compliance with chapters 7080 and 7081, as published in the State Register, volume ..., page ..., that also comply with this chapter. Ordinances must apply to all the land area within the county, except in towns and cities that have adopted ordinances that comply with the county ordinance and this chapter.

B. All counties with SSTS ordinances must:

(1) permit and inspect SSTS within cities and townships that do not administer an effective SSTS ordinance; and

(2) determine if city and township ordinances are technically and administratively as strict as the county ordinance.

**Subp. 3. City and township responsibilities.** Cities and townships with SSTS ordinances must effectively administer and enforce an ordinance that conforms with the county’s regulatory strategy and is administratively and technically as strict as the county ordinance, as determined by the county. Before

*cities or townships can adopt an SSTS ordinance, the county must be consulted and concur with the ordinance.*

#### Justification

Minn. Stat. § 115.55 lays out a regulatory scheme for SSTS that gives counties some additional responsibilities over what is expected of cities. This is the text of the law:

***Minn. Stat. § 115.55, Subd. 2. Local ordinances.*** (a) *All counties that did not adopt ordinances by May 7, 1994, or that do not have ordinances, must adopt ordinances that comply with individual sewage treatment system rules by January 1, 1999, unless all towns and cities in the county have adopted such ordinances. County ordinances must apply to all areas of the county other than cities or towns that have adopted ordinances that comply with this section and are as strict as the applicable county ordinances. Any ordinance adopted by a local unit of government before May 7, 1994, to regulate individual sewage treatment systems must be in compliance with the individual sewage treatment system rules by January 1, 1998.*

The first obligation of counties is to adopt an SSTS ordinance that covers all the geographic area of a county not covered by city or town SSTS ordinances. The law goes on to say that these ordinances apply to all areas of the county other than “cities or towns that have adopted ordinances that comply with (the law) and are as strict as the applicable county ordinances.” This could be interpreted to mean that counties are responsible for administering in areas where there are city or town ordinances which do not comply with the law and state rules.

The proposed rule language requires a cooperative effort between counties and their cities and towns aimed at the development of more consistent approaches to SSTS regulation. This is important to several sectors, including homeowners and realtors involved in property sales, as well as SSTS contractors who work in multiple jurisdictions. The current system where cities and towns adopt ordinances without county involvement has resulted in a patchwork system of regulation across the state. The new requirement for cooperation will result in less variation than currently exists.

In discussions during rule development, some counties argued that their responsibility is to ensure that SSTS are regulated in all areas of the county, not to ensure that city and town ordinances are as stringent. In actuality however, Minn. Stat. § 155.55 provides that the county regulate SSTS in areas where city and township ordinances do not comply with state SSTS standards and where city and township ordinances are not as strict as the applicable county ordinances. There must be some level of communication between the county and the smaller jurisdictions to ensure consistency. Initial drafts of this rule went further than the proposed language. The proposed language is viewed by the Agency as the minimum level of coordination that can be effective.

It is reasonable and appropriate to place the responsibility for establishing the local “bottom line” for SSTS regulation at the county level. Counties are responsible for protection of public health under Minn. Stat. ch. 145A, and for water quality protection under Minn. Stat. § 103B.311. When cities and towns develop ordinances that are less stringent than the county ordinance, development may be skewed toward these jurisdictions and concentrations of homes or other establishments built could have a greater potential for negative environmental impacts.

Counties in the seven-county Metropolitan Area (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington) pose somewhat a special case. In the Metro Area, land use authorities reside with cities and towns, not counties. In some cases, all the cities and towns have adopted SSTS ordinances, so there is no

land area remaining for the county to cover with their ordinance. This complicates the picture for these counties.

Looking at the statute, a confusing situation is found. In the first sentence of Minn. Stat. § 115.55, subd. 2, counties do not need to develop an ordinance if all cities and towns already regulate SSTS, but in the next sentence the law requires that all city and town ordinances be as strict as the applicable county ordinance. Where there is no county ordinance, there is no baseline for the cities and towns to follow. In these cases, city and town ordinances must therefore be as strict as the state SSTS standards, the default baseline when there is no county ordinance to follow. MPCA staff will need to review the city and town ordinances to ensure compliance.

**930. Proposed Change part 7082.0040, Subpart 4.**

**7082.0040 REGULATORY ADMINISTRATION RESPONSIBILITY.**

**Subp. 4. Required fiscal and physical capacity for local programs.** All local governments that administer SSTS programs must have:

A. adequate personnel to properly conduct SSTS technical and administrative functions as determined in items (1) and (2).

(1) All local governments that administer SSTS programs must have least one certified inspector as described in part 7083.1010 subpart 2, as published in the State Register, volume ..., page ... who is employed by the local unit of government or a contracted licensed SSTS inspection business. The person may also be contracted for services by multiple local units of government; and

(2) at least one person who is employed by the local unit of government who has received accredited training on administration of local SSTS programs.

B. an enforceable ordinance that meets the requirements of this chapter; and

C. budget and staff appropriate to administer the provisions of the ordinance.

**Justification**

The goal of the proposed change is to develop effective local programs statewide. To be effective, a local program needs a certain fiscal and physical capacity to be able to administer their program. This part of the proposed rule lays out the minimum requirements for local program capacity. The first item requires that each local jurisdiction that regulates SSTS to have, either on staff or through a contractual arrangement, an SSTS professional certified as an inspector. Item (2) requires that someone from each local unit of government attend training on SSTS program administration. That training will be provided by MPCA, possibly in conjunction with the U of M.

The second item requires that each jurisdiction adopt an ordinance that meets the requirements of the rule. It is restated here for clarity.

The third item relates to the level of funding and staffing relative to the workload experienced in that jurisdiction. The rule does not provide a specific level that would be judged sufficient, but does require that each local jurisdiction provide the Agency with information on staffing, funding, and workload.

**931. Proposed Change part 7082.0040, Subpart 5, formerly 7080.0310, Subpart 5.**

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

A. a copy of the standard construction permit, operating permit, and inspection forms, if different from previous year's;

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

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

	<u>0-2,499</u>	<u>2,500-9,999</u>	<u>Other</u>
	<u>gallons</u>	<u>gallons</u>	<u>establishments*</u>
	<u>per day</u>	<u>per day</u>	

<u>New construction</u>	....	....	....
<u>Replacement systems</u>	....	....	....
<u>Type I</u>	....	....	....
<u>Type II</u>	....	....	....
<u>Type III</u>	....	....	....
<u>Type IV</u>	....	....	....
<u>Type V</u>	....	....	....

\*Other establishments should not also be counted in the appropriate flow category;

D. the percent of new and replacement systems field inspected;

E. the total number of systems serving full-time residences and seasonal residences;

F. the estimated percentage of existing SSTS in compliance within the local government's jurisdictional boundaries;

G. the number of variances issued from the local SSTS ordinance by type;

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

I. the number of systems regulated under an operating permit or enforceable maintenance provisions;

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

K. a narrative description of problem areas in local SSTS administration.

### Justification

Minn. R. ch. 7080 has included reporting requirements for local ISTS programs since its adoption in 1996. The first annual reports were to be submitted in 1999. The Agency has annual report data for five years for most jurisdictions. In the proposed text above, items that are in addition to those required in the current version of chapter 7080 are double underlined. This version also includes language and format changes, inserting a table to be completed. This is a clearer depiction of the needed information.

It is necessary to add the new reporting elements so the Agency can gain greater understanding of the current practice in SSTS regulation and so progress at addressing problem systems can be tracked. This information is important also to local water planning efforts, to the MPCA Total Maximum Daily Load (impaired waters) program and for basin planning. (See <http://www.bwsr.state.mn.us/watermgmt/complocalwatermgmt/index.html> for information on local water planning and <http://www.pca.state.mn.us/programs/index.html> for a description of the latter two programs.)

More specific justification of each modified or added element is as follows:

**Addition of reporting categories for new construction and replacement:** The Agency has requested this information from local units of government (LUGs) on a voluntary basis for several years. LUGs are required to issue permits for all new construction and inspection, making it very simple to capture this data. The information is important because it allows the Agency to track upgrades of poor systems, as well as identify areas where significant new development is occurring in areas without city sewer. Because the information is necessary for the Agency's tracking of local program progress and simple to provide, it is reasonable to require local governments to report it.

**Addition of reporting categories for systems receiving 0-2,499 gallons per day, systems receiving 2,500 to 9,999 gallons per day and other establishments:** The development of specific rules for mid-sized SSTS and other establishments, along with the added requirements for advanced designers to work on ISTS serving from two to five dwellings, add complexity to the rule. The Agency has an interest in tracking local programs use of these rules. Collection of the needed information can be done by the local program during the permitting process with little added work. It can be as simple as marking a column for each of the systems of each type installed. Since the information requested is important in order for the Agency to gain a full understanding of the implementation of the SSTS rules on the local level and gathering the data is not overly burdensome to local governments, it is reasonable to require local governments to report this data.

**Inclusion of a reporting table in the rule:** This table provides local governments with a ready framework for understanding what data will be required. It is not a significant change to the current report form.

**Total number of systems serving seasonal and year-round residents:** The difference between the number of seasonal and year-round residents is important to identify. This is because seasonal dwellings are used less, therefore, their ISTS receive less waste and create less impact than an equivalent system at a year-round home. It is also important to agencies that may fund sewage treatment improvement projects, since cost share programs may not fund seasonal dwellings. Thus, it is important that the numbers of each be known.

**The number of variances issued from the local ISTS ordinance by type:** Like the other new reporting categories above, the number of variances by type is simple for a local unit of government to report, since all variance actions are taken by the local government. It is important for the Agency to monitor the number of variances both as a means of determining where problems exist with the rule and as a check on the quality of local implementation.

**The number of septic system tanks installed by each installer or homeowner:** Minn. Stat. § 115.551 requires those who install sewage tanks in ISTS to collect and remit \$25/tank to the Agency. This requirement, first imposed to benefit the 2003 budget, provides the Agency with needed operating revenue to administer an effective SSTS program. The funds cover the cost of staff who provide technical assistance and oversight; including enforcement, the new technology review program, and increased Agency involvement in training of SSTS professionals.

The fee is to be paid by the tank installer. Most of the time, tanks are installed by licensed installers. MPCA staff knows who these installers are and has an established business nexus to the installers through the licensing program. However, the Agency does not administer the local jurisdiction ISTS permitting program, and so does not have the means to ensure that accurate counts of installed tanks by installer are reported. It is reasonable for the Agency to require that the local units of government who do the permitting, report the number of tanks installed by each installer who works in their jurisdiction so the Agency can audit the tank fee submittals.

Some local units of governments point out that this is an added burden. They do not currently keep track of this information, so it will require an extra data gathering effort. While this may be true, the added burden is not anticipated to be significant. The needed data can be gathered simply by keeping a list of installers who install the systems (information the local units of government have from performing on-site construction inspections or can be collected from local permit applications) and tallying each tank as it is installed. The MPCA is not requiring the development or maintenance of a database or anything more formal than a list and tally with subsequent annual reporting.

Other local units of government say this is burdensome because the ISTS permits are issued to the homeowners, not to the ISTS professionals. Even if the installer is not specified to the local unit at the time of ISTS permit issuance, the local unit will work with the installer during inspections and will receive documentation from the installer when the as-built drawings are submitted. The local unit will not have to go through any special procedures to identify how many tanks the installer put in each system, so it is reasonable for the Agency to request that local units collect this information.

Homeowners can also install their own ISTS (allowed in Minn. Stat. § 115.56, subd. 2), but local permits are still required. In these cases, the homeowners are required to submit the \$25/tank directly to the Agency. These rule changes are not requiring the local units to collect the fee, only that they report to the MPCA which homeowners install their own ISTS. This is no more burdensome to the local units than keeping records of ISTS installer tank numbers.

Without the local data, the Agency has no cost-effective way to audit the tank fees. The Agency has requested the tank installation by installer data since 2003, and many jurisdictions have been reporting this information. Where the data is reported, some violations have been uncovered and enforcement actions taken. By requiring universal reporting of this data, the Agency will be able to administer the program more effectively and ensure sufficient operating revenue to keep the program strong. Having the tank installation information by installer is vital to MPCA, and collecting the data is not overly burdensome to local units, therefore, it is necessary and reasonable for MPCA to require reporting of this data.

**A narrative description of problem areas in local SSTS administration:** This field is added to the annual report to provide local units with a structured opportunity to share program implementation concerns with MPCA. If there are no problems they wish to share, they may complete this question with “none.” It is reasonable for MPCA to provide this opportunity, and no burden to local units to provide the information. It is a reasonable addition to the annual reporting requirements.

## **MINN. R. 7082.0050 GENERAL REQUIREMENTS FOR LOCAL ORDINANCES**

### **932. Proposed Change part 7082.0050, Subpart 1.**

#### **Subpart 1. Adoption of local ordinances.**

**A. The regulation of SSTS by local governments must be implemented through an ordinance based on the requirements of this chapter, except that counties may choose between options described in Subparts 3 or 4 and may also adopt alternative local standards according to Subpart 5. Cities and towns must adopt the regulatory model used by the county and must be as strict as the county ordinance.**

**B. County ordinances that administer SSTS programs must be updated to the standards of chapters 7080 to 7083, as published in the State Register, volume ..., page ..., within 12 months of the effective date of those chapters. City and township ordinances must be updated no more than 12 months after the county ordinance in which the city or township is located is updated, must comply with the standards of chapters 7080 to 7083, as published in the State Register, volume ..., page ..., and must be as strict as the applicable county ordinance.**

#### **Justification**

This subpart lays out the basic framework allowed for local SSTS ordinances. Counties may choose to adopt the conventional program, incorporating the technical standards of Minn. R. ch. 7080 and 7081 without change. To do this, the ordinance states that the county is adopting those standards by reference, and answers the specific questions that need to be answered in each jurisdiction, such as the upgrade time

period for existing SSTS that fail to protect groundwater and what types of systems can be installed in that jurisdiction. The county also may be more restrictive than the Minn. R. 7080 and 7081 standards – in this case they would specify in their ordinance those elements where the county standards are more restrictive. An example may be a county that requires larger tanks than the Minn. R. ch. 7080 standards. The county then would document the differences from the state rule in their “list of differences” and have this available for SSTS professionals and citizens upon request.

The second type of ordinance that a county may chose to adopt is a performance code. In the performance code, the ordinance goes beyond the basic requirements of Minn. R. ch. 7080 and 7081 and addresses all aspects of wastewater management. Certain requirements (listed in Minn. R. 7082.0100, subp. 1) must be met by all ordinances, including performance codes. But once these are met, the county then has greater flexibility in designing their ordinance requirements. For counties that adopt a performance code, the “list of differences” is still required, but would be likely developed at a much more general level, describing the program as performance-based and then describing the underlying philosophy and goals of the ordinance and providing an overview of the requirements.

Minn. Stat. § 115.55 also allows counties to adopt less-restrictive standards than the state standards in areas of sustained low population density. This subpart reflects this option. The areas covered by alternative local standards must be clearly defined and limited to those areas which meet the statutory description. The goal of the proposed language is to ensure that: (1) the process laid out for adoption of alternative local standards is followed; (2) the areas covered by those standards are limited to those allowed in the statute; and (3) the adopted standards protect human health and the environment. Ideally, the area covered by alternative local standards would be very limited.

**933. Proposed Change part 7082.0050, Subpart 2, formerly 7080.0305, Subpart 5.**

*Subp. 2. **Review by agency.** A. A copy of all local ordinances regulating SSTS and all future ordinances or amendments must be submitted to the commissioner within 30 days after adoption, accompanied by a completed ordinance review checklist provided by the commissioner.*

*B. Local ordinances and programs must be reviewed by the commissioner for compliance with this chapter and to ensure that, based on local circumstances in that jurisdiction, the ordinance adequately protects public health and the environment. The commissioner should complete the ordinance review within six months of receipt. Ordinances may be implemented without prejudice during the review process. The commissioner must supply comments on the ordinance to the local unit of government when the review is complete.*

*C. Local ordinances that do not meet the requirements of this chapter, chapters 7080 and 7081, as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55, may be subject to administrative actions.*

Justification

Minn. Stat. § 115.55 requires that local ordinances comply with SSTS rules. The exact language is:

*Subd. 2. **Local ordinances.** (a) All counties that did not adopt ordinances by May 7, 1994, or that do not have ordinances, must adopt ordinances that comply with individual sewage treatment system rules by January 1, 1999, unless all towns and cities in the county have adopted such ordinances. County ordinances must apply to all areas of the county other than cities or towns that have adopted ordinances that comply with this section and are as strict as the applicable county ordinances. Any ordinance adopted by a local unit of government before May 7, 1994, to regulate individual sewage treatment*

*systems must be in compliance with the individual sewage treatment system rules by January 1, 1998*

The cited language above, provides that both ordinances adopted in response to the statute, and those that were in existence before that time, are to be in compliance with SSTS rules, now adopted as Minn. R. ch. 7080. It is reasonable for the Agency to review local ordinances to determine whether they meet the requirements of the rule. Comments will be provided to the local units when the Agency's review is complete. Comments will likely range from unconditional concurrence to the identification of one or more serious defects either in the ordinance, or in the process that was followed in its adoption. (The latter is most likely in the case of local jurisdictions that adopt alternative local standards, since this is the area of the rule that requires the most process.)

The former version of Minn. R. 7080.0305, subp. 5, requires that local ordinances be submitted to the commissioner 30 days after adoption. No response from the Agency is either provided for or disallowed. These proposed changes require that the Agency review the ordinance, with a response from the Agency expected within six months of submittal. The local government may fully implement the ordinance during the review period, so that process is not slowed. Local governments that have questions about certain provisions of their draft ordinances are urged to work proactively with MPCA before completing the adoption process to avoid potential problems during the formal review process.

The Agency will provide local units with support and technical assistance during the ordinance adoption process. Checklists will be developed to aid local units as well. This will help to reduce the burden on local units of government. Effective local ordinances are the key to effective SSTS regulation in Minnesota. Because this is critical to the environmental goals of the program, it is reasonable for the Agency to review local ordinances. The burden on local units will be lessened through the use of tools like checklists and workshops.

Item C in this section of the proposed rule states that administrative actions may be taken for ordinances that do not meet the requirements of the rule. This is included in the proposed rule to make it clear that there are potential consequences if requirements are not met. However, the Agency would not begin the dialog with local units whose ordinance is problematic by initiating enforcement actions. To the contrary, the comment letter which is sent to the local unit would summarize the identified problems and provide guidance on their correction. The MPCA staff would seek to work cooperatively with the local units to correct problems and deficiencies and would only resort to enforcement actions if the local unit was not willing to cooperate.

The statutory allowance provided to counties to adopt ordinances that are less restrictive than the standards provided in the state's SSTS rules complicates this picture somewhat. The statute (Minn. Stat. § 115.55, subd. 7) states:

*Subd. 7. **Local standards.** (a) **Existing systems.** Counties may adopt by ordinance local standards that are less restrictive than the agency's rules in order to define an acceptable existing system. The local standards may include soil separation, soil classification, vegetation, system use, localized well placement and construction, localized density of systems and wells, extent of area to be covered by local standards, groundwater flow patterns, and existing natural or artificial drainage systems. The local standards and criteria shall be submitted to the commissioner for comment prior to adoption to demonstrate that, based on local circumstances in that jurisdiction, they adequately protect public health and the environment.*

*(b) **New or replacement systems.** Counties, after providing documentation of conditions listed in this paragraph to the commissioner, may adopt by ordinance local standards that are less restrictive than the agency's rules for new system construction or*

replacement in areas of sustained and projected low population density where conditions render conformance to applicable requirements difficult or otherwise inappropriate. Documentation may include a map delineating the area of the county to be served by the local standards, a description of the hardship that would result from strict adherence to the agency's rules, and evidence of sustained and projected low population density. The local standards must protect human health and the environment and be based on considerations that may include, but need not be limited to, soil separation, soil classification, vegetation, system use, localized well placement and construction, localized density of systems and wells, extent of area to be covered by local standards, groundwater flow patterns, and existing natural or artificial drainage systems. The local standards must provide cost-effective and long-term treatment alternatives. The draft ordinance incorporating the local standards must be submitted to the local water planning advisory committee, created under section 103B.321, subdivision 3, and then submitted with justification to the commissioner 30 days before adoption for review and comment.

(c) **New or replacement systems; local ordinances.** A local unit of government may adopt and enforce ordinances or rules affecting new or replacement individual sewage treatment systems that are more restrictive than the agency's rules. A local unit of government may not adopt or enforce an ordinance or rule if its effect is to prevent or delay recording with the county recorder or registrar of titles of a deed or other instrument that is otherwise entitled to be recorded.

(d) **Local standards; conflict with state law.** Local standards adopted under paragraph (a) or (b) must not conflict with any requirements under other state laws or rules or local ordinances, including, but not limited to, requirements for:

(1) systems in shoreland areas, regulated under sections 103F.201 to 103F.221;

(2) well construction and location, regulated under chapter 103I; and

(3) systems used in connection with food, beverage, and lodging establishments, regulated under chapter 157.

The local standards must include references to applicable requirements under other state laws or rules or local ordinances.

This portion of the statute shows that the legislative intent is that these alternative local standards also must be protective of human health and the environment. Later sections of the proposed rule lay out the process for documentation of the alternative local standards. The process laid out in the proposed rule does not restrict the ability of counties to adopt alternative local standards, but instead, it requires that the Agency do a detailed review and provide comment to the counties that propose alternative local standards. If the county seeks to adopt alternative local standards without following this process, this would be grounds for possible enforcement action by the state, if the deficiencies are not addressed.

**934.** Proposed Change part 7082.0050, Subparts 3 to 5, formerly 7080.0305, Subpart 6.

Subp. 3. **Conventional programs.** Each SSTS ordinance must have technical standards. Conventional programs are programs that employ ISTS and MSTS technical standards and criteria as specified in chapters 7080 and 7081, as published in the State Register, volume ..., page ..., and program administrative functions in parts 7082.0100 to 7082.0700.

Subp. 4. **Performance programs.** A county may further choose to develop and implement a comprehensive, performance-based program using ISTS and MSTS designed to adequately protect the public health and the environment. Performance programs must meet the requirements of the conventional program and include provisions necessary to implement part 7082.0100, subpart 4.

Subp. 5. **Requirements for alternative local standards.** Counties may adopt and, if adopted, must enforce by ordinance alternative local standards for existing or new construction or replacement of SSTS as part of a conventional program. The alternative local standards must protect public health and the environment according to Minnesota Statutes, section 115.55, subdivision 7, paragraphs (a) and (b), and must comply with items A to F.

A. Alternative local standards must not apply to shoreland, wellhead, or facilities licensed by the state.

B. Alternative local standards must comply with requirements of other applicable state laws or rules or local ordinances.

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

(1) soil separation;

(2) soil classification;

(3) vegetation;

(4) system use;

(5) localized well placement and construction;

(6) localized density of systems and wells;

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

(8) groundwater flow patterns; and

(9) existing natural or artificial drainage systems.

D. Counties may adopt alternative local standards for new construction or replacement in areas of sustained and projected low population density where conditions render conformance to this chapter difficult or otherwise inappropriate. Counties seeking to adopt alternative local standards for new construction or replacement must submit the following information to the commissioner:

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

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

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

chapter;

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

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

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

(7) applicable justifications under item C.

E. All new systems installed under alternative local standards must have operating permits issued by the county that adopted the alternative local standards.

F. If the draft county SSTS ordinance includes alternative local standards for new construction and replacement, the ordinance must be submitted to the local water planning advisory committee created under Minnesota Statutes, section 103B.321, Subdivision 3, and then submitted with justification to the commissioner at least 30 days before adoption for review and comment demonstrating that the ordinance adequately protects public health and the environment.

### Justification

This section of the proposed rule provides counties with three options for structuring their ordinances. The first option is the “conventional program,” which is the major option allowed in the current rule. In this option, the county adopts the state SSTS rule. There are many advantages to this approach, including

greater statewide consistency and subsequent access to others working through the same challenges, the fact that SSTS professionals are all trained to the standards of the state SSTS rule, and that MPCA will develop materials to support this type of ordinance. This is the type of program envisioned when the first version of Minn. Stat. § 115.55 was promulgated in 1994. The goal at that time was to implement a baseline requirement that was administered through local ordinances that met the state standards and a statewide licensing program of professionals who adhered to those standards. It is necessary and reasonable for MPCA to offer this as the first and most supported option for structuring local SSTS programs.

The second option is for development of a “performance program,” a system of SSTS regulation that is not prescriptive in nature. It is intended to open the door to allow counties interested in developing a comprehensive wastewater management program a chance to do this while still meeting statutory requirements in Minnesota.

The “performance program” is a comprehensive local wastewater program that is more all-encompassing than the conventional program. Across the continent, there has been limited adoption of performance codes, but some examples do exist. One is in British Columbia, Canada ([www.healthservices.gov.bc.ca/protect/sewage.html](http://www.healthservices.gov.bc.ca/protect/sewage.html)) and another in California (cite). The National Onsite Wastewater Recycling Association has developed a model code that also informs this effort. There is also a model that was developed in northern Minnesota – the “Model Code Framework for Performance Management of Onsite/Cluster Wastewater Systems Model Code Framework for Performance Management of Onsite/Cluster Wastewater Systems,” completed in December 2004 with funding from the EPA and the Iron Range Resources (IRR) at <http://www.co.st-louis.mn.us/publichealth/Environmental/CodeVersion2-0Jan2005.pdf>

The preamble to this document provides a good introduction to performance codes:

“Onsite and Cluster Wastewater Treatment Systems Introduction:

*Regulation is used by society to manage societal risks from various human activities through laws, rules, and guidelines. To be effective, the regulatory program must be responsive and adaptable to changes in conditions or perceptions of risk. In its purest sense, the program should establish a framework that assures that the desired outcomes of an activity are routinely achieved regardless of the prevailing circumstances. It must be an outcome-based program based on accountability with verification, yet with a strong element of trust. Further, it must be structured such that it can be administered fairly and consistently over the range of circumstances that the program might apply.*

*Codes regulating onsite wastewater treatment systems traditionally have not followed this outcome-based model. Nearly all onsite wastewater treatment codes are prescriptive. That is they prescribe detailed means and methods for siting, designing, and constructing systems on sites meeting specific criteria. Typically, the designs are robust; “passive” in operation and stable in performance, so little owner attention is needed. If applied in conformance to the rules, the designs are “deemed to satisfy” the desired outcomes without confirming measurements. In other words, prescriptive codes are “means-based” seeking design compliance with “pre-engineered” systems approved for use only on properties with specific site conditions that are considered suitable for the prescriptive designs. Changing the prescriptive rules to address concerns for adverse environmental impacts from the systems or to relax restrictions to their application in a particular area is a cumbersome process and not readily undertaken by local authorities. As a result, practices and technologies are updated slowly and are not always responsive to the needs of the area. If building sites do not meet the accepted site criteria, regulators are put in the position of either prohibiting development of the lot or granting variances to the prescribed*

*applications to allow development to proceed. The variances are often granted with no clear assurances that the desired outcomes can be achieved.*

*An outcome-based regulatory program can be achieved through a performance code. This is a relatively new approach to onsite wastewater system regulation, which seeks sustained performance compliance with stipulated performance outcomes based on potential public health and environmental risks of the particular receiving environment. The “ends,” or treatment performance, determine compliance rather than the “means,” or design compliance, as is the case with prescriptive codes. The performance-based approach:*

- *Provides assurances that system performance is sustained over the life of the system so that public health, water resources, property values, and quality of living are not threatened.*
- *Allows effective solutions for sensitive environments.*
- *Provides more flexibility in dealing with difficult wastewater characteristics (e.g. large volumes, high strengths, etc.).*
- *Allows easier and swifter application of new technologies or practices.*
- *Allows science-based means to correct failures that will maintain performance requirements.*
- *Provides flexibility to change performance requirements as perceptions of risk change.*
- *Allows economic growth to achieve sustainable development, which will not sacrifice public health or environmental quality.*

*While a performance approach is rational and verifiable, it lacks the objectivity of prescription. Under prescription, either the property is “suitable” for a prescribed design or it is not. Thus, whether a treatment system is in compliance with a prescriptive code is easy to determine because compliance is based at the time of construction on physical features that can be measured against the specific required criteria, i.e. conformance of the installed system to the code prescripts. After the final construction inspection, regulatory oversight typically ends because the system is “deemed to satisfy” the implicit performance requirements. Only when a complaint is filed or a failure confirmed does the regulatory authority intervene. Conversely, the performance approach is much more subjective and, thus more difficult to enforce. Compliance is determined not by the technology alone, but also by the results of ongoing operation and maintenance each system receives. Rather than demonstrating compliance only at the time of installation, a system is judged on its performance that is measured at intervals throughout its service life. In addition to education and design review, system surveillance becomes a principal role of the regulator. Thus, many regulatory authorities prefer the prescriptive approach because rule compliance is well defined so enforcement can be easier but, without performance monitoring, malfunctions often are not detected, which can create the misperception that the program is successfully protecting public health and water resources.”*

The third option is the statutorily-allowed Alternative Local Standards. The language presented in this proposal for Alternative Local Standards is unchanged from the current rule, so no further justification is provided in this SONAR.

#### Framework Purpose:

In January 2000, ten northern Minnesota counties undertook an effort to develop a performance code framework that could be used to develop customized performance codes addressing the difficulties with permitting effective on-site wastewater treatment in the region. The former chapter 7080 of the

Minnesota Rules regulating on-site treatment systems was primarily prescriptive. In northeast Minnesota, a large percentage of the existing lot conditions were not suitable for most of the prescriptive designs permitted by the state rules. As with any prescriptive code, land use decisions are based on what the code considers “suitable” site conditions for construction of approved designs rather than what is desirable from a resource perspective. As a result, economic hardships have been created, poor land use decisions made, and economic development inhibited.

