

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the
Proposed Rule Amendments
Governing the Individual Sewage
Treatment Systems Program,
Minn. R. Ch. 7080

MPCA POSTHEARING
COMMENTS,
May 10, 1999

Hearing Docket: #12-2200-11927-1

Two proposed new parts of Minn. R. ch. 7080 (7080.0400 and 7080.0450) were placed on public notice on November 30, 1998. The entire rule (incorporating 7080.0400 and 7080.0450, as modified by comments received) was placed on public notice on March 1, 1999. Pursuant to those public notices, written comments were submitted to the Minnesota Pollution Control Agency (MPCA) until 4:30 p.m. on March 31, 1999. Public hearings were held on April 19, 1999, on the proposed rules. The record is open for posthearing submissions until the close of business on May 10, 1999.

In accordance with Minn. Stat. § 14.15, subd. 1, and Minn. R. 1400.2230, subp. 1, the Minnesota Pollution Control Agency (MPCA or agency) submits the following comments on the rules and responses to the comments made and issues raised during the prehearing comment period, during the hearings, and in written posthearing submissions.

Included in this document are the following:

- I. Comments with rule citations and agency responses.
- II. Miscellaneous comments and agency responses.
- III. Hearing Request Letters.
- IV. SONAR corrections.
- V. Other attachments supporting the proposed rules.

Comments under item I are organized by their corresponding rule citation. References to the proposed rules are by pages and lines (e.g., RR1.22-24 means page 1, lines 22 through 24) to the rule certified by the Revisor of Statutes on January 20, 1999. References to the Statement of Need and Reasonableness are by page number (e.g., S22). The 110 letters the MPCA received during the Public Notice comment period are referred to by the number MPCA staff assigned to the letter (e.g., L22). References to the hearing transcript are by page and line (e.g., H16.23-25 means page 16, lines 23 through 25). Changes proposed to the Revisor's January 20 version are shown in italics with a double underline for proposed additions and with cross-outs for proposed deletions. The abbreviations most frequently used in this document are: individual sewage treatment system (ISTS), local unit of government (LGU), and Minnesota Pollution Control Agency (MPCA or agency).

**COMMENTS RECEIVED DURING CHAPTER 7080
COMMENT PERIOD ENDING 3/31/99 AND THROUGH THE
HEARING PROCESS ENDING 5/10/99**

Agency Proposed Responses

I. Comments with rule citations and agency responses.

**4658.4040 C. Nursing home rule. Clint Elston 3/31/99 letter. Comment #1.
RR1.21. L145**

COMMENT: Commenter is opposed to rules and statutes that mandate connection to city sewer or use of an ISTS.

RESPONSE: This comment is outside the subject matter of the chapter 7080 rulemaking. The Revisor's office has indicated that 4658.4040 is not open for comment; that office included it here only to show reference changes.

7080.0010 PURPOSE AND INTENT

**7080.0010. Purpose and Intent. Pine County 3/31/99 letter, comment #1. RR2.10.
S9. L143.**

COMMENT: Commenter asks what the term "reasonably" means.

RESPONSE: The agency believes, based on research, that standards contained in this rule do not provide 100% protection of groundwaters, especially during periods of climatic stress or high volumes of flow. However, the agency is comfortable with the level of treatment because it poses little environment or health risk.

**7080.0010. Purpose and Intent. Dakota County 3/31/99 letter, comment #1.
RR2.26. S9-10. L142.**

COMMENT: Language should be added stating "The MPCA shall send a copy to the County on MPCA ISTS Correspondence to local units of government."

RESPONSE: No change is proposed. This is a service that the agency can, depending upon available resources, provide to county governments. The agency can, as a matter of practice, copy counties on all correspondence regarding sub-county ordinances. However to place such a requirement in rule does not seem necessary.

**7080.0010. Purpose and Intent. Pumpco 3/19/99 letter, comment #2. RR2.14-17.
S9-10. L124.**

COMMENT: The rule is not clear as stated in the purpose and intents.

RESPONSE: The agency has attempted to make the rules as clear as possible. The advent of new technologies, legislation and attempts to accommodate the myriad of needs throughout the state has made the rule more complex.

7080.0020 DEFINITIONS

7080.0020 subp. 1b Additive, individual sewage system. Pine County 3/31/99 letter, comment #2. RR3-23-26. S12. L143.

COMMENT: The definition of additive seems to promote their use.

CHANGE: Rule change proposed:

*7080.0020 subp. 1b Subp. 1b. **Additive, individual sewage treatment system.** "Additive, individual sewage treatment system" means a product ~~which is~~ added to the wastewater or to the system with the intent to improve the performance of an individual sewage treatment system.*

REASON: Additives have not proven that they actually perform as claimed. Therefore, it is appropriate that a qualifying statement be added to clarify which products are covered by this definition.

7080.0020, subp 4. Alternative System definition. Agency Comment. RR4.6-8 S13

COMMENT: Definition needs amending due to new part 7080.0400.

CHANGE: The agency proposes the following change:

*Subp. 4. **Alternative system.** "Alternative system" means an individual sewage treatment system employing methods and devices presented in part ~~7080.0910, subpart~~ 7080.0172 or as designated by the commissioner in 7080.0400, subp. 2.*

REASON: Clarity. An alternative system is one that is currently identified in the rule (7080.0172) as described in the SONAR (Hearing Exhibit 3). The clause "or as designated by the commissioner in part 7080.0400, subp. 2" links the alternative definition to the proposed new technology process. See part 7080.0400 discussion.

7080.0020, subp. 4b. Applicable requirements. Agency recommended change. RR4.11-13.

CHANGE: Rule change proposed.

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

REASON:

This change restores the definition of applicable standards to its original language. This is necessary because some counties have not yet adopted an ordinance as required by Minn. Stat. § 115.55. The original change to delete the language was based on the assumption that all counties would have adopted an ordinance by the deadline of January 1, 1999. Restoring the original language is necessary for those areas not covered by a local ordinance.

7080.0020, subp 4c. As-built. Craig Berg 3/29/99 letter comment #1. RR4.19-22. S.13-14. L136.

COMMENT: Would an inspection report covering the rough-in inspection constitute an as-built if all areas outlined are covered?

RESPONSE: No rule change proposed. The agency feels that the definition of as-builts is clear on what documentation is required.

7080.0020, subp 6. Bedrock. Minnesota Department of Health 3/30/99 letter, comment #3. RR5.4-6. S14. L134.

COMMENT: Change the definition of bedrock to: “Bedrock means the layer of parent material that is composed of consolidated or cemented rock particles or composed of interlocking mineral crystals and is either in a weathered or unweathered condition”.

CHANGE: Rule change proposed.

7080.0020 Subp. 6. Bedrock. "Bedrock" means ~~that~~ the layer of parent material ~~which that is consolidated and unweathered.~~ composed of consolidated or cemented rock particles or composed of interlocking mineral crystals and is either in a weathered or unweathered condition. Bedrock also includes layers of which greater than 50 percent by volume consists of unweathered in-place consolidated bedrock fragments.

REASON: The agency will retain the last sentence of the current definition, so designers have criteria to identify bedrock conditions in the field. This comment was also made by the MDH during the 1996 rule revisions. Please see the SONAR (1999 SONAR exhibit 39) for the 1996 revisions, page 15 -16.

7080.0020, subp 10a. Certificate of compliance. Cass County letter submitted at the 4/19/99 hearing. RR5.18-21. S15.

COMMENT: Cass county suggests adding “at the time of the inspection” at the end of the sentence.

CHANGE: Rule change proposed.

7080.0020, subp. 10a. **Certificate of compliance.** *“Certificate of compliance” means a document written after a compliance inspection certifying that a system is in compliance ~~as specified under part 7080.0060, and signed by a qualified employee or licensee~~ with applicable requirements at the time of the inspection.*

REASON: This has been a topic many times at inspection workshops and at the ISTS Advisory Committee. In the early licensing program, there were many property owners who thought of the inspection as an implied warranty; however, since 1996 there have been several information efforts directed at property owners and ISTS professionals.

The rule was written to clearly identify the specific failure criteria. The agency participates in LGU workshops and at University of Minnesota workshops to educate. The agency also offers a recommended existing system inspection form with a clause directed towards this comment, realizing nothing is foolproof to avoid litigation. This language was reviewed by the attorney general’s office:

I hereby certify as a State of Minnesota licensed Inspector, or Qualified Employee that my observations recorded are accurate as of the date for the site stated above. I hereby certify that all inspection work was completed according to applicable requirements. No determination of future hydraulic performance can be made due to lack of sufficient size, unknown conditions during system construction, future water usage over the life of the system, abuse of the system, and/or inadequate maintenance all of which will adversely affect the system.

7080.0020, subp. 11b. Clean sand. Dave Gustafson comment. RR8 and RR61. S16-17. L139.

COMMENT: Clean sand specification should be in subp. 11b.

RESPONSE: See Requirements have been moved from the definitions and relocated. Many reviewers indicated that the clean sand definition was actually a standard and not a general definition, and the agency was advised by many reviewers that the definition should be listed as a standard. See RR61 and S16-17.

7080.0020, subp. 12b. Disclosure. Agency recommended change. RR7.21. S18.

COMMENT: The term “existing” should be changed to “ISTS.”

CHANGE: Rule change proposed.

Subp. 12b. Disclosure. *“Disclosure” means any conclusions or statements regarding an ~~existing~~ ISTS or abandoned ISTS made by the owner of a property with or served by an ISTS to fulfill the requirements of Minnesota Statutes, xx section 115.55, subdivision 6. ISTS information provided by someone other than the property owner must meet the requirements ~~under~~ in part 7080.0300 7080.0315, subpart 6 2, item E.*

REASON: The term “existing” is recommended to be removed from the proposed definitions (see 7080.0020, subp. 16b; RR9.10-12. discussion below). Therefore, a rule search was conducted and each use of the term “existing” re-evaluated to determine if the term is impacted by the change and to see if it is necessary to remove the term “existing.” In this case, the term “existing” is not necessary to the understanding of this definition and can be reasonably replaced with the term “ISTS” with no change in meaning or implementation.

7080.0020 subp. 15a. Drainfield Rock. Jason Peterson 2/25/99 concerns, comment # 3. RR8.19-26. S20. L30.

COMMENT: Concerned that the term igneous rock precludes rock contaminated with pieces of Dolomite limestone.

RESPONSE: No rule change proposed. The proposed definition allows other similar, insoluble, durable and decay resistant material. Therefore, if a dolomite limestone meets this requirement it can be used in place of igneous rock. This decision was reached at the 4-1-1999 ISTS Advisory Committee meeting.

7080.0020, subp. 16. Dwelling. Aitkin County 2/26/99 letter, comment #1. RR9.2-7. S20. L76.

COMMENT: Commenter asks if an in-home daycare is an “other establishment.”

RESPONSE: No rule change is proposed. If the system receives sewage from more than 20 persons or the waste is from non-domestic sources, the system is classified as an other establishment. See SONAR (Hearing Exhibit 3), page 20.

7080.0020, subp. 16b. Existing system. MN Association of Realtors 3/4/99 letter, comment # 2 and MN Association of Realtors 1/19/99 letter, comment #1 and MN Association of Realtors 1/19/99 letter, comment #3, with similar concerns raised in Carlton Co. comment letter dated 3/22/99, comment #1. RR9.10-12. S21. L11. L79.

COMMENT: Commenter indicates that existing systems should be defined as any system that currently exists.

CHANGE: Rule change proposed: delete definition of existing system in 7080.0020.

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

REASON: A word search of the use of the term "existing system" indicated that the term was not needed and that the common usage of the word "existing" was sufficient. For the purposes of this rule, all systems not meeting the requirements of "new construction or replacement" (7080.0020 subp.24b, RR12.25-26 and

RR13.1-3) would then, by default, be considered as an existing system. Other parts of the rule have also been clarified, as applicable, per this change. Please see RR7.21, RR22.3, RR22.25 and RR30.13 changes.

7080.0020, subp. 16c. Failing system. Pumpco 2/24/99 meeting with the agency. RR9.13-17. S21-22.

COMMENT: Commenter asks how the failing system definition relates to performance systems.

RESPONSE: In answer to the commenters question, 7080.0060 clearly describes systems and the compliance requirements for all types of systems. If a system is designed per 7080.0179 (performance, RR25.20-21), and is meeting its performance requirements, then the system is in compliance.

7080.0020, subp. 16c. Failing system. Carlton County letter, comment # 2. RR9.13-22. S.21-22 S204-207. L131.

COMMENT: Carlton county asks if the definition for a failing system should include a size requirement. Commenter explains it is problematic when a compliance inspection is required for a bedroom addition because it is unclear if the system should be approved if it does not meet the sizing requirement for the new bedroom.

RESPONSE: No rule change is proposed per this comment. In an earlier draft of the rules a size requirement for existing systems was proposed if a bedroom addition was to be built. This proposal came under much criticism when the agency solicited comments at regional meetings. The criticism was based on the time and effort required to determine sizing when in some cases sizing could not be determined with much accuracy. Therefore, the agency dropped the proposal. The ISTS Advisory Committee discussed this issue at the 4/1/99 meeting and the consensus was that a size determination should not be required.

7080.0020, subp. 16c. Failing system. MN Association of Realtors 3/4/99 letter, comment # 3; Don Kriens 3/11/99 letter (incorrectly referenced as 7080.0010 subp 16 C.); Pine County 3/31/99 letter comment # 3, Dan Hecht, Clearwater County; 4/19/99 hearing testimony, Cass County letter submitted at the 4/19/99 hearing, Koochiching County hearing exhibit 12, Aitkin County 2/26/99 letter, comment #2 (incorrectly referenced as Subp. 16a) and Dave Gustafson 3/31/99 letter. RR9.13-22. S21 (note that reference at the bottom of S21 incorrectly is identified as 16a; it should be 16c), statute (Attachment 2), and also S204-207. L79. L90. Comments and response (Hecht): H102.21-25, H103.1-25, H104.1-25, H105.1-13 (Exhibit 11). Comments (Olson): HH102.24-24, H53.18-25, H54.1 (Exhibit 12) Response: H55.9-25, H56.1-19. L76. L139.

COMMENT: The Realtors' concern is that the Agency overstepped its authority to include in its definition of failing system a tank that obviously leaks below the designed operating depth and a system which is loaded greater than 1.2 gallons

per square foot per day with a hydraulic head of greater than 30 inches. Mr. Kriens and Mr. Hecht are concerned that this now would require sizing a system during a compliance inspection. Cass County suggests adding “unless it is a system defined in 7080.0179” to the end of the definition. Koochiching County states that less than 3’ and/or a loading rate of more than 1.2 gallons/ft²/day causes many systems to fail that are not causing any problems. Aitkin County and Mr. Gustafson requested that “designed operating depth” be defined. Mr. Gustafson also requests that operating depth be clearly applied to the inspection criteria.

CHANGE: Rule change proposed.

*Subp. 16a. 16c. **Failing system.** "Failing system" means ~~any system that discharges sewage to a seepage pit, cesspool, drywell, or leaching pit and, other pit, a tank that obviously leaks below the designated operating depth, a soil system that is loaded greater than 1.2 gallons per square foot per day, a soil system with a pressure head no greater than 30 inches, or any system with less than three feet of soil or sand between the bottom of the distribution medium and the saturated soil level or bedrock. In addition, any system posing an imminent threat to public health or safety as defined in subpart 19a shall be considered failing. Upgrade requirements for these systems are found under parts 7080.0060, subparts 3 and 4, and 7080.0315 or 7080.0350 the required vertical separation as described in part 7080.0060, subpart 3.~~*

REASON: Consistency and clarity. The agency reviewed the statute and agrees that the failing system definition should not include the language proposed earlier (now shown as crossed out). The language also should not be here because it forces the inspector to check sizing; an item already agreed upon to NOT require. It can be extremely difficult, particularly in the winter season, to establish the sizing of the system and is unreasonable to require. The language *concept* is, however, needed and is discussed later in this document (see new definition “other pit”). The agency proposes not to include the language recommended by Cass County. Systems built in accordance with Part 7080.0179 require some vertical separation to exist. It is reasonable for the agency to require inspectors to verify that vertical separation exists. See RR94.25 and proposed changes to part 7080.0060 within this text.

7080.0020, subp. 16c. Failing system. Definitions. Dakota County 3/31/99 letter, comment #2. RR9.16. S21-22. L142.

COMMENT: Delete the word “no” to correctly define a failing system.

RESPONSE: This language has been removed. See above comment.

7080.0020, subp. 16c. Failing system. MN Association of Realtors 1/19/99 letter, comment # 3. RR9.13-22. S21. L11.

COMMENT: The Association requests clarification on the requirements for failing and non-complying systems.

RESPONSE: No rule change proposed.

The agency does not recognize the term “non-compliance” in the manner suggested by the Association. The Association appears to desire separate terms for failing (typically, seepage pit, drywell, leaching pit, less than 3’ vertical separation) and “non-compliance” term (seepage pit, drywell, leaching pit, at least 2’ of separation). The agency sees this only as a confusing matter and defines the compliance criteria clearly (RR25.3-23) rather than adding another term. It is clear within the rule and is has used in the industry for quite some time. For example, if a trigger for an inspection occurred, such as a bedroom addition, an inspection was conducted, the system had 2’ of vertical separation, and then the system was labeled as “non-compliance” the sale of property would be thus hindered. The Agency can see that if an owner were told that he or she had a non-compliance system but it didn’t require updating at this time, the owner would hesitate on the house purchase. The agency chooses to avoid such a conflict by stating that a system is in compliance if it has 2’ of vertical separation in a non-SWF area, and is not a seepage pit, drywell or leaching pit, and is not a imminent threat to public health or safety, and is built before 4/1/96).

7080.0020, subp 16c. Failing system. Tom Dimond 3/23/99 letter RR9.13-22. S21-22. L128.

COMMENT: Commenter asks why drywells are categorized as a failing system if they can meet or exceed a performance standard.

RESPONSE: No rule change is proposed. The proposed rule is divided into two distinct technical portions. In the first portion compliance is determined by adherence to a prescriptive design. In the second portion compliance is determined by proving through visual examination and/or analytical testing that the system is in compliance. Historically, seepage pits were judged under a prescriptive standard in which seepage pits, by virtue of their design, were failed. In the proposed revisions two different pathways exist to grandfather the use of seepage pits.

The first pathway is that the local ordinance approves the use of seepage pits (Minnesota Statutes section 115.55, subdivision 5a (f)) as long as public health and the environment are protected. To ensure that not just any pit or excavation can be labeled as a seepage pit, the revised rule sets out the parameters of a seepage pit (7080.0950 RR.124-125).

The second pathway is the seepage pit meeting the performance standard. This can be done if allowed by local ordinance (7080.0305 subpart 10 - RR86.20-26 and RR87.1-2). This grandfathering could occur by proving the system without

modification is adequately treating and disposing of the sewage, or by making modifications to meet the performance criteria.

7080.0020 subp. 16c Failing system and 7080.0060 subp. 3 Compliance criteria. Tom Dimond 3/23/99 letter and 4/19/99 hearing testimony. RR8.13-22 and RR25.3-24. S21-22 and S49-51. L128. H94.24-25 to H102.1-3.

COMMENT #1:

a) Mr. Dimond states that the state's position on drywells and their viability is unclear. b) He states that drywell systems work and they should be allowed to show that they work. c) He states that the use of drywells should be allowed for existing and new systems based on the October 1980, Environmental Protection Agency's design manual.

RESPONSE: No rule change proposed. a) Minn. Stat. § 115.55, subd 5a (f) clearly identifies the state's position: "if a seepage pit, drywell, or leaching pit exists and the LGU with jurisdiction over the system has not adopted local standards to the contrary, the system is failing and must be upgraded, replaced, or its use discontinued within the time required by subdivision or local ordinance." The agency has established, in proposed 7080.0950, the acceptable criteria for seepage pits if the local permitting authority wishes to allow continued use of existing seepage pits. See SONAR (Hearing Exhibit 3), pages 204-207.

b) See previous response to Mr. Dimond's 3/23/99 comment letter above.

c) The Environmental Protection Agency document as read in the testimony has not been updated since October 1980. Seepage pits are included and are, as partially testified and quoted from the manual, "generally discouraged by many local regulatory agencies in favor of trench or bed systems." The document includes recommended limitations on the use of seepage pits such as use where groundwater levels are deep at all times (a condition uncommon to most of Minnesota) and where land area is too limited. The document quotes, including the underline, "Maintaining sufficient separation between the bottom of the seepage pit and the high water table is a particularly important consideration for protection of groundwater quality." Since the majority of sites don't qualify for this and since other system designs that are known to treat effectively exist, the legislature has stated in law that seepage pits are failing and must be upgraded unless the LGU finds they can be used and still protect public health and the environment (sometimes a difficult and costly task because groundwater monitoring would most likely be necessary with false-negative results a concern).