The northern Minnesota project team decided at the outset that rather than trying to “fix” the existing code, a fresh start was necessary with a “clean sheet of paper” that would be unencumbered by existing biases and political decisions of the past, which could limit innovation. This effort was not undertaken to create a new code that would replace the current code, but rather to create the committee’s concept of an “ideal” model that could provide a guide to enhance the existing program. Stakeholder meetings were held with staff and/or county commissioners in each of the participating counties. Also, meetings were held with several regional special interest groups. The purpose of the meetings was to identify strengths and weaknesses of the current regulatory programs and to solicit recommendations for alternative approaches. From these meetings, objectives of the model code and principles that would guide its development and implementation were drafted (Otis, McCarthy, and Crosby, 2000). These are stated in subchapter 1 of the Model Framework.

This performance code framework presents the results of this effort. The framework is intended to provide a structure for an effective regulatory program that will achieve sustainable and affordable development without endangering public health or water quality. It is intended to provide flexibility to solve wastewater problems, ready access to technologies and practices that can be used in sensitive receiving environments, and options to allow rational land use planning. It is meant to assist counties in implementing a comprehensive on-site wastewater system regulatory program that can be customized to meet the specific needs of their customers and circumstances.

Five program models are described. They are models similar to those promoted by EPA, which progress from a traditional, but enhanced, prescription model to performance models that rely on property owner operation or public or private utility ownership and management. A county would select one of the management models based on the sensitivity of the environments typically encountered in the county, the county’s wastewater treatment needs, and the capacities of regulatory, technical, and management resources available in the county. Using this model as the basis of its program, the county could borrow elements from higher-level models to customize the model to its specific needs and desired outcomes. Thus, the framework allows a county to remain with the existing prescriptive program and “grow” into a performance program as the program elements necessary to support the more advanced program are put into place.

It is appropriate that the state SSTS rules allow the option for a county to develop a performance code, and reasonable for the state to expect outcomes beyond that which a minimum prescriptive program offers. The required elements of a performance code are provided in the proposed language as Minn. R. 7082.0100, subp. 4, and are discussed later in this SONAR.

Why are only counties allowed these three options? Refer to the discussion provided in this SONAR for Minn. R. 7082.0030, subp. 3. City and town ordinances are required to be as restrictive as the applicable county ordinance. If a county chooses the performance program option, any city, town or special-purpose unit of government ISTS ordinances in that county would need to also lay out performance programs.

One new element is added to Alternative Local Standards in this proposed rule:

*E. All new systems installed under alternative local standards must be under operating permits issued by the county that adopted the alternative local standards.*

This is not in the former Minn. R. ch. 7080, nor is it specifically a requirement for alternative local standards in the enabling statute. However, it is a necessary and reasonable addition to this type of a county program. Since alternative local standards may reduce the basic level of environmental and public health protection by reducing safety factors, it is reasonable to add oversight of these systems on an ongoing basis. The operating permit will ensure a greater level of scrutiny to the continued operation of the systems, and will facilitate the county in collection of data to verify that their designs are indeed effective.

## **MINN. R. 7082.0100 REQUIREMENTS FOR LOCAL ORDINANCES**

**935.** Proposed Change part 7082.0100, Subpart 1, formerly 7080.0305, Subparts 2 and 4.

Subpart 1. **Requirement.** All SSTS ordinances must contain the provisions in items A to D, which reflect statutory requirements in Minnesota Statutes, section 115.55.

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

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

C. A provision requiring that the owner has five years from the date of the bedroom addition permit issuance to upgrade, replace, repair, or discontinue use of the system.

This upgrade criterion applies only if:

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

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

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

(4) the system does not comply with part 7080.0060; and

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

D. Local ordinance requirements regulating vertical separation for systems built before April 1, 1996, in non-SWF must meet the requirements in part 7080.1500, Subpart 4, item E, as published in the State Register, volume ..., page ....

### Justification

These items are in statute and are also in the former version of Minn. R. ch. 7080, with only minor changes in wording for enhanced clarity or as needed to fit into the new rule language.

**936.** Proposed Change part 7082.0100, Subpart 2, formerly 7080.0305, Subpart 2 item E.

Subp. 2. **List of differences.** A local unit of government must prepare and make available to the commissioner, and to the public upon request, a written list of all technical and administrative differences between its ordinance and chapters 7080 and 7081, as published in the State Register, volume ..., page ....

### Justification

Subpart 2 carries forward language from Minn. Stat. § 115.55, subd. 2(c), adding specificity as to what types of differences are to be identified. The statute now says “any differences,” which is less specific.

**937. Proposed Change part 7082.0100, Subpart 3 item A.**

*A. Ordinances adopted by a local unit of government under part 7082.0050 must contain the provisions in subitems (1) to (17).*

**Justification**

Conditions in this item are considered mandatory either due to statutory requirements or what the Agency believes is necessary. Each subitem is presented separately with justification. For the reasons stated for each, MPCA staff believes that it is necessary and reasonable to include each of these requirements in local ordinances.

**938. Proposed Change part 7082.0100, Subpart 3, item A, subitem (1), formerly 7080.0305, Subpart 4, item E.**

*(1) A provision that requires all design, installation, alteration, repair, maintenance, operation, pumping, and inspection activities for SSTS to be completed by an appropriately licensed business, an appropriately certified qualified employee, or a person exempted under part 7083.0700, Subpart 1, as published in the State Register, volume ..., page .... A local unit of government may not require additional local licenses, local registrations, local certificates, or other similar professional credentials for ISTS professionals. The ordinance may require other state-issued licenses or certificates of registration.*

**Justification**

The first clause is carried forward from the current version of Minn. R. 7080.0305, subp. 2(E), and was initially justified in the SONAR for that rule.

The second clause states that local units may not require additional local licenses for SSTS professionals. That had been a common practice before statewide licensure was imposed in 1995, and is now expressly prohibited by law in Minn. Stat. § 115.56, subd. 2g. This rule change, however, does clarify that local ordinances may require other state-issued licenses or certificates of registration. This is important because some local units, especially those in fragile environments like the karst geology of Olmsted County, require that certain decisions can only be made by an SSTS designer who is also a Professional Soil Scientist. It is appropriate that local units have authority to require additional state issued licenses or certificates of registration in these circumstances.

**939. Proposed Change part 7082.0100, Subpart 3, item A, subitem (2), formerly 7080.0305, Subpart 4, item G.**

*(2) A provision that requires abandonment of SSTS, or part thereof, that will no longer be used, according to part 7080.2500, as published in the State Register, volume ..., page ....*

**Justification**

This provision is carried forward from the current Minn. R. 7080.0305, subp. 4(G) and Minn. R. 7080.0176, with minor wording changes for clarity.

**940. Proposed Change part 7082.0100, Subpart 3, item A, subitem (3), formerly 7080.0305, Subpart 2.**

*(3) Technical standards and criteria for new and existing SSTS that adequately protect the public health and environment, as determined by parts 7080.1500, 7080.2150, Subpart 2, and 7081.0080, as*

published in the State Register, volume ..., page .... The ordinance may specifically adopt the technical standards in parts 7080.1710 to 7080.2400 and 7081.0110 to 7081.0290, as published in the State Register, volume ..., page ....

#### Justification

This provision in Minn. R. 7082 clarifies that the commissioner of the agency has the authority and responsibility to determine whether the technical standards and criteria in local ordinances are actually protective. This provision also gives the Agency more standing in review of ordinances and makes determination of deficiencies more enforceable.

**941.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (4), formerly 7080.0305, Subpart 3, item B.

(4) Whether variances to local ordinance provisions are allowed and, if so, the specific procedures required to obtain a variance from local ordinance requirements.

#### Justification

Local governments have different views on the granting of variances. For some, it is a commonly used tool. Others do not consider variances at all. This provision in Minn. R. ch. 7082 requires that the local ordinance specifically state whether variance requests will be considered, and if so, the procedures to be followed. The decision to allow variances or not, and process to follow if they are allowed, is left to the local units of government to decide. The Agency requires that local governments report the number of variances allowed in the annual report. The Agency will use this information to evaluate the level of rigor in the rule. For example, if a significant number of variances are issued to a single provision, that provision will be reviewed and evaluated for change in subsequent rule revisions.

**942.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (5).

(5) Provisions for design review, permit issuance, construction inspection, and system operation.

#### Justification

This provision requires local governments specifically to cover design review, permit issuance, construction inspection and system operation.

**943.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (6), formerly 7080.0305, Subpart 4, item F.

(6) A provision that requires that all lots created after January 23, 1996, have a minimum of two soil treatment and dispersal areas that support a Type I system as described in parts 7080.2200 to 7080.2230 or 7081.0270, Subpart 4, as published in the State Register, volume ..., page ..., as applicable.

#### Justification

This provision was first imposed in the 1996 revisions to Minn. R. ch. 7080 (7080.0305, subp. 4[g]), and is justified in that SONAR. The changes proposed here include a terminology change from the current “one additional soil treatment area” to the clearer “two soil treatment and dispersal areas.” The second change is to drop the term “standard system” and replace it with “Type I system.” This is because other

changes to the rule will eliminate the term “standard system.” The proposed language changes have no change in effect than the current language.

- 944.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (7), formerly 7080.0305, Subpart 4, item H and 7080.0172, Subpart 3, item A.

(7) A provision that specifies the conditions necessary to allow the use of holding tanks. The ordinance must specify holding tank operation and maintenance requirements. At a minimum, a monitoring and disposal contract signed by the owner and a licensed maintainer business is required unless the owner is a farmer exempt from licensing under Minnesota Statutes, section 115.56, subdivision 2, paragraph (b), clause (3). The homeowner is responsible for ensuring that the contract guarantees the removal of the tank contents before overflow or any discharge.

#### Justification

This provision is included because the Agency has received many calls from local units of government who failed to include this provision and were surprised to find that Minn. R. 7080 does not ban or allow holding tanks, but instead leaves the decision up to local units. This provision is carried forward from the former Minn. R. 7080, but includes more specificity on the need to effectively manage the sewage that accumulates in the holding tanks.

- 945.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (8) formerly 7080.0030, Subpart 1a. and 7080.0065 subpart 4.

(8) A provision that prohibits surface discharge of SSTS unless issued a national pollution discharge elimination system permit by the agency.

#### Justification

Prohibitions against surface discharge of sewage without an NPDES Permit already exist in state and federal law and form the basis for the entire water quality permitting program now administered for EPA by MPCA. This provision enhances enforceability of those state and federal laws by making them locally enforceable as well.

- 946.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (9).

(9) A provision specifying the allowable use and location of ISTS in floodplains in compliance with applicable state and local requirements.

#### Justification

The regulation of land use is handled by counties, cities, and towns in Minnesota. In floodplains, the state imposes some regulatory restrictions, but there is still a strong local component. The purpose of this provision is to require local units to specify whether and how ISTS are to be used in floodplains.

- 947.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (10).

(10) A provision requiring that a management plan be developed, reviewed, and approved before issuance of a construction permit for all new or replacement ISTS as described in part 7080.1100, Subpart 51, as published in the State Register, volume ..., page ....

### Justification

The majority of content in the SSTS rules focuses on proper design and construction of SSTS. However, once even the best system is installed, it becomes the responsibility of the homeowner to take care of it from there. Management plans are needed for consumer education – it is like a users’ manual that comes with a DVD player or new car. The management plan will inform consumers about the proper use of their systems and how to take care of them once the installer leaves. For the simpler systems, the management plans will be relatively simple. As the system complexity increases, so will the complexity of the management plans.

This proposed requirement does not require active enforcement of the management plan by local units of government, although they may choose to do so. If a local unit lacks the capacity to be rigorous in this area, there is still benefit to be gained by having a management plan developed for each system and delivered to the homeowner so they clearly understand what they have and how to take care of it. This requirement will provide the needed information to the system owner for proper operation.

**948.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (11), formerly 7080.031 subpart 6.

(11) A provision requiring operating permits for all systems installed under parts 7080.2290, 7080.2300, and 7080.2350, and chapter 7081, as published in the State Register, volume ..., page ....

### Justification

This provision brings forward the requirements of the designated parts of the other rules and requires their reflection in the local ordinance for implementation.

**949.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (12) formerly 7080.0175, Subpart 2.

(12) A provision requiring that the SSTS owner or owner's agent pump septic tanks or assess the system to determine the need to pump septic tanks no less than every three years. The ordinance must require pumping of solids if the solids accumulation needs to be removed based on part 7080.2450, as published in the State Register, volume ..., page ....

### Justification

This provision brings the basic requirement for system maintenance into local ordinances. New and replacement systems built after the effective date of this rule change will have individualized management plans developed. Maintenance is also critical for systems that predate these rules. The provisions outlined here are the minimum that has been deemed to be adequate and come into this rule from previous versions of the SSTS rules.

Inclusion of this provision does not require the local unit to develop a system to ensure that homeowners maintain their ISTS, although that would be a desirable development.

**950.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (13), formerly 7080.0600, Subpart 3.

(13) A provision requiring that all owners of new or replacement Class V injection wells, as defined in Code of Federal Regulations, title 40, part 144, submit inventory information to the

Environmental Protection Agency and the agency and that all Class V wells be identified as such in property transfer disclosures.

#### Justification

The purpose of this provision is to improve enforceability of existing federal regulations (40 CFR pt. 144) and state laws (Minn. Stat. § 115.55, subd. 5). While the state law does not specifically call out the disclosure of Class V wells, it does require disclosure of the status of the SSTS at the time of property transfer and the fact that a given system is additionally regulated by EPA as an injection well is a significant factor in its status.

#### **951. Proposed Change part 7082.0100, Subpart 3, item A, subitem (14).**

(14) A provision outlining how conflicting inspections and other technical disputes between SSTS professionals will be resolved if they occur as described in part 7082.0700, Subpart 5.

#### Justification

Technical disputes between professionals (e.g. – two designs for an SSTS are submitted, one requires a mound and the other is for trenches) occur from time to time. Many of these are based on people interpreting things differently and coming to different conclusions.

The Agency does not have the staff resources to adjudicate all situations. Since the local units of government are closer to the individual sites in most cases, and are generally more familiar with soil conditions in their locale than MPCA staff would be, it is appropriate that they be the regulatory entity to be involved in resolving disputes.

This provision requires local governments to outline a procedure for resolving technical conflicts. It does not specify what that procedure has to be. Some counties, for example, already have written policies in place to deal with conflicts. In St. Louis County, professional soil scientists who are also registered SSTS designers are called in to resolve soils disputes. Other jurisdictions may chose to simply state that when a dispute occurs, the local regulatory agency will review both views and cast the deciding vote. Another approach would be to have a systematic process like the Technical Evaluation Panels (TEP) set up under the Wetland Conservation Act.

The Agency is working with the University of Minnesota and other interested parties to see if an approach like the TEP process could work for SSTS as well. It is expected that a pilot approach will be launched in time, possibly implemented in a small area to test its effectiveness and the needed level of support. After testing, a broader approach may be launched. During this period of experimentation, it is appropriate for local units to provide a process that outlines how conflicts will be resolved in that jurisdiction.

#### **952. Proposed Change part 7082.0100, Subpart 3, item A, subitem (15).**

(15) A provision specifying what level of local approval is needed for repair to and rejuvenation or remediation of SSTS, as defined in local ordinance.

#### Justification

There have been instances where lack of clearly defined boundaries on the local ability to regulate “repair” of an SSTS have resulted in much confusion and some lawsuits. Adding a provision to local ordinances that sets the boundaries will dispel confusion, resulting in less lost time to regulatory squabbles and legal considerations. The Agency is not directing any particular level of approval for

repairs; it will be up to the local unit to set a level appropriate for community needs that matches their ability to administer it. For example, a provision in a local ordinance could state that any pump replacement or relaying of pipe needs a permit, or that no local approvals are needed for any SSTS repair. Most local governments will have some experience in this area and will be able to make well-informed decisions in crafting this provision.

**953.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (16) formerly 7080.0175, Subpart 2, item C, subitem (1), unit (a).

(16) A provision allowing or disallowing the use of soil texture and structure in Table IX in part 7080.2150, Subpart 3, for sizing of soil treatment and dispersal systems.

#### Justification

This is a former requirement of Minn. R. 7080.0170, subp. 2(C)(1)(a).

**954.** Proposed Change part 7082.0100, Subpart 3, item A, subitem (17), formerly 7080.0179, Subpart 2, item C, subitem (4).

(17) A determination of whether, or where, additional nitrogen, phosphorus, or other contaminants compliance levels will apply.

#### Justification

Proposed chapter 7081 contains regulatory requirements for nitrogen and phosphorus for MSTs. This provision identifies that local units of government may also set more restrictive standards for MSTs if desired. Proposed chapter 7080 does not set nitrogen or phosphorus standards for ISTS but contains a similar provision (7080.2150, subpart 2, item E), which identifies that the local unit of government may set standards for nitrogen and phosphorus as desired.

**955.** Proposed Change part 7082.0100, Subpart 3, item B, formerly 7080.0060, Subpart 2, 7080.0305, Subpart 2, item D and 7080.0305, Subpart 4, item F.

B. Ordinances adopted by a local unit of government under part 7082.0040, Subparts 2 or 3, may contain the provisions in subitems (1) to (6).

(1) A provision that requires all sewage generated in the jurisdiction to be treated either in an agency-permitted facility or a system that meets the requirements of an ordinance adopted under this chapter.

(2) A provision allowing or disallowing the use of the system types as described in parts 7080.2210 to 7080.2400, as published in the State Register, volume ..., page ....

(3) A provision on the use, prohibition, or restriction of warrantied technologies as established in Minnesota Statutes, section 115.55.

(4) A provision to regulate the disposal of septage according to federal requirements and appropriate state guidelines.

(5) Provisions that protect the secondary soil treatment and dispersal area. Other permits issued to the property must consider the protection of the secondary site.

(6) In addition to the provision in item A, subitem (6), a provision to require enough land area to support the proposed improvements, such as having enough area to support all anticipated site improvements, plus the area needed for the two soil treatment areas. The ordinance may also contain a provision on the action needed in the event that the lot was created according to this provision, but the lot's soil treatment and dispersal area is subsequently damaged or disturbed.

## Justification

This list of items that may be included in local ordinances is provided to guide ordinance writers in thinking about the type of questions that will arise as they implement their ordinances. The list is not intended to limit local units to only these provisions, but rather to provide them with a starting list of items to consider in ordinance development.

### **956. Proposed Change part 7082.0100, Subpart 4.**

**Subp. 4. Ordinance requirements for performance programs. Performance programs must meet the requirements of Subpart 3 and items A to J below.**

A. An education program must be established to educate owners on the purpose, use, and care of SSTS and notify owners of impending scheduled submittals of compliance monitoring reports.

B. A program must be established to evaluate potential risks of SSTS-receiving environments, evaluate appropriate septage management, inform the local planning authority of changes in regulations, and evaluate the potential impacts of SSTS regulation changes on land use.

C. A program must be established to determine performance requirements necessary to protect public health and water resources for each defined receiving environment in the regulatory jurisdiction. At a minimum, the performance requirements must protect underground sources of drinking water according to chapter 4717 and protect surface waters according to chapter 7050.

D. The ordinance must establish site evaluation requirements that define the process to characterize the receiving environment.

E. A program must be established to administer renewable operating permits issued to system owners, stipulating system performance and compliance monitoring requirements renewable upon documentation of compliance with operating permit stipulations. The program must provide for tracking and reviewing compliance monitoring reports for timely submittal by owners and ensuring the system is operating within its performance requirements stipulated in the operating permit.

F. A program must be established to track residuals hauling, treatment, and disposal according to Code of Federal Regulations, title 40, part 503, and Use and Disposal of Sewage Sludge, Code of Federal Regulations, title 40, part 257, and applicable state, tribal, and local requirements.

G. A program must be established for notifying owners of pending scheduled submittals of compliance monitoring reports and performing system inspections randomly or at the time of operating permit renewal.

H. An enforcement program must be established that includes penalties for failure to comply with the compliance schedule and requires system assessments by a certified inspector at the time of operating permit renewal.

I. A record-keeping program must be established that includes a database inventory of all systems, including locations, site evaluations, record drawings, permits, and inspection reports, tracking for operating permits, and compliance reporting.

J. A financial assistance and funding program must be established providing the legal and financial support to sustain the management program.

## Justification

This list of required elements for performance programs is drawn from a guidance document developed by EPA entitled “Handbook for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems,” February 2003, available online at [www.epa.gov/owm/septic/pubs/septic\\_management\\_handbook](http://www.epa.gov/owm/septic/pubs/septic_management_handbook). It provides a framework for counties that wish to go beyond the current level of wastewater management offered in a minimum program. A performance program is viewed as a tradeoff – on the one hand, the county has more flexibility in system design since the prescriptive elements of the minimum code are replaced with designer training and

judgment. On the other hand, further training and good judgment alone do not provide oversight or monitoring, and so a more comprehensive framework is needed to ensure that wastewater is treated. It is necessary for the Agency to set a framework like this, and the elements laid out are reasonable.

**957.** Proposed Change part 7082.0100, Subpart 5, formerly 7080.0300, Subpart 2, item B.

Subp. 5. More restrictive. Local ordinance technical or administrative requirements may be more restrictive than this chapter.

#### Justification

This provision is brought forward unchanged from the current Minn. R. 7080.0303, subp. 2(B).

### **MINN. R. 7082.0300. LOCAL PROGRAM ADMINISTRATION**

**958.** Proposed Change part 7082.0300, Subpart 1, item A, formerly 7080.0300, Subpart 3, item B.

#### Subpart 1. Variance from requirements of this chapter.

A. A local unit of government may request a variance from the commissioner from the standards in this chapter or request a variance to the public health or environmental protection standards in parts 7080.2150, subpart 2, and 7081.0080, subparts 2 to 5, as published in the State Register, volume ..., page ....

#### Justification

The above-cited standards are included in SSTS design as the basic core requirements for SSTS environmental and public health protection. Therefore, if a local unit of government wishes to vary from these standards, it is prudent to bring the proposal under state scrutiny.

**959.** Proposed Change part 7082.0300, Subpart 1, items B and C, formerly 7080.0030, Subpart 3, item C.

B. Before granting a requested variance, the commissioner must find that by reason of exceptional circumstances, the strict enforcement or strict conformity with this chapter or public health or environmental standards would be unreasonable, impractical, or not feasible under the circumstances. The commissioner may permit a variance under part 7000.7000 in harmony with the general purpose of this chapter and chapters 7080 and 7081, as published in the State Register, volume ..., page ..., and the intent of applicable state laws. The variance request must contain, as applicable:

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

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

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

(4) the alternative measures that will be taken

to ensure a comparable degree of compliance with the intention of this chapter;

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

(6) cost considerations; and

(7) other relevant information requested by the commissioner as necessary to properly evaluate the variance request.

C. Variances must be submitted to and approved by the commissioner prior to implementation.

### Justification

The current Minn. R. ch. 7080 allows local units to apply to the Agency for a variance, and lays out the circumstances that must be met before a variance can be approved. This proposed language, in the first paragraph, clarifies the types of situations in which variances may be sought. It is both necessary and reasonable that MPCA allow local governments to petition for flexibility when needed.

#### **960. Proposed Change part 7082.0300, Subpart 2 formerly 7080.0305, Subpart 3, item C.**

##### **Subp. 2. Prohibited variation.**

A. Local ordinances may not deviate from flow determinations under part 7081.0110, as published in the State Register, volume ..., page ..., if the deviation reduces the average daily flow from 10,000 gallons or more to less than 10,000 gallons per day without approval of the commissioner.

B. Programs adopted under part 7080.0100, Subpart 3, must not issue variances from provisions in part 7080.2150, Subpart 2, or 7081.0080, Subparts 2 to 5, as published in the State Register, volume ..., page ....

C. Only the governing state agency or locally delegated authority may issue variances to chapters 4715, 4720, 4725, 6105, and 6120.

### Justification

Item A is a new proposal to prevent the artificial adjustment of flow figures to allow an SSTS to evade an SDS permit. The agency has heard that reducing the flow values may be a common practice by some counties to avoid state permits. This rule provision will eliminate that practice.

Items B and C are current provisions which have been moved and modified due to rule restructuring and reformatting.

#### **961. Proposed Change part 7082.0300, Subpart 3.**

Subp. 3. Variation from local ordinance. Variances to standards and criteria not listed in Subpart 2 may be granted on a site-by-site basis by the local unit of government, if applicable local variance procedures are followed.

### Justification

This provision specifies the types of local variances that local units may consider – site by site variances. This means that each variance request must be considered on its individual merits. If a local unit were to allow a substandard practice by area-wide variance, it would result in less protection to the environment and public health than is afforded by the rule currently and this is unacceptable. Site specific decisions take into account the individual hardships posed by strict conformance to the rule and other factors of risk to human health and the environment. It is both reasonable and necessary for MPCA to limit local variances in this way.

#### **962. Proposed Change part 7082.0300, Subpart 4, formerly 7080.0310, Subpart 4.**

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

A. site evaluation reports, including items identified in part 7080.1730, as published in the State Register, volume ..., page ...;

B. design reports for items identified in part 7080.2430, as published in the State Register, volume ..., page ...;

C. as-built drawings;

D. management plans and results for approved management plans; and

E. an annual list of all sewage system tanks installed in the jurisdiction, sorted by the licensed installation business.

#### Justification

Recordkeeping requirements are already included in Minn. R. 7080.0310, subp. 4. There are a few new elements in this proposed language. In C, the word “drawings” is added for clarity; and in D, the phrase “management plans” is substituted for “monitoring plants” and “mitigation plans,” as both of these are incorporated into the new management plan.

Item E is a new item, added to assist local governments in developing the information required in Minn. R. 7082.0040, subp. 5(H). Justification for this element is provided in this SONAR for that section of the proposed rule.

#### **963. Proposed Change part 7082.0300, Subpart 5, formerly 7080.0305, Subpart 9.**

Subp. 5. **Enforcement of local ordinances.** Local units of government shall administer local programs and enforce local ordinances that regulate SSTS as adopted in compliance with this chapter. Local units of government may also enforce local ordinances under Minnesota Statutes, section 115.071, Subdivisions 3 and 4.

#### Justification

This provision is in the current Minn. R. 7080.0305, subp. 9. This change cites responsibility to the full rule, not just to the specific portions in the current rule. This change brings the rule into closer alignment with the intent of Minn. Stat. § 115.55, subd. 2:

*Subd. 2. **Local ordinances.** (a) All counties that did not adopt ordinances by May 7, 1994, or that do not have ordinances, must adopt ordinances that comply with individual sewage treatment system rules by January 1, 1999, unless all towns and cities in the county have adopted such ordinances. County ordinances must apply to all areas of the county other than cities or towns that have adopted ordinances that comply with this section and are as strict as the applicable county ordinances. Any ordinance adopted by a local unit of government before May 7, 1994, to regulate individual sewage treatment systems must be in compliance with the individual sewage treatment system rules by January 1, 1998.*

The underlined portions above emphasize that local ordinances are to comply with state SSTS rules.

#### **MINN. R. 7082.0500 PERMIT PROGRAM FOR SSTS**

#### **964. Proposed Change part 7082.0500, Subparts 1 to 3. formerly 7080.0310, Subparts 1 to 3.**

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

A. Local units of government shall enforce local ordinances that regulate SSTS through permitting programs that meet the minimum requirements of this chapter.

B. A local unit of government with an SSTS ordinance adopted under part 7082.0040, Subparts 2 and 3, must have a permit program that specifically addresses the following:

(1) permit application requirements;

(2) site, design, and soil review and approval requirements and procedures;

(3) record keeping; and

(4) reporting to the commissioner.

C. Permits must be required for all new construction and replacement . Permits may be required for all or certain types of SSTS repairs.

D. A local unit of government with a local ordinance to regulate bedroom additions must comply with Subpart 3, item C.

**Subp. 2. SSTS permit application requirements.**

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

B. Local units of government must require, review, and approve the technical basis for Type II to Type V systems as listed in parts 7080.2250 to 7080.2400, as published in the State Register, volume ..., page ....

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

A. A qualified employee or licensed inspection business, who is authorized by the local unit of government must review the permit application to determine whether site evaluation procedures, observations, and conclusions are accurate and fulfill applicable requirements, which include an infield verification of the seasonally saturated soil or bedrock at the proposed soil treatment and dispersal sites and any other exhibits, and whether the proposed system will meet applicable requirements. An MSTs inspector is required to perform the duties listed in this item for MSTs.

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

C. Local units of government shall not issue a permit for a bedroom addition on property served by a system unless the SSTS is in compliance with applicable requirements, as evidenced by a certificate of compliance. A local unit of government may temporarily waive the certificate of compliance requirement in this item for a bedroom addition permit for which application is made during the period from November 1 to April 30, provided a compliance inspection of the system is performed by the following June 1 and the applicant submits a certificate of compliance by the following September 30. This item does not apply if the local unit of government does not have an ordinance requiring a permit to add a bedroom.

**Justification**

The base language here comes from Minn. R. 7080.0310. The change to “who is an inspector” is to bring this part of the rule into alignment with the new classifications for ISTS professionals embodied in this rule change. The deletion of “or variance” in item C is because the term “variance” is not needed. The ultimate result in issuing a variance is to gain a permit, so there is no impact in either including or deleting the word.

New language has been added:

“...which include an infield verification of the seasonally saturated soil or bedrock at the proposed soil treatment and dispersal sites and any other exhibits, and whether the proposed system will meet applicable requirements...”