COMMENT #2: There has been a limited amount of testing on dry well systems and it's hard to merit saying they are good or bad.

RESPONSE: No rule change proposed. The agency agrees with Mr. Dimond that limited data exist on both the treatment and hydraulic performance of seepage

pits. The agency's research dollars for ISTS are currently being spent to study new technologies. The agency has discussed this issue with the City of St. Paul officials, and the City may be willing to instrument Mr. Dimond's seepage pit to monitor for performance.

COMMENT #3: The wording should be changed to nonconforming or obsolete instead of failing.

RESPONSE: See also MN Association of Realtor's comment and response for 7080.0020, subp. 16c. As additional background, the Agency has worked extremely hard over the last eight years to clarify misuse of terms. Inspectors were hired to "certify" an ISTS and terms such as "functioning," "working," "non-complying," "operational," "obsolete," "nonconforming", and others were used. The industry and related partners (realtors, mortgage bankers, lenders) were all at odds because of the confusion over what these words really meant. The 1996 rule clearly established the new language in which a system falls into one of three categories: failing, an imminent threat to public health or safety, or compliant. An interim category for a "nonconforming" system is not necessary or reasonable. The 1996 language continues to be used in the proposed rules. The design of a system is critical to determining if treatment and disposal can occur; failing and imminent threat are the symptoms.

Note that ISTS perform two functions, treatment and disposal. Therefore, a compliant system must perform both functions. An existing system inspection looks at compliance through treatment and hydraulic function; the system does not need to meet every standard as for a newly constructed system. Therefore the existing system is labeled compliant, even though it may be "obsolete" because it fails to meet the standards for a new system. If a system is not treating and not disposing properly, it is termed an imminent threat to public health and safety. If the system is adequately disposing (below grade) but not treating, it is a failing system. In other words, a failing system is one which is adversely affecting groundwater quality.

COMMENT #4: Mr. Dimond suggests it is not clear that LGUs can continue to use existing seepage pits. He suggests rewording to say: "The LGU may allow the continued use of drywells. The length of time for their continued use is solely at the discretion of the LGU. Nothing in these rules precludes that local option."

RESPONSE: The proposed rule, as noticed, does allow the LGU to continue use of seepage pits. However, the arrangement of the rule is such that expressing this concept in one area of the rule, makes other links between failing systems and seepage pits more difficult to understand. Currently seepage pits are clearly defined as failing .0020, subp. 16c (RR9.13-21) and inspectors understand to look for failing systems in 7080.0060, subp. 3 A (2) (RR25.7) to determine compliance. This definition of failing can be modified only through a local

ordinance as described separately in 7080.0305, subp. 6 (RR82.24-26 - RR86.1-11). The agency proposed to distinctly separate the compliance criteria for clarity. LGUs using alternative local standards then will note the differences in the ordinance versus chapter 7080 as required in Minn. Stat. § 115.55. Taking the suggested language would in effect require everything in the rule to be followed by “unless the LGU has an alternative local ordinance.”

Please also refer to RR124.9, the design guidance for LGUs to determine if existing seepage pits comply. It is not known if Mr. Dimond's review included 7080.0950 or whether he just reviewed the references to seepage pits in 7080.0020 subp. 16c and 7080.0060 subpart 3. The Agency has met with the City of St. Paul officials (regarding Mr. Dimond's system) about the statutory requirements concerning existing seepage pits, and they understand their authority to allow the continued used about existing seepage pits.

7080.0020, subp. 16h. Flow measurement. Cass County letter submitted at the 4/19/99 hearing. RR10.11-13. S23.

COMMENT: Cass County requests the word “accurately” be added to the sentence.

CHANGE: Rule change proposed.

7080.0020, subp. 16h. Flow measurement. “Flow measurement” means any method to accurately measure water or sewage flow, including water meters, event counters, running time clocks, electronically-controlled dosing or any combination thereof.

REASON: It is reasonable to add the word “accurately” because flow is a critical determination for design. Inaccurate use of flow measurement can result in premature overloads and failures of septic systems. Although the original language implies that people will use accurate flows, it may well be necessary to specifically say so.

7080.0020, subp. 17a. Gas deflecting baffle. Agency recommended change. RR10.19-21

CHANGE:

Rule change proposed (deletion of the definition).

REASON:

See rationale for deletion in discussion of 7080.0130, subp. 3 B.

7080.0020, subp. 17a. Gas deflecting baffle. Pumpco 2/24/99 meeting. RR10.19-21. S24.

COMMENT: Remove mandate for gas deflecting baffles or at least from existing systems. This mandate creates bad competition, requires people to enter tanks (i.e., hazardous situation) to add the gas deflecting baffle, and the burden to add

gas deflecting baffles for new tanks will fall on the tank manufacturer.

CHANGE: Rule change proposed.

7080.0130, subp. 2 H. *The outlet baffle ~~A gas deflecting baffles baffle or effluent screen shall be installed on at the outlet of the final septic tank which services an other establishment.~~*

REASON: The agency agrees that the issues raised by the commenters are valid, that requiring a gas deflecting baffle could be dangerous (if it requires someone to enter a tank) and that the provision should be deleted.

**7080.0020 subp. 18a Greywater system. Pine County 3/31/99 letter comment # 4.
RR10.24 S24 L143**

COMMENT: The term “other similar system” should be defined.

RESPONSE: No rule change proposed. The agency added this phrase in the 1996 rulemaking concerning products that separate waste. The definition now includes systems that discharge a small amount of blackwater (i.e., compost tea). This amount of blackwater is not enough to disqualify a system as a greywater system.

7080.0020. Geotextile. Dave Gustafson comment. RR10. L139.

COMMENT: Mr. Gustafson suggests a geotextile specification be added.

RESPONSE: No rule change is proposed. The agency, at this time, does not have adequate information to determine the proper specifications for geotextile fabric. This issue was studied in depth in the 1996 rule revisions and through many ISTS Advisory Committee meetings without arriving at acceptable specifications.

**7080.0020, subp. 18. Definitions. Dakota County 3/31/99 letter, comment #3.
RR10.22. L142.**

COMMENT: Include a definition of greywater.

RESPONSE: Current rule 7080.0020, subp. 18 is the definition of greywater.

**7080.0020 subp. 19 Holding tank Definition. Pine County 3/31/99 letter comment # 5.
RR11.3-4 S24-25 L143**

COMMENT: Commenter asks why the term “approved” is deleted when describing disposal areas.

RESPONSE: See SONAR (Hearing Exhibit 3) pages 24 and 25.

**7080.0020, subp. 19c. ISTS professional. Pumpco 2/24/99 meeting, comment # 5.
RR11.12-15. S25. L74.**

COMMENT: Modify the language of ISTS professional for greater clarity.

RESPONSE: No rule change is proposed. The term describes persons doing ISTS work. It follows the statutory definition in Minn. Stat. § 115.55, subd. 1(h). For example, if both qualified employees (registered state and local unit of government employees) and designated registered professionals (licensed business employees) need to be identified with a certain provision in the rule, the term "ISTS professional" is used as shorthand, for brevity.

7080.0020, subp. 19c. ISTS professional. KBM 3/24/99 letter comment # 3. RR11.12-15. S25 and S210-211. L129

COMMENT: The requirements in the rule to become an ISTS professional are not rigorous enough so one can be designated as a professional. Confusion can exist with the term Professional Engineer.

RESPONSE: No rule change is proposed. The agency has not been aware of any confusion between the terms ISTS Professional and Professional Engineer. Therefore, the need to change the term is not evident. Also, the agency feels that the ISTS industry is truly a profession which takes adequate training, skill and expertise in order to design, install, inspect and maintain ISTS.

7080.0020, subp. 22D. Local unit of government. Agency recommended change. RR12.8-9.

CHANGE: Rule change proposed.

*Subp. 22e. **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.*

REASON: In the noticed rule there are two terms used for local regulators, the first is "permitting authority" and the second is "local unit of government". These terms are used interchangeably and mean the same regulatory entity. Therefore the agency proposes to replace all references to "permitting authority" with "local unit of government". The additional language is proposed to clarify that the authority of the local unit of government is restricted to its area of jurisdiction.

7080.0020, subp. 22e. Lot. Pumpco 3/19/99 letter, comment # 3 (incorrectly referenced as page 10 lines 10-11). RR12.10-13. S27. L124.

COMMENT: "Lot" has different meanings throughout the rule.

RESPONSE: No rule change is proposed. Upon review and discussion with Pumpco at the 4/1/99 ISTS Advisory Committee meeting, it appears we now agree that the term "lot" does not have different meanings in the rule. See also response under 7080.0179, subp. 2C3. Performance. RR78.11-12.

7080.0020, subp. 22e1 (new). Medium sand. Agency recommended change.

R12.

COMMENT: The term medium sand needs to be defined.

CHANGE: The agency proposes the following change:

Medium sands. "Medium sands" means soil particles which range in size between 0.25 millimeters and 0.5 millimeters.

REASON: The term medium sands is used in various sections of this chapter. A definition is needed to adequately identify this material.

7080.0020, subp. 23. Mottling. Dakota County 3/31/99 letter, comment # 4 (letter incorrectly references line RR25) and Pine County 3/31/99 letter comment #8. RR12.20. S27-28. L142 and L143.

COMMENT: Add mottling definition to reference redoximorphic features.

CHANGE: Rule change proposed.

7080.0020 subp. 23 Mottling. "Mottling" means the same as redoximorphic features in subpart 28e.

REASON: This change is for clarity. The industry is accustomed to the term "mottling," however, "redoximorphic features" is the standard technical term in the soils industry and is proposed to be used in the ISTS industry when describing soils. The redoximorphic features definition allows more factors to be considered in soils determinations than simply mottling.

7080.0020, subp 24. Mound system. Minnesota Department of Health 3/30/99 letter, comment #4 and Pine County 3/31/99 letter comment # 4 and Agency recommended change. RR12.21-24 and RR12.2. S21-24, 28. L134. L133.

COMMENT: Mound system definition needs more specificity to distinguish it from at-grade systems.

CHANGE: Rule change proposed.

Subp. 24. Mound system. "Mound system" means a system where the soil treatment area is built above the natural elevation of the soil to overcome limits imposed by proximity to saturated soil or bedrock, or by rapidly or slowly permeable soils system constructed on original soil. soil treatment system with a rockbed elevated above the original soil with clean sand to overcome soil limitations.

REASON: Clarity. The change is needed to establish more clarity between an at-grade system and a mound system.

7080.0020, subp. 24b. New construction. Agency recommended change. RR13.2 S28-29.

COMMENT: The language “currently active permit” is unclear.

CHANGE: Rule change proposed.

*Subp. 24b. **New construction.** "New construction" means installing or constructing ~~a~~ an entirely new individual sewage treatment system ~~in its entirety; artificial drainage~~ or collector system; or altering, extending, or adding capacity to ~~an existing individual sewage treatment~~ a system under a currently under construction active permit and before issuance of the initial certificate of compliance.*

Suggestion xx

*Subp. 24b. **New construction.** "New construction" means installing or constructing ~~a~~ an entirely new individual sewage treatment system ~~in its entirety; artificial drainage~~ or collector system; or altering, extending, or adding capacity to ~~an existing individual sewage treatment~~ a system under a currently under construction active permit and before which has not been issued an of the initial certificate of compliance.*

So, a system that was built w/o a permit is not new construction, that is not perfect but OK. Also, (this is too difficult to change right now) but we should of called this a “new ISTS” versus “new construction”. We do not refer to old systems as existing construction.

REASON: Clarity. The phrase “currently active permit” is unclear because a permit can be issued based on a submitted design and not be contingent on a final inspection or submittal of as-builts. Each LGU can manage its own permit program in the way that best suits its needs. It is reasonable to clarify that new construction means construction before the initial certificate of compliance is issued because then it clearly describes where in the process of construction one is (i.e., the system is under construction now; it has never had an inspection or certificate of compliance), rather than tying it back to a permit requirement.

7080.0020, subp. 24c. New technology. Ayres Associates 3/19/99 letter, comment # 1 and Cass County letter submitted at the 4/19/99 hearing. RR13.4-8. S29. L123.

COMMENT: Ayres suggests eliminating the word design. Cass County suggests that the term “new technology” be changed to “approved technology.”

CHANGE: Rule change proposed:

*7080.0020, subp. 24c. **New technology process.** “New technology process” means a product’s sewage and disposal ~~or design~~ process, combination of components, component of a product; or modification to existing components such, that has been approved by the agency in accordance with this chapter and is to be considered a standard system*

before actually being included by amendment to this chapter designated by the commissioner in part 7080.0400.

Suggestion: xx

7080.0020, subp. 24c. New technology process. “New technology process” means the process described in 7080.0400 in which a product ~~or design~~ process can be designated as a alternative or standard system, combination of components, component of a product; or modification to existing components, that has been approved by the agency in accordance with this chapter and is to be considered a standard system before actually being included by amendment to this chapter

Do word search, do we use this term in the rule?

This is what you sent me:

7080.0020, subp. 24c. New Technology. “New technology” means a ~~product sewage and disposal or design~~ process, combination of components, component of a product; or modification to existing components, that has been approved by the agency in accordance with this chapter and is to be considered a standard system before actually being included by amendment to this chapter designated as such by the commissioner in part 7080.0400.

REASON: Clarity. The Ayres & Associates letter suggests many changes for the treatment of new technology. The comments generating change are reasonable to clearly identify what the approval components will actually be and what must be submitted. In particular, a distinction needs to be made between the product itself and the process of designation.

It is not the design of a product the agency is looking for; it is the process or “treatment train.” The agency expects to see submittal recommendations for tanks, if necessary, prior to the new technology, information on the new technology such as percent removals for certain constituents (e.g., BOD₅, TSS, Fecal Coliform and other applicable parameters), and ultimately the recommended final treatment or disposal (e.g., some will request higher hydraulic and/or organic rates, downsizing, and/or less vertical separation). The agency will look at the “product’s sewage and disposal process,” then designate the new technology submittal as an alternative system or a standard system depending on fulfilling the requirements of the new 7080.0400. The term new technology scares realtors, mortgage bankers and some LGUs. See also proposed 7080.0400.

The Cass County comment is not a proposed rule change because the term “new technology” is used in the statute. It is used in the rule for consistency even though the agency does acknowledge that the term “new” may imply that the world has never seen such technologies. This most certainly is not the case for a lot of the technologies already planning to be used and currently used in Minnesota. It does not appear necessary to make the distinction.

**7080.0020, subp 25a. Other systems. Craig Berg 3/29/99 letter comment #1.
RR13.21-23-22. S.30. L136**

COMMENT: Should label these designs as something other than “Other”.

RESPONSE: No rule change is proposed. The agency has tried to think of a replacement name for the current term “experimental system;” however no suitable term could be found. The agency has asked for assistance from the ISTS Advisory Committee and others to find a suitable term, with none being offered. The agency’s goal is simply to be rid of the experimental term since it was so negatively and inappropriately characterized by entities outside of the industry.

7080.0020, subp. 25x. Other pit. Agency recommended change. RR13.25. Please see S22 and S204-206.

COMMENT: A definition for “other pit,” a term used in the failing system definition is necessary.

CHANGE: Rule change proposed.

*Subp. 25x. **Other pit.** “Other pit” means any pit or greater than 30 inches and used for sewage treatment or disposal.*

Suggestion: xx

*Subp. 25x. **Other pit.** “Other pit” means any pit or other device which is greater than 30 inches in height and used for sewage treatment or disposal.*

REASON: The term “other pit” is now proposed under the definition of failing system (RR9.14). Other pit was added to the definition to clearly establish that 55-gallon barrels, chevy cars and trucks, and other pits not defined within this rule, but used for sewage treatment or disposal, constitute failing systems. The 30 inch depth is based on maximum sewage depths allowed under current design. See S22 and S204-206.

7080.0020, subp. 26a. Performance systems. Cass County letter submitted at the 4/19/99 hearing and James Baker 4/19/99 hearing testimony. RR14.1-3. S30. H67.4-12.

COMMENT: Cass County asks why performance systems are described as necessary “to provide long-term performance” when standard systems are not held to the same standard.

CHANGE: No rule change proposed. Standard systems are held to the same standard. The design options for standard systems in the rule are proposed, under typical use, to last for approximately 25 years. The concern with performance systems is that any type of system is allowed. If long-term performance is not required the property owner could be facing multiple replacements over time. Mr. Baker gave an example during the hearing that he also has this concern. It is necessary and reasonable to require long-term performance so Minnesota is not a testing ground for failures, especially unknown failures.

**7080.0020, subp. 27. Permitting authority. Agency recommended changes.
RR14.12-14. S31.**

CHANGE: Rule change proposed.

~~*Subp. 27. **Permitting authority.** “Permitting authority” means any a unit of government, state agency or any an authorized representative who administers or enforces ordinance or laws or rules through permits or approvals.*~~

CHANGE: 7080.0110 subp. 2a.

~~*E. ~~ten-year~~ floodplain designation and flooding elevation from published data as available or from data which that is acceptable to and approved by the permitting authority local unit of government or the DNR;*~~

CHANGE: 7080.0130 subp. 6.

~~*D. E. Owners of an aerobic tank shall maintain an effective maintenance service contract shall be maintained, acceptable to the permitting authority local unit of government at all times. The maintenance service contract must be acceptable to the permitting authority, if applicable.*~~

CHANGE: 7080.0172 subp. 3.

~~*A. Holding tanks for new construction are prohibited unless approved by the permitting authority, with a monitoring and disposal plan signed by the owner and administered and enforced by the permitting authority local unit of government.*~~

CHANGE: 7080.0178 subp. 1.

~~*Subpart 1. **General.**Reasonable assurance of performance of the system must be submitted to the permitting authority local unit of government. The engineering design of the system must be submitted and approved by the permitting authority local unit of government.*~~

CHANGE: 7080.0179 subp. 2. A.

A. Reasonable assurance of performance of the system must be submitted to the ~~permitting authority~~ local unit of government.. The engineering design of the system must be submitted and approved by the ~~permitting authority~~ local unit of government.

CHANGE: 7080.0310 subp. 2

Subp. 2. **ISTS permit application requirements.** ISTS permit applications ~~must include~~ issued by the ~~permitting authority~~ local unit of government must require the submittal of exhibits described under subpart 4, items A, D, and B, ~~and include~~ E, along with general requirements ~~to adequately identify~~ for identifying the property and owners, a site evaluation report, a design ~~summary and drawings,~~ applicable ~~construction information~~ report, and any other information requested by the ~~permitting authority~~ local unit of government. pertinent to this process.

CHANGE: 7080.0310 subp. 6.

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

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

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

CHANGE: 7080.0310 subp. 7. A.

Subp. 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 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 ~~permitting authority~~ local unit of government..

(3) Monitoring plans may be modified as necessary and reapproved by the ~~permitting authority~~ local unit of government..

CHANGE: 7080.0310 subp. 7. B. (2)

(2) Monitoring results shall be submitted by the permittee to the ~~permitting authority~~ local unit of government.. The ~~permitting authority~~ local unit of government..

must maintain the monitoring results. Monitoring plans must require the permittee to notify the ~~permitting authority~~ local unit of government. within 30 days if monitoring results do not meet monitoring plan requirements.

CHANGE: 7080.0700 subp. 2

C.~~identifying problems related to ISTS and making repairs; providing upgrade, repair, and replacement advice; and maintaining and submitting to the permitting authority local unit of government as-builts of all work;~~

REASON: Please refer to the justification for 7080.0020, subp. 22D.

7080.0020, subp. 28g. Restaurants. Joe Hibbers 3/3/99 letter, comment #1.

RR15.14-15. L77.

COMMENT: Definition of “restaurant” could include private homes; “establishments” is not a defined term.

CHANGE: Rule change proposed.