This is a major change from current requirements. This requires local governments to send staff or their contracted employee out to the site of a proposed ISTS and examine the soils to ensure that the system design is correct. The benefit of this requirement is significant. If the first time the inspector arrives at the site is to do a construction inspection, there is a chance that the soils errors will have resulted in installation of a system that does not meet code. The site where the “in error” system was installed will have been disturbed and so is no longer usable for an ISTS. This may have been the only site available for the ISTS, and thus, a serious problem for the homeowner. The greater involvement of local officials early in the permitting process will result in better ISTS being installed and fewer lots “spoiled” through error.

Only 26 percent of the counties responding to the survey do not verify soils at some time in the permitting process. About 1/3 of those who do verify do so before issuing the permit. This data is from a survey conducted by the MPCA of counties in April, 2006. The survey was sent to all 87 counties; there were 61 respondents to the survey.

#### **MINN. R. 7082.0600. SYSTEM MANAGEMENT**

##### **965. Proposed Change part 7082.0600, Subpart 1, formerly 7080.0310, Subpart 7.**

###### Subpart 1. Management plans.

A. Local units of government shall require management plans for all new or replacement ISTS. These plans must be submitted and approved before issuance of a construction permit. The approved management plan must be reviewed and signed by the owner before issuance of the construction permit.

###### B. Management plans must include:

(1) maintenance requirements, including frequency;  
(2) operational requirements, including which tasks the owner can perform and which tasks a licensed service provider or maintainer must perform;

(3) monitoring requirements;

(4) requirements that the owner notify the local unit of government when management plan requirements are not met;

(5) disclosure of the location and condition of the additional soil treatment and dispersal area on the lot or serving that residence; and

(6) other requirements as determined by the local unit of government.

C. Management plans may be modified as necessary and reapproved by the local unit of government.

###### Justification

This section replaces the current Monitoring and Mitigation Plans in Minn. R. 7080.0305, subp. 7, and lays out the required elements of a Management Plan. Item A reiterates the requirement for developing Management Plans for all new or replacement ISTS in Minn. R. 7082.0030, subp. 3(A)(10), and is justified in that portion of this SONAR.

The remainder of this section is the list of elements to be included in the Management Plans. Subitems (1) through (4) are very basic – the homeowner must know what needs to be done to take care of their new SSTS. Subitem (5) requires an evaluation of the condition of the replacement soil treatment system. This is reasonable because the current land use will impact the future performance of the system, for example, if the future site may be used as a site for an auxiliary garage. Identification of the second site will help to stop this damage before it occurs. Item C clarifies that management plans may be amended, and that amended plans need to be approved by the local permitting authority. It is necessary and reasonable for MPCA to specify the required elements of a management plan and set forth a basic framework for its administration at the local level.

**966. Proposed Change part 7082.0600, Subpart 2, formerly 7080.0310, Subpart 6.**

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

A. Local units of government must issue and enforce an operating permit for SSTS specified in parts 7080.2290, 7080.2350, and 7080.2400, and chapter 7081, as published in the State Register, volume ..., page ..., and any other system deemed to require operational oversight as determined by the local unit of government. If the local unit of government does not have the resources or desire to provide adequate oversight of systems requiring an operating permit, those systems or technologies must not be installed in that jurisdiction. Operating permits may be modified as necessary and reapproved by the local unit of government.

B. An operating permit must be based on the system's management plan and must include:

- (1) maintenance requirements, including frequency of maintenance;
- (2) operational requirements;
- (3) monitoring requirements;
- (4) compliance limits and compliance boundaries;
- (5) reporting frequency;
- (6) a requirement that the permittee notify the local unit of government when permit requirements are not met. Corrective actions must be taken as directed by the local unit of government;
- (7) disclosure of the location and condition of the additional soil treatment and dispersal system; and
- (8) stipulation of acceptable and prohibited discharges.

**Justification**

The requirement for an operating permit on more complex systems is currently in Minn. R. 7080.0310, subp. 6. The list of elements in proposed item B are brought forward from that rule with only minor grammatical changes. The underlined proposed changes in item A clarify that operating permits are needed for all systems, except Type I to Type III ISTS serving fewer than five homes (except holding tanks). The second sentence of item A requires that the local permitting authority assess their ability to effectively oversee systems under operating permits, and prohibits them from permitting systems that they are not able to oversee. It is both necessary and appropriate that MPCA impose this restriction on local units to prevent the installation of large or complex ISTS without adequate oversight. This has been a problem in the current regulatory structure and needs to be corrected. The final sentence in the proposed language clarifies that operating permits can be modified and must be re-approved by the local units.

Why operating permits? The EPA recommends the use of operating permits where sustained performance of on-site systems is critical to protect public health and water quality. The EPA also recommends the use of operating permits for the following: (1) more complex systems, (2) large capacity systems, (3) systems treating high strength wastewaters, and (4) systems in sensitive environments, including lakes and vulnerable aquifers used for drinking water supplies (i.e. source water protection areas).

In March 2003 the EPA issued a document titled, “Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems” (EPA 832-B-03-001, March 2003 – Exhibit 423). These guidelines were developed with a goal of assuring that decentralized wastewater treatment is as reliable as centralized systems that are used in major cities across the nation today. An operating permit would provide a way for continuous oversight of system operation and performance and in determining timely corrective actions, if compliance conditions with the permit are not maintained.

The EPA Voluntary Guidelines specify five management models that can be used. These are:

**Management Model 1 - “Homeowner Awareness”** specifies appropriate program elements and activities where treatment systems are owned and operated by individual property owners in areas of low environmental sensitivity. This program is adequate where treatment technologies are limited to conventional systems that require little owner attention. To help ensure that timely maintenance is performed, the regulatory authority mails maintenance reminders to owners at appropriate intervals.

**Management Model 2 - “Maintenance Contracts”** specifies program elements and activities where more complex designs are employed to enhance the capacity of conventional systems to accept and treat wastewater. Because of treatment complexity, contracts with qualified technicians are needed to ensure proper and timely maintenance.

**Management Model 3 - “Operating Permits”** specifies program elements and activities where sustained performance of treatment systems is critical to protect public health and water quality. Limited-term operating permits are issued to the owner and are renewable for another term if the owner demonstrates that the system is in compliance with the terms and conditions of the permit. Performance-based designs may be incorporated into programs with management controls at this level.

**Management Model 4 - “Responsible Management Entity (RME) Operation and Maintenance”** specifies program elements and activities where frequent and highly reliable operation and maintenance of decentralized systems is required to ensure water resource protection in sensitive environments. Under this model, the operating permit is issued to an RME instead of the property owner to provide the needed assurance that the appropriate maintenance is performed.

**Management Model 5 - “RME Ownership”** specifies that program elements and activities for treatment systems are owned, operated, and maintained by the RME, which removes the property owner from responsibility for the system. This program is analogous to central sewerage and provides the greatest assurance of system performance in the most sensitive of environments.

The management plans that will be required for all new systems will bring most of Minnesota up to Management Model 1. This is appropriate for simple systems in rural areas, but is not appropriate for systems using advanced treatment technologies, clusters serving multiple homes, MSTs that accept waste from “other establishments,” or in sensitive areas. In these areas, the proposed rules require Operating Permits, bringing those systems up to Management Model 3.

The Voluntary Guidelines provide more detail on the elements of operating permits. This guidance is broken into each of the major elements of SSTS design, construction and management and details suggested activities for each party responsible for elements at that level. The items shown below in *italics* have been incorporated into these proposed rules. As you can see, there are many recommended elements that have not been chosen for incorporation into the rule at this point.

## PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 1: DESIGN

### Regulatory Authority

- *Codify prescriptive, pre-engineered designs that are suitable for treatment sites that meet the appropriate prescriptive site criteria.*
- *Administer a plan review program for engineered designs to meet stipulated performance criteria.*
- *Require submission of routine operation and emergency contingency plans (in these proposed rules, this is the management plan) that will sustain system performance and avoid un-permitted discharges.*

### Designer

- *Obtain certification/license to practice.*
- *Certified/licensed designer to design treatment system that is compatible with the site and soil characteristics described by the site evaluator.*
- *Comply with applicable federal, state, tribal, and local requirements in the design of wastewater treatment and dispersal systems.*

## PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 2: CONSTRUCTION

### Regulatory Authority

- *Administer a permitting program for system construction, including Regulatory Authority review of proposed system siting and design plans.*
- *Require designer of record to certify that completed system construction is in substantial compliance with approved plans and specifications.*
- *Require that record drawings of constructed system be submitted to the Regulatory Authority by Owner.*
- *Require Owner to submit a copy of system O&M manual to the Regulatory Authority.*

### Contractor/Installer

- *Obtain certification/license to practice.*
- *Construct the system in accordance with the approved plans and specifications.*
- *Prepare record drawings of completed system and submit to Owner.*
- *Provide Owner with an O&M manual describing component manufacturer's maintenance and troubleshooting requirements/recommendations.*
- *Comply with applicable federal, state, tribal, and local requirements in the design and construction of wastewater treatment and dispersal systems.*

### Designer of Record

- *Approve proposed field changes and submit to Owner.*
- *Certify that construction of the system is substantially in conformance with the approved plans and specifications.*

### Owner

- *Hire a certified/licensed contractor/installer to construct system.*

- Submit final record drawings of constructed system to Regulatory Authority.
- Submit a copy of system O&M manual to Regulatory Authority to record required maintenance.

#### PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 3: OPERATION & MAINTENANCE

##### Regulatory Authority

- Provide Owner/User with educational materials regarding system use and care.
- *Administer a program of renewable/revocable operating permits that are issued to Owner stipulating system performance criteria, compliance monitoring reporting schedule, term of permit, and renewal option upon documented compliance with permit.*
- *Track and review compliance monitoring reports to ensure that systems are operating in accordance with operating permits.*

##### Operator

- *Obtain certification/license to practice.*
- *Inspect and service system as necessary in accordance with the submitted O&M manual and/or operating permit stipulations.*
- Certify to Owner that the required maintenance was performed in a timely manner, describing any system deficiencies observed.
- *Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.*

##### Pumper/Hauler

- *Obtain certification/license to practice.*
- *Inspect and service system as necessary.*
- *Comply with applicable federal, state, tribal, and local requirements in the operation and maintenance of the treatment and dispersal system.*

##### Owner

- *Hire a certified/licensed pumper/hauler or operator to maintain system.*
- Maintain system in proper working order.
- Operate and maintain the system in accordance with O&M manual and/or operating permit stipulations.
- *Submit compliance monitoring reports to the Regulatory Authority according to the schedule stipulated in the operating permit.*

##### User

- *Follow recommendations provided by Regulatory Authority and/or Service Providers to ensure that undesirable or prohibited materials are not discharged to system.*

#### PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 4: RESIDUALS MANAGEMENT

### Regulatory Authority

- Administer a tracking system for residuals hauling, treatment, and disposal and review to evaluate compliance with 40 CFR Part 503 Use and Disposal of Sewage Sludge, 40 CFR Part 257, and applicable state, tribal, and local requirements.
- Inventory available residuals handling/treatment capacities and develop contingency plans to ensure that sufficient capacities are always available.

### Pumper/Hauler

- *Comply with applicable federal, state, tribal, and local requirements in the pumping, hauling, treatment, and disposal of treatment system residuals.*

## PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 5: COMPLIANCE INSPECTIONS/MONITORING

### Regulatory Authority

- *Perform inspection programs at point-of-sale, change-in-use of properties, “targeted areas,” and/or systems reported to be in violation.*
- Conduct compliance inspections of residuals hauling, treatment, and disposal.
- Administer a program to monitor timely submittals of acceptable compliance maintenance reports.
- *Notify Owner of impending scheduled submittals of compliance monitoring reports.*
- Perform system inspections randomly and/or at time of operating permit renewal.

### Operator or Pumper/Hauler

- *Inform Owner of any noncompliant items observed during routine servicing of system.*

### Owner

- Submit compliance monitoring reports to Regulatory Authority as stipulated in operating permit.
- Submit compliance inspection report signed/sealed by a certified/licensed inspector prior to applying for renewal of operating permit.

## PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 6: CORRECTIVE ACTIONS

### Regulatory Authority

- *Negotiate compliance schedule with Owner for correcting documented noncompliant items.*
- *Administer enforcement program including fines and/or penalties for failure to comply with compliance requirements.*
- *Obtain necessary authority to enter property to correct imminent threats to public health if the Owner/User fails to comply.*
- *Require system inspection by certified inspector at time of operating permit renewal.*

### Designer

- Provide Owner with documents (drawings, specifications, modifications, etc.) that may be required by Regulatory Authority prior to corrective action.

#### Contractor/ Installer

- Perform required repairs, modifications, and upgrades as necessary.

#### Inspector

- Obtain certification/license to practice.
- Inspect treatment system for compliance with operating permit prior to permit renewal.

#### Owner

- Comply with terms and conditions of the negotiated compliance schedule.
- Submit required documents for corrective actions to Regulatory Authority.
- Hire appropriate certified/licensed Service Providers to perform required corrective actions.

### PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 7: RECORD KEEPING, INVENTORY, & REPORTING

#### Regulatory Authority

- Administer a database inventory (locations, site evaluations, record drawings, permits, performed maintenance, and inspection reports) of all systems.
- Maintain a residuals treatment and disposal tracking system.
- *Maintain a current certified/licensed Service Provider listing that is available to the public.*
- *Administer a tracking system for operating permits.*
- *Administer a tracking database for compliance reports.*

#### Operator or Inspector

- Provide certified report of all maintenance and observed system deficiencies to Owner.
- Perform system monitoring as stipulated in Owner's operating permit.

#### Pumper/Hauler

- *Prepare and submit records of residuals handling as required.*

#### Owner

- Maintain approved record drawings and O&M manual of system.
- Maintain maintenance records of system.
- Submit compliance monitoring reports to Regulatory Authority.
- Provide drawings, specifications, O&M manual, and maintenance records to new property owner at time of property transfer.

### PROGRAM ELEMENT/RESPONSIBLE PARTY/ACTIVITY 8: FINANCIAL ASSISTANCE & FUNDING

#### Regulatory Authority

- Provide the legal and financial support to sustain the management program.

- Provide a listing of financial assistance programs available to Owner/User and the qualifying criteria for each program.
- Consider implementing a state or local financing program to assist Owners in upgrading their systems.

## **MINN. R. 7082.0700 INSPECTION PROGRAM FOR INDIVIDUAL SEWAGE TREATMENT SYSTEMS**

**967.** Proposed Change part 7082.0700, Subparts 1 to 4, formerly 7080.0315, Subparts 1 to 3.

**Subpart 1. Inspection requirements.** Local units of government must have an inspection program to enforce requirements under this chapter. The inspection program must specify the frequency and times of inspections, specify the requirements of an inspection, establish an inspection protocol, provide for when an inspection cannot be completed in a timely manner, and, at a minimum, include the requirements for a compliance inspection under Subparts 2 and 3, except for Subpart 3, item E.

**Subp. 2. Compliance inspection.**

A. A compliance inspection must be conducted:

(1) to ensure compliance with applicable requirements;

(2) to ensure compliance before issuance of a permit for the addition of a bedroom on property served by an SSTS, if the local unit of government issues permits for the addition of a bedroom, unless the requirements under part 7082.0310, Subpart 3, item C, are met;

(3) for all new construction or replacement;

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

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

B. A licensed inspection business that inspects an existing SSTS may subsequently design and install a new SSTS for that property, provided the inspection business is also licensed to design and install. A person working for or on behalf of a governmental unit may not use the person's position to solicit for private business gain.

C. The construction inspection requirement may be satisfied by a review by the designated local official of video, electronic, photographic, or other evidence to show compliance as provided by the installer.

**Subp. 3. Certificate of compliance; notice of noncompliance; new construction or replacement.**

A. SSTS in compliance with applicable requirements must be issued a certificate of compliance and systems found not in compliance must be issued a notice of noncompliance. SSTS not in compliance with part 7080.1500, subpart 2, or 7081.0080, subpart 3, as published in the State Register, volume ..., page ..., must be repaired or replaced within ten months or as directed under Minnesota Statutes, chapter 145A. Systems out of compliance with other applicable requirements must be repaired or replaced according to local ordinance requirements. Systems issued a notice of noncompliance for operational or monitoring deficiencies must immediately be maintained, monitored, or managed according to the operating permit.

B. The initial certificate of compliance may be issued if reasonable assurance is evident that the system was built according to applicable requirements as specified in the construction permit.

C. Local units of government shall develop a certificate of compliance document or use a certificate of compliance developed by the agency. The certificate of compliance must include the sewage tank watertightness report described in subpart 4, item B, subitem (1), the vertical separation distance

report described in subpart 4, item B, subitem (2), and the management plan developed under part 7082.0060, subpart 1. All certificates of compliance and notices of noncompliance must include property and property owner identification, date of inspection, system components, system location (dimensioned or drawn to scale), well setback distance, field check of soil conditions, SWF designations as applicable, and Class V designation as applicable.

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

E. A certificate of compliance or notice of noncompliance must include a certified statement from the certified individual or qualified employee who conducted the compliance inspection and indicate whether the ISTS is in compliance with local ordinance requirements.

F. If a compliance inspection indicates that the system is not in compliance with applicable requirements, the notice must contain a statement to this effect and specify what must be done to achieve compliance.

G. Certificates of compliance for new construction or a replacement system remain valid for five years from the date of issuance unless the local unit of government finds evidence of noncompliance.

**Subp. 4. Certificate of compliance; notice of noncompliance; existing systems.**

A. The agency's existing SSTS inspection report forms shall be used for existing system compliance inspections. Local existing system inspection forms may also be required.

B. An inspection for existing SSTS must verify the conditions in subitems (1) to (5).

(1) Sewage tanks must be assessed for leakage below the operating depth. A watertightness report must be completed that includes the method or methods used to make the assessment. The assessment may be made by any licensed SSTS business, except a design business, or made by a qualified employee with an SSTS certification, except as a designer. A passing report is valid for three years unless the certified individual has reason to believe that a new inspection is to be conducted and the tank is found not to be watertight.

(2) The vertical separation distance from the bottom of the soil treatment and dispersal system and the seasonally saturated soil or bedrock must be verified by two independent certified designers or inspectors. The system designer's verification qualifies as one verification. A vertical separation distance report must be completed that includes the method or methods used to make the assessment. The assessment may be made by a licensed inspection business or a qualified employee inspector. If the verification separation report consists of verifications by two independent parties, a subsequent verification is not required unless the inspector has reason to believe a noncompliant condition exists. The allowable verifications for the vertical separation report may be past soil borings used for design purposes or past soil borings from previous compliance inspections, if the verification was conducted by a party independent of the party conducting the previous inspection. In these cases, the past soil borings must be attached to the vertical separation report.

(3) Sewage backup, surface seeping, or surface discharge from the system must be determined. A hydraulic function report must be completed that includes the method or methods used to make the assessment. The assessment may be made by a licensed inspection business or a qualified employee with an inspector certification. A passing report is valid until a new inspection is requested or if the hydraulic performance is believed to have changed.

(4) Compliance with the system operational and maintenance requirements must be determined. An operation and maintenance report must be completed that includes the method or methods used to make the assessment. The assessment must be made by a licensed inspection business or a qualified employee inspector.

(5) The verification of proper management of a system must be conducted by a licensed

operation business or qualified employee operator if the system requires an operator. A passing report is valid until a new inspection is requested and becomes invalid if future required monitoring does not take place or monitoring results indicate noncompliance. If required maintenance is not up to date at the time of inspection, the maintenance activities must be performed at the time of the inspection and an assessment made by the inspector or operator as to whether the system can again be in compliance, provided required maintenance is performed in the future.

C. A certificate of compliance shall be based on the results of the verifications in item B. The certificate of compliance or notice of noncompliance must be signed by a licensed inspection business or a qualified employee certified as an inspector. The certificate or notice must be submitted to the local unit of government with jurisdiction and the property owner or owner's agent no later than 15 days after a compliance inspection. The completed form must also be submitted to the owner or owner's agent. The certificate of compliance is valid for three years from the date of issuance, even if one of the supporting reports expires before the three-year period, unless an inspector finds evidence of noncompliance.

D. If a compliance inspection indicates that the system is failing to protect groundwater, presents an imminent threat to public health or safety, is noncompliant due to lack of maintenance, or is not in compliance with the applicable requirements, the notice must contain a statement to that effect and specify what must be done to achieve compliance.

### Justification

This section of the proposed rule lays out the requirements for a local ISTS inspection program. The first two subparts come forward from the current Minn. R. 7080.0305 with only minor revisions. The first addition clarifies who may inspect advanced designs and brings this section into line with the proposed changes to the licensing provisions in new Minn. R. ch. 7083. The second addition incorporates statutory language passed in 2005 that altered Minn. Stat. § 115.55, subd. 5e.

The big changes here are in subparts 3 and 4. The reason for this proposed change is to reduce the burden of existing system inspection. The concept is to develop for each ISTS in Minnesota, over a period of time, a permanent record of the soils at the site and the condition and management of the ISTS. This is done by filing four reports:

- The Sewage Tank Watertightness Report.
- The Vertical Separation Distance Report.
- The Hydraulic Functioning Report.
- The Operational and Maintenance Requirements Report.

Each of these reports is discussed in greater detail below.

**1. The Sewage Tank Watertightness Report** – This report certifies that the tank does not leak below the operating depth of the tank. To complete this form, the ISTS professional will need to be able to verify that water is not leaking in or out of the tank. For most, this will involve pumping the tank and making observations, although in a survey of inspectors conducted in past years about half the pumpers said they could determine whether a tank leaked without pumping it. There continues to be debate about whether this is possible, but the rule allows those who feel they can do it, to do so using their best professional judgment.

The rule language specifies that only installers, maintainers, and inspectors may complete this form. The report is valid for three years, the longest period of time that a system can go without being assessed for maintenance.

**2. The Vertical Separation Distance Report** – This report documents the verification that the vertical separation distance meets the required standard for that system. The verification is done by two independent certified designers or inspectors. Once this form is completed by two independent professionals, subsequent verification is not required when the system is inspected.

A provision in the proposed language allows the use of previous records on a system. For example, a system that was installed in 1993 and has good records from the original design may be inspected in 2008 by a certified designer and found to meet the required separation. These two assessments can fill the requirements of this report, nullifying the need for subsequent soils determination for this system.

The proposed rule does modify this somewhat, however, with the provision that “*a subsequent verification is not required unless the inspector has reason to believe that hydraulic or other site changes have affected the site hydrology.*” In some cases, there may have been changes to the site hydrology (such as a beaver dam that backs water up over the system) that will change the results of the soils determination.

**3. The Hydraulic Functioning Report** – this report verifies that the system continues to operate without any backup or surface discharge. It is to be completed at the time of system maintenance or when an incident occurs. If an incident occurs and repairs are made, a new Hydraulic Functioning Report is completed to verify that the system is back in operating order.

**4. The Operational and Maintenance Requirements Report** – This report verifies that the system has been maintained as required. It is updated at every maintenance event. If required maintenance has not been conducted, the system is in noncompliance until the required maintenance is completed and assessment made by an inspector or maintainer that the system can operate as designed even after the slip-up in maintenance.

The process begins with the two reports completed when the system receives its final inspection at time of installation. These are the Sewage Tank Watertightness Report (STWR) and the Vertical Separation Distance Report (VSDR). These go into the system file along with a copy of the Management Plan developed for that system. At the time the system is due for its first maintenance, the STWR is updated, and the Hydraulic Functioning Report (HFR) and Operational and Maintenance Requirements Report (OMRR) are completed. Each of these are updated at each subsequent maintenance event, whether planned or to respond to incidents.

Once all parts of the four-part inspection reports are completed for a system and on file at the local government office, subsequent inspections (such as for real estate transactions) will only need to access those records to complete a Certificate of Compliance. This will greatly facilitate the inspection process, especially in the winter. The greatest benefit will be derived from the field verification of soils by two independent inspectors or designers. Once this is complete, the soils do not need to be evaluated again. The Certificate of Compliance is good for three years, even if one of the forms that are the basis for the Certificate expires in the interim, unless the inspector finds evidence of non-compliance.

Drafts of these forms are attached to this SONAR as Exhibit 532. Minn. Stat. § 115.55 provides MPCA with authority to develop an existing system inspection form.

968. Proposed Change part 7082.0700, Subpart 5, formerly 7080.0715, Subpart 3.

**Subp. 5. Seasonally saturated soil disagreements.**

A. If a documented discrepancy arises on the depth of the seasonally saturated soil between licensed businesses for SSTS design or compliance purposes, all disputing parties must follow the procedure outlined in this subpart.

(1) All local dispute resolution procedures must be followed.

(2) If no local dispute resolution procedures exist, the disputing parties must meet at the disputed site in an attempt to resolve differences.

(3) If the provision in subitem (2) does not resolve the differences, then one or more of the methods in units (a) to (c) must be employed.

(a) Obtain an opinion from a qualified employee of the local permitting authority with jurisdiction, if the local permitting authority is willing to provide an opinion.

(b) Obtain an opinion from an SSTS technical evaluation committee, if a committee has been developed for this purpose and is available and willing to render an opinion. The committee must be created in cooperation with the commissioner.

(c) Obtain an opinion from a Minnesota licensed professional soil scientist who is a certified SSTS designer or inspector and who is independent of, and agreed upon by, both parties.

(d) If options under unit (a) or (b) are not viable, an opinion must be rendered under unit (c).

(4) If opinions rendered in subitems (2) or (3) do not resolve the dispute, all initial and follow-up documents and information generated must be submitted to the local unit of government. The local unit of government shall take into consideration all information and opinions rendered and make a final judgment. The local unit of government shall render findings of fact, conclusions of law, and findings setting forth the reasons for any final decisions it renders.

B. If a documented discrepancy arises on the depth of the seasonally saturated soil between an SSTS licensed business and a local unit of government for SSTS design or compliance purposes, all disputing parties shall follow the procedure outlined in this item.

(1) The local unit of government and the licensed business must meet at the disputed site in an attempt to resolve differences.

(2) If the provision in subitem (1) does not resolve differences, then one or more of the methods in item A, subitem (3), unit (b) or (c), must be employed.

(3) If opinions in subitem (2) are not sought or do not resolve the dispute, the local unit of government shall take into consideration all information and opinions rendered and make a final judgment. The local unit of government shall render findings of fact, conclusions of law, and findings setting forth the reasons for any final decisions they render.

C. Upon resolution of a dispute, amendments to the initially disputed documents containing the resolution shall be made and submitted to the local unit of government and all other parties involved.

Justification

This is former language in Minn. R. 7080.0715, subp. 3.

REASONABLENESS OF AMENDMENTS TO INDIVIDUAL SECTIONS OF PROPOSED  
CHAPTER 7083

**MINN. R. 7083.0010 PURPOSE AND INTENT**

**969. Proposed Change part 7083.0010 paragraph 1.**

*The proper location, design, installation, use, and maintenance of a subsurface sewage treatment system (SSTS) protects the public health, safety, and general welfare by the discharge of adequately treated sewage to the ground water. In order to reasonably accomplish the proper location, design, installation, operation, and maintenance of an SSTS, the Pollution Control Agency provides in this chapter criteria for certifying trained individuals and licensing SSTS businesses.*

Justification

This introductory statement is similar to the introductory statement for the former Minn. R. 7080.0010. The authority for this chapter is Minn. Stat. § 115.56.

**970. Proposed Change part 7083.0010 paragraph 2.**

*The authority for this chapter is granted in Minnesota Statutes, chapters 103F, 103G, 115, and 116. This chapter does not address the licensing of wastewater treatment plant operators regulated under chapter 9400 or Type IV land application of waste professionals as regulated in chapter 7048.*

Justification

This language is offered to avoid confusion with other licensing and certification programs conducted by the Agency.

**971. Proposed Change part 7083.0010 paragraph 3.**

*It is the intent of this chapter to provide standards for adequate training, experience, continuing education, insurance, and bonding for SSTS businesses and certified individuals. These standards also present the foundation for enforceable violations along with the agency's enforcement procedures. The agency's enforcement program may require assistance from local units of government to file complaints and gather evidence against those in violation of local SSTS ordinances.*

Justification

These introductory statements highlight the statutory requirements of SSTS. An explanatory note is added at the end of this part indicating that the local permitting authorities will be a necessary help in the Agency's efforts to assess the effectiveness of the certification and licensing program and to provide evidence for the enforcement of violations. Local permitting authorities are involved in the review of designs, construction inspections and the critique of the work of SSTS professionals.

## MINN. R. 7083.0020 DEFINITIONS

### 972. Proposed Change part 7083.0020, subpart 1.

*Subpart 1. **Certain terms.** In addition to the definitions in chapters 7080, 7081, and 7082 as published in the State Register, volume ..., page ..., and Minnesota Statutes, section 115.55, the terms used in this chapter have the meanings given them. For purposes of these standards, certain terms or words are interpreted as follows: the words "shall" and "must" are mandatory and the words "should" and "may" are permissive. All distances, unless otherwise specified, must be measured horizontally.*

#### Justification

Many of the terms used in proposed chapters 7080, 7081, 7082, and 7083 will occur in one or more chapters. Instead of repeating the definition in each rule and repeating in this Statement the discussion of the reasonableness of each of the repeated definitions in every chapter, it is proposed to define each term and explain the reasonableness of each definition in the chapter where that definition is most relevant and appropriate. For example, the definition of "mid-sized treatment system" is defined in chapter 7081 and the reasonableness of it will be discussed in this Statement where it occurs in chapter 7081.

One problem with addressing the reasonableness of the frequently used definitions in different chapters is that within some of the definitions the specific terms "individual sewage treatment system" or "mid-sized sewage treatment system" are used. These two terms have a very specific meaning and therefore, in some cases, a definition that uses one or the other of these terms would not seem to apply in the context it is used. However, the agency is clarifying in this subpart that the definition applies to either type of treatment system, if that term is used in the text of each chapter.