7080.0020 Subp. 28g ~~Restaurants. "Restaurants" means establishments that prepare and serve meals at which multiple dishes and utensils are washed.~~

REASON: Based on this and other comments, the agency proposes to delete the term restaurants because it is only used once in the rule. It is no longer needed because a maximum waste strength will be used to identify restaurants and other establishments that may have similar waste strengths.

7080.0020, subp 29a. Saturated soil. Pine County 3/31/99 letter comment # 9.

RR15.19. S.33 L143

COMMENT: Commenter asks what the phrase “other information” means in regard to determining watertable depths.

RESPONSE: No rule change proposed. Other information can be used if the redoximorphic features (or lack of them) do not reflect the level of the seasonally saturated soil. Other information could include soil survey designation of relic mottling or piezometer data. See also SONAR (Hearing Exhibit 3).

7080.0020, subp. 29c Seepage bed (note: letter refers to 29b which is incorrect).

Aitkin County 2/26/99 letter, comment # 3. RR15.22-24. S34. L76.

COMMENT: Can a seepage bed be built using chambered material.

RESPONSE: No rule change is proposed. The rule clearly states that a "standard" seepage bed must use drainfield rock as a distribution medium (RR15.22-24 and RR58.8). This is due to the lack of evidence that other media perform equal to or better than drainfield rock. It should be understood that

chambered media can be used in seepage beds under 7080.0178 - Other Systems (RR76.11-26; S110-112), 7080.0450 - Warranted Systems (RR96.18-26 and RR97.1-25 and RR98.1-8; S158-160) and 7080.0179 - Performance Systems (RR.77.1-26, RR78.1-25, RR79.1-4; S113-126). These alternatives were developed to foster the use of new technologies with some follow-up to determine performance. For chamber media to become a standard or alternative technology, they must meet the requirements of proposed 7080.0400 New Technology (RR94.21-26, RR95.1-24, RR96.1-17; S153-157).

7080.0020, subp. 30 Seepage pit, or leaching pit, or dry well. Aitkin County 2/26/99 letter, comment # 4. RR15.25-26 and RR16.1-4. S34. L76.

COMMENT: What is a seepage pit if it fails.

RESPONSE: No rule change is proposed. 7080.0020 Failing system (RR9.13-22) states a seepage pit is a failing system. 7080.0305, subp. 4 A (RR.81.13-16) requires failing systems to be upgraded, replaced, repaired or discontinued use within the time period specified by local ordinance. Inspection requirements for seepage pits are specified in 7080.0950 (RR124). Local standards can include different requirements for seepage pits. See Minn. Stat. § 115.55 (Exhibit 2) and RR82.24-26, RR84.15-26, RR85.1-24, RR86.1-11 and S135-137.

7080.0020, subp. 31a. Septic tank. Cass County letter submitted at the 4/19/99 hearing. RR16.8-11. S34.

COMMENT: Cass County suggests changing “clarified liquids” to “effluent” in the clause “effluent to discharge to a treatment system” at the end of the proposed definition.

CHANGE: Rule change proposed.

7080.0020, subp. 31a. Septic tank. “Septic tank” means any watertight, covered receptacle designed and constructed to receive the discharge of sewage from a building sewer, separate solids from liquid, digest organic matter, store liquids through a period of detention, and allow the ~~clarified liquids~~ effluent to discharge to a soil treatment system.

REASON: Clarity. Cass County correctly identified an oversight. With the addition of new technology and performance standards it is necessary to define septic tank discharge as going to any type of treatment system, not just to a soil treatment system.

7080.0020. subp. 31b Serial distribution (new) Dakota County 3/31/99 letter, comment # 5. RR16. L142.

COMMENT: Add a definition for serial distribution.

CHANGE: Rule change proposed.

7080.0020 subp. 31b (new). Serial distribution. “Serial distribution” means distribution of sewage by gravity flow that progressively loads one section of a soil treatment system to a predetermined level before overflowing to the succeeding section. This progressive loading does not place a dynamic head on lower section of the soil treatment system, nor does the distribution medium function as a conveyance medium to the next section.

REASON: For clarity.

7080.0020, subp. 33. Sewage. Dave Gustafson comment. RR16. S35. L139.

COMMENT: Water softener waste should be excluded from the definition of sewage.

RESPONSE: No rule change proposed. This issue has been contested for many years. The agency feels the current rule, which does not mention water softener wastes, is the preferred method to deal with this waste. The waste is not considered sewage because it does not come in contact with humans or pathogens, and it is nutrient free (except some sodium and calcium salts). Therefore, the wastes pose little health or environment threat. The current non-mention of water softener wastes allows homeowners either to put it in their system (which is the easiest, due to internal plumbing configurations) or to remove the waste from the system if the waste is placing stress on the system). If the rule excludes this waste as sewage, then all homes would need a separate building sewer to handle this waste, which is impractical. This issue was discussed at the 4/1/99 ISTS Advisory Committee meeting and the consensus was not to mention these wastes in the rule. In addition, the MDH rules would need amending to allow this waste to be diverted in any other fashion.

7080.0020, subp. 33. Clint Elston 3/31/99 letter. Comment #2 B. RR16.13-19. L145

COMMENT: If toilet waste is separated from the waste it is no longer sewage. A definition of greywater is necessary.

CHANGE: Rule change proposed.

7080.0020 subp. 33 Subp. 33. **Sewage.** *"Sewage" means ~~any water-carried domestic waste, exclusive of footing and roof drainage and chemically treated hot tub or pool water, from any industrial, agricultural, or commercial establishment, or any dwelling or any other structure.~~ Domestic waste includes liquid waste produced by toilets, or bathing, laundry, or culinary operations, ~~and, or~~ the floor drains associated with these sources. ~~Animal waste and commercial or industrial waste are not considered domestic waste~~ Household cleaners in sewage are restricted to amounts normally used for domestic purposes.*

REASON: The changes are for clarity. The rule already contains a definition of greywater.

The agency agrees, however, that the current definition of sewage could lead to Mr. Elston's conclusion. Therefore, the agency proposes the change shown. Placing "or" in the list of terms designates single waste streams as sewage. Research has shown that greywater contains just as many fecal coliform bacteria as toilet waste (attachment 11).

7080.0020, subp. 38. Shoreland. Agency proposed change. RR16.25-26 and RR17.1-3. S36.

COMMENT: To clarify the jurisdictional boundaries of shorelands.

CHANGE:

Subp. 38. Shoreland. "Shoreland" means land located within the following distances from adjacent to public waters: ~~1,000 feet from the ordinary high water mark of the lake, pond or flowage; and 300 feet from a river or stream or the landward extend of a floodplain designated by ordinance on such a river or stream, whichever is greater~~ that has been designated and delineated as a shoreland by local ordinance as approved by the Department of Natural Resources.

REASON: The definition as proposed gave the impression that a local unit of government could define shoreland as less than or greater than the 1000 or 300 feet. The added language clarifies that the LGU must work with the Department of Natural Resources (DNR) to obtain approval to establish ordinance requirements.

7080.0020, subp 41a. Soil dispersal system. Cass County letter submitted at the 4/19/99 hearing. RR17.7-9. S37.

COMMENT: Cass County suggests changes to the soil dispersal definition.

CHANGE: 7080.0020 subp. 41a

~~7080.0020, subp. 41a. Soil dispersal treatment system. "Soil dispersal treatment system" means a system whose main function is to dispose of disperse effluent and provide while providing some unsaturated treatment to protect the public health and the environment.~~

CHANGE: Rule change proposed. 7080.0020 subp. 44

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

CHANGE: 7080.0179, subp. 2 C (1) and (2).

C. Groundwater and surface water protection.

..... An ~~unsaturated zone~~ must be maintained between the bottom of the soil treatment ~~dispersal~~ system and the seasonally saturated soil or bedrock during loading of effluent.

(2) 25 feet from the soil ~~dispersal~~ treatment area.

and 7080.0179 subp. 2 C (3):

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

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

REASON: Clarity. Cass County identifies the terms “soil treatment” as the predominant term in the rule. This was verified with a computer search. “Soil dispersal” and “dispersal” are used only in part 7080.0179. It is reasonable to define the predominant term and use the same terminology throughout the rule for clarity. In addition, performance systems will in most cases use soil treatment as the final polishing component so it’s not just dispersal. The definition of soil treatment area needed to be slightly modified to include soil systems which receive effluent from devices other than sewage tanks, such as sand filters or wetlands.

7080.0020 subp. 45. Standard system. Pumpco 2/24/99 meeting, comment # 1, Wright County 3/30/99 letter and agency recommended change. RR17.19-21. L74.

COMMENT: Commenters indicate the references are incorrect and should be limited to 7080.0172, not 7080.0176.

CHANGE: The agency agrees with the comment and proposes the following change:

7080.0020 Subp. 45a. **Standard system.** *"Standard system" means an individual sewage treatment system specified in parts 7080.0125 ~~to 7080.0170~~ 7080.0065 to 7080.01706, and 7080.0600 and as designated by the commissioner under part 7080.0400, subp. 4.*

REASON: Correction and consistency. The references were incorrect in the proposed rule and the commenter’s suggestion that 7080.0172 be the limit is also incorrect. Part 7080.0172 is “other systems.” These types of systems include systems built on fill soil and systems built with limited data on reliability; systems definitely not included within “standard systems.” Standard systems have shown reliability over time and location for several years.

Adding the last clause is consistent with the designation process outlined in proposed part 7080.0400. Systems meeting the requirements set forth could then be labeled as standard systems. It is reasonable to make that clear in the definition.

7080.0020, subp. 45b. Subsoil. Dakota County 3/31/99 letter, comment # 6. RR17.23. S38. L142.

COMMENT: Add word “moist” before references to color values to be consistent with the “moist” reference on RR19.2 and RR28.16.

CHANGE: Rule change proposed.

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

REASON: This is the standard method to determine subsoil colors.

7080.0020, subp 46a. SWF. Minnesota Department of Health 3/30/99 letter, comment #2. RR18.4-8. S38-39. L134.

COMMENT: Add inner wellhead management zone and the proviso (to both inner wellhead management zone and well head protection areas) “where the MDH has designated the aquifer supplying the public water supply well vulnerable to contamination under the provision of Minnesota Rules part 4720.5330.”

CHANGE: Rule change proposed.