### 973. Proposed Change part 7083.0020, subpart 2.

*Subp. 2. **Agency.** "Agency" means the Pollution Control Agency.*

#### Justification

Used for brevity.

### 974. Proposed Change part 7083.0020, subpart 3, formerly 7080.0020, subpart 4b.

*Subp. 3. **Apprentice.** "Apprentice" means an individual who meets the requirements in part 7083.1090 by completing training, passing the examination, and gaining experience under part 7083.1050, subpart 2.*

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

### 975. Proposed Change part 7083.0020, subpart 4, formerly 7080.0020, subpart 4c.

*Subp. 4. **As-builts.** "As-builts" means drawings and documentation specifying the final in-place location, elevation, size, and type of all system components. These records identify the results of materials testing and describe conditions during construction. Information provided must be verified by a certified statement.*

### Justification

This is a format change with an added requirement that the as-built must be signed and that all work was conducted in accordance with applicable requirements. This certification requirement is reasonable, as an added measure to insure that the installation being verified was done correctly.

#### **976. Proposed Change part 7083.0020, subpart 5, formerly part 7080.0020, subpart 12a.**

*Subp. 5. Certified. "Certified" means an individual is included on the agency's SSTS certification list and is qualified to design, install, maintain, repair, pump, operate, or inspect an SSTS as appropriate with the individual's qualifications. A certified individual who is working under a license is subject to the obligations of the license. Certified individuals were previously known as registered professionals.*

### Justification

This is a name change “designated registered professional”. No change in meaning or purpose is intended.

#### **977. Proposed Change part 7083.0020, subpart 6.**

*Subp. 6. ISTS. "ISTS" means an individual sewage treatment system as defined under part 7080.1100, subpart 47, as published in the State Register, volume ..., page ...*

### Justification

This is the definition provided in chapter 7080 which is used in this chapter.

#### **978. Proposed Change part 7083.0020, subpart 7, formerly part 7080.0020, subpart 21d.**

*Subp. 7. Licensee. "Licensee" means a person to whom a license is issued under this chapter.*

### Justification

Format change with some additional clarifying language due to rule restructuring.

#### **979. Proposed Change part 7083.0020, subpart 8.**

*Subp. 8. Mentor. "Mentor" is a person who holds a mentor designation as described in part 7083.2000 and provides mentorship.*

### Justification

It is proposed to clearly set criteria for who can be a mentor to individuals seeking to gain the required work experience to become certified. Therefore, a definition is prudent to correctly identify these individuals.

#### **980. Proposed Change part 7083.0020, subpart 9.**

*Subp. 9. Mentorship. "Mentorship" means the provision of personal supervision to an individual who is seeking to gain qualifying work experience to become certified..*

### Justification

The current experience requirements fail to adequately describe who is qualified to provide mentorship to gain in-field experience. Therefore, provisions in this rule are provided to fill that gap and to provide a classification title to that individual.

#### **981. Proposed Change part 7083.0020, subpart 10.**

*Subp. 10. MSTs. "MSTs" means a mid-sized SSTS as defined in part 7081.0020, subpart 4 as published in the State Register, volume ..., page ...*

### Justification

Please see the justification for Minn. R. 7081.0020, subp. 4.

#### **982. Proposed Change part 7083.0020, subpart 11, formerly part 7080.0020, subpart 28d.**

*Subp. 11. Qualified employee. "Qualified employee" means a state or local government employee who designs, installs, maintains, pumps, or inspects SSTS as part of the person's employment duties.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

#### **983. Proposed Change part 7083.0020, subpart 12.**

*Subp. 12. Subsurface sewage treatment system or "SSTS." "Subsurface sewage treatment system" or "SSTS" means an individual sewage treatment system as defined in part 7080.1100, subpart 47, as published in the State Register, volume ..., page ..., and/or a mid-sized sewage treatment system as defined in part 7081.0020, subpart 5, as published in the State Register, volume ..., page ..., as applicable.*

### Justification

This term is proposed to be used as a combined term for both ISTS and MSTs.

#### **984. Proposed Change part 7083.0020, subpart 13, former part 7080.0020, subpart 9a.**

*Subp. 13. Subsurface sewage treatment system business or SSTS business. "Subsurface sewage treatment system business" or "SSTS business" means a business that designs, installs, maintains, repairs, pumps, operates, or inspects an SSTS as appropriate with the organization's license and qualifications.*

### Justification

This is a format change with some additional clarifying language due to rule restructuring and the addition of a system operator component.

**MINN. R. 7083.0040 ADMINISTRATION BY THE AGENCY**

**985.** Proposed Change part 7083.0040, subpart 1.

*Subpart 1. Agency to administer. This chapter is administered by the agency.*

Justification

This statement is necessary because the companion chapters to this chapter (chapters 7080, 7081, and 7082) are implemented by local permitting authorities, while this chapter is implemented by the Agency.

**986.** Proposed Change part 7083.0040, subpart 2, item A.

*Subp. 2. Variance procedures.*

*A. In certain cases, the commissioner may grant a variance to SSTS businesses, certified individuals, or apprentices from the standards in this chapter. This variance provision is not intended to provide relief from missed expiration dates, past noncompliance or pending enforcement actions.*

Justification

It is prudent to allow for a variance to Agency rules in the event of a pending unique circumstance in which a rule provision does not meet its intended outcome. However, since this chapter contains dates for certification and licensing, it is not intended that the Agency issue variances for avoidable noncompliance.

**987.** Proposed Change part 7083.0040, subpart 2, items B. and C, formerly part 7080.0030, subpart 3 C.

*B. Before granting a requested variance, the commissioner or agency must find that, by reason of exceptional circumstances, the strict enforcement of or strict conformity with this chapter would be unreasonable, impractical, or not feasible under the circumstances. The agency may permit a variance under part 7000.7000 in harmony with the requirements of 7000.7000 the general purpose of this chapter and the intent of applicable state laws. The variance request must contain, as applicable:*

- (1) the specific provision in the rule or rules from which the variance is requested;*
- (2) the reasons why the rule is unreasonable, impractical, or not feasible under the circumstances and state the underlying circumstances;*
- (3) a description of the hardship that compliance with the rule presents;*
- (4) the alternative measures that will be taken to ensure a comparable degree of compliance with the intention of the chapter;*
- (5) the length of time for which the variance is requested;*
- (6) a statement that the party applying for the variance will comply with the terms of the variance, if granted; and*
- (7) economic considerations.*

*C. In addition to the variance information required in item B, the commissioner may also require the requesting party to submit other relevant information as necessary to properly evaluate the variance request.*

Justification

These items have been moved and their format changed due to rule restructuring.

## MINN. R. 7083.0700 LICENSES

### 988. Proposed Change part 7083.0700, subpart 1, formerly part 7080.0700, subpart 1.

Subpart 1 . State license required . A state SSTS license applicable to the type of work being performed is required for any business that conducts work to design, install, repair, maintain, operate, or inspect all or part of an SSTS. A license is also required to land spread septage and operate a sewage collection system discharging to an SSTS. Property owners that employ a business to perform this work shall hire a business that is licensed according to this chapter. Individuals exempt from a state SSTS license must follow all applicable local, state, and federal requirements. A license is not required for:

#### Justification

The first sentence is a current provision which was moved from former Minn. R. 7080.0700, subp. 1.

The second sentence clarifies that a state maintainer license is required to land apply septage.

The third sentence is a new provision to highlight to homeowners that they must hire an appropriately licensed business. This has two main purposes. The first purpose is to serve as a warning to those individuals who purposely wish to hire someone who is not licensed in order to save on costs. Secondly, it can be used as an informational tool to those building a home in a rural area and have no idea that a state license is required for SSTS work. The U of M extension service conducts many outreach activities for rural homeowners and can include such information in their informational packages and presentations. Please refer to exhibit 168.

The fourth provision is to clarify that just because a state license may not be needed, all work still must meet or exceed applicable requirements.

### 989. Proposed Change part 7083.0700, subpart 1, items A to E, formerly part 7080.0700, subpart 1.

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

B. an individual who, after obtaining a signed site evaluation and design report from a licensed design business, constructs an ISTS to serve a dwelling that is owned by the individual and functions solely as a dwelling or seasonal dwelling for that individual. Any assistance provided to the system owner in construction of a system under this item must be performed by a licensed installation business;

C. an individual who performs labor or services as an employee of a licensed SSTS business;

D. a farmer who pumps septage from an ISTS from dwellings or other establishments that are owned or leased by the farmer and applies septage on land that is owned or leased by the farmer;

E. a property owner who personally gathers existing information, evaluates, and investigates an ISTS to provide a disclosure as defined in Minnesota Statutes, section, subdivision, for a dwelling that is owned by the individual and functions solely as a dwelling or seasonal dwelling for that individual;

#### Justification

The requirements above have been moved due to rule restructuring.

**990.** Proposed Change part 7083.0700, subpart 1, item F.

*F. an individual or business who abandons an SSTS;*

Justification

This exemption is proposed for two reasons. The first reason is that Minn. Stat. § 115.56 does not specifically state that a license must be required for abandonment. Secondly, the abandonment process is very straightforward and simple, and no special knowledge, skills or abilities are required. It is also very efficient, since the business installing the central sewer system can readily abandon the system with their onsite excavation equipment and manpower.

**991.** Proposed Change part 7083.0700, subpart 1, item G.

*G. an individual who maintains a toilet waste treatment device for a dwelling that is owned by the individual and functions solely as a dwelling or seasonal dwelling for that individual; or*

Justification

Minn. Stat. § 115.56 requires a license for those who pump an SSTS. However, a toilet waste treatment device is not considered an SSTS, and amounts generated are small, fairly well decomposed and contain no free liquid. Therefore, allowing the disposal of such material by the system owner is appropriate. It is anticipated that the material will be bagged and disposed of in a sanitary landfill along with the other household solid waste.

This requirement brings up the additional discussion of whether a homeowner can provide operation and management of their own SSTS. Minn. Stat. § 115.56 indicates that a license is required to maintain a system, and provides no exemption for operation and maintenance as it does for design and installation of a system. Therefore, due to the complexity of systems and/or the public health risk of mishandling materials, a licensed business is required for the operation and maintenance of SSTS.

**992.** Proposed Change part 7083.0700, subpart 1, item H.

*H. an individual who performs tasks identified in the management plan that do not require a maintainer or service provider license for a dwelling that is owned by the individual and functions solely as a dwelling or seasonal dwelling for that individual.*

Justification

This provision is proposed in the same spirit for those who are allowed to construct their own system per Minn. Stat. § 115.56. It is reasonable to allow the homeowner to provide maintenance of their own system if they are knowledgeable and capable of performing these tasks. It is intended that instructions on simple observation and maintenance activities will be developed and included as part of the required management plans.

**993.** Proposed Change part 7083.0700, subpart 2.

*Subp. 2. Land application. Land application of stored septage, must be conducted by a Type IV operator certified under chapter 7048.*

### Justification

This provision clarifies that this chapter only regulates land application of materials meeting the qualifications for septage. Other similar materials, such as municipal biosolids, are regulated under different certification requirements. Please refer to Exhibit 355.

## **MINN. R. 7083.0710 CATEGORIES, AUTHORIZATIONS, AND RESPONSIBILITIES**

### **994. Proposed Change part 7083.0710.**

*Except as described in part 7083.0700, subpart 1, an individual or business must not perform the services described in this chapter and chapters 7080 to 7082, as published in the State Register, volume ..., page ..., unless licensed by the commissioner under the appropriate license category in parts 7083.0720 to 7083.0800.*

### Justification

This requirement is supported by Minn. Stat. § 115.56.

## **MINN. R. 7083.0720 CONDITIONS FOR LICENSED BUSINESSES**

### **995. Proposed Change part 7083.0720 item A, formerly part 7080.0715, subpart 1 A.**

*Licensed businesses must:*

*A. ensure that all SSTS work is conducted according to applicable requirements;*

### Justification

This is a current provision that has been moved and format change due to rule restructuring.

### **996. Proposed Change part 7083.0720 item B, formerly part 7080.0715, subpart 1 B.**

*B. ensure that the business's certified individuals or apprentices fulfill the conditions under parts 7083.0710 to 7083.0800;*

### Justification

This is a current provision that has been moved and format change due to rule restructuring.

### **997. Proposed Change part 7083.0720 item C, former part 7080.0715, subpart 1 C.**

*C. designate an adequate number of certified individuals to meet the requirements under this chapter;*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

### **998. Proposed Change part 7083.0720 item D, former 7080.0705, subpart 1.**

*D. maintain the bond and insurance required under part 7083.1000;*

### Justification

This is a current provision that has been moved and format change due to rule restructuring.

#### **999. Proposed Change part 7083.0720, item E.**

*E. prepare and submit written reports according to local ordinance requirements and requirements in this chapter and chapters 7080 and 7081, as published in the State Register, volume ..., page ...:*

### Justification

It is reasonable to require that all applicable reporting requirements must be followed.

#### **1000. Proposed Change part 7083.0720, item F.**

*F. notify the commissioner in writing within 30 days if the business has:*

*(1) a change of address;*

*(2) a change in certified individuals; or*

*(3) a change in bond or insurance coverage; and*

### Justification

These provisions were previously found in former Minn. R. 7080.0710, subp. 5 and 7080.0715, subp. 1.

#### **1001. Proposed Change part 7083.0720, item G.**

*G. maintain all reports for a minimum of five years.*

### Justification

It is proposed to require that all reports be kept on the system for five years. This is reasonable because future compliance determinations and possible licensing enforcement actions will be based on previous records and those records should be available for review.

## **MINN. R. 7083.0730 REQUIREMENTS FOR CERTIFIED INDIVIDUALS**

#### **1002. Proposed Change part 7083.0730, item A formerly part 7080.0715, subpart 2, item A.**

*A certified individual must:*

*A. provide direction and personal supervision to noncertified employees working on an SSTs;*

### Justification

This provision is more stringent than the former standard by providing more detail about the work that it requires trained personal to conduct or supervise.

#### **1003. Proposed Change part 7083.0730 item B, formerly 7080.0715, subpart 2, item B.**

*B. ensure the work completed meets applicable requirements; and*

### Justification

This is a current provision that has been moved and format change due to rule restructuring.

#### **1004. Proposed Change part 7083.0730, item C.**

*C. complete a certified statement for required reports.*

### Justification

It is reasonable and necessary that all required reporting be certified by the individual who has the knowledge of whether the work was performed correctly.

### **MINN. R. 7083.0740 DESIGN LICENSE**

#### **1005. Proposed Change part 7083.0740, subpart 1, item A.**

##### *Subpart 1. Authorization.*

*A. A basic licensed design business may conduct site and soil evaluations, design systems, and write management plans for a Type I, II, or III ISTS as described under part 7080.2200 to 7080.2300, as published in the State Register, volume ..., page ..... or other establishments with an average daily flow of 2,500 gallon or less.*

### Justification

It is proposed to subdivide the designers category. The subdivisions will be based on the size of the system (flow amounts) and the system complexity. These divisions are based on meetings with industry professionals, mainly in the metro area, who said that they wished to increase the professional requirements as they believed that some licensed professionals are inadequately prepared to conduct SSTS work. However, in many areas of out-state Minnesota, only a few systems are installed each year, therefore, professionals in those areas only design/install a few systems per year (exhibits 162 and 310). Out-state professionals cautioned that an increase in training, bonding, insurance, and continuing education requirements would result in many out-state SSTS businesses leaving the industry, because the extra requirements would make it unprofitable, due to the small number of systems done each year. If the requirements were increased to the point that out-state businesses would leave the industry, it may leave many areas of the state without licensed businesses. It appears that the current professional requirements are satisfactory for the design, installation, and maintenance of more conventional systems. Therefore, the basic designer license classification is proposed which essentially has the same requirements as the current program, but now limits the work areas to only conventional, well tested, passive, prescriptive designs (Type I and II systems). This appears to be a reasonable compromise between the group that wants to increase professional requirements and the people who only design and install a few systems per year.

#### **1006. Proposed Change part 7083.0740, subpart 1, item B.**

*B. An advanced licensed design business may conduct site and soil evaluations, design systems, and write management plans for Type I to Type V ISTS as described in parts 7080.2200 to 7080.200, as published in the State Register, volume ..., page ..., serving dwellings or other establishments with an average daily flow of 2,500 gallons per day or less*

### Justification

It is proposed that with increased professional requirements, designers will be allowed to design systems that are more complex in nature. For further justification, please refer to Minn. R. 7083.0700, subp. 2(A)(1). See the comment 3 in Exhibit 453.

#### **1007. Proposed Change part 7083.0740, subpart 1, item C.**

*C. An MSTs licensed design business may conduct site and soil evaluations, design systems, and write management plans for systems described in items A and B and and MSTs.*

### Justification

The development of the new chapter 7081 for mid-sized systems will be much more complex than the simple design packages offered in chapter 7080 for individual sewage treatment systems. Therefore, much more training will be required to design these larger systems. The industry accepts this and endorses a higher skill level for those designing MSTs.

The controversy lies in that the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience, and Interior Design (AELSLAGID) also claims that MSTs systems require the services of a professional engineer, professional soil scientist, and a professional geologist. The Agency will defer to any decision made by this Board on the professional requirement for MSTs work, but a clear directive is given in Minn. Stat. § 115.56 that subsurface sewage treatment work also needs to be conducted by one who holds a MSTs designers license. Therefore, design drawings will require to be signed by professionals and one who is licensed under this chapter. Please refer to Exhibit 94 – comment 2, 159, 344, 395, 400, 418, 421, 430, 436, , 437, and 438.

#### **1008. Proposed Change part 7083.0740, subpart 2, item A, subitem (1).**

*Subp. 2. Responsibilities. All design licensees must:*

*A. inform the proposed system owner of:*

*(1) the classification of the system under part 7080.2200 to 7080.2400 , as published in the State Register, volume ..., page ...; and*

*(2) the estimated costs for construction, operation, monitoring, service, component replacement, and management and the anticipated system life; and*

*B. provide written reasonable assurance of system performance to the local unit of government including, but not limited to:*

*(1) adherence to system type requirements; or*

*(2) technical basis for design elements for Type II to Type V systems.*

### Justification

It has been reported that some prospective system owners do not realize the capital or management costs of the system that has been designed for them. Therefore, it is proposed that the prospective owner be informed of the costs and management issues before deciding if the system is amenable to the prospective owner. See comment 1 of Exhibit 500.

**1009. Proposed Change part 7083.0740 subpart 3.**

*Subp. 3. Certified designers. Certified designers must review soil and site evaluations and designs by noncertified employees. This review includes both verification of field observations and conclusions and design assumptions and calculations.*

**Justification**

It is reasonable to require the certified individual to review any work conducted by non-certified workers. This is due to the complex nature of the work to correctly identify and interpret soil conditions and perform calculations for system design. Please refer to Exhibit 154.

**MINN. R. 7083.0750 INSPECTION LICENSE**

**1010. Proposed Change part 7083.0750, subpart 1, item A, formerly part 7080.0700, subpart 2, item E, and part 7080.0315, subpart 2, items D and E.**

***Subpart 1. Authorization.***

*A. A licensed inspection business may conduct compliance inspections and issue written certificates of compliance and notices of noncompliance for an existing MSTS described in part 7083.0740, subpart 1, items A and B. An inspection business may install a new system for a property in which the business has conducted an existing ISTS compliance inspection, provided the business holds the appropriate licenses. A licensed inspection business may be authorized to review and approve site evaluations and designs, inspect new construction and replacement systems, review management plans, and issue written certificates of compliance and notices of noncompliance for systems described in part 7083.0740, subpart 1, items A and B, on behalf of a local unit of government.*

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring.

**1011. Proposed Change part 7083.0750, subpart 1, item B.**

*B. A licensed MSTS inspection business may conduct compliance inspections and issue written certificates of compliance and notices of noncompliance for existing systems described in part 7083.0740, subpart 1, item C. An inspection business may install a new system for a property in which the business has conducted an existing system compliance inspection, provided the business holds the appropriate licenses. A licensed MSTS inspection business may be authorized to review and approve site evaluations and designs, inspect new construction and replacement systems, review management plans, and issue written certificates of compliance and notices of noncompliance for systems described in part 7083.0740, subpart 1, item C, on behalf of a local unit of government.*

**Justification**

If it is reasonable to require increased professional requirements for designers, then it follows that those who conduct inspections of those systems should have similar professional requirements.

**1012. Proposed Change part 7083.0750, subpart 2.**

*Subp. 2. Responsibilities. Inspection and MSTS inspection licensees must submit the agency's existing inspection form to the local unit of government and the property owner within 30 days after any existing system compliance inspection.*

Justification

Minn. Stat. § 115.55 requires the Agency to develop an inspection form for existing systems. The Agency has been told on many occasions that a frequent practice by homeowners is to hire multiple inspectors if the initial inspection is not to their liking. Therefore, it is proposed that all existing compliance inspection forms be submitted to the local permitting authority so they are aware of the dispute and can take action if desired. If the local permitting authority suspects a licensing violation in this dispute, they can bring this to the attention of the Agency.

**1013. Proposed Change part 7083.0750, subpart 3.**

*Subp. 3. Certified inspectors. Certified inspectors are responsible for personally conducting the necessary procedures to assess system compliance. Certified inspectors must complete and sign the agency's existing system inspection form.*

Justification

Former Minn. R. 7080.0715, subp. 2(B)(3) requires certified inspectors to conduct inspections and not to delegate this work to noncertified workers. Completing the Agency's inspection form is required by Minn. Stat. § 115.55.

**MINN. R. 7083.0760 INSTALLATION LICENSE**

**1014. Proposed Change part 7083.0760, subpart 1.**

*Subpart 1. Authorization. A licensed installation business may construct, install, alter, extend, maintain, or repair all SSTs according to an approved design.*

Justification

Unlike the proposal to increase professional requirements and develop new subcategories for designers and inspectors, it is not proposed to develop new subcategories for installers. MPCA staff had many discussions on this issue with industry representatives who expressed mixed feelings whether the requirements should be increased. Because there was no overwhelming mandate by participants to increase these requirements, and the Agency had no compelling information that a change was needed, it is proposed to only have one installer license category. However, it is anticipated that some increase of professional requirements will be needed to make up any identified deficiencies. These deficiencies have been recently highlighted in meetings with the industry for the purpose of updating each disciplines need-to-know criteria.

**1015. Proposed Change part 7083.0760, subpart 2, item A, formerly 7080.0715, subpart 1, item A.**

*Subp. 2. Responsibilities. Installation licensees must:*

*A. ensure all work is done according to an approved design report;*

Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

**1016.** Proposed Change part 7083.0760, subpart 2, item B, formerly 7080.0715, subpart 2, item B, subitem (2), unit (a).

*B. notify the local unit of government when work is in need of required inspections;*

Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

**1017.** Proposed Change part 7083.0760, subpart 2, item C, formerly 7080.0700, subpart 2, item C.

*C. provide as-built drawings to the owner and local unit of government within 30 days of system installation;*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1018.** Proposed Change part 7083.0760, subpart 2, item D.

*D. maintain quality control and quality assurance records for five years;*

Justification

It is reasonable to require that if reports/records are required to be generated, that the generator maintain a copy for future reference.

**1019.** Proposed Change part 7083.0760, subpart 2, item E.

*E. provide system owners with information concerning system operation and maintenance;*

Justification

It is reasonable to require the installer to inform the new system owner of the management plan that was prepared and explain to them the location, proper operation and maintenance of the system components.

**1020.** Proposed Change part 7083.0760, subpart 2, item F.

*F. ensure that all construction activities comply with applicable storm water regulations;*

Justification

This provision is to highlight that storm water regulations need to be followed during construction activities.

**1021. Proposed Change part 7083.0760, Subpart 2, item G.**

*G. institute no change from the signed and approved design report until the proposed change is made by the designer and approved by the local unit of government;*

Justification

The Agency receives many telephone calls each year in which the installer has changed the design due to a variety of reasons. If changes are significant, then the installer actually ends up designing the system, at least in part. Problems result, because such changes may not be compliant with local ordinances, not approved by the permitting authority, and they result in systems that are not what was agreed upon when the system was bid. Therefore, this provision makes it clear that significant changes need to be made by a designer and approved by the permitting authority.

**1022. Proposed Change part 7083.0760, subpart 2, item H.**

*H. negotiate with the system owner to determine who will be responsible for seeding, erosion and frost protection, watering, and other vegetation establishment activities; and*

Justification

The Agency commonly receives phone calls from owners of newly constructed systems who complain that installers did not establish a vegetative cover. Many times, it appears that it was not clear if the establishment of vegetation was included in the bid amount. Therefore, to rectify future misunderstandings, it is proposed that the installer and system owner specifically discuss and come to an agreement on this issue.

**1023. Proposed Change part 7083.0760, subpart 2, item I.**

*I. pay the septic system tank fee and submit the form according to Minnesota Statutes, section 115.551, including notification if no tanks were installed during the reporting year. The form and payment are due to the commissioner by January 31 for the previous calendar year's installations.*

Justification

This provision is meant to highlight the provisions of Minn. Stat. § 115.551.

**1024. Proposed Change part 7083.0760, subpart 3, formerly 7080.0715, subpart 2, item B, subitem (2).**

*Subp. 3. Certified installers. Certified installers must be at the worksite to meet supervision needs as determined by the training and experience level of the crew and local requirements and to ensure that the installation, alteration, or extension of an SSTS is in accordance with an approved design report and permit. The certified installer must prepare quality control and quality assurance records and prepare and sign as-built drawings. The certified installer must personally determine, supervise, and verify:*

- A. the system layout and placement;*
- B. that site conditions allow for construction;*
- C. the proper soil moisture conditions for excavation;*
- D. the elevations of sewage tanks and soil treatment systems;*
- E. the quality of tanks and suitability of other materials;*
- F. solutions to problems encountered; and*

G. upgrade and repair advice provided.

Justification

This is a current provision and has been expanded to provide needed clarity. Please refer to comment 4 of Exhibit 100, comment 1 of Exhibit 103, and comment 2 of Exhibit 135.

**MINN. R. 7083.0770 MAINTENANCE LICENSE**

**1025.** Proposed Change part 7083.0770, subpart 1, formerly 7080.0715, subpart 2, item B, subitem 4.

Subpart 1. Authorization. A licensed maintenance business may measure scum and sludge depths in sewage tanks for the accumulation of solids and removing these deposits; remove solids and liquids from toilet waste treatment devices; transport septage; land apply septage or dispose of septage in a treatment facility; identify problems related to sewage tanks, baffles, maintenance hole covers, extensions, and pumps and make the repairs; evaluate sewage tanks, dosing chambers, distribution devices, valve boxes, or drop boxes for leakage; identify cesspools, seepage pits, leaching pits, and drywells; and clean supply pipes and distribution pipes for all SSTS.

Justification

This proposal is to change the name from a licensed pumper to a licensed maintainer. This change was proposed by the industry. Their rationale is that “pumpers” do much more than just pump tanks, as evidenced in the listing of duties in this item. The Agency has no objections to this change. See comment 2 of Exhibit 500.

The work areas listed are the current work areas of a pumper.

**1026.** Proposed Change part 7083.0770, subpart 2, item A, formerly 7080.0715 subpart 2, item B, subitem (4).

Subp. 2. Responsibilities. Maintenance licensees must:

A. record pump-out date, gallons removed, any tank leakage below or above the operating depth, the access point used to remove the septage, the method of disposal, the reason for pumping, and any troubleshooting or repairs conducted. This information must be submitted to the homeowner within 30 days after the maintenance work is performed. Maintenance business pumping record information must be maintained by the business for a period of five years;

Justification

Many of these provisions have been moved with the inclusion of new provisions which include the reason for pumping. This provision is to highlight to the local permitting authority if the system has chronic hydraulic problems and may be out-of-compliance. The second new provision is if the maintenance was conducted under any permit that may be required by the local permitting authority. As with the other licensing disciplines, it is proposed to require all maintenance information to be submitted to the local permitting authority. This will help determine the compliance status of the system, as one of the new compliance measures is if the system has been properly maintained. The five-year record keeping requirement is a requirement of 40 CFR pt. 503.

**1027. Proposed Change part 7083.0770, subpart 2, item B.**

*B. observe and provide written reports of any noncompliance to the system owner within 30 days;*

Justification

It is proposed that any non-compliance determined by the maintainer only be reported to the property owner, and not the local permitting authority. Currently, no provision in this manner exists in rule. In discussions with maintainers, they clearly expressed that they did not want to police compliance issues, by reporting non-compliance to the local permitting authority. They felt strongly that they did not want to turn-in their customers for a possible enforcement action. The compromise for this was to require the maintainer to report noncompliance to the property owner. At this point the property owner is aware of the situation and must disclose this non-compliance at property transfer as required in Minn. Stat. § 115.55, subd. 6.

**1028. Proposed Change part 7083.0770, subpart 2, item C.**

*C. report new service contracts entered into or cancellation of current service contracts to the local unit of government within 30 days after the maintenance work is performed; and*

Justification

If the local permitting authority requires a service contract for systems, then in order to monitor if a contract is in place for the system, a reporting mechanism is reasonable to be required. Please refer to comment 2 of Exhibit 177.

**1029. Proposed Change part 7083.0770, subpart 2, item D.**

*D. obtain a signed statement if the owner refuses to allow the removal of solids and liquids through the maintenance hole cover.*

Justification

This has been moved and modified from Minn. R. 7080.0175, subp. 3(C).

**1030. Proposed Change part 7083.0770, subpart 3, formerly part 7080.0700, subpart 2, item D and part 7080.0715, subpart 2, item B, subitem (4).**

*Subp. 3. Certified maintainers. Certified maintainers must provide proper training, daily review of work, and periodic observation of work conducted by noncertified individuals. Certified maintainers are responsible for conducting or supervising:*

- A. the measurement of scum and sludge depths;*
- B. the making of sensory observations if nondomestic wastes may have been discharged into the system;*
- C. the identification of problems and watertightness related to sewage tanks;*
- D. the assessment of the condition of baffles, effluent screens, maintenance hole covers, and extensions;*
- E. the removal of septage; and*
- F. the land application of septage or disposal in a treatment facility.*

### Justification

These are current provisions which have been moved with a language change for clarity and a format change due to rule restructuring.

## **MINN. R. 7083.0780 SERVICE PROVIDER LICENSE**

### **1031. Proposed Change part 7083.0780, subpart 1.**

*Subpart 1. Authorization. A licensed service provider business may measure scum and sludge depths for the accumulation of solids; identify problems related to sewage tanks, baffles, effluent screens, maintenance hole covers, extensions, and pumps and make the repairs; evaluate sewage tanks, dosing chambers, distribution devices, valve boxes, or drop boxes for leakage; and clean supply pipes and distribution pipes. Service provider businesses may also assess, adjust, and service systems for proper operation; take, preserve, store, and ship samples for analysis; interpret sampling results and report results for an SSTS; and operate sewage collections systems discharging to an SSTS.*

### Justification

This is a new proposed license category. The Agency has been told on several occasions over the past few years that a new licensing category should be developed for system operation. This concern has been brought about by the large increase in the number of MSTs along with the development and use of more complex technologies. The Agency agrees with this concern and proposes this new category. In addition, this concern has also been raised at the national level as evidenced by articles in national trade and environmental journals and symposiums. Large SSTS which require a SDS Permit require a Class D or higher operator for those systems. Please refer to Exhibit 232.

### **1032. Proposed Change part 7083.0780, subpart 2, item A.**

*Subp. 2. Responsibilities. Service provider licensees must:*

*A. report sampling results, operational observations, system adjustments, and other management activities in compliance with local ordinances, management plans, or operating permit requirements;*

### Justification

It is reasonable to require that all sampling results generated due to the operating permit or management plan be reported so the permitting authority can determine if the system is being managed and meeting limits.

### **1033. Proposed Change part 7083.0780, subpart 2, item B.**

*B. observe and provide written reports of any noncompliance to the system owner within 30 days; and*

### Justification

It is proposed that any noncompliance determined by the service provider is only required to be reported to the property owner, and not the local permitting authority. Currently no requirement of this type exists in rule. The Agency believes that service providers will not want to police compliance issues by reporting noncompliance to the local permitting authority. Therefore, the rule will require service providers to

report noncompliance to the property owner. At this point the property owner is aware of the situation and must disclose this noncompliance at property transfer as required in Minn. Stat. § 115.55, subd. 6.

**1034. Proposed Change part 7083.0780, subpart 2, item C.**

C. report new service contracts entered into or cancellation of current service contracts to the local unit of government within 30 days.

Justification

If the local permitting authority requires a service contract for systems, then in order to monitor if a contract is in place for the system, a reporting mechanism is reasonable to be required. Please refer to comment 2 to Exhibit 177.

**1035. Proposed Change part 7083.0780, subpart 3.**

Subp. 3. Certified service providers. Certified service providers must provide proper training, daily review of work, and periodic observation of work conducted by noncertified individuals. Certified service providers are responsible for conducting or supervising:

A. the measurement of scum and sludge depths for the accumulation of solids;

B. the making of sensory observations if nondomestic wastes may have been discharged into the system;

C. the identification of problems and watertightness related to sewage tanks; and

D. the assessment of the condition of baffles, effluent screens, maintenance hole covers, and extensions.

Justification

These tasks, which can be conducted under the supervision of a certified individual, are similar to what a maintainer is allowed to do.

**1036. Proposed Change part 7083.0780, subpart 4.**

Subp. 4. Certified service providers.. Certified service providers must personally:

A. assess the operational status and system performance by sampling, measuring, and observing in compliance with the management plan or operating permit;

B. preserve, store, and ship samples for analysis and interpret sampling results;

C. adjust, repair, or replace components to bring the system into proper operational compliance;

D. assess the operational status of sewage collection systems and adjust, repair, or replace components to bring the system into proper operational status; and

E. complete and submit any necessary reporting to the system owner and the local unit of government.

Justification

This task list includes the more diagnostic assessments of the system and should not be delegated to non-certified individuals.

## **MINN. R. 7083.0790 OTHER WORK**

### **1037. Proposed Change part 7083.0790, formerly 7080.0700, subpart 3.**

*In the case of SSTS work not described under parts 7083.0740 to 7083.0780, the commissioner shall determine if a license is necessary and, if so, which license category is applicable along with any additional requirements that may be necessary to obtain a license.*

#### Justification

This is a current requirement and has been moved with explanatory language added to address a specific area of SSTS work that does not fit into any current categories. Developing a new category is not necessary as it can be adequately regulated by this provision. It is up to the SSTS professional to seek out a determination by the Commissioner.

## **MINN. R. 7083.0800 RESTRICTED LICENSES**

### **1038. Proposed Change part 7083.0800, formerly 7080.0700, subpart 4.**

*The commissioner may add restrictions to a license for the following reasons:*

- A. as the result of an enforcement action under part 7083.2020;*
- B. as a method to allow an apprentice to gain experience as described under part 7083.1050, subpart 2, item B; or*
- C. as a method to limit the scope of the work to be conducted under the license to coincide with restrictions placed on the certified individual according to part 7083.2010, subpart 6.*

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

## **MINN. R. 7083.0900 APPLICATION FOR LICENSE; FEES; RENEWAL**

### **1039. Proposed Change part 7083.0900, subpart 1, item A, formerly 7080.0705, subpart 1.**

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

- A. one or more certified individuals with specialty area certifications matching the requested license to meet the conditions under parts 7083.0710 to 7083.0800;*
- B. general liability insurance as required by part 7083.1000; and*
- C. a corporate surety bond as required by part 7083.1000.*

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

### **1040. Proposed Change part 7083.0900, subpart 2, formerly 7080.0705, subpart 2.**

*Subp. 2. **Requirements for obtaining or renewing licenses.***

*A business that meets the eligibility requirements under subpart 1 may apply for or renew a license on forms provided by the commissioner. The application must be submitted to the agency no later than 60 days prior to the expiration or renewal date. Issuance of a new license also requires a 60-day review and approval period.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1041. Proposed Change part 7083.0900 subpart 3, formerly 7080.0705, subpart 3.**

*Subp. 3. Fees. The annual SSTS license fee is \$100 for each license category under parts 7083.0710 to 7083.0800. The annual license fee for a business with multiple licenses shall not exceed \$200.*

### Justification

Additional language has been added to the former provision to maximize the total annual fee to \$200/year. This provision is proposed because of the new licensing categories and subcategories. The current licensing categories are structured in a manner that requires only two licenses to be obtained if a business wished to be involved in all SSTS work. This is due to the fact that the Agency offers a combination license for those who wish to design and inspect systems (Designer I license). However, it is not feasible to offer a combination license if there are now three different types of designers and two different types of inspectors. Therefore, under the proposed system a total of five separate licenses would need to be purchased to conduct all SSTS work. Therefore, it is proposed to cap the licensing fees to a maximum of \$200 as is the current practice. Please refer to Exhibit 48 and Exhibit 79, comment 4.

**1042. Proposed Change part 7083.0900, subparts 4 to 6, formerly 7080.0705, subparts 4 to 6.**

*Subp. 4. Issuance. Upon the commissioner's approval of the license application and payment of the license fee, a license must be issued to the proprietor of a sole proprietorship, the partners of a partnership, or the corporate chief executive officer or a qualifying person in Minnesota designated by a corporation.*

*Subp. 5. Term. A license is valid for one year after the date of issuance. License renewals may be requested for longer periods up to three years. The fee is determined by multiplying the approved number of years by the fee in subpart 3.*

*Subp. 6. Denial. The commissioner shall deny an application for issuance or renewal of a license if the applicant is not eligible under subpart 1. A license application may also be denied as the result of an enforcement action under part 7083.2020. A pending denial based on part 7083.2020 may not be issued before an opportunity is provided for a contested case hearing complying with Minnesota Statutes, chapter 14.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

## **MINN. R. 7083.1000 BONDING AND INSURANCE FOR SSTS LICENSED BUSINESSES LIABILITY**

**1043. Proposed Change part 7083.1000, subpart 1, item A.**

*Subpart 1. Bond and insurance requirements.*

*A. To be eligible for SSTS licensing, an SSTS business must have a minimum of \$100,000 of general liability insurance. The minimal amount is not increased for businesses with multiple licenses. The insurance must be written by a business licensed to provide insurance in Minnesota.*

Justification

Liability insurance is a requirement of the current program, however, no minimum amount has ever been specified. Discussions with the industry and interested parties seem to indicate that \$100,000 of coverage would be minimally adequate. The Agency has no objections to this amount.

**1044. Proposed Change part 7083.1000, subpart 1, item B, formerly 7080.0710, subpart 1, item D.**

*B. To be eligible for SSTS licensing, proof of general liability insurance must be evidenced by a certificate of insurance form that shows the minimum coverage that will be in effect for at least the term of the license. The licensee is responsible for providing written notice to the commissioner within 30 days of cancellation or change in liability insurance. If the insurance is canceled or the amount of coverage is reduced to less than the amounts in item A, the license immediately and automatically becomes invalid and the business must not perform SSTS work until the business obtains insurance meeting the requirements of this part and submits notification of insurance coverage to the commissioner.*

Justification

The Agency is proposing to drop the provision in the former rule that requires proof of insurance by a notarized certificate, as Agency staff has indicated that requirement is not necessary (Minn. R. 7080.0710, subp. 1[D]). Provisions found in former Minn. R. 7080.0715, subp. 1(D) and (E) concerning a change in the status of the licensed business is now included in this section and embellished to clearly indicate the non-status of the license if the insurance coverage is insufficient.

**1045. Proposed Change part 7083.1000, subpart 1, item C, formerly 7080.0710, subpart 1.**

*C. To be eligible for SSTS licensing, a business must hold a corporate surety bond in the amounts specified in Table I or greater. If a business seeks more than one license, then the license category with the highest bonding amount fulfills the bond requirement for all licenses sought. A licensed SSTS business must disclose the amount of bond coverage to those to whom they are providing services.*

Table I

<u>License</u>	<u>Minimum Bond Amounts</u>
<u>Basic design</u>	<u>\$10,000</u>
<u>Advanced design</u>	<u>\$15,000</u>
<u>MSTS design</u>	<u>\$25,000</u>
<u>Basic inspection</u>	<u>\$10,000</u>
<u>MSTS inspection</u>	<u>\$25,000</u>
<u>Installation</u>	<u>\$10,000</u>
<u>Maintenance</u>	<u>\$10,000</u>
<u>Service provider</u>	<u>\$10,000</u>

Justification

This is a current requirement and has been moved from its former location with modifications. The modification is that the current \$10,000 bond required for current license holders will increase for those businesses designing more complex or larger systems. There was much discussion with the industry if these minimum amounts should be raised. The industry overwhelming said “No.” Their rationale is that Agency enforcement against poor professionals should stop multiple infractions, therefore the \$10,000 bond should be sufficient. Their rationale also stated that “good” professionals who do make a mistake,

will in good faith, fix any problems, so raising the bond would penalize good professionals whose bond will never be invoked. MPCA staff notes that multiple infractions have occurred and have exhausted bond amounts. To rectify this situation, the Agency proposes to require replenishment of any bond which falls below the \$10,000 minimum. It is also proposed to require the business to disclose the amount of bond coverage to those they are providing services for, so the system owner can make a decision if they wish to require more bond coverage for their particular project, especially for MSTs projects. Please refer to comment 10 to Exhibit 79.

**1046.** Proposed Change part 7083.1000, subpart 1, item D, 7080.0710, subpart 5.

D. The bond must be written by a corporate surety licensed to do business in Minnesota.

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1047.** Proposed Change part 7083.1000, subpart 1, item E, formerly 7080.0710 subpart 1, item A.

E. The corporate surety bond must be submitted to the commissioner on the bond form provided in part 7080.2030 and must name the applicant as the principal.

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1048.** Proposed Change part 7083.1000, subpart 1, item F, formerly 7080.0710, subpart 1, item B.

F. The corporate surety bond must be signed by an official of the business who is legally authorized to represent the business and must list a contact if a claim is to be filed.

This is a current provision that has been moved with a format change due to rule restructuring.

**1049.** Proposed Change part 7083.1000, subpart 1, item G, 7080.0710, subpart 1, item C.

G. The corporate surety bond must cover work to be done under all SSTS licenses to be held by the business.

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1050.** Proposed Change part 7083.1000, subpart 2, item A, formerly 7080.0710, subpart 3.

Subp. 2. Bond use.

A. The corporate surety bond must be conditioned on the principal faithfully performing the duties and complying with all laws, ordinances, and rules pertaining to the SSTS license applied for and all contracts entered into.

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1051. Proposed Change part 7083.1000, subpart 2, item B.**

*B. A person suffering a loss from the principal failing to act according to item A may petition the corporate surety and may be granted payment of the bond.*

Justification

This requirement was located on the bond form in former Minn. R. 7080.0920. It is important to note that any person suffering loss may claim the bond. This provision would allow a person who did not directly contract with the principal to claim the bond. For example, if an installer improperly installed a system, and the property is sold to another owner, the second owner may file a claim against the installer even though they did not hire the installer, because the previous owner did.

**1052. Proposed Change part 7083.1000, subpart 3, formerly 7080.0710, subpart 4.**

*Subp. 3. Term of bond. The term of the corporate surety bond must be continuous with the term of the license. The penal sum of the bond is noncumulative and must not be aggregated every year that the bond is in force*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1053. Proposed Change part 7083.1000, subpart 4, 7080.0710, subpart 5.**

*Subp. 4. Notification of bond actions. The corporate surety must provide written notice to the commissioner within 30 days of cancellation or reduction of a licensee's bond. If a corporate surety bond is canceled or the amount of coverage is reduced to less than the amounts in subpart 1, Table I, the license immediately and automatically becomes invalid and the business must not perform SSTS work until the business obtains another corporate surety bond meeting the requirements of this part and submits notification of renewed bond coverage to the commissioner. The corporate surety must notify the principal of any claims pending against the bond within five days of the receipt of the claim and notify the principal of any payments made against the bond within five days of payment.*

Justification

This is a current requirement and has been moved with substantive changes to this part. The first change is that the corporate surety must also notify the commissioner if the bond amount is reduced and not just if the bond is canceled. In addition, the provision is added that if the bond is reduced, that the licensed is deemed invalid. This is a change to current language that just said that if the bond is canceled, no work may be performed. These changes are reasonable because Minn. Stat. § 115.56 requires a minimum of a \$10,000 bond. If a claim reduces that amount, the license is no longer valid until \$10,000 in bond coverage is renewed. This has been a problem as there have been multiple claims on a bond, in which the bond could not cover all the claims. MPCA staff has also been told about situations where a claim has been brought to the bonding company and the principal was never notified of the claim. Therefore, it seems reasonable to require that the principal be involved in any claim on their work, since it is their bond and future potential to be bonded that is in jeopardy if the bonding company pays without understanding the principal's perspective regarding any dispute.

**1054. Proposed Change part 7083.1000, subpart 5.**

*Subp. 5. Other professional assistance. An SSTS business that seeks, accepts, and implements work products developed by a noncertified individual is responsible and liable for the related performance of the system.*

**Justification**

It is necessary to explain the requirements if an SSTS professional seeks the expertise of a non-certified person. These situations arise with the enlisting of a professional soil scientist, professional engineer, researcher, or manufacturer. Such opinions can be sought, but the advice must be filtered through local requirements and basic SSTS principles which are known by the certified individual.

**MINN. R. 7083.1010 QUALIFIED EMPLOYEE REQUIREMENTS**

**1055. Proposed Change part 7083.1010, subpart 1, formerly part 7080.0720.**

*Subpart 1. Responsibilities. A qualified employee must fulfill the applicable responsibilities under parts 7083.0710 to 7083.0800 that are applicable to the work being performed. Qualified employees must be certified with specialty area certifications applicable to the work being conducted. A qualified employee may be an apprentice if the individual has specialty area certifications applicable to the work to be completed, has fulfilled the requirement under part 7083.1050, subpart 2, and has been issued performance restrictions.*

**Justification**

This is a current provision that has been moved with a format change due to rule restructuring.

**MINN. R. 7083.1020 SSTS INDIVIDUAL CERTIFICATION AND TRAINING PROGRAM**

**1056. Proposed Change part 7083.1020, subpart 1, formerly 7080.0800, subpart 1.**

*Subpart 1. Purpose. Parts 7083.1020 to 7083.1090 establish the SSTS individual certification and training program. This program establishes training, experience, and examination requirements for SSTS individual certification. An individual may be certified in the following specialty areas:*

- A. designer;
- B. advanced designer;
- C. MSTS designer;
- D. inspector;
- E. MSTS inspector;
- F. installer;
- G. maintainer; and
- H. service provider.

**Justification**

Introductory statement from former rule, with new designer and inspector subcategories and service provider category additions.

**1057.** Proposed Change part 7083.1020, subpart 2, formerly part 7080.0800, subpart 2.

*Subp. 2. **Program components.** An individual must successfully complete the following components for a specialty area to qualify for certification in that specialty area:*

*A. training described under part 7083.1030;*

*B. examination described under part 7083.1040;*

*C. experience described under part 7083.1050; and*

*D. continuing education described under part 7083.1060.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1058.** Proposed Change part 7083.1020, subpart 3, formerly 7080.0800, subpart 3.

*Subp. 3. **Application.** An individual who qualifies under subpart 2, items A to C, for a specialty area may apply to be certified by the commissioner according to part 7083.1080. Individuals who complete subpart 2, items A and B, for a specialty area may apply to receive an apprentice designation according to part 7083.1090.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1059.** Proposed Change part 7083.1020, subpart 4, formerly 7080.0800, subpart 4.

*Subp. 4. **Certification period.** A certification issued by the commissioner is valid for a three--year period.*

Justification

This is a current requirement and has been moved without a substantive change. For discussions on other proposals in this area, please refer to comment 6 to Exhibit 100 and comment 5 to Exhibit 279.

**1060.** Proposed Change part 7083.1020, subpart 5, formerly 7080.0800, subpart 5.

*Subp. 5. **Applicable certification specialty area.** In the case of SSTS work not described under parts 7083.0710 to 7083.0800, the commissioner shall determine which certification specialty area is applicable.*

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**MINN. R. 7083.1030 TRAINING**

**1061.** Proposed Change part 7083.1030, subpart 1, formerly 7080.0805, subpart 1.

*Subpart 1. **Required training.** To fulfill the training requirement for one or more specialty areas under the certification and training program, an individual must successfully complete formal coursework that covers basic SSTS knowledge and specialty training area as described in items A and B.*

### Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

**1062.** Proposed Change part 7083.1030, subpart 1, item A, formerly 7080.0800, subpart 1, item A.

*A. All certified individual must have formal SSTS training in soil treatment theory; design and construction fundamentals; system operational requirements; statute and rule requirements; technology options; and state licensing requirements, standards, and criteria.*

### Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

**1063.** Proposed Change part 7083.1030, subpart 1, item B, part 7080.0800, subpart 1, item B.

*B. ISTS specialty area certification holders must have formal training to perform the required responsibilities for each specialty area in parts 7083.0710 to 7083.0800. Advanced and MSTTS designers must receive training in a specific technology before designing and writing a management plan for that technology.*

### Justification

This requirement has been moved with language changes and a substantive change. The substantive change is that advanced and MSTTS designers need to have training in a technology before being involved with that technology. The Agency will not monitor if an advanced or MSTTS designer fulfills this requirement due to the great administrative burden it would place on the Agency. However, this provision would be enforced if the Agency learned through the permitting process or complaint, that a business was working outside of this provision.

**1064.** Proposed Change part 7083.1030, subpart 2, 7080.0800, subpart 2.

*Subp. 2. Accreditation of training. Training used to fulfill the requirements under subpart 1 and part 7083.1060 must be accredited by the commissioner according to part 7083.1070.*

This is a current provision that has been moved with a format change due to rule restructuring.

## **MINN. R. 7083.1040 EXAMINATION**

**1065.** Proposed Change part 7083.1040, subpart 1, formerly 7080.0810, subpart 1.

*Subpart 1. Examinations. An examination for basic information regarding an SSTS and each of the specialty areas under part 7083.1020, subpart 1, must be offered by the commissioner at least annually. The examinations must be based on the skill, knowledge, experience, and education that a person must have to perform the authorized duties and responsibilities under parts 7083.0710 to 7083.0800 for each specialty area sought. An individual must successfully complete the basic and specialty area examinations with a passing score of 70 percent or greater to qualify for certification and apprentice designation. The commissioner may require a passing score of 70 percent or greater on any portion or*

subpart of an examination, which focuses on a critical skill component, in order to pass the entire examination.

#### Justification

This requirement has been moved with a substantive change added. The substantive change is that a minimum score is to be added to this requirement. A score of 70 percent was chosen to be consistent with other Agency programs which require a passing score of 70 percent. In addition, it is proposed that a score of 70 percent of any portion of an exam which is critical to adequately performing the work functions. One area which readily applies is that of correctly identifying soil colors. It is calculated that 5 percent of males are colorblind (Exhibit 392), and the Agency feels it is a significant number of individuals. Therefore, they could not perform the soil color field work which is touted as the most critical piece of the design process. Consequently, the Agency will likely start requiring a passing score on the portion of the soil exam which tests the ability to determine soil color. Please refer to Exhibits 276, 278, 316, and comment 4 to Exhibit 339.

**1066.** Proposed Change part 7083.1040, subpart 2, formerly 7080.810, subpart 2.

Subp. 2. Expiration of test score. An examination that qualifies for certification expires if the continuing education requirements under part 7083.1060, subpart 1, are not fulfilled. The period within which continuing education must be completed starts when the first examination is taken in which a passing score is received.

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1067.** Proposed Change part 7083.1040, subpart 3, formerly 7080.0810, subpart 3.

Subp. 3. Failure on examination. An individual who fails an examination is ineligible to retake the same examination for six months unless the individual has completed additional training approved by the agency in the subject matter covered by the failed examination in addition to that required under part 7083.1030, subpart 1. Official documentation of this additional training must be provided at the time the examination is retaken. Training hours used to fulfill this reexamination requirement may not be used to fulfill continuing education requirements. Failure to pass the examination in a specialty area or the basic examination does not prevent the person from taking an examination for a different specialty area certification.

#### Justification

This requirement has been moved with one substantive change added. The substantive change is that the exam may not be retaken for six months after failure versus the current provision which provides that the exam cannot be retaken for two months. This change was proposed by the U of M staff, who indicated that too close of exam spacing may result in the person just focusing on the test questions that were incorrect and not focusing on learning the material. In practice, few wait the two months to retake an examination, but retake training and then retake the exam.

**MINN. R. 7083.1050 EXPERIENCE**

**1068. Proposed Change part 7083.0815, subpart 1.**

*Subpart 1. Experience requirements. An individual seeking certification must:*

- A. complete the experience requirement according to one of the methods under subpart 2;*
- B. complete the amount of experience according to subpart 5;*
- C. acquire necessary experience within the six years immediately preceding submission of the completed certification application; and*
- D. complete and submit the documentation requirements under subpart 4.*

Justification

These are introductory provisions. The requirement in item C is a current requirement moved from Minn. R. 7080.0815, subp. 2(E).

**1069. Proposed Change part 7083.1050, subpart 2, item A, formerly 7080.0815, subpart 1, item A.**

*Subp. 2. Options to gain experience. The experience needed to qualify for a specialty area may be acquired by one of the methods in items A to D.*

- A. Experience may be completed as an employee or worker of a licensed SSTS business under an experience plan as described in subpart 3.*

Justification

This is a current requirement that has been moved with two substantive changes. The first substantive change is that the former rule requires that the experience must be gained as an employee. This new provision also includes the term “worker” in the event that someone is willing to provide labor in exchange for the needed experience, without being an employee. The second substantive change is that an experience plan must be used for qualifying experience. In the past, no experience requirements were ever specified, so it could not be determined if quality experience was being obtained.

**1070. Proposed Change part 7083.1050, subpart 2, item B, formerly part 7080.0815, subpart 1, item B.**

*B. Experience may be gained as an apprentice under a restricted license. Qualifying experience under a restricted license must be completed under an experience plan as described in subpart 3.*

Justification

This is an existing requirement that has been moved from Minn. R. 7080.0815, subp. 1(B), with some of the explanatory language moved to item C.

**1071. Proposed Change part 7083.1050, subpart 2, item C.**

*C. Experience may be gained through field work experience from an agency-accredited training program that provides realistic in-field work situations.*

Justification

The Agency has been informed that in some parts of the state it is difficult or impossible to find a mentor to work under to gain experience. This is mainly due to areas in which the local government inspector

has been told that the local government will not provide mentorship. Therefore, it has been suggested that the Agency should allow experience to be gained by a training program which provides the needed experience. The U of M has provided this type of training in the past. Please refer to Exhibit 147.

**1072.** Proposed Change part 7083.1050, subpart 2, item D, formerly 7080.0815, subpart 1a.

*D. Experience may be gained through a method approved by the commissioner.*

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1073.** Proposed Change part 7083.1050, subpart 3, item A.

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

*A. Experience gained under an experience plan must be gained under the supervision of an unrestricted certified individual who has a specialty area certification that is the same as the specialty area sought by the individual acquiring the experience or under the supervision of an inspector who is authorized to design and inspect the system. After December 31, 2010, an individual providing experience oversight must be a mentor as described in part 7083.2000.*

#### Justification

The provision that the unrestricted certified individual or mentor must have the same endorsement as the specialty area sought by the individual acquiring the experience, or by an inspector is a current requirement found in former Minn. R. 7080.0815, subp. 1(B). It is also proposed that those approving experience have special qualifications and officially be termed a “mentor.” Please see the justification for Minn. R. 7083.2000 for the qualifications for a mentor.

**1074.** Proposed Change part 7083.1050, subpart 3, item B, formerly 7080.0815, subpart 1c.

*B. Experience plans must be submitted to and approved by the commissioner before apprentice designation is granted. The commissioner may require that the plan be discontinued or modified to correct the problem(s) if the objectives for acquiring experience are not being fulfilled. The commissioner shall make a final evaluation to determine if the experience gained under the plan successfully fulfilled the experience requirement.*

#### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1075.** Proposed Change part 7083.1050, subpart 3, item C, formerly 7080.0815, subpart 1b.

*C. Experience plans must include the number of systems to be worked on to obtain experience and the applicable specialty area requirements in subitems (1) to (4).*

*(1) Experience plans for apprentice designer must verify the completeness and accuracy of the preliminary and field evaluation work products. This includes the in-field verification of the soil borings and the interpretation of the height of the seasonally high saturated soil level and bedrock. All design assumptions and calculations must be verified.*

(2) Experience plans for apprentice installer must verify construction of systems according to the approved design and applicable construction requirements. Verification must include on-site observations during the work periods identified in part 7083.0760, subpart 3, items A to G.

(3) Experience plans for apprentice inspector must verify the completeness and accuracy of inspecting the compliance status of a newly constructed or existing ISTS. This verification includes a field verification of all field observations and conclusions. Design reviews must also be verified.

(4) Experience plans for an apprentice maintainer must verify that sewage tanks were maintained and septage disposal was in accordance with applicable rules. This verification includes a field verification of all work activities.

#### Justification

These are existing requirements that have been modified and moved with the addition of a substantive change. The substantive change is that the method used for obtaining experience will contain minimum requirements that must be observed and supervised during the work. Please refer to comment 13 of Exhibit 79.

**1076.** Proposed Change part 7083.1050, subpart 4, item C, formerly 7080.0815, subpart 9.

#### **Subp. 4. Experience plan reporting.**

A. All work used to gain experience for certification must be documented. Documentation shall include all information, records, or other documents required by this chapter or chapters 7080 to 7082, as published in the State Register, volume ..., page .... The documentation must be submitted to the commissioner from a minimum of five jobs along with the experience plan from those same jobs. The documentation must provide the basis for approval or denial of a certification.

B. Approvals, sign-offs, or certificates of compliance issued by the local unit of government must be submitted to the commissioner for the five jobs noted in item A.

C. The completed experience plan must contain the signature and certification number of the mentor

D. The submittal must contain any other information necessary to determine compliance with this part.

#### Justification

This revised section is much more rigorous than former Minn. R. 7080.0815, subp. 9. This revised section now includes submittal of work documents from five jobs, plus inspection approvals. Under the former provision the experience documentation the Agency received was a list of addresses with one signature of the person who is verifying the experience. In many cases this sign off was no more than a routine inspection conducted for installations by fully certified individuals. Therefore, the Agency wishes to increase the effort of the mentor to ensure that in-field training is taking place and the Agency will review some of the documentation to see, at least on paper, that the person is successfully performing the necessary work tasks.

**1077.** Proposed Change part 7083.1050, subpart 5, item A, formerly 7080.0815, subpart 4.

#### **Subp. 5. Amount of experience.**

A. An applicant for certification as a designer must have co-completed with a mentor a minimum of 15 ISTS site and soil evaluations, designs, and management plans for a Type I, II, or III system, as defined under parts 7080.2200 and 7080.2300, as published in the State Register, volume ..., page ..., with a minimum of one aboveground system design, and a minimum of one belowground system design. An

applicant must observe five installations and five service or operational instances, with mentorship not required. No additional experience is required to qualify for the advanced or MSTs designer certification.