7080.0020 Subp. 46a. SWF. "SWF" means the following three categories of systems: systems constructed in shoreland areas; systems constructed in wellhead protection areas or inner wellhead management zones regulated under Minnesota Statutes, chapter 103I where the Minnesota Department of Health has designated the aquifer supplying the public water supply as vulnerable to contamination under provisions of Minnesota Rules, part 4720.5330;(I don't understand this xx) and systems serving food, beverage, and lodging establishments, including manufactured home parks and recreational camping areas licensed according to Minnesota Statutes, chapter 327.

REASON: The comment and the language came from the Minnesota Department of Health which is responsible for these areas and should correctly identify these areas.

7080.0020, subp. 46b. Technical standards and criteria. Pumpco 2/24/99 meeting, comment # 3. RR18.9-10. S39. L74.

COMMENT: There are problems in the use of the term “technical standards and criteria” in 7080.0115.

RESPONSE: No rule change proposed. The agency did a word search and found limited problems with the use of the term. Changes are offered in the impacted parts.

7080.0020, subp. 46b. Technical standards and criteria. Pumpco 2/24/99 meeting. RR18.9-10. S39.

COMMENT: Commenter asks if the references are correct.

RESPONSE: No rule change proposed. The references were reviewed and are correct. The technical standards and criteria are all the prescriptive standards found in this chapter.

7080.0020. Definitions. Alarm device. Carlton County Zoning Office 3/9/99 letter. RR3.10-27. RR4.1-25. RR5.1-26. RR6.1-27. RR7.1-27. RR8.1-26. RR9.1-26. RR10.1-26. RR11.1-26. RR12.1-26. RR13.1-27. RR14.1-26. RR15.1-26. RR16.1-26. RR17.1-25. RR18.1-25. RR19.1-21. S11-42. L88.

COMMENT: There needs to be a definition of an “alarm device”.

CHANGE: Rule change proposed.

7080.0020 subp. 3a1 (RR4.2) Alarm device. "Alarm device" means a device which clearly alerts the system operator of malfunction by use of visual or audible methods; it is intended to prevent sewage overflows.

7080.0160 subpart 1a D (RR.47.1) D. A dosing device must employ an alarm device to warn of failure.

7080.0172 subpart 3 G (RR.72.12-14). Holding tanks shall be monitored with an alarm device to minimize the chance of accidental sewage overflows. Techniques such as visual observations, warning lights or audible alarms, or regularly scheduled pumping shall be used.

7080.0600 subp. 4 D (3) Dosing chambers shall include a separate alarm system device for each dosing device to warn of dosing device failure, overflow, or other malfunction.

REASON: It is reasonable to define alarm device since it is readily used in the text of the rule. The other rule changes impacted by this definition are also shown.

7080.0020, subp. 48a. Toilet waste treatment devices. Carlton County letter, comment # 3. RR18.12-18 S. S39-40. L131.

COMMENT: Privies should be added to the definition of toilet waste treatment devices.

CHANGE: Rule change proposed.

7080.0172 Subp. 4. A. Toilets. A toilet waste treatment device or privy shall be used in conjunction with a greywater system. Greywater or garbage shall not be discharged to the toilet waste treatment device except as specifically recommended by a manufacturer.

REASON: The proposed rule strikes privies from the definition of toilet waste treatment devices and adds them as individual sewage treatment systems. The agency proposed the change because privies are more like an ISTS than a toilet waste treatment device. A privy needs to be located by a site evaluation (soils and setback requirements), designed by a designer, and inspected by an inspector. A permit should also be required for a privy. None of these things are required for installation of a toilet waste treatment device. However the agency found one small complication in this change and proposes the following change:
[[Isn't this where the change to 7080. 0172 should be placed?]]

7080.0020, subp xx. Inner wellhead management zone. Minnesota Department of Health 3/30/99 letter, comment #1. Wellhead protection area. RR19.16-21. S41-42. L134.

COMMENT: A definition of an inner wellhead management zone should be added.

CHANGE: Rule change proposed.

7080.0020 subp. 21xx 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 Minnesota Department of Health under Minnesota Rules, part 4720.5330.

REASON: Accuracy. The comment was from the agency which defines such areas and understands the importance of using the correct terminology.

7080.0025 ADVISORY COMMITTEE

7080.0025 Advisory Committee. Donna Peterson. Minnesota Lakes Association 1/11/99 letter. RR19.24-25 and RR20.1-25 and RR21.1-3 L9.

COMMENT: Request that the Minnesota Lakes Association be represented on the ISTS advisory committee.

CHANGE: The agency agrees and proposes the following change:

7080.0025 Subpart 4 Non-voting members. The following agencies and associations each have at least one nonvoting member Minnesota Lakes Association. (RR21.3)

REASON: The state's ISTS program was started to protect Minnesota lakes from degradation from non-treating ISTS. Today there are still many dwellings

surrounding lakes which need upgrading. Therefore, to have a representative of the Lakes Association would be a benefit to the Committee when discussing system design and upgrade requirements in lakeshore areas. The issue whether to include a representative on the Committee was discussed at the April 1 ISTS Advisory Committee meeting; the Lakes Association should be included as a non-voting member.

7080.0025. Advisory Committee. Larry Fyle 3/19/99 letter, comment # 1 RR21.26. S45. L130

COMMENT: Propose that a quorum consists of more than 1/2 of the voting membership.

RESPONSE: See S45.

7080.0025, subp 4. Nonvoting members. Minnesota Department of Health 3/30/99 letter, comment #6. RR20.20. S42-43. L134.

COMMENT: Delete MDH as a non-voting member.

CHANGE: The agency agrees with this change and proposes the following:
7080.0025 subp. 4. Subp. 4. ~~Ex-officio~~ Nonvoting members. The following agencies and associations shall each have at least one nonvoting ex-officio member to assist the advisory committee and to be advised, in turn, on matters relating to ISTS: the agency, ~~Department of Natural Resources, Minnesota Department of Health,~~

REASON: Oversight in the noticed rule.

7080.0030, subp 4. Administration by all state agencies. Pumpco 2/24/99 meeting. RR24.9-18. S48-49. L124

COMMENT: Does not like the broad classification of systems included as class V injection wells.

RESPONSE: No rule change proposed. Systems which classify as class V injection wells are defined in 40 CFR parts 144 and 146. The agency has no control to designate systems otherwise.

7080.0030 ADMINISTRATION BY STATE AND FEDERAL AGENCIES

7080.0030, subp 1. Federal regulation. Agency recommended change. RR22.3. S45-46.

COMMENT: Delete “new or existing”.

CHANGE: Rule change proposed.
*7080.0030 Subpart 1. **Federal regulation.** All ~~new or existing~~ subsurface or surface discharging systems that are designed to receive a flow from a*

dwelling or group of dwellings with ten or more bedrooms, or to receive any substance not included in the definition of sewage in part 7080.0020, subpart 33, and any other establishment are regulated under Title 40 of the Code of Federal Regulations, parts 144 and 146, and minimum state requirements described in part 7080.0600.

REASON: The term “existing” is recommended to be removed from the proposed definitions (see 7080.0020, subp. 16b; RR9.10-12. discussion below) so a rule search was conducted and each use of the terms “existing” re-evaluated to determine if the term is impacted by the change and to see if it is necessary to remove the terms “existing.” In this case, the term “new or existing” is not necessary to the understanding of this provision and can be reasonably deleted with no change in meaning or implementation.

7080.0030, subp 1a. SDS and NPDES permits required. Testimony on 4/19/99 by Dale Olson, Koochiching County, Dick Sigel, Land Use Administrator from Lake County 4/19/99 and Aldean Luthi, Harold Luthi and Amy Doll of Stevens county at the 4/19/99 hearing, 5/3/99 letters from Neil Schmidgall and Jim Wulf and 4/29/99 letter from Anton Scharfer. RR22.25-27. S45-46. L12-18, L22-25, L27-28, L73, L80, and L122. H73.23-25. Hearing Exhibits 12, 13 and 14. Attachments 15-17.

COMMENT : This is a combination of comments from each of the three testimonies. The testimony followed a similar track and the agency paraphrases it as follows:

- 1) This rule should allow a discharge of septic tank effluent to the ground surface.
- 2) Rural homes with surface discharge should be regulated the same as cities with a surface discharge.
- 3) Mound systems do not work.
- 4) Cost of treatment is too high and is unnecessary. There is not sufficient data to show there is a problem.
- 5) Rule does not seem realistic for rural Minnesota. Failing ISTS are not as bad as feedlots.
- 6) What penalties will be associated with persons who have failing systems?
- 7) Why are municipal lagoons acceptable and surface discharge of septic tank effluent is not?
- 8) Why can the Morris wastewater facility discharge twice the amount of Phosphorus than what is already in the river?
- 9) Why can materials from septic tanks and holding tanks be spread on the land surface, but a discharge from a home cannot be surface discharged?

RESPONSE:

1) This rule should allow a discharge of septic tank effluent to the ground surface. In beginning this discussion we first need to examine what the legislature has said about this issue, based on what is contained in sewage that is of concern to the legislature and the agency.

The legislature has authorized rules that address subsurface treatment and discharge of effluent. The legislature defined ISTS to include only systems that “use[] subsurface treatment and disposal.” Minn. Stat. § 115.55, subd 1 (g). The legislature further provided in Minn. Stat. § 115.55, subd. 5a (b), that if an ISTS “inspector finds one or more of the following conditions: (1) sewage discharge to surface water; (2) sewage discharge to ground surface; . . . (5) any other situation with the potential to immediately and adversely affect or threaten public health and safety, then the system constitutes an imminent threat to public health or safety and, if not repaired, must be upgraded, replaced, or its use discontinued” In short, the legislature did not authorize rules that would allow a discharge of septic tank effluent to the ground surface.

The major constituents of concern are pathogens. Sewage can contain pathogenic organisms in high concentrations. Infectious agents in sewage are: Hepatitis, E. Coli, typhoid, cholera, HIV, polio, parasites and many, many others. Infectious agents come from phlegm, saliva, vomit, blood, skin diseases, urine, feces and spoiled food wastes. Septic tanks provide very little treatment for most pathogenic organisms (except for some larger parasitic ova and cysts); therefore, it is the agency's position that septic tank effluent should not be discharged to the ground surface.