#### Justification

This is a current requirement that has been moved with substantive changes added. The first substantive change is that the experience must be co-completed with a mentor, indicating that the apprentice is well supervised throughout the work process. The second substantive change is limiting the experience for Type I, II, or III systems. This is necessary because these individuals will only have been trained in Type I to III systems. The third substantive change is that there is a requirement that one system be above ground and one below ground. Under former rule, all the experience can be gained with either all above ground or below ground systems, which does not lead to a broad experience. Please refer to comment 7 to Exhibit 100. The third substantive change is that it is proposed that prospective designers observe five installers, they are allowed to observe any type of SSTS construction practices. This provision stems from installers who have commented to the Agency that they received designs that are very difficult to install, and that better options (from an installation standpoint) exist. Therefore, it is hoped that if designers observe construction practices, better designs will result.

Lastly, it is proposed that no additional experience be required for a MSTs designer. This is because it would be difficult to gain experience in some areas of the state in which few MSTs are installed. The lack of an experience requirement will be made up by increasing the educational requirements for those involved with MSTs.

#### **1078. Proposed Change part 7083.1050, subpart 5, item B, formerly 7080.0815, subpart 5.**

B. An applicant for certification as an installer must have completed a minimum of 15 ISTS installations, with a minimum of one aboveground system installation and a minimum of one belowground system installation. An applicant must observe five service or operational instances, with mentorship not required.

#### Justification

This requirement has been moved with similar additions as those contained in the designer provision. Please refer to the justification for Minn. R. 7083.1050, subp. 3(A).

#### **1079. Proposed Change part 7083.1050, subpart 5, item C, formerly 7080.0815, subpart 7.**

C. An applicant for certification as an inspector must have co-completed with a mentor a minimum of 15 inspections of Type I to V systems. No additional experience is required to qualify for an MSTs certification.

#### Justification

This requirement has been moved with similar additions as those contained in the designer provisions. Please refer to the justification for Minn. R. 7083.1050, subp. 3(A).

**1080.** Proposed Change part 7083.1050, subpart 5, D, formerly 7080.0815, subpart 6.

*D. An applicant for certification as a maintainer must have co-completed with a mentor a minimum of 15 pump outs with properly disposed of septage*

Justification

This is a current provision that has been moved with a language change for clarity and a format change due to rule restructuring.

**1081.** Proposed Change part 7083.1050, subpart 5, E.

*E. No experience is required to qualify for the service provider certification.*

Justification

It is proposed not to require experience for service providers. This is due to the fact that there are currently no licensed service providers to provide training in this area. In addition, the service provider will have the initial assistance of the designer, installer and likely the manufacturer for a new system that they can get some assistance. They will also be aided by a written management plan or operating permit which will outline the necessary procedures to follow. The Agency will monitor how the service providers are performing their tasks to determine, for future rule revisions if an experience component is necessary.

**MINN. R. 7083.1060 CONTINUING EDUCATION**

**1082.** Proposed Change part 7083.1060, subpart 1, item A, formerly 7080.0820, subpart 1.

*Subpart 1. Renewal requirements.*

*A. All designers and inspectors who are certified or apprentices must complete 18 hours of continuing education training related to SSTS every three years, with a minimum of six of those hours devoted to soils education with a field component. All installers, and service providers who are certified or apprentices must complete 12 hours of continuing education training related to SSTS every three years.*

Justification

This requirement has been moved with a substantive change added. The substantive change is that the continuing education hours for designers and inspectors are proposed to be changed from 12 hours every three years to 18 hours every three years with a soils component. This change is supported by the industry as the Agency is constantly being advised that more soils training is needed. For other discussions concerning this area, please refer to Exhibits 144 and 172.

**1083.** Proposed Change part 7083.1060, subpart 1, item B, formerly 7080.0820, subpart 2, item C.

*B. An individual with a maintainer certification must complete nine hours of continuing education related in general to SSTS or six hours of continuing education specifically related to SSTS maintenance or land application of septage every three years. A maintainer whose gross annual revenue from pumping systems is \$9,000 or less and whose gross revenue from pumping systems during the year ending May 11, 1994, was at least \$1,000 is not subject to the continuing education requirements.*

### Justification

This requirement has been moved without a substantive change.

**1084.** Proposed Change part 7083.1060, subpart 1, item C, formerly 7080.0820, subpart 1, item A.

*C. Certified individuals and apprentices must complete the applicable hours of continuing education under items A and B that meet the criteria under subpart 2 for each time period specified in those items. The continuing education requirement is not increased for multiple specialty area certifications. Continuing education hours earned in excess of those required under this subpart may not be carried over to meet the requirements for future renewal periods. The renewal period begins when the first examination is taken in which a passing score is received under part 7083.1040.*

### Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1085.** Proposed Change part 7083.1060, subpart 1, item D.

*D. The continuing education must be taken during the time specified in this subpart and remains valid even though not reported before the end of the certification period. However, certification is considered expired until the training is reported. If adequate continuing education training is not taken during the certification period, recertification must be gained by retaking the examinations.*

### Justification

These are new provisions in this chapter added to address common problems the Agency faces with those who miss the educational deadlines for renewal or those who do not report that they have met the continuing educational requirements. It is reasonable to give credit to the training that was taken before the expiration date, but just not reported to the Agency. However, the Agency will consider the certification to be expired during the period before it was reported. Mandatory retaking of the exam is a current provision and moved from Minn. R. 7080.0810, subp. 2.

**1086.** Proposed Change part 7083.1060, subpart 1, item E, formerly 7080.0820, subpart 1, item D.

*E. In each certification period, certified individuals and apprentices must accrue continuing education hours specified in items A to C. At least one-half of the required training must be directly related to the administrative and technical parts of chapters 7080 to 7083 as published in the State Register, volume ..., page ..., as determined by the commissioner.*

### Justification

This is a current requirement that has been moved with language changes added for clarity. Please refer to comment 12 to Exhibit 79.

**1087.** Proposed Change part 7083.1060, subpart 2, formerly 7080.0820, subpart 2.

*Subp. 2. Criteria for continuing education. Coursework that qualifies for continuing education credit is coursework related to the technical aspects of sewage, sewage treatment, SSTS, soil identification, soil interpretation, soil water movement, engineering or environmental health related to SSTS, maintenance*

or operation of an SSTS, land application of wastes, or other related topics. Credit must also be given for coursework relating to state SSTS rules and statutes and coursework related to the administration of local ordinances, permitting, and inspection. Only programs accredited or otherwise authorized by the commissioner for continuing education credit may be used to maintain a certification or apprentice designation.

#### Justification

This is a current requirement that has been moved with added detail to specify what subject areas are considered appropriate training for continuing education. These subject areas are currently used as policy at the Agency and appeared to be a reasonable approach to assess continuing education subject areas.

### **MINN. R. 7080.1070 ACCREDITATION OF TRAINING PROGRAMS AND AUTHORIZATION OF TRAINING FOR CONTINUING EDUCATION CREDITS**

#### **1088. Proposed Change part 7083.1070, formerly 7080.0830.**

Subpart 1. Requirements. To receive training program accreditation for basic, specialty area, or continuing education training, the program sponsor must submit to the commissioner

- A. a written objective that describes expected outcomes for the participant;
- B. the credentials of the persons conducting the training that demonstrates the trainers' educational and professional background and expertise in and knowledge of SSTS and state SSTS standards, rules, and statutes and specifies the subject areas that the trainers will be responsible for;
- C. a training plan that demonstrates how the course will meet the requirements in parts 7083.1030 and 7083.1060;
- D. a method for evaluating successful completion, including the form that will document course participation and successful completion;
- E. a description of the topics and how much time will be spent on training for each topic during the hours the course is conducted; and
- F. a document signed by a representative of the sponsoring organization certifying that the sponsor will maintain records of participants, attendance, and successful completions for a minimum of three years.

Subp. 2. Procedures for approval. The commissioner shall approve a training course if the information submitted under subpart 1 demonstrates that the course meets the objectives for a specific specialty area under part 7083.1030 or for continuing education under part 7083.1060. The commissioner shall evaluate the submitted information to determine how many continuing education credits will be awarded. The accreditation may be reevaluated by the commissioner at any time. The commissioner may require that the training program be updated to ensure recent industry developments are included. Accreditation may be canceled by the commissioner if the program sponsor does not respond to the commissioner's written request for program information or training course revisions or if the commissioner determines that the program has not met its training objective.

Subp. 3. Authorization of training for continuing education credits. Nonaccredited training may qualify for continuing education credits only if authorized by the commissioner. The person requesting the credits must provide the information requirements of subpart 1 for any nonaccredited training attended and document in written format how the course will meet or has met the requirements under part 7083.1030 or 7083.1060, including proof of successful completion of the training. The commissioner may prorate the credit hours granted based on the amount of the training that pertains to the SSTS specialty area for which it is requested.

#### Justification

These are current provisions that have been moved with a language change for clarity and a format change due to rule restructuring.

## **MINN. R. 7083.1080 SSTS CERTIFICATION**

### **1089. Proposed Change part 7083.1080, formerly 7080.0850.**

It is proposed to change the current term of a “registered professional” to the term “certified professional.” This change is proposed to avoid the common confusion faced by professionals with “registering” for a U of M workshop. When new individuals ask Agency staff about entering the STS profession they confuse being registered for a workshop with being registered as an STS professional. This is quite a common occurrence which is frustrating for the new individual.

*Subp. 1. Qualifications. The commissioner shall certify in the appropriate specialty area individuals who successfully satisfy the requirements in parts 7083.1030 to 7083.1060 as applicable to a specialty area in part 7083.1020, subpart 1, and submit a completed application under part 7083.2010, subpart 1, that is approved by the commissioner.*

*Subp. 2. Multiple certifications. A certification for each specialty area successfully completed must be added to an individual's certification.*

*Subp. 3. Certification required. Except as provided under part 7083.1090, subpart 1, certified individuals under part 7083.0900, subpart 1, item A, and qualified employees must be certified under this part.*

*Subp. 4. Maintaining certification. To maintain certification, an individual must fulfill the continuing education requirements under part 7083.1060, complete the renewal requirements under part 7083.2010, subpart 4, and fulfill the responsibilities under parts 7083.0710 to 7083.0800 that are applicable to specialty area certifications.*

*Subp. 5. Certification maintenance. The commissioner shall assign certification numbers, maintain a statewide certification list, record training, and monitor performance of all persons certified.*

### Justification

These requirements have been moved with changes in references due to the format changes in the rule. Former Minn. R. 7080.0850, subp. 5 was moved to Minn. R. 7083.0715, subp. 2 and 7083.0700, subp. 2.

## **MINN. R. 7083.1900 APPRENTICE**

### **1090. Proposed Change part 7083.1900, formerly 7080.0855.**

*Subpart 1. Qualifications. A. An individual is designated as an apprentice if the individual:*  
*(1) successfully completes the requirements in parts 7083.1030 and 7083.1040 for the specialty areas listed in part 7083.1020, subpart 1;*

*(2) is gaining experience through a method approved in part 7083.1050, subpart 2; and*

*(3) submits a complete application as required in part 7083.2010, subpart 1, that is approved by the commissioner.*

*B. An apprentice may perform the duties of a certified individual according to parts 7083.0730 to 7083.0780 under a restricted license or as a restricted qualified employee if the experience requirements of part 7083.1050 are met.*

*Subp. 2. Maintaining apprentice designation. To maintain an apprentice designation, an individual must:*

*A. fulfill the continuing education requirements in part 7083.1060;*

*B. complete the renewal requirements in part 7083.2010, subpart 4; and*

C. fulfill the responsibilities in parts 7083.0710 to 7083.0800 that are applicable to specialty area certifications. A certification for each specialty area successfully completed must be added to an individual's certification or apprentice designation.

Justification

These are current provisions that have been moved with a language change for clarity and a format change due to rule restructuring.

**Minn. R. 7083.2000 MENTOR DESIGNATION**

**1091. Proposed Change part 7083.2000, subpart 1.**

Subpart 1. **Qualifications.** To be authorized to provide mentorship to an individual to gain the necessary experience for certification under part 7083.1050, subpart 2, items A and B, a mentor must:

Justification

This part is proposed in order to improve the qualifications of apprentices. The Agency believes that the current method for apprenticeships does not provide adequate or any meaningful experience.

**1092. Proposed Change part 7083.2000, subpart 1, item A, formerly 7080.0815, subpart 1, item B.**

A. be certified in the mentor specialty area or be an inspector; and

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1093. Proposed Change part 7083.2000, subpart 1, item B.**

B. not have had a violation that resulted in a successful enforcement action within the past five years.

Justification

It is reasonable to require that those who mentor apprentices must be competent and trustworthy individuals, so that omissions and errors are not perpetuated.

**1094. Proposed Change part 7083.2000, subpart 2.**

Subp. 2. **Commissioner designation.** A candidate found to meet the qualifications as a mentor under this part must be designated by the commissioner as a mentor. The commissioner may revoke mentorship designation upon finding a violation that results in an administrative penalty order, stipulation agreement, or schedule of compliance; incompetence; negligence; fraud; illegal activity; or inappropriate conduct in the performance of the duties authorized under the mentorship designation.

Justification

Official designation as a mentor will be granted by the commissioner so that prospective apprentices can obtain a list of those qualified to become mentors. It is reasonable and necessary to allow the

commissioner to remove a mentorship designation from someone who has been found to not fulfill the responsibilities of a mentor. Please refer to comment 11 of Exhibit 79.

**1095. Proposed Change part 7083.2000, subpart 3.**

*Subp. 3. **Responsibility.** The mentor is not responsible for any noncompliance attributed to the work of the apprentice. The licensed SSTS business is responsible if the mentor and apprentice are working as employees or on behalf of the same licensed SSTS business.*

**Justification**

This provision is provided to make it clear that the responsibility for the system lies with the person who holds the license, not with the mentor. For example, if the apprenticed business holds a restricted license, the bond and insurance of the restricted license holder would apply.

**MINN. R. 7083.2010 ADMINISTRATION OF PROFESSIONAL CERTIFICATION AND APPRENTICE PROGRAM**

**1096. Proposed Change part 7083.2010, formerly 7080.0860.**

*Subpart 1. **Application; issuance.** An individual meeting the qualifications in part 7083.1080, subpart 1, or 7083.1090, subpart 1, is eligible to apply for certification or apprentice designation on a form provided by the commissioner. The commissioner requires 60 days for review of the application. A complete application consists of documentation of training and experience or the experience gaining method meeting the requirements under part 7083.1050, subpart 2. A certification or apprentice applicant may not fulfill the duties and responsibilities of a certified or apprentice individual until designated as such in writing by the commissioner.*

*Subp. 2. **Approval of certification or apprentice designation.** Upon the commissioner's approval of the certification or apprentice application, the commissioner shall issue a number and verification of the individual's status.*

*Subp. 3. **Certification and apprenticeship period.** Certifications or apprenticeships issued by the commissioner are valid for three years.*

*Subp. 4. **Renewal.** Every three years, the certified individual or apprentice shall submit an application for renewal on forms provided by the commissioner no later than 60 days prior to the expiration date. The renewal application must be accompanied by documentation of continuing education under part 7083.1060.*

*Subp. 5. **Denial of application.** The commissioner may deny an application or renewal application for a certification or apprentice based on evidence of actions listed under part 7083.2020. Notice of the pending denial must be served on the applicant by mail. Any pending denial based on part 7083.2020 may not be issued before an opportunity is provided for a contested case hearing complying with Minnesota Statutes, chapter 14.*

*Subp. 6. **Restrictions; conditions.** The commissioner may add performance restrictions and training conditions to an individual certification or apprentice designation at any time to address unusual work situations or experience requirements, to take enforcement action under part 7083.2020, or to limit the scope of responsibilities under parts 7083.0710 to 7083.0800, for an individual. Notice of the pending restriction must be served on the applicant by mail. Any pending restriction shall not be issued before an opportunity is provided for a contested case hearing complying with Minnesota Statutes, chapter 14.*

Justification

These requirements have been moved with one substantive change. The substantive change is to allow a contested case hearing for an application denial or an action to place a restriction on a license. This change will make it consistent with other enforcement actions listed in former Minn. R. 7080.0900, subp. 4(A), which provide an opportunity for a contested case hearing.

**MINN. R. 7083.2020 ENFORCEMENT ACTION**

**1097. Proposed Change part 7083.2020, subpart 1, formerly 7080.0900, subpart 1.**

*Subpart 1. SSTS business licenses. The commissioner may deny, suspend, restrict, revoke, or place corrective action or fine, , raise bond amounts, or institute other sanctions against a SSTS business license for any of the following reasons:*

Justification

This is a current requirement and has been moved from Minn. R. 7080.0900 subp. 1 with a substantive change added. The substantive change is the addition of more enforcement tools in addition to the denial, suspending or revoke a business license. This is reasonable to use other methods of enforcement for less serious infractions.

**1098. Proposed Change part 7083.2020, subpart 1, items A to E, formerly 7080.0900, subpart 1, items A to E.**

- A. failure to meet the requirements for a license;
- B. failure to comply with applicable requirements;
- C. submission of false or misleading information or credentials in order to obtain or renew a license;
- D. failure to provide adequate supervision to noncertified employees;
- E. incompetence, negligence, fraud, illegal activity, or inappropriate conduct in the performance of the duties authorized under the license;

Justification

These requirements have been moved with one language change due to rule format changes, and one substantive change added. The substantive change is the addition of fraud, illegal activity or conflict of interest as enforceable violations. This is reasonable to make these additions as these violations should be adequate cause to bring an enforcement action. Please refer to comment 3 of Exhibit 9, comment 6 of Exhibit 99, comment 5 of Exhibit 100, comment 3 of Exhibit 103, Exhibit 134, comment 2 of Exhibit 135, comment 1 of Exhibit 139, Exhibit 292, comment 5 of Exhibit 333, comment 338 and comment 6 of Exhibit 369.

**1099. Proposed Change part 7083.2020, subpart 1, item F.**

*F. failure to report the number of sewage tanks installed and pay tank fees as prescribed in Minnesota Statutes, section 115.551; or*

Justification

This is a reasonable additional enforceable violation as Minn. Stat. § 115.551 requires installers of sewage tanks to submit a \$25 fee per sewage tank installed.

**1100.** Proposed Change part 7083.2020, subpart 1, item G, formerly 7080.0900, subpart 1, item F.

G. failure to comply with applicable soil dispute resolution requirements.

Justification

This is a current provision that has been moved with a format change due to rule restructuring.

**1101.** Proposed Change part 7083.2020, subpart 2, formerly 7080.0900, subpart 2.

Subp. 2. Certification and apprentice. The commissioner may deny, suspend, restrict, revoke, place corrective action fine, or institute other sanctions against a certification or apprentice designation for any of the following reasons:

A. failure to meet the certification or apprenticeship requirements;

B. failure to comply with applicable requirements; or

C. submission of false or misleading information or credentials in order to obtain or renew a certification or apprentice designation.

D. incompetence, negligence, fraud, illegal activity, conflict of interest, or inappropriate conduct in the performance of the duties authorized under the certification;

E. Failure to comply with applicable soil dispute resolution requirements.

Justification

These requirements have been moved with one substantive change added. The substantive change is the addition of fraud, illegal activity, or conflict of interest as enforceable violations. It is reasonable to make these additions as these violations should be adequate cause to bring an enforcement action.

**1102.** Proposed Change part 7083.2020, subpart 3, formerly 7080.0900, subpart 3.

Subp. 3. Complaints.

A. Upon receiving a signed written complaint that alleges the existence of grounds for enforcement action against a licensed SSTS business or a certified or apprenticed individual under subpart 1 or 2, the commissioner shall initiate an investigation.

B. The complaint must contain the name, address, and telephone number of the complainant; the name of the alleged violators; the alleged violations, dates, and locations; and any other pertinent information to demonstrate the validity of the complaint.

C. The commissioner shall evaluate the results of the investigation and determine whether enforcement actions are necessary. The commissioner may convene and enlist expert advice from a technical advisory committee.

D. Enforcement actions shall not be taken before written notice is given to the licensee or individual and an opportunity is provided for a contested case hearing complying with Minnesota Statutes, chapter 14

Justification

These requirements have been moved with language changes for clarity and due to format changes in the rule. There is one substantive change in this part. The substantive change is that the commissioner may convene and enlist expert advice from a technical advisory committee. This suggestion came from the

industry, as they have seen value in technical advisory committee for the state's wetland delineation program. The Agency has met with staff from the Board of Water and Soil Resources and the U of M to test the feasibility of a technical advisory committee.

**1103. Proposed Change part 7083.2020, subparts 4 and 5, formerly 7080.0900, subpart 3.**

*Subp. 4. Enforcement action. If the commissioner finds that enforcement action is necessary, the actions described in items A to C must be taken.*

*A. A written notice, must be sent by certified mail to the licensee, certified individual, or apprentice. The written notice must contain, as applicable, the effective date of the enforcement action, the nature of the violation constituting the basis for the enforcement action, the facts that support the conclusion that a violation has occurred, specific actions necessary to fulfill the terms of the notice, and a statement that a licensee, certified individual, or apprentice who desires a contested case hearing must, within ten calendar days, exclusive of the day of service, file a written request with the commissioner.*

*B. If a hearing is requested, the enforcement action is stayed pending the outcome of the hearing. If the licensee, certified individual, or apprentice does not request a hearing, the business or individual forfeits any opportunity for a hearing.*

*C. A licensee, certified individual, or apprentice whose license, certification, or apprenticeship has been revoked is not entitled to apply for a license, certification, or apprenticeship for one year following the effective date of revocation or for any longer period of time specified in the revocation notice. A licensee, certified individual, or apprentice with a revoked or suspended license, certification, or apprenticeship shall return the license, certification, or apprentice identification card to the commissioner.*

*Subp. 5. Enforcement; general. General agency enforcement authority under Minnesota Statutes, sections 115.03, 115.071, 115.072, 115.56, 116.072, and 116.073, is also available for enforcement actions under this part.*

**Justification**

These requirements have been moved with language changes for clarity and due to format changes in rule. There is one substantive change in this part. The substantive change is that all written notices be sent via certified mail. This is reasonable and necessary so the Agency is aware that the notice has been received and that additional enforcement actions could take place if any response date violations occur.

**1104. Proposed Change part 7083.2020, subpart 6**

*Subp. 6. Nonlicensed violations. The commissioner may fine, or impose other sanctions, for those implying or advertising to be a certified individual, apprentice or licensed business or conducting SSTS activities without the required certification, apprentice or license.*

**Justification**

Many violations brought to the Agency's attention are not involving with those persons or businesses who hold a license, but with those who do not hold a license and are not exempt per Minn. Stat. § 115.56 and this chapter. Therefore, it is reasonable and necessary that a provision be added describing possible enforcement actions that could be brought against those who are conducting SSTS work without a license.

1105. Proposed Change part 7083.2030, formerly 7080.0920.

**MINN. R. 7083.2030 MINNESOTA POLLUTION CONTROL AGENCY SURETY BOND FORM.**

Bond No. \_\_\_\_\_

MINNESOTA POLLUTION CONTROL AGENCY  
SUBSURFACE SEWAGE TREATMENT SYSTEM (SSTS)  
SURETY BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT

\_\_\_\_\_  
*(Name of Licensee)*

*doing business as ..... at*

\_\_\_\_\_, *Minnesota, as Principal, and*

*(Address)*

\_\_\_\_\_, *a corporation authorized*

*(Name of Surety)*

*to do surety business in the State of Minnesota, as Surety, are hereby held and firmly bound to the Commissioner of the Minnesota Pollution Control Agency-State of Minnesota and any persons aggrieved by reason of the Principal's failure to faithfully perform the duties, and in all things comply with all laws, ordinances, and rules, pertaining to the Principal's license or any permit applied for and all contracts entered into, in the sum of \_\_\_\_\_ THOUSAND DOLLARS (\$ \_\_\_\_\_). For the payment of this sum, Principal and Surety bind themselves, their heirs, representatives, successors and assigns, jointly and firmly by these presents.*

*THE CONDITION of the above obligation is such, that WHEREAS the said Principal is making application with the Minnesota Pollution Control Agency to be licensed as, or has been licensed as, a subsurface sewage treatment system business:*

.....  
*(specific licenses).*

*NOW THEREFORE, if said Principal shall faithfully and lawfully perform the duties, and in all things comply with the laws and ordinances, including all amendments thereto, appertaining to the license or permit applied for, then this obligation shall be void; otherwise to remain in full force and effect.*

*The aggregate liability of the Surety, regardless of the number of claims made against the bond or the number of years the bond remains in force, shall in no event exceed the amount set forth above. Any revision of the bond amount shall not be cumulative. This bond may be canceled by the Surety as to future liability by giving written notice to the Minnesota Pollution Control Agency, stating the date of cancellation, which in no event shall be less than thirty (30) days after the mailing of said notice; however, the Surety shall remain liable*

for any and all acts of the Principal covered by this bond up to the date of cancellation.

PROVIDED, it is the intention of the parties that this bond be continuous. This bond may be canceled at any time upon giving the said Principal and the Minnesota Pollution Control Agency 30 days written notice, said notice to be served by certified mail, whereupon, except as to any liabilities or indebtedness incurred prior to the termination of this said 30 days notice, the liability of the Surety under this bond shall cease. The Surety shall notify the Principal and the Minnesota Pollution Control Agency if payment on the bond has been made which results in the value of the bond falling below the legal requirement.

By their signatures below, the parties certify that the wording of this surety bond is identical to the wording specified in Minnesota Rules, part 7083.2030, as the rules were constituted on the date the parties executed the bond.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Signed, sealed and delivered in the presence of:

\_\_\_\_\_  
(Witness as to Principal)      (Licensee name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Witness as to Surety)      (Name of Surety Company)

\_\_\_\_\_  
By

\_\_\_\_\_  
(Attorney-in-Fact)

INDIVIDUAL OR PARTNERSHIP ACKNOWLEDGMENT

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

On the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, a Notary Public within and for said county, personally appeared, \_\_\_\_\_ to me known to be the person(s) described in and who executed the foregoing instrument, as Principal(s), and acknowledged to me that s/he executed the same as her/his free act and deed.

\_\_\_\_\_  
Notary Public, \_\_\_\_\_  
County, \_\_\_\_\_  
My Commission Expires \_\_\_\_\_

(Notarial Seal)

CORPORATE ACKNOWLEDGMENT

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

On the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
before me personally appeared, \_\_\_\_\_  
to me, who being duly sworn, did depose and say: that s/he  
resides in \_\_\_\_\_ the s/he is the \_\_\_\_\_  
President of the \_\_\_\_\_  
the corporation

described in and which executed the foregoing instrument; that s/he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation; and that s/he signed her/his name thereto by like order.

\_\_\_\_\_  
Notary Public,

\_\_\_\_\_  
County,

\_\_\_\_\_  
My Commission Expires

(Notarial Seal)

ACKNOWLEDGMENT OF CORPORATE SURETY

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

On the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ before me  
personally appeared, \_\_\_\_\_ to me

known, who being duly sworn, did say: that s/he resides in  
\_\_\_\_\_ the s/he is the aforesaid officer or

attorney in fact of \_\_\_\_\_ a

corporation; that the seal affixed to the foregoing instrument  
is the corporate seal of said corporation; and that said  
instrument as signed and sealed in behalf of said corporation by  
the aforesaid officer, by authority of its board of directors;  
and the aforesaid officer acknowledged said instrument to be the  
free act and deed of said corporation.

\_\_\_\_\_  
Notary Public,

\_\_\_\_\_  
County,

\_\_\_\_\_  
My Commission Expires

(Notarial Seal)

\*\*\*SURETY COMPANY POWER OF ATTORNEY MUST BE ATTACHED\*\*\*

Justification

These current requirements have been moved with the addition of two substantive changes. The first substantive change is that the bond amount listed on the form has been changed from \$10,000 to a blank amount. This is due to the differences in the amount of bonding required on some of the new licensing subcategories. For justification on the change in bond amounts please refer to the justification for Minn. R. 7083.1000, subp. 1(C). The second substantive change is that the surety must notify the principal if a payment is made on the bond. Please refer to the justification for Minn. R. 7083.1000, subp. 4.

**MINN. R. 7083.2040 TRANSITIONING EXISTING REGISTRATIONS AND LICENSES**

**1106. Proposed Change part 7083.2040.**

Subpart 1. Designers. A business licensed, and an individual registered, as a designer I or designer II on the effective date of this chapter are reclassified as basic designers. A business reclassified as a basic designer under this chapter may design all types of ISTS and MSTs until three years after the effective date of this chapter. After that time, a business designing a Type IV, or Type V ISTS, or MSTs must meet the requirements of this chapter.

Subp. 2. Inspectors. A business licensed, and an individual registered, as a designer I or inspector on the effective date of this part are reclassified as inspectors. A business or individual reclassified as an

inspector under this chapter may inspect all types of ISTS and MSTs and administer local programs until three years after the effective date of this chapter. After that time, the business or government employee inspecting a Type IV or Type V ISTS or MSTs, or administering a SSTS regulatory program, must meet the requirements of this chapter.

Subp. 3. **Maintainers.** A business licensed, and an individual registered, as a pumper on the effective date of this chapter is reclassified as a maintainer under this chapter.

Subp. 4. **Service provider.** To gain a service provider license or certification, a business or individual must meet the requirements of this chapter. A business or individual providing management services before the effective date of this chapter may operate an SSTS until three years after the effective date of this chapter, without a service provider license. Three years after the effective date of this chapter businesses and individuals providing SSTS management services must meet the requirements of this chapter.

Subp. 5. **Basic and continuing education.** Designer I's or designer II's on the effective date of this chapter who take training to upgrade to an advanced designer or MSTs designer before this chapter has been in effect for three years, may have their training hours credited as fulfilling the continuing education hours specified in part 7083.1060. Designer I's or inspectors who take training to upgrade to a MSTs inspector within three years of the effective date of this chapter, may have their training hours credited as fulfilling the continuing education hours specified in part 7083.1060.

#### Justification

These proposed provisions are reasonable and necessary to transition from the current licensing and registration program to the new licensing and certification program. To ease the transition it is proposed to allow the education taken to gain the new subcategories to also be credited as fulfilling the continuing education requirements. The Agency believes that three years from the effective date of the chapter is a reasonable time to obtain the necessary instruction and transition to the new requirements.

## VI. STATUTORY CONSIDERATIONS AND ECONOMIC ANALYSIS

Section VI of this Statement is divided into three parts. The first two parts will discuss the specific and general statutory requirements that apply to the proposed rules. The third part will provide specific details of the MPCA's economic assessment of the proposed rules.

### A. Statutory Requirements Specific to the MPCA

Three Minnesota laws specifically identify MPCA rulemaking responsibilities. Two of these laws: Minn. Stat. § 115.43, subd. 1, and Minn. Stat. § 116.07, subd. 6, are very similar and require that the MPCA consider economic factors in the development of all MPCA rules.

#### Minn. Stat. § 115.43, subd. 1 (Powers)

*In addition to the other powers prescribed by law, the agency shall have the powers and duties prescribed in this section. In exercising all such powers the agency shall give due consideration to the establishment, maintenance, operation and expansion of business, commerce, trade, industry, traffic and other economic factors and other material matters affecting the feasibility and practicability of any proposed action, including, but not limited to, the burden on a municipality of any tax which may result therefrom and shall take or provide for such action as may be reasonable, feasible and practical under the circumstances.*

#### Minn. Stat. § 116.07, subd. 6 (Exercise of Powers)

*In exercising all its powers the pollution control agency shall give due consideration to the establishment, maintenance, operation and expansion of business, commerce, trade, industry, traffic, and other economic factors and other material matters affecting the feasibility and practicability of any proposed action, including, but not limited to, the burden on a municipality of any tax which may result therefrom, and shall take or provide for such action as may be reasonable, feasible, and practical under the circumstances.*

These two statutes establish essentially identical requirements for the MPCA to give due consideration to economic factors in developing rules. The MPCA's consideration of economic factors is reflected in this Statement by the discussion presented below and by the supporting data provided in the Appendices to this Statement. The MPCA finds, after consideration of the economic factors, that the rules do not unreasonably cause any adverse effect on any business or impose a burden on municipalities.

An additional statutory requirement specifically applies to MPCA rulemakings that may affect the Minnesota Department of Transportation (MnDOT).

#### Minn. Stat. § 174.05 (Notification of MnDOT)

*The commissioner of the Pollution Control Agency shall inform the commissioner of transportation of all activities of the Pollution Control Agency which relate to the adoption, revision or repeal of any standard or rule concerning transportation established pursuant to section 116.0*

MnDOT is responsible for the design and operation of many SSTS at rest areas and truck stations (maintenance areas) throughout Minnesota. The MPCA estimates that there are about 50 SSTS at rest areas and a small number of restroom-waste only SSTS at truck stations managed by MnDOT. Although

the rules will not specifically affect Minnesota's transportation system, the rules will affect MnDOT through their SSTS responsibilities. The MPCA has notified the Commissioner of MnDOT that these rules are being developed. The MPCA does not expect that the rules will significantly change how MnDOT will manage the SSTS systems associated with their facilities.

## B. General Statutory Requirements

The following additional statutory requirements apply to all rulemaking conducted in Minnesota.

### 1. Minn. Stat. § 14.131 (Statement of Need and Reasonableness)

#### Economic Factors

*By the date of the section 14.14, subdivision 1a, notice, the agency must prepare, review, and make available for public review a statement of the need for and reasonableness of the rule. The statement of need and reasonableness must be prepared under rules adopted by the chief administrative law judge and must include the following to the extent the agency, through reasonable effort, can ascertain this information:*

*(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule;*

*(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues;*

*(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule;*

*(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule;*

*(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals;*

*(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals; and*

*(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference.*

In this Statement the MPCA has provided a complete discussion of each of these points. Please refer to part 3 below.

#### Performance-Based Systems

Minn. Stat. § 14.131 requires an agency to include in its SONAR a discussion of how the agency, in developing the rules, considered and implemented the legislative policy supporting performance-based regulatory systems set forth in Minn. Stat. § 14.002. Minn. Stat. § 14.002, states that:

*The legislature recognizes the important and sensitive role for administrative rules in implementing policies and programs created by the legislature. However, the legislature finds that some regulatory rules and programs have become overly prescriptive and inflexible, thereby increasing costs to the state, local governments, and the regulated community and decreasing the effectiveness of the regulatory program. Therefore, whenever feasible, state agencies must develop rules and regulatory programs that emphasize superior achievement in meeting the agency's regulatory objectives and maximum flexibility for the regulated party and the agency in meeting those goals.*

The 1996 revisions to Minn. R. ch. 7080 addressed the need for regulatory flexibility by allowing local permitting authorities to adopt environmental performance outcomes in local ordinances. This rule (Minn. R. 7080.0179) placed no hindrance on the technologies or designs that could be used to meet these outcomes. These 1996 rule provisions were developed as a companion to the provisions in Minn. Stat. § 115.55 that allow for the establishment of local standards and were developed to set minimum environmental protection outcomes for those local units of government that adopt alternative local standards. Few counties adopted the performance based ordinances or alternative local standards. Currently, about one percent of the systems in Minnesota are classified as performance-based systems. The MPCA believes that this disinterest in the use of performance based designs may be in part due to the fact that these types of systems are more expensive, require more maintenance and have unknown reliability for waste water treatment and performance.

Another reason for the limited use of performance based technologies is that the performance outcomes in the current rules are based on the same degree of environmental sensitivity for all site conditions. The MPCA chose to use the same environmental sensitivity for all sites because of the MPCA's assumption that a water supply well will be located on each site with an SSTS. In order to protect a water supply, the MPCA sets a high level of environmental sensitivity. However, the MPCA believes that these decisions can be made by the local unit of government as well as the MPCA. As a result of the changes being made in this rulemaking (Minn. R. ch. 7082), local permitting authorities will have the authority to determine site specific sensitivities. The MPCA believes that in this type of situation, it is very appropriate to provide the option of regulatory flexibility for specific regional and administrative reasons.

#### Additional Notification

Minn. Stat. § 14.131 requires that an agency either include in its SONAR a description of its efforts to provide additional notification to persons or classes or persons who may be affected by the proposed rule, or explain why these efforts were not made. A discussion of the Agency's efforts to provide notification to interested persons during the rule drafting process is provided in section II of this Statement. Additional notification will be provided at the time the proposed rules are published for public comment through a mailing of the Notice of Intent to Adopt to a list of persons identified as being specifically interested in these rules. A list of the persons receiving the additional notice will be provided to the Office of Administrative Hearings as part of the rulemaking record. The Agency will also post the notice of the comment period on the MPCA's website, along with this Statement and a copy of the proposed rules.

#### Commissioner of Finance Review

Minn. Stat. § 14.131 was amended in 2004 to require state agencies to consult with the Commissioner of Finance to help evaluate the fiscal impact and fiscal benefits of proposed rules on local units of government. Although this consultation process is still being developed, the MPCA has, through agreement with the Department of Finance, submitted a copy of the proposed amendments and this Statement, to staff person at the Department of Finance who is designated as the review contact.

### Notification of Legislative Reference Library

The MPCA will send the required information to the Legislative Reference Library at the time the notice of hearing is mailed.

#### 2. Minn Stat. § 14.127, section 1 (Legislative Review)

*Cost thresholds. An agency must determine if the cost of complying with a proposed rule in the first year after the rule takes effect will exceed \$25,000 for: (1) any one business that has less than 50 full-time employees; or (2) any one statutory or home rule charter city that has less than ten full-time employees. For purposes of this section, "business" means a business entity organized for profit or as a nonprofit, and includes an individual, partnership, corporation, joint venture, association, or cooperative.*

MPCA has estimated the costs for several types of businesses. There are costs to existing SSTS contractor businesses of approximately \$625 (see Appendix 8). For a new individual to become registered the cost will be approximately \$3,300 (see Appendix 6) and the cost to voluntarily upgrade a SSTS license to higher levels will be approximately \$4,000 (see Appendix 5). Costs to small businesses that use SSTS to treat sewage will increase approximately \$23,000 (see Appendix 4), and costs to manufacturers of proprietary sewage treatment products could range as high as \$80,000. The costs to this last category are discretionary in nature – the manufacturer can choose to sell products as part of Type 5 systems to avoid costs. None of these costs to businesses exceed the \$25,000 threshold in this statute.

Similarly, the MPCA has estimated the extent to which these rules will affect local units of government, including “home rule charter cities.” The MPCA believes that approximately 100 cities administer a program to regulate SSTS to some extent. The proposed changes to Minn. R. ch. 7082 will affect these cities. But the MPCA does not believe that the effect will exceed the statutory limit of more than \$25,000 in the first year. A complete discussion of the costs that will be incurred by local units of government is provided in Appendix 1. Moreover, cities are not required to administer SSTS programs. If a city felt that updating their ordinance and administering the new requirements were too burdensome, they could rescind their ordinance and the responsibility for SSTS regulation would fall back to the county.

#### Minn. Stat. § 14.111 (Impact on Agriculture)

*Before an agency adopts or repeals rules that affect farming operations, the agency must provide a copy of the proposed rule change to the commissioner of agriculture, no later than 30 days prior to publication of the proposed rule in the State Register.*

Minn. Stat. 14.111 requires an agency to provide a copy of the proposed rule changes to the Commissioner of Agriculture no later than 30 days prior to publication of the proposed rule in the State Register if the proposed rule has an impact on agricultural land. The MPCA does not believe the subject of this rulemaking, the adoption of SSTS standards, will have any impact on agricultural land or farming operations.

#### Minn. Stat. § 14.116 (Legislative Notification)

*When an agency mails notice of intent to adopt rules under section 14.14 or 14.22, the agency must send a copy of the same notice and a copy of the statement of need and reasonableness to the chairs and ranking minority party members of the legislative policy and budget committees with jurisdiction over the subject matter of the proposed rules.*

*In addition, if the mailing of the notice is within two years of the effective date of the law granting the agency authority to adopt the proposed rules, the agency shall make reasonable efforts to send a copy of the notice and the statement to all sitting legislators who were chief house and senate authors of the bill granting the rulemaking authority. If the bill was amended to include this rulemaking authority, the agency shall make reasonable efforts to send the notice and the statement to the chief house and senate authors of the amendment granting rulemaking authority, rather than to the chief authors of the bill.*

The MPCA plans to send a copy of the notice, proposed rules and this Statement to the chairs and ranking Republican members of the Senate Environmental and Natural Resources Committee, Senate Environment, Agriculture and Economic Budget Division, and to the chairs and DFL Leads of the House Environment and Natural Resources Policy Committee and House Environment and Natural Resources Finance Committee.

The remaining requirements of Minn. Stat. § 14.116 are inapplicable because the MPCA's statutory authority to adopt the rules is found in Minn. Stat. §§ 115.55 and 115.56 and are not new grants of rulemaking authority as described in Minn. Stat. § 14.116.

#### C. Consideration of Economic Impact

Minn. Stat. § 14.131 requires that an agency's Statement of Need and Reasonableness include a discussion of the economic factors associated with the proposed rule. In this Statement the MPCA will provide a general overview of the economic effects, a discussion of the effects of each chapter, a point by point discussion of the factors that Minn. Stat. § 14.131 requires to be addressed. In addition, the Appendices will provide detailed economic assessment and data regarding the effect of these rules.

##### 1. Summary of the General Economic Impact of This Rulemaking

It is important to recognize that this rulemaking does not impose new requirements to treat sewage, conduct county programs, license SSTS professionals or establish water quality protection standards. The foundation of these major components of environmental protection is already established in state rule and statute. In this Statement the MPCA will not address the economic effects of requiring that SSTS adequately treat sewage because the state rules that require sewage treatment have been in effect since 1978. Some elements of these rules will add to the cost of installing and maintaining an SSTS system; but all of the cost of installing and maintaining an SSTS cannot be attributed to these rules. Neither can all the benefits of proper waste treatment be attributed to these rules. The MPCA believes that the proposed rules will provide specific benefits, such as extended system life and effectiveness of waste treatment, but does not ascribe the entire benefit of a well designed, well functioning SSTS to these rules.

The MPCA will not address in detail the cost to local governments that must establish SSTS programs because counties have been required by statute to implement programs to ensure proper installation and maintenance of subsurface sewage treatment systems since January 1, 1999. Although these rules may have an economic effect by requiring some county actions in order to meet the new standards, the MPCA believes that the cost to county SSTS programs will be balanced by a corresponding benefit in the form of increased efficiency from the more clear and detailed standards provided in the rules.

The rules make changes to the current system for licensing SSTS professionals. Although in some cases these changes will increase the cost of training and licenses for SSTS individuals and businesses, the MPCA believes the general effect of these changes will be seen in benefits of enhanced property value, extended SSTS life, improved public health and improvements in the work of SSTS individuals and businesses. The requirements in these rules are anticipated to lower overall costs of building and

operating SSTS systems by improving the quality of work done by SSTS businesses and local permitting authorities (lessening the cost of system repair or replacement, enforcement actions, litigation, etc.), ensuring the use of reliable SSTS components, and fostering good maintenance which will increase system life.

The MPCA believes that in general, the economic impact of this rulemaking will be favorable to SSTS owners and to all current and future users of Minnesota's ground water. Although these benefits can be assigned an economic value and evaluated as part of the economic impact of the rules, in this Statement, the MPCA will not attempt to assess the value of these benefits in economic terms. Compiling cost estimates and benefit descriptions encourages comparisons. There is a natural tendency to compare whether the benefits of a rule will exceed the costs associated with it. A formal cost-benefit analysis is not possible for this rulemaking because of the difficulties in estimating monetary benefits. Although the two sets of values will not be presented equally in this Statement, some general findings can be made about the benefits of each chapter of the proposed rules and are presented in the summaries below.

## 2. Summary of the Economic Impact of Each Chapter

Although the MPCA believes that the overall economic impact of the rules is favorable, the MPCA also believes that it is most important and of greater interest to the regulated community to identify and evaluate the expected costs of the rules in this Statement. Although there is some discussion provided regarding the benefits of the rules, the following discussion of the economic impact will focus on the specific costs that will be incurred as a result of these rules. Additional details regarding costs are provided in the appendices.

### Minn. R. ch. 7080. Design and Operational Standards for ISTS serving 3 or less Dwellings

This chapter establishes standards for the design and construction of ISTS that serve from one to three residences. These standards include the design, installation, operation, inspection, and abandonment of ISTS and individual ISTS components.

The major benefit of this chapter will be the assurance that residential ISTS are designed and constructed to provide proper sewage treatment. Functional ISTS will maintain property value, eliminate re-design, and repair costs. Properly treating waste and eliminating surfacing of sewage will protect public health by minimizing the impact on underground waters and limiting potential exposure to sewage. Local units of government operating ISTS programs will benefit from the consistency provided by these standards which will minimize or eliminate case by case review and negotiation of appropriate standards.

The MPCA believes that the overall economic impact of these standards on those installing new ISTS will be an eleven percent increase (or \$750) above the costs to install a new system under the former rule. The main capital cost increases occur due to increased design and site evaluation requirements and increased requirements for septic tank design, construction, installation, and testing. See Appendix 2. This additional cost increase has been offset by the reduction in some design standards which resulted in a reduced capital cost for some ISTS components. The Agency believes that the increase in capital costs will result in a reduction of over-all system costs over the life of the system.

It is anticipated that the operational costs for ISTS will be subject to a one-time increase of \$210. This is mainly the cost of preparing a management plan for proper system operation. See appendix 3. This cost is anticipated to reduce over all cost of sewage treatment at a residence by extending the operating life of the system. The MPCA believes that the cost of treatment of residential waste is integral to the cost of residential upkeep and does not believe that the standards will present an unreasonable economic burden to homeowners.

Those individuals who own existing systems will realize (on an average) a cost savings of \$940 per owner due to the relaxing of the compliance standards for existing systems, which will result in more systems being classified as being in compliance, therefore requiring less upgrades. See Appendix 7.

Minn. R. ch. 7081. Design and Operational Standards of MSTs –“mid-sized systems”

This chapter establishes standards for the design, siting, construction, inspection and operation of SSTS that serve more than three residences up to flows of 10,000 gallons per day.

The major benefit of this chapter will be the assurance that new MSTs construction that serves larger residential units or businesses will provide proper sewage treatment. Functional MSTs systems will enhance property value, eliminate costs of re-design and repair and protect underground waters and public health.

The major cost of these changes will be the cost to homes and businesses that are connected to a MSTs. The MPCA believes that these standards will have a significant effect on certain types of businesses and clusters of dwellings. Given this lack of guidance in rule, many practitioners chose an approach of multiplying the design and sizing criteria for a single-family home by the number of homes proposed for the cluster. This approach did not take into account factors such as increased groundwater mounding due to concentrated (rather than diffuse) discharges in a single area and environmental impacts such as increased discharge of nitrate and phosphorus in a single location.

Many systems built using the multiplication theory failed and had to be replaced. Practitioners began to use more sophisticated design criteria than were in the rule to ensure system effectiveness and longevity. This proposed rule builds on current best practices. There will be increased costs over systems designed using the multiplication approach, but many of the costs need to be incurred to prevent immediate hydraulic failure of the systems. This cost will be offset by both environmental benefit and by increased system longevity.

The second type of failure for SSTS is one of not adequately treating the effluent. Conventional SSTS treatment processes do not treat for nitrogen which can impact drinking water supplies. Therefore, new standards are included in Minn. R. ch. 7081 which include nitrogen mitigation. This may add significant costs to the system, with the benefit being that the downgradient groundwater will be potable without treatment cost before consumption.

Major cost areas include:

- Higher design flow amounts.
- Nitrogen reduction requirements.
- Phosphorus reduction for some systems.
- More detailed site evaluation processes over individual systems.
- Hydrogeologic investigation.
- Effluent filters required.
- Size soil treatment and dispersal system with a 50 percent increase for periodic resting.
- Designers providing inspection services.
- System Operation and Maintenance manual.
- Operating permit.
- Ownership management costs.

Some of these costs may not be necessary for some systems. A weighted cost estimate indicates that the cost increase for a 5,000 gallons per day MSTs would be approximately \$23,000 (see Appendix 4), which is a 14 percent increase over the former rule.

#### Minn. R. ch. 7082 Requirements for Local SSTS Programs

The major benefit of this chapter will be to provide a framework for the implementation of the rules through local units of government. This framework will provide consistency throughout the state and eliminate the current expense and inefficiency that has been the result of each local unit of government developing their own SSTS program and dealing with issues on a case by case basis.

Minn. Stat. § 155.55, subd. 7, requires counties to adopt an ordinance administering an SSTS program that meets MPCA standards in all areas of the county **not** covered by a city or township SSTS ordinance by 1999. Only one county, Koochiching, has not yet adopted an ordinance. Cities and townships may choose to adopt an SSTS ordinance. Their ordinance must meet MPCA standards and must be as stringent as the county program. If they do to adopt such an ordinance, then they become the local administering authority. It is important to note that cities and townships choose to have a program, it is not required. If the costs of upgrading to the new requirements are too great, the city or town may choose to step out of this area of regulation.

The cost of these changes will be incurred by local units of government in three major areas: cost of ordinance amendment, cost of providing additional training for employees, and added cost of administering the ordinance. The MPCA does not expect that the rules will compel significant changes in how the counties operate their programs (approx. \$2,100/year). However, the rule amendments will cause a one-time transitional cost of \$21,400. See Appendix 1. The MPCA has made grants of up to \$9882 available to all counties to upgrade their ordinances through funds administered through the Board of Water and Soil Resources. Cities and townships that choose to administer SSTS programs will face similar cost burdens to counties in meeting the requirements of these proposed changes.

#### Minn. R. ch. 7083 Licensing

The economic benefit of these changes will be seen in the building of improved on-site wastewater treatment systems. Additionally, SSTS professionals who choose to earn advanced certifications will develop an economic advantage over their competitors since a broader range of work will be open to them over those who stay at the more basic level.

Those individuals who wish to remain at the basic levels will have a \$630 cost increase under the new registration or licensing requirements. See Appendix 8. If registered individuals or licensees wish to increase their level of registration or licensing, the additional costs will be approximately \$4,000. See Appendix 5. For a new unregistered or unlicensed person to become registered, the increase training and experience requirements for the basic level of registration will be approximately \$3,300. See Appendix 6.

### 3. Statutory assessment of economic impact

Minn. Stat. § 14.131 sets out seven factors relating to the economic impact of rules that must be addressed in this Statement. The MPCA's discussion of these factors, based on information that may be obtained by reasonable effort, is presented below

It is important to note that this rulemaking makes a number of major revisions to the SSTS rules. For purposes of this Statement, the discussion of the seven factors to consider for economic impacts will only address the most significant of these changes. Although the MPCA does not intend to address each of the seven factors for every change that is being made to the rules, the MPCA believes that by addressing the

most significant points in detail, this discussion will address the statutory intent that the MPCA provide an assessment of the overall economic effect of the rules.

*(1) “a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule.”*

The classes of persons who will potentially be affected by the proposed rule changes are:

- (a) SSTS owners and future owners (residential and commercial).
- (b) Local units of government with ordinances that regulate sewage treatment (counties, townships, and cities).
- (c) SSTS licensed businesses.
- (d) U of M Onsite Sewage Treatment Program.
- (e) Manufacturers of SSTS components.
- (f) MPCA.
- (g) All persons who drink or otherwise use Minnesota’s water resources.

All of the groups listed above will derive certain benefits from the rules and will also incur costs as a result of the rules. The immediate costs will be borne by the current and future owners of SSTS systems and the taxpayers who will support the SSTS licensing and inspection programs of local units of governments.

- (a) The MPCA estimates that there are 500,000 individual SSTS currently in use in Minnesota, and this number is increasing every year. The standards being proposed in Ch. 7080 will increase the cost for maintenance over the current rule and may increase the cost of new construction. The rules will affect a total of 500,000 homeowners a year but the MPCA does not believe that they will cause an increase in the total cost of owning and operating an SSTS. The MPCA estimates that the cost of an SSTS that meets the standards is less than 3 percent of the cost of an average new home.

The MPCA estimates that there are approximately 11,000 MSTs currently in use in Minnesota and that 180 will be installed each year for new establishments or as replacement systems. The standards being proposed in Minn. R. ch. 7081 will apply to new construction and each year will affect communities using MSTs.

- (b) In Minnesota, all 87 counties currently operate a program to approve and inspect SSTS systems (Koochiching County operates a SSTS program without an ordinance by enforcing chapter 7080 requirements). In addition, there are about 100 municipalities and townships that administer SSTS program. For municipalities and townships, this is a discretionary activity. If they do not choose to have an SSTS program, then the county must administer in that area.
- (c) The MPCA estimates that in Minnesota there are 1800 companies that install and maintain SSTS systems. These companies may incur extra costs if they desire to achieve higher levels of certification and licensure.
- (d) The U of M Extension Service provides the outreach and education programs to instruct SSTS installers and maintenance services. The changes to the rules will require the U of M Extension Service to modify and update their training materials. The MPCA has provided the U of M with a significant grant to assist them in developing these materials. Additional classes will be added for the new disciplines. Costs of the training program are recouped through fees.

- (e) The effect of the rules could be significant for some manufacturers of SSTS products. It is estimated that the testing and registration process could add up to \$80,000 for manufacturers. This cost is discretionary – the manufacturer may choose not to participate in this registration process. However, this increased cost could be offset by increased business opportunities that open up nationally once the product is registered in Minnesota.
- (f) The effect of the rules on the MPCA is discussed in detail in item (2) below.
- (g) The MPCA expects that the increased cost for the citizens of Minnesota will be slight for a new ISTS and that the new rules will add moderate to significant costs to a new MSTTS. However, the environmental improvements that will accrue from the better designs and increased maintenance, especially for MSTTS, will be substantial and include cleaner groundwater, less risk to public health from surfacing sewage and reduced discharge of nutrients to Minnesota’s waters.

(2) *“The probable costs to the MPCA and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.”*

Much of the MPCA’s SSTS resources are currently spent providing technical assistance to a large number of local permitting authorities and SSTS professionals. In many instances the MPCA is assisting with situations that could be handled locally if the SSTS professionals were better trained. The need for better training is evident based on the similarity and basic nature of questions posed to the MPCA when providing technical assistance. Therefore, part of the revisions to Minn. R. ch. 7083 will increase the training and experience needed for SSTS professionals. Establishing a more robust program will save resources for the MPCA, local permitting authorities and the industry. It will specifically save MPCA resources by taking the Agency out of a reactive mode of solving reoccurring problems, allowing a shift to a proactive mode to solve the problem once and train individuals to solve the repeat occurrences. The revisions will save the resources of local permitting authorities and SSTS professionals by ensuring that they have the level of expertise necessary to address problem conditions and eliminating the need to wait for an MPCA resolution of the problem.

Cost increases will occur to the agency for product registration activities. These activities include:

- Program start-up and organizational costs.
- Technical Advisory panel costs.
- Costs associated with staff review.
- Issue registration reports.
- Provide assistance on registration designations.
- Issue registration reports.
- Provide assistance on registration designations.

The product registration start-up costs are estimated to be a 0.5 FTE for the first year and 0.25 FTE as ongoing costs. Other travel and meeting costs are estimated to be approximately \$5,000 per year.

The Agency intends to review and comment on local ordinance submittals per the ordinance changes required by these amendments. The review costs are estimated to be one FTE for two years. After this period, it is estimated that review of periodic SSTS ordinance revisions will require 0.15 FTE’s per year.

The Agency may be conducting audits of LUG administrative programs along with possible enforcement actions against LUGs which do not have any effective SSTS program. The anticipated cost would be 0.4 FTE per year.

The rules should not have a significant impact on state revenue. The MPCA's SSTS program relies on licensing fees and a fee on septic tanks. A \$46,000 increase in revenue to the agency may result due to the rules separating the existing Designer I license into two licenses (Designer and Inspector) and the new service provider license category which may attract new businesses, but it is difficult to predict if this will be the case. However, the new licensing categories and new licensing requirements, which will be more rigorous, may slightly, decrease the number of businesses interested in entering the SSTS industry. The requirements for existing businesses that work with small conventional systems have not increased. The new sewage tank criteria should not result in a significant change in the amount of tanks being used, so no change in revenue from the tank fee is anticipated. Exhibit 460 provides data regarding the number and type of ISTS businesses from which the MPCA's fee revenues are determined.

Other agencies that may be affected by the rules are MnDOT and the Department of Natural Resources (DNR). These agencies own and operate SSTS at parks, rest stops and maintenance facilities. The impact to these agencies will need to be taken into account as they plan activities for the coming year, but should not result in significant staff cost increases. For example, if the DNR has certified employees in charge of the maintenance of campground MSTs, this person will need to gain an additional certification as a service provider to continue doing the work. If DNR instead contracts for these services, the only needed change will be to ensure the company they contract with is licensed as a service provider. Capital costs will increase if state agencies are to be installing MSTs.

*(3) "A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule."*

The MPCA believes that the proposed changes are the least intrusive methods available for improving the delivery of SSTS services. The rules are based on existing SSTS rules that have been in effect for many years in Minnesota, beginning with the voluntary standards laid out in Water Pollution Control 40 in 1974. The MPCA considered that the most reasonable and least intrusive way to continue to regulate SSTS was to expand on and improve the existing administrative system and to not make a radical change to how SSTS systems would be regulated. The MPCA has met with many groups and individuals representing all aspects of the industry and few have commented that the methods proposed are overly intrusive and that an easier, less intrusive method exists. One area of comment related to the fact that the former rules allow performance-based design but not performance-based local regulatory programs. The MPCA has attempted to address these existing impediments as it has developed the new methods presented in chapter 7082. The MPCA believes that these proposed rules are less intrusive and more adaptable than the former rules. The development of the new, more flexible system classification (i.e. "Types") will allow local governments to choose SSTS designs that protect public health and the environment for the least cost. This was done in response to concerns raised when the current rule was adopted that the rule was overly prescriptive, intrusive and inflexible, even though the "performance system" category was offered.

*(4) "A description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule."*

Minn. Stat. § 115.55, subd. 3 require the Agency to write rules concerning SSTS. Therefore, no legal alternative, besides rules, exists to regulate SSTS in Minnesota. It should be understood that the rule is only enforceable if adopted into a local ordinance (Minn. Stat. § 115.55, subd. 2). Because the MPCA was interested in providing the least intrusive method of achieving the goals of this rulemaking, the MPCA did not consider any alternative methods for achieving the purpose of the proposed rule and no

nonalternative methods were proposed by any interested parties. The MPCA responded to the concerns discussed above in the drafting of Minn. R. ch. 7082.

(5) *“The probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals.”*

The cost for complying with the rule will have increased costs for certain SSTS users and certain sectors of the SSTS manufacturing and construction industry, however these increased costs are anticipated to reduce overall costs of onsite wastewater treatment. The level of environmental protection is anticipated to remain the same for ISTS, and the proposed rule will result in a higher level of protection for MSTs. The cost for each sector will be explored individually.