The agency has been involved in discussions and literature searches about disease transmission and how it is not occurring from the discharge of untreated sewage due to factors such as vaccines, low population density, cold temperatures, and good water well construction. However, the agency still believes that a surface discharge of improperly treated sewage should not occur because of the potential for disease transmission. The Minnesota Department of Health recognizes the potential and clearly believes in prevention because of the known potential. Past and present health and mortality studies do not track what caused an elderly person's death or persons with impeded immune systems. If a doctor examines a patient with flu-like symptoms the answer is, typically, you have a virus, go home and rest. No analysis of bodily secretions is routinely done and no examination for the cause of disease transmission is done either. The agency is aware of the problems associated with the increase in virus identification and is very concerned about American citizens as we enter this new antibiotic-resistant era. Infectious disease may not be effectively controlled with drugs. Infectious agents can be transmitted by vectors (flies, mosquitoes, rats, etc.) and they can pass through shallow groundwater and travel great distances. The agency's goal is to prevent effluent movement into a drinking water source or a surface water where bodily contact with pathogens can occur.

2) Rural homes with surface discharge should be regulated the same as cities with a surface discharge.

The commenters make the point that municipalities can discharge sewage to the ground surface or to surface waters. This is true but only after sewage is properly treated. Also, these discharges are regulated by a federal National Pollutant Discharge Elimination System (NPDES) permit. It should be clearly understood that septic tanks do not treat to the level of a municipal wastewater treatment plant. To be in compliance with agency surface discharge permit requirements, primary treatment (i.e., settling of large solids in a septic tank or classifier), secondary treatment (by filtering and/or microbial breakdown), and disinfection must take place.

If a surface discharge is desired for individual homes, more treatment than a septic tank will provide is required and the discharge must be regulated under a different scheme than Chapter 7080. The following regulatory schemes are available:

- A. Each individual home could apply for a National Pollution Discharge Elimination System (NPDES) permit. This method would cost approximately \$500/year, and include monitoring, reporting and operational requirements--the same requirements as a municipal facility. Water quality limits would be placed on the discharge, requiring primary and secondary treatment such as a septic tank followed by an aerobic tank, sand filter, wetland or peat filter, with final treatment by disinfection. In addition, the system would need to be periodically monitored and serviced by a trained professional.
- B. It may be possible that a professional wastewater vendor or local unit of government could obtain an NPDES permit to cover multiple homes. They would provide the services listed in A above.
- C. Cooperative, sewer districts, lakeshore associations, et al., could also combine to obtain the NPDES permit.

It is unclear at this time if design requirements for surface discharges could be included in Chapter 7080 which would meet the requirements of the federal Clean Water Act. This option would require much study and input by health officials, researchers, and local, state and federal authorities, other state agencies and elected officials. This would constitute a major change and is outside the scope of this rulemaking activity. As this rule stands, it is a subsurface discharge rule.

3) Mound systems do not work.

The agency has been told many times that mound systems do not work. The perceived problems are seepage from the mound or freezing. There are mound failures in Minnesota. The agency has followed up on many of these reported failures only to find that the mound was not designed or constructed per Chapter 7080 requirements. The agency has never been to a failed mound which was properly designed, installed, used and maintained. Mounds are more sensitive to

failure if requirements of 7080 are not met. The agency is in frequent contact with local permitting authorities and the agency routinely asks for the failure rate of mound systems. The typical range of answers is between 1 and 3 percent out of an estimated 5000 mound installations per year.

4) Cost of treatment is too high and is unnecessary.

Based on a statewide survey of contractors in 1996/97, the average cost of an in-ground system (e.g., rock trench or gravelless trench) was \$4000. Based on the soil survey for Stevens county approximately 65% of the county has less than 4 feet of vertical separation available (Attachment 20). This number is based on random siting of homes. If homes are selectively placed on high spots, the percentage could increase. The minimum depth of a system is 8" (e.g., 6" rock +2" pipe [2" cover above ground] or 8" gravelless pipe); therefore, areas with 38" vertical separation would allow an in-ground system at the lower cost.

On sites with 36" of vertical separation, at-grade systems can be used with survey costs showing \$4000. For sites with less than 36" of vertical separation, mound systems can be used. The survey costs for mound systems were \$5,500 (a 1994/95 survey indicated \$6,200). See attachment 18. On very difficult sites mounds can range from \$12,000 to \$15,000. The capital cost for a mound system may be somewhat high; however, the agency feels that the current design standards are the most cost effective methods available when considering overall costs. Even though capital costs are quite high, long term costs are reasonable. A \$5,500 mound, expected to last 25 years would result in a cost of about \$0.003 per gallon or a monthly cost of about \$20. This cost figure includes operation and maintenance costs. This cost is quite comparable to a monthly fee by a household on municipal system. It should be noted that the municipal fee does not reflect the true cost of treatment because most municipal systems have been heavily subsidized (50% to 90%) by state and federal grant monies. The municipal fee also does not include the cost of installing the collection pipes which ranges from \$50 to \$70/foot. Therefore it would cost \$10,800 to hook up a lot with 100 feet of frontage and 80 feet of building sewer to a municipal system. Even with a cost-effective rule, the agency is allowing the search for lower cost technologies under proposed parts 7080.0178 and 7080.0179.

The advent of new technologies tried under the "other system" category and "performance system" category may provide additional cost savings. The agency intends to gather that information over the years of implementation. See also Attachment 18 and discussion under Mr. Dick Sigel below (under "Additional Comments") for funding options discussion.

5) Failing ISTS are not as bad as feedlots.

It should be understood that "failing systems" with a lack of adequate separation distance from the bottom of the drainfield to the groundwater will cause contamination. This has been documented by many researchers. A few of these

research papers have been compiled in Attachment 15. Therefore, the agency, in good conscience, had to identify these systems as failed. However the agency realized that the contamination plumes may not be directly affecting drinking water wells or surface waters. Therefore, the agency decided that the time frame to upgrade these systems should be a local decision. This time frame can be as long as ten months following the point at which the system is no longer hydraulically functioning, (i.e., becomes an imminent threat to public health and safety per Minn. Stat. § 115.55, subdivision 5a). This gives the local permitting authority complete flexibility in determining upgrade requirements based on the cost and threat to public health for failed systems. The statute and proposed rule also allow the use of local standards that are less restrictive than this chapter.

Research sponsored by the agency in the Beauford watershed in Blue Earth County studied the impact of surface discharges of septic tank effluent. The purpose of the project was to quantify the amount of fecal coliform bacteria in the ditches and streams and to determine what reductions would occur in concentrations of fecal bacteria if code-complying systems were installed. This watershed also had two large feedlots which provides a comparison of the effects of surface discharge of sewage versus the effects from animal production (28 ISTS versus 2 feedlots). Eighteen of the 28 systems in the watershed were upgraded in this project. Monitoring for fecal contamination occurred before and after upgrades. The results indicated large declines in fecal contamination after the ISTS were upgraded. This study showed that:

- 1) the discharge of septic tank effluent causes fecal contamination of surface waters;
- 2) the impacts are not localized to the area near the discharge pipe; and,
- 3) upgrading ISTS can achieve major reductions in fecal contamination in a watershed even with the presence of feedlots (See attachment 16).

It should also be noted that feedlot manure is different than human waste. Human wastes contain pathogenic organisms that can affect other humans. Feedlot wastes typically concern animal-carried agents and environmental protection, rather than public health protection as the primary goal of protection. Human wastes need to be treated for public health protection.

6) What penalties will be associated with persons who have failing systems?

The local unit of government administers and enforces ordinances. Penalties associated with lack of required upgrades would be identified and enforced in the local ordinance.

7) Why are municipal ponds acceptable and surface discharge of septic tank effluent is not?

The discharge of raw waste to a wastewater pond is normally at the bottom of the pond causing the water to mix with the older water as it travels through the pond system. The older water immediately provides dilution of the raw waste. Much

process water and other water sources are included; influent is not solely from facilities discharging pathogenic organisms. The older water in the pond has a population of micro organisms, including aerobic bacteria, that thrive in the constructed pond and break down the pollutants. Algae produced then uses the nutrients and carbon dioxide to produce oxygen for the aerobic bacteria. Ultraviolet rays also penetrate the water promoting disinfection in this controlled environment. Ponds are fenced so children, dogs and roaming animals cannot enter the system. Yes, birds frequent pond systems because they are typically large ponds located in a large open space area (1/4 mile minimum distance from homes). Transmission of disease from such landings has not been well documented. It remains the agency position that it is reasonable and responsible to manage sewage treatment, whether by municipal wastewater treatment facilities or ISTS, for the prevention of pathogen transmission. Chapter 7080 remains a subsurface rule as protection against surface transmission. Specific design standards prescribed for many waste facilities encourage prevention.

8) Why can the Morris wastewater facility discharge twice the amount of Phosphorus than what is already in the river.

First, note that the Phosphorus standard established in proposed 7080 is for subsurface groundwater flow that could reach a lake. Phosphorus has typically not been a problem with properly designed and located ISTS with subsurface discharge. See S123.

To answer Mr. Luthi's question, however, we investigated the Phosphorus discharge allowed for the Morris facility. According to agency staff who issue permits, the Morris facility does not presently have a Phosphorus limit. The permit was last issued in 1993. Since permits remain valid for five years, the permit must be re-issued this year. The Phosphorus issue has been highly contested; however, a Phosphorus Strategy has been developed and implemented. Currently, any facility that discharges treated wastewater upstream within 50 miles of a lake gets a 1 mg/l limit. The Strategy will continue to grow and change as each permit is reviewed and decisions made based on new system construction, expansion of facilities and discharge points. Morris, during reissuance, will most likely be investigated for Phosphorus impacts, especially if an expansion is planned. See Attachment 23.

9) Why can materials from septic tanks and holding tanks be spread on the land surface, but a discharge from a home cannot be surface discharged? Septic tank and sewage holding tank wastes can be applied to the ground surface if proper disposal methods are employed. These methods are designed to 1) keep the material on site 2) treat the material for pathogen removal 3) attenuate the nutrients. In order for this to occur the application to the ground surface must:

- * meet setback requirements to wells, surface waters, dwellings
- * be in a posted or remote area
- * meet slope restrictions

- * meet soil restrictions (no floodplains, no very sandy soils, no high watertable or high bedrock soils)
- * satisfy USEPA treatment requirements (i.e., add lime to the septage and maintain a pH of 12 for 30 minutes prior to spreading to destroy pathogens and odors)
- * observe crop use restrictions
- * comply with maximum daily, yearly and site life rates.