- **ISTS Future Owners.** The MPCA anticipates that the capital costs will rise slightly for those installing a new or replacement system under these proposed revisions. Cost of new system installation is expected to increase by about \$750 for the average system (see Appendix 2). The average ISTS costs \$6500, so the proposed rules will increase the cost by about eleven percent. Most of this cost comes from direct costs that will accrue to the homeowners from rule requirements such as larger tank sizing; testing of tanks for water tightness, installation of flow meters, effluent filters and alarms, and proper abandonment procedures for ISTS that will no longer be used. Some of the costs, such as larger tank sizing, apply to all systems. Other costs, such as flow meters, only apply to systems with pumps. The documented cost increases show the cost increase from the current rule to the proposed rule.

Many ISTS are now installed with many of the features that are part of the new rules. This is not quantifiable, but will further mitigate the cost impact to the homeowner. The MPCA anticipates that the additional capital costs will be offset by reducing many subsequent costs that occur when poor designs or maintenance practices are followed. These subsequent costs relate to system problems and failures due to poor design and/or use of nondurable materials, such as tanks that leak, pipes that sway and bend, and unknown use patterns that result in system overload when, for example, a leaking toilet sends hundreds of gallons a day into the system and hydraulically overloads it. The cost for maintenance is estimated to be a one-time cost of \$210, but will be offset by longer system life which will result in a overall cost savings. See Appendix 3.

- **Current ISTS Owners.** The average owner of a current ISTS will save \$940 under the proposed rule due to the relaxing of the compliance standards for existing systems, which will result in more systems being classified as being in compliance therefore requiring less upgrades. See Appendix 7. The MPCA believes that although the standards of the proposed rules will add eleven percent to the cost of a new ISTS, the new, better designed and maintained system will function more effectively, have a longer expected lifespan, and will have a greatly reduced chance of failure with resulting back up and property damage.
- **Future MSTs Owners.** There are two types of MSTs addressed in the proposed rules, those serving clusters of residences and those serving businesses. These two types are dealt with separately below.

The MPCA anticipates that the capital costs for new residential cluster MSTs will increase by about \$23,000 per cluster. See Appendix 4. According to data from the USDA’s Rural Development Commission, an average large cluster costs \$767,119 and serves an average of 70 homes. This comes to about \$11,000 per residence. It is reasonable to extend this per-unit cost to smaller clusters. For purposes of this analysis, the average MSTs cluster is assumed to serve

15 homes, with a projected average cost of \$165,000. The added cost of \$23,000 due to the changes in the proposed rules would increase the total cost of a residential cluster MSTs by about 14 percent

As discussed above, some portion of the added cost is already borne by future residential MSTs owners since few systems are built today to the bare minimum standards of the current Minn. R. ch. 7080. It is not possible to quantify this difference.

Some of the additional cost associated with this rule is associated with the increase in environmental protection. The MPCA believes that the standards of the current rules do not adequately protect ground water used for water supplies. However, these additional costs for environmental protection are justified by the fact that preventing contamination at the MSTs will minimize costs to downgradient ground water users. The cost of contamination for downgradient sources may involve drilling a deeper well, or providing water treatment before use.

The second type of MSTs serves “Other Establishments” – businesses such as resorts and other businesses located in areas not served by city sewer. Large capital and operational costs could be borne by MSTs for restaurants and other establishments with high strength wastes. However, by not bearing the increased and necessary capital costs, systems receiving high strength wastes have a very short soil treatment system life. Discussions with county staff brought up a very clear example. An MSTs for a grocery store/ice cream parlor combination in St. Louis County quickly overloaded their standard MSTs with high strength waste which resulted in a system life of three years. Systems serving dwellings are assumed to have a life of 25 to 50 years or more. Therefore as previously stated, the MPCA anticipates that these new additional costs will decrease the overall, long term sewage treatment costs. These added costs are expected to be similar to cluster developments because pretreatment will be necessary for both systems.

- Current MSTs Owners. Current MSTs owners will not need to retrofit or replace their MSTs to meet the increased standards. Current MSTs owners will not bear higher costs for system operation over what is currently required. Existing MSTs owners will face significantly higher costs if the current system hydraulically fails and needs to be replaced.
- Local Units of Government with an SSTS Ordinance (LUG). Local units of government with an SSTS ordinance will bear a higher cost of permitting systems. The increased ongoing costs will be approximately \$2,100/year as the result of the new requirements that LUGs: (1) check the soil conditions in the field, (2) review a monitoring plan, and (3) increase training for inspectors employed by the local permitting authority. See Appendix 1.

The rules require that the local permitting authorities verify that the soil conditions of the proposed site match the design of the SSTS. Verification should minimize SSTS failures that occur when local permitting authorities issue compliance certificates without checking soil conditions and system design. These situations have occurred frequently and always cause expense and complications for the SSTS owners. Non-compliance has been discovered at the point-of-sale by private inspection businesses hired by the SSTS owner. Expensive litigation and system re-design have been the result of inspection authorities who do not verify soil conditions and system design compatibility. Some local permitting authorities have recognized that it is better to check the soils at the time of design/construction. Approximately 75 percent of the local permitting authorities currently verify soils at some point in the permit review process. More detail regarding how local permitting authorities manage this issue is provided in this Statement in the discussion of the changes being proposed to Minn. R. 7082.0500.

The second expense for LUGs is the cost for reviewing a management plan in addition to their current review of the design. The MPCA anticipates that this additional review step will not involve a significant resource demand on LUGs. The U of M and the MPCA will develop specific management plans for the most common systems being installed. These plans can be used as prototypes for the use of review staff with the result that additional review time should be minimal, one hour or less.

The third expense for LUGs is the cost associated with providing the extra training required by the rules for initial certification as a regulatory inspector. However, the MPCA believes that the cost of adequate training will be offset by recouping the costs currently associated with LUG staff time spent trying to understand and resolve issues. Maintaining an adequate level of knowledge is critical to operating an effective SSTS program. Additional education is also being required for certification of SSTS professionals. The MPCA believes this will reduce the time it will take LUG staff to review and negotiate with SSTS owners and installers who suggest innovative designs.

- Current SSTS Licensed Businesses. Businesses that are currently licensed to conduct SSTS activities will have increased costs if they wish to upgrade their license from a base level designer or inspector to an advanced or MSTTS level certification. The structure of the rule, with small “other establishments” being covered in 7080, further reduces the added cost burden of the proposed rules.

Those individuals who wish to remain at the basic licensing levels will have a \$630 cost increase under the new registration or licensing requirements (see Appendix 8). If registered individuals or licensees wish to increase their level of registration or licensing, the additional costs will be approximately \$4,000 (see Appendix 5). For a new unregistered or unlicensed person to become registered, the increased training and experience requirements for the basic level of registration will be approximately \$3,300 (See Appendix 6).

- Future SSTS Licensed Businesses. Future SSTS business will face a higher cost of education and possibly mentorship when starting an SSTS business. These costs will be due to the higher standards for education and experience that will result from these rule changes. However, the training, exam and experience requirements to enter this trade are still much less than the requirements for other licensed trades such as becoming a plumber which requires extended periods of apprenticeship as well as education.
- University of Minnesota. The U of M, as part of its Agricultural Extension Service, provides training to SSTS professionals and homeowners. This training program will need to be revised in order to incorporate the changes to the SSTS rules and as a result, the U of M will have an initial increase in costs to revising of the training materials and courses. MPCA has provided a significant grant to the U of M to help defray the costs of this work. The MPCA does not expect that the cost of making the necessary changes to the training program will increase the cost to training participants.
- Manufacturers of SSTS Components. The manufacturers will be first to see increased costs as they bring their products through the registration process. Similar programs in Washington, Pennsylvania, Maryland and Quebec provide some information on the costs of testing. These estimates range from \$55,000 to \$80,000 per treatment technology, and \$2000 for engineer certification of distribution media. Since the Minnesota program is very similar to the Washington program, and has much in common with the others mentioned, it is likely that some

vendors will have already conducted the testing for other markets, or that they would recoup benefits from more than one state. Manufacturers can also bypass the registration process and sell their products as parts of Type 5 systems. If they chose this, there would be no added costs.

- (6) *“the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals.”*

Another way of addressing this question is to ask “what are the benefits of this rulemaking?” Identification of the probable costs of not adopting the rules and continuing with the current system of SSTS management should be the same as a discussion of the benefits of adopting them. The MPCA has not conducted an economic assessment of the benefits associated with these rules. A comprehensive benefit analysis would identify pollutant releases and assess the damage caused by releases based on an assessment of the value of environmental factors. In addition, there should also be an economic assessment of the cost of redesign and replacement of failing SSTS and the effect of effective waste treatment on property value. The MPCA has not conducted a benefit assessment of that level and is instead providing a general discussion of the economic benefits that are expected to result from the adoption of the rules.

The MPCA believes that the overall benefit of the rules will exceed the cost of adopting them. The costs for not adopting the proposed rules, as they relate to specific affected classes of persons are as follows:

- Future ISTS Owners. Not adopting the rules will create costs for future owners of SSTS in the following areas: cost of slower permit issuance, limited implementation of newer technologies, more design inspections, unavailability of technical assistance, shorter system life, uncertainty associated with purchase of an existing home with an unknown compliance status, increased potential for system malfunction or deficiencies, and the cost of litigation to resolve SSTS-related disputes.
- Current ISTS Owners. The cost of not adopting the rules will be the result of shorter system life due to inadequate maintenance. An SSTS that could be designed and constructed to last 50 years will fail and need to be rebuilt if it is not properly maintained.
- Future MSTs Owners. Not adopting the rules will result in a number of costs for the owners of MSTs. In addition to shorter system life because of improper maintenance, the MPCA expects that these mid-sized systems will also lead to water contamination and the expense of mitigation and litigation associated with contamination of neighboring wells. As stated previously, the Agency has many documented cases of system failure of new MSTs.
- Current MSTs Owners. Current owners could benefit from these rules if they would follow the management practices outlined for new MSTs. These practices will increase the system life and lessen the overall system costs.
- Local Units of Government with an SSTS Ordinance. If the rules are not adopted, local units of government will need to spend more time developing case by case solutions to difficult situations and making decisions on use of new technologies. Local units of government will need to conduct more inspections and enforce more violations because the level of training of SSTS professionals will be lower. Local units of government will also need to devote more resources to dealing with homeowners with noncompliant or failed systems because soil conditions were not checked prior to installation. If SSTS are properly maintained they will last longer and there will

be less need for repeated licensing by the local unit of government. Also, LUG staff will be less efficient if they are not as highly trained as required under the propose rules.

- Current SSTS Licensed Businesses. If the rules are not adopted, the businesses that design SSTS will continue to struggle with developing solutions to difficult site conditions and MSTs design criteria. The difficulty in addressing problems will result in increased cost to the consumer of SSTS services and in some cases, make it impossible to site SSTS in certain areas.
- Future SSTS Licensed Businesses. If the rules are not adopted, future SSTS businesses will remain less than adequately trained. This may cause the business to fail or endure unnecessary hardships for themselves, the permitting authority or their customers.
- University of Minnesota. Not adopting the rules will continue the existing system which requires the U of M staff to respond to requests for technical assistance with case by case issues rather than being able to proactively plan for specific training needs.
- Manufacturers of SSTS Components. Not adopting the rules will maintain the current system which is very inefficient in regard to standards and product review. Currently, SSTS component manufacturers must present evidence and gain approval in each of Minnesota's more than 200 SSTS jurisdictions. If the rules are not adopted, manufacturers of SSTS components will not have the benefits of uniform standards and a consistent product review protocol.

*(7) "an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference."*

Federal regulations do not address the design, installation or operation of SSTS, nor does it address local SSTS ordinances or programs, nor do they address the licensing of SSTS businesses.

Federal rules do stipulate the environmental protection outcomes for SSTS that serve a cluster of two or more single family dwellings and all systems serving non-dwellings that serve over 20 persons per day (40 CFR pt. 144 and 146, see Exhibit 439). The environmental standard for these systems is that the effluent must meet drinking water quality standards after they pass through the soil treatment zone and before entering underground water. Minnesota's SSTS rules vary slightly from the federal standard by allowing the use of groundwater dilution with rainfall recharge to mix with the effluent in the saturated layer in order to meet the drinking water standards. If the proposed state rules followed the federal requirements, all systems would be required to employ secondary (biological) treatment and likely highly advanced treatment to remove nitrogen compounds, prior to the wastes being discharged into the soil. Therefore, the state rules will warn that meeting the requirements of these rules may not fulfill the federal requirements (Exhibit 415).

Federal regulations also establish some technical and administrative requirements for land application of septage (40 CFR pt. 503). The Agency is not proposing state standards for land spreading of septage, but the current and proposed rules require licensed SSTS maintainer businesses to follow applicable federal requirements.

VII. LIST OF AUTHORS, WITNESSES AND EXHIBITS

A. Authors

Mark S. Wespetal, P.S.S., Municipal Division, Minnesota Pollution Control Agency.  
Gretchen Sabel, Municipal Division, Minnesota Pollution Control Agency.  
Barbara McCarthy, Municipal Division, Minnesota Pollution Control Agency.

B. Witnesses

The MPCA does not intend to conduct a hearing on the proposed rules unless sufficient requests are received. However, if the need arises, the MPCA anticipates that the following MPCA staff will testify and that additional witnesses may be added prior to a hearing.

Mark S. Wespetal, P.S.S., Municipal Division, Minnesota Pollution Control Agency.  
Gretchen Sabel, Municipal Division, Minnesota Pollution Control Agency.  
Barbara McCarthy, Municipal Division, Minnesota Pollution Control Agency.  
Bill Priebe, Municipal Division, Minnesota Pollution Control Agency

C. Exhibits

A list of MPCA Exhibits 1 through 530 is provided in Appendix 9.

VIII. CONCLUSION

Based on the foregoing, the proposed rules are both needed and reasonable.

\_\_\_\_\_  
Dated:

\_\_\_\_\_  
Brad Moore  
Commissioner  
Minnesota Pollution Control Agency

ONGOING ADMINISTRATIVE COSTS FOR LOCAL UNITS OF GOVERNMENT

Rule Citation	Item	Unit Cost Descripiton	Time for Task (hrs.)	Labor Cost	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	LUG Ongoing Administrative Costs
7080.017	More detail review of soil report	LUG review	1	\$50	\$50	yes	180	100%	\$9,000	\$50	\$50
7080.1500 subp. 2	LUG makes determination on primitive dwelling	Review and decision	0.5	\$50	\$25	yes	200	1%	\$5,000	\$0.25	\$1
7081.0128 subp. 6	Review of groundwater assessment information	Hours/project for LUG	2	\$50	\$100	yes	90	50%	\$9,000	\$50	\$50
7081.0170 subp. 1	Confer with LUG on soils evalution	LUG time	1.5	\$50	\$75	yes	180	100%	\$13,500	\$75	\$75

7081.0290 item D and 7082.0600 subp. 2	All systems must be under operating permit	LUG staff time to develop permit template, review specific sites	4	\$50	\$750	yes	180	100%	\$117,000	\$750	\$750
7081.0290 item D and 7082.0600 subp. 2	All sites must be under operating permit	Annual review of reporting data	2	\$60	\$120	yes	180	100%	\$21,600	\$120	\$120
7082.0040 subp. 5	Increased reporting requirements		5	\$50	\$250	yes	180	100%	\$45,000	\$250	\$250
7082.0050 subp. 5	Alternative local standards need operating permit	Annual review of reporting data	1	\$60	\$60	yes	120	67%	\$7,200	\$40	\$40
7082.0100 subp. 3 item A subitem (10) and 7082.0600 subp. 1	Management Plan needed for all ISTS	LUG review	0.5	\$50	\$25	yes	17,000	100%	\$425,000	\$25	\$25
7082.0300 subp. 4 item E	LUG to record and report tank fee		16	\$50	\$800	yes	180	100%	\$144,000	\$800	\$800
<b>Totals</b>									<b>\$796,300</b>		<b>\$2,061</b>

TRANSITIONAL ADMINISTRATIVE COSTS FOR LOCAL UNITS OF GOVERNMENT

Rule Citation	Item	Unit Cost Description	Time for Task (hrs.)	Labor Cost	Other Costs	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	LUG Transitional Administrative Costs
7082.0040 subp. Item B subitem (2) and subp. 3	County determination if city/town ordinance is as strict		16	\$50		\$800	yes	120	67%	\$96,000	\$536	\$536
7082.0050 subp. 1 item B	All LUGs must update ordinances				\$16,000	\$16,000	yes	180	100%	\$2,880,000	\$16,000	\$16,000
7082.0050 subp. 5	Alternative Local standards need operating permit	LUG staff time to develop permit template, review specific sites	2	\$50		\$100	yes	120	67%	\$12,000	\$67	\$67

7082.0500 subp. 3 item A	MSTS inspector needed if LUG allows MSTS				\$3,500	\$3,500	yes	120	67%	\$420,000	\$2,345	\$2,345
7082.0700 subp. 3	Develop new Certificate of Compliance		8	\$50		\$400	yes	180	100%	\$72,000	\$400	\$400
7082.0040 subp. 4 item A subitem (2)	LUG needs trained administrator				\$400	\$400	yes	180	100%	\$72,000	\$400	\$400
7083.0750	Inspector needed for type IV or V systems				\$2,500	\$2,500	yes	120	67%	\$300,000	\$1,675	\$1,675
<b>Totals</b>										<b>\$876,000</b>		<b>\$21,423</b>

ISTS CAPITAL COSTS

Rule Citation	Item	Unit Cost Description	Assumptions	Time for Task (hrs.)	Labor Cost	Material Cost	Other Costs	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	ISTS Capital Cost for System Owner
7080.1720 subp. 4 item C	Must observe soil structure for soil borings			0.5	\$60			\$30	yes	17,000	100%	\$510,000	\$30	\$30
7080.1720 subp. 4	Multiple soil observations required	per site		0.75	\$60			\$45	yes	17,000	100%	\$765,000	\$45	\$45
7080.1920 I C	Inlet or outlet may be on the side septic tanks							-\$200	no	100	1%	-\$20,000	-\$1	-\$1
7080.1930 subp. 1	Increased septic tank size for ISTS	per tank				\$450		\$450	yes	8,500	50%	\$3,825,000	\$225	\$225



7080.2050 subp. 2	ASTM pipe installation methods required	per system		1.5	\$60			\$90	yes	17,000	100%	\$1,530,000	\$90	\$90
7080.2050 subp. 4 item A subp. item (4)	Must pressurize wide seepage beds	per / seepage bed		3	\$60	\$820		\$1,000	yes	200	1%	\$200,000	\$11	\$11
7080.2050 subp. 4 item J	Pressure distribution cleanouts required	per system		0.75	\$60	\$20		\$65	yes	6,800	40%	\$442,000	\$26	\$26
7080.2050 subp. 4 items F and G	More pressure distribution orifices required, 3' spacing	per / system	This practice has been promoted for years and is the industry standard	0	\$0	\$0	\$0	\$0	yes	-	0%	\$0	\$0	\$0
7080.2100 subp. 2 item C	Allow a 500 gallon lift station vs. a 600 gallon	per/system				-\$75		-\$75	no	2,700	16%	-\$202,500	-\$12	-\$12
7080.2210 subp. 1	Flow meter required on all systems with pumps	per meter		0.5	\$60	\$80		\$110	yes	8,500	50%	\$935,000	\$55	\$55

7082.0500 subp. 3 item A	Infield soils check	LUUG can require others to check so cost is accounted to owner	all includes 17,000 under 7080 and 500 under 7081	1.5	\$50			\$75	yes	17000	100%	\$1,275,000	\$75	\$75
7083.0740 subp. 2	Estimate costs reasonable assurance, technical basis			3	\$60			\$180	no	1100	9%	\$198,000	\$16	\$16
<b>Totals</b>												<b>\$16,874,480</b>	<b>\$752</b>	

ISTS OPERATION AND MAINTENANCE COSTS

Rule Citation	Item	Unit Cost Descripiton	Time for Task (hrs.)	Labor Cost	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	ISTS Operational Costs for System Owner
7082.0100 subp. 3 item A subitem (10) and 7082.0600 subp. 1	Management Plan needed for all ISTS	per plan for the designer to develop the plan and review with system owner	3.5	\$60	\$210	yes	17,000	100%	\$3,570,000	\$210	\$210

MSTS CAPITAL COSTS

Rule Citation	Item	Unit Cost Descripton	Assumptions	Time for Task (hrs.)	Labor Cost	Material Cost	Other Costs	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	MSTS Capital Cost for System Owner
7080.0170	More detailed soil assessment performed, extra form completed	Additional soil assessment		4	\$60		\$200	\$440	yes	180	100%	\$79,200	\$440	\$440
7081.0200	Contour maps required	Determining elevations and map drawing		6	\$60			\$360	yes	180	100%	\$64,800	\$360	\$360
7081.023	Install monitoring points						\$350	\$350	maybe	180	100%	\$63,000	\$350	\$350
7081.0060 subp. 4 7081.0127 subp. 6 and 7081.0170 subp. 9	Phosphous modeling required	Soil samples, lab analysis, interpretation, reporting		6	\$60			\$360	for systems w/in surface water setback	10	5%	\$3,600	\$18	\$18

7081.0080 subp. 4 item D	MSTS discharging to aquifers must meet 10 ppm nitrate	Denitrification technology capital cost					\$10,000	\$10,000	maybe	30	30%	\$300,000	\$3,000	\$3,000
7081.0080 subp. 4 item D	Nitrogen BMP's	Capital cost					\$4,000	\$4,000	maybe	150	70%	\$600,000	\$2,800	\$2,800
7081.0080 subp. 4 item E	Phosphorus Standard	Phosphorus removal capital cost						\$8,000	maybe	5	3%	\$40,000	\$240	\$240
7081.0080 subp. 4 item E	Phosphorus standard	Monitoring cost						\$500	maybe	5	3%	\$2,500	\$15	\$15
7081.0120 subp. 2	Use 110 gallons per bedroom for flow determination	System size will be slightly larger	Old flow values for Type 2 dwellings was 95 to 100 gallons/day				\$0	\$0	yes	180	100%	\$0	\$0	\$0
7081.0130 subp. 2	Increased septic tank capacity	~3 times increase over current rule	\$0.80 gallon, 10,000 gallon increase on a 5K system				\$8,000	\$8,000	yes	180	100%	\$1,440,000	\$8,000	\$8,000

7081.0170 subp. 3	Extra 50% capacity constructed on drainfield	per system	5K system @ \$14/gallon flow cost, but assumed already included in current designs in which the cost numbers were generated, \$11,000/hook- up or \$32/gallon					\$0	yes	180	100%	\$0	\$0	\$0
7081.0170 subp. 1	Confer with LUG on soils evaluation	Designer's time		1.5	\$60			\$90	yes	180	100%	\$16,200	\$90	\$90
7081.0170 subp. 5 item A	Soil pits required			4	\$60			\$240	yes	180	100%	\$43,200	\$240	\$240
7081.0170 subp. 7	Hydraulic measurement in soil			8	\$60			\$480	yes	180	100%	\$86,400	\$480	\$480
7081.0180 subp. 1 item I	Groundwater mounding assessment	Initial modeling		4	\$60			\$240	yes	180	100%	\$43,200	\$240	\$240
7081.0180 subp. 1 item I	Groundwater mounding assessment	Follow-up modeling		30	\$75			\$2,250	maybe	160	90%	\$360,000	\$2,025	\$2,025

7081.0210 subp. 2	Groundwater assessment required	Desktop study to generally characterize groundwater conditions		8	\$60			\$480	yes	180	100%	\$86,400	\$480	\$480
7081.0210 subp. 2	Groundwater impact study for nitrogen	Modeling including reporting		6	\$60			\$360	maybe	180	100%	\$64,800	\$360	\$360
7081.0210 subp. 3	Field or further groundwater assessment when required by LUG	Installation of monitoring wells	Three wells per system				\$8,000	\$8,000	maybe	18	10%	\$144,000	\$800	\$800
7081.0210 subp. 5 and 6	Hydrogeologic interpretations and reporting			6	\$60			\$360	yes	180	100%	\$64,800	\$360	\$360
7081.0240 subp. 3	Effluent filter and alarm required			1.2	\$60	\$240		\$312	yes	180	100%	\$56,160	\$312	\$312
7081.0240 subp. 5	All tanks tested	per tank	4 tanks per MSTS	1.5	\$60			\$90	yes	720	100%	\$64,800	\$90	\$90
7081.0240 subp. 7	Grease trap required	per tank		4	\$60	\$1,200		\$1,440	yes	20	36%	\$28,800	\$518	\$518

7081.0270 subp.	Install groundwater elevation well to check for mounding	per system	not an official MDH "well"	3	\$60	\$50		\$230	yes	180	100%	\$41,400	\$230	\$230
7081.0280 item B	Designer must observe installation and develop report	system	Not full time inspection	16	\$60			\$960	yes	180	100%	\$1,728,000	\$960	\$960
7081.0290 item C	All systems must have O and M manual	Manual development		10	\$60			\$600	yes	180	100%	\$108,000	\$600	\$600
	Systems must meet 10 ppm nitrate	Monitoring cost					\$100	\$100	maybe	30	17%	\$3,000	\$17	\$17
<b>Totals</b>												<b>\$5,532,260</b>	<b>\$23,025</b>	

INCREASE COSTS FOR NEW LICENSING CATEGORIES

Rule Citation	Item	Unit Cost Descripiton	Other Costs	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	Upgrade to New License Category Cost for Current ISTS Business
7083.0740 subp. 1 item B	Advanced designer qualifications	training cost	\$3,000	\$3,000	no	100	20%	\$300,000	\$600	\$600
7083.0740 subp. 1 item C	MSTS designer / inspector qualifications	training cost	\$4,000	\$4,000	no	50	10%	\$200,000	\$400	\$400
7083.0780 subp. 2	Service provider qualifications	training cost	\$3,000	\$3,000	no	100	100%	\$300,000	\$3,000	\$3,000
7083.1000 subp. 1 item C	Increased bond cost - advanced designer		\$150	\$150	no	100	21%	\$15,000	\$32	\$32
<b>Totals</b>								<b>\$815,000</b>		<b>\$4,032</b>

INCREASED COST FOR A NEW INDIVIDUAL TO BECOME REGISTERED

Rule Citation	Item	Unit Cost Descripion	Assumptions	Other Costs	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	New Business to be Licensed Cost
7083.2000	Mentor qualifications			\$50	\$50		100	100%	\$5,000	\$50	\$50
7083.1050 subp. 3	Prepare and submit experience plan			\$50	\$50		100	100%	\$5,000	\$50	\$50
7083.1050 subp. 3 item C	Mentoring in field		Most will be mentored by employer, this is those without that option	\$6,000	\$6,000	yes	500	50%	\$3,000,000	\$3,000	\$3,000
7083.1050 subp. 4	Additional mentor recordkeeping required			\$200	\$200	yes	100	100%	\$20,000	\$200	\$200
<b>Totals</b>									<b>\$3,030,000</b>		<b>\$3,300</b>

COST OF EXISTING ISTS

Rule Citation	Item	Unit Cost Description	Assumptions	Time for Task (hrs.)	Labor Cost	Material Cost	Other Costs	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	Cost for Owners of Existing ISTS
7080.2500	Abandonment of systems not in use			6	\$60		\$50	\$410	yes	15000	3%	\$6,150,000	\$12	\$12
7081.0300	Abandonment of systems not in use			24	\$60			\$1,440	yes	2	1%	\$2,880	\$14	\$14
7080.1500 subp. 4	15% reduction on vertical separation distance							-\$6,500	no	1,500	18%	-\$6,500	-\$1,147	-\$1,147
7080.2500 subp. 1 item B	Remove mercury switches when abandoning	per system abandoned	No cost of disposal to homeowner through HHW; cost to businesses = \$1/switch; 4 switches per system. 1/2 of switches disposed by homeowners.	0.5	\$60	\$0	\$4	\$34	yes	4,000	100%	\$136,000	\$34	\$34
7082.0700 subp. 3 item D	Four-part existing system inspection form		Training for all registered inspectors - 1 day; \$150 in increased record keeping per LUG				\$150	\$150	yes	475	100%	\$71,250	\$150	\$150
<b>Totals</b>												<b>\$6,353,630</b>	<b>-\$937</b>	

COSTS INCREASE FOR EXISTING LICENSED BUSINESSES

Rule Citation	Item	Unit Cost Descripton	Assumptions	Time for Task (hrs.)	Labor Cost	Other Costs	Total Unit Cost	Required?	How Many Impacted - Number?	How Many Impacted - Percent?	Total Cost for all Impacted	Weighted unit costs	Current Licensee Additional Cost
7083.072	License responsibilities		increase over current practice	2	\$60		\$120	yes	1800	100%	\$216,000	\$120	\$120
7083.082	More Continuing Education Hours (Soils) for Designers and Inspectors	Training and Lodging Costs	500 Designers and Inspectors			\$150	\$150	yes	500	100%	\$75,000	\$150	\$150
7083.0900 subp. 3	Split D1 category into inspector and designer		459 D1's			\$100	\$100	yes	459	100%	\$45,900	\$100	\$100

7083.0900 subp. 3	Split D1 category into inspector and designer	added costs to licensees	459 D1's			\$100	\$100	yes	459	100%	\$45,900	\$100	\$100
7083.0900 subp. 3	Limit cost to two licenses	lower licensing fees to those with 3 licensees				- \$100	-\$100	yes	133	100%	-\$13,300	-\$100	-\$100
7083.1000 subp. 1 item A	\$100,000 liability insurance		no cost, this is current practice			\$0	\$0	yes	0	100%	\$0	\$0	\$0
7083.1030 subp. 1 item B	Designers must be trained in a technology			16	\$60	\$250	\$1,210	yes	100	21%	\$121,000	\$254	\$254
<b>Totals</b>											<b>\$490,500</b>		<b>\$624</b>