Surfacing of septic tank effluent from a rural dwelling does not conform to these requirements, with the main concerns being untreated sewage close to the dwelling, no site restrictions, no runoff control, little treatment for pathogens and high application rates over a small area. Please refer to attachment 24.

7080.0030, subp 1a. Agency recommended change. RR22.25. S45-46.

COMMENT: Delete “new or existing”.

CHANGE: Rule change proposed.

7080.0030 subp. 1a. ***SDS and NPDES permits required.** The agency issues State Disposal System (SDS) and National Pollutant Discharge Elimination System (NPDES) permits.*

***B.** All ~~new or existing~~ systems ~~which~~ 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 ~~NPDES or SDS~~ permit requirements.*

REASON: The term “existing” is recommended to be removed from the proposed definitions (see 7080.0020, subp. 16b; RR9.10-12. discussion below) so a rule search was conducted and each use of the term “existing” re-evaluated to determine if the term is impacted by the change and to see if it is necessary to remove the term “existing.” In this case, the terms “new or existing” is not necessary to the understanding of this provision and can be reasonably deleted with no change in meaning or implementation.

7080.0030, subp 3 B and C. Variance procedures. Minnesota Department of Health 3/30/99 letter, comment #7, Dakota County 3/31/99 letter, comment # 7 and agency recommended change. RR23.18-19. S47-48. L134. L142.

COMMENTS: The Minnesota Department of Health suggests changing the term “Minnesota Department of Health” to “Plumbing Code administrative authority”. Dakota County recommends that in areas where the MDH has delegated the well program to a county or city, a variance is also required from the local delegated party. The agency proposes deletion of “or not reasonable due to proximity of systems.”

CHANGE: Rule change proposed.

*7080.0030 subp. 3 **B.** Variances to separation distances from wells 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 that 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.

7080.0030 subp. 3 . C. Before granting a requested variance, the commissioner or agency must find by reason of exceptional circumstances that strict enforcement of any provision of this chapter would cause undue hardship; that disposal of the sewage is necessary for the public health, safety, or welfare; or that strict conformity with the standards parts 7080.0305 to 7080.0315 would be unreasonable, impractical, or not feasible under the circumstances, or not reasonable due to proximity of systems. 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. Variances to separation distances from wells and water supply pipes can only be issued by the Minnesota Department of Health. The variance request must contain, as applicable:

REASON: Accuracy. These comments are from the Minnesota Department of Health and Dakota County which are responsible for implementation of the regulations from which variances covered by this rule are sought.

7080.0030, subp 4. Administration by all state agencies. Minnesota Department of Health 3/30/99 letter, comment #8. Pumpco 3/19/99 letter, comment # 4 (incorrectly referenced under 7080.0060). RR24.15. S48-49. L134. L124.

COMMENTS: 1) (Pumpco) What is and where is the justification and rationale for the Minnesota Department of Health not allowing the use of non-standard technology? 2) (Minnesota Department of Health) Amend language concerning use of systems designed under 7080.0172, 7080.0178 and 7080.0179 to say: (line 15)“... treatment and only where allowed and enforced under ordinance and permit of the local unit of government”..

CHANGE: Rule change proposed.

Subp. 4. Administration by all state agencies. Individual sewage treatment systems serving establishments ~~or facilities~~ 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 state of Minnesota is 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 individual sewage treatment systems requiring approval by the state shall also comply with applicable local

codes and ordinances. Plans and specifications must receive the appropriate state and local approval before construction is initiated.

REASON: The department responsible for these situations made these comments at the 4/1/99 ISTS Advisory Committee meeting.

7080.0060 COMPLIANCE CRITERIA

7080.0060, subp. 2. Primitive Dwellings. Carlton County letter, comment # 4. RR24.26 and RR25.1 S49 L131.

COMMENT: The term “poorly drained soils” needs to be defined.

RESPONSE: No change is proposed. The agency desires to leave this section, which deals with very small quantities of sewage (a few gallons), general in nature. The agency anticipates that poorly drained soils can be determined by visual examination of landscape position and vegetation by a homeowner. If a disagreement occurs between a homeowner and a local regulator, exact criteria can be found in the publication Soil Survey Manual (cited in 7080.0110 subp. 4 (8) - RR30.18-21) with a field determination made using criteria found in 7080.0110.

7080.0060, subp. 2. Primitive dwellings. Pine County 3/31/99 letter comment # 10 RR24.24 S49 L143

COMMENT: The primitive dwelling criteria are not enforceable.

RESPONSE: See comment to Carlton County letter, comment # 4 (above) and SONAR (Hearing Exhibit 3), page 49.

7080.0060, subp. 2. Primitive dwellings. Craig Berg 3/29/99 letter comment #3. RR24.26 and RR25.1 S49 L136

COMMENT: Mr. Berg asks if this specification allows the disposal of greywater in a small pit or open ended pipe so long as it remains below grade.

RESPONSE: No rule change proposed. The answer to this question, based on the proposed language, would likely be no. The proposed language dealing with primitive dwellings is purposely broad and describes an outcome instead of a design standard so local units of government can judge the many different scenarios that they face during inspections.

7080.0060, subp. 3. MN Association of Realtors 3/4/99 letter, comment #1 and Minnesota Association of Realtors 1/19/99 letter, comment #2. RR25.3-23 and RR93.7-27, RR94.1-20. S164-165. L11. L79.

COMMENT: The Association would like the wording of Minnesota Stat. § 115.55, subd. 5a (c) to be placed within the 7080.0600 (RR25) and 7080.0315 (Statute, Exhibit 2).

RESPONSE: No rule change proposed. The agency has included the statutory language in various parts. 7080.0060 (RR25) is proposed to clearly identify how an inspector determines compliance. 7080.0305 (RR79) is proposed for local units of government, describing what must be included in a local ordinance. 7080.0315 (RR.91-94) is proposed for local units of government to develop an inspection program for ISTS.

The term “notwithstanding” as used in the statute, was not used in the rule because it confused most people. In fact, the reverse interpretation of this word is most common (i.e., that unless the local ordinance is different versus the local ordinance cannot be different.). Rule statements concerning this issue are clear, although they are found in different locations as a tie in to other provisions. This rule organization worked well in the 1996 version and it is reasonable to keep the rule as consistent as possible in usage. Please also refer to RR18.4-8 which defines shoreland, wellhead and food beverage and lodging facilities.

7080.0060, subp. 3. MN Association of Realtors 3/4/99 letter, comment #2. RR9.10-12. L79.

COMMENT: The Association would like the wording of Minnesota Stat. § 115.55, subd. 5a (d) to be placed within 7080.0600 (RR25) and 7080.0315 (RR91). (Statute, Exhibit 2).

RESPONSE: No rule change proposed. See also response to comment #1 above. The statutory directive is more clearly described in 7080.0060 (RR25.11-12) by stating existing systems built on or after 4/1/96 must have a three-foot vertical separation and in 7080.0060 (RR25.13-15) by stating that existing systems built before 4/1/96 that are not in Shoreland areas, not in wellhead protection areas, and those serving food, beverage and lodging establishments, must have at least two feet of vertical separation.

The Association desires the language to also be placed in 7080.0315 (RR93.7-27, RR94.1-20). The legislative intent was to have LGU control of when existing system upgrade, replacement or discontinued use is warranted (Minnesota Stat. § 115.55, subd. 5b). The legislation directed the agency to write rules for LGUs to implement their programs (Minnesota Stat. § 115.55, subd. 3 (a) (2)). It is not the inspector’s responsibility to enforce the upgrade, if needed. The inspector looks for the compliance criteria identified in 7080.0060 (RR25), identifies why the system needs an upgrade (Minnesota Stat. § 115.55, subd. 5b and 7080.0315, subp. 3A (4) --RR93.24-27), and submits the Notice of Noncompliance or Certificate of Compliance to the local unit of government (Minnesota Stat. § 115.55, subd. 5b and 7080.0315, subp. 3A (2) -- RR93.13-18). It is then the

LGUs responsibility to carry out the upgrade, replacement or discontinued use of that system through the local compliance procedures. The rule is divided in this fashion. It is reasonable to keep these items separate for the ISTS professionals. The rule is written in rule format and consumers typically rely on the expertise of the ISTS professionals and factsheets distributed by the agency and University of Minnesota.

7080.0060, subp. 3 A (3). MN Association of Realtors 3/4/99 letter. Comment #4. RR25.3-24. L79.

COMMENT: Comment #4 asks why the rules include additional requirements for compliance by stating “(3) the system meets the performance expectations of any applicable monitoring plan.” The concern was that it implies monitoring plans are required for all systems.

CHANGE: Rule change proposed.

(3) the system meets the performance expectations of any applicable monitoring plan as required under parts 7080.0178 and 7080.0179; and

REASON: The agency has proposed wide flexibility in the rule for technologies to be used in the ISTS industry. Within 7080.0178 and 7080.0179 are allowances for these technologies. Both parts require monitoring and mitigation plans to assure that the technologies have adequate monitoring and that mitigation strategies have been discussed, written and approved prior to problems occurring. The monitoring plan requirements now become the compliance standard. In other words, a monitoring plan could require sampling of a recirculating gravel filter that claims to meet a biochemical oxygen demand of 10 mg/l, total suspended solids of 10 mg/l and a total fecal coliform of less than 200 mg/l. The monitoring would be used to verify these numbers to assure the technology is performing as designed. It is reasonable to allow the monitoring plan requirements to be used to determine compliance for these types of systems.

It is reasonable to provide clarification on when monitoring plans are required.

7080.0060, subp 3. MN Association of Realtors 3/4/99 letter, comment #4. RR25.9-10. S49-51. L79.

COMMENT: Comment #4 also asks if there is a definition for a monitoring plan.

CHANGE: The agency agrees with the comment and proposes the following change:

Add 7080.0020 subp. 22e1. 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 7080.0310 subpart 7..

Add 7080.0020 subp. 22e2. Monitoring Plan. “Monitoring plan” means a plan which requires the periodic examination or testing of system performance established in 7080.0310 subpart 7.

REASON: It is reasonable to include a definitions of significant rule requirements.

7080.0060, subp 3. MN Association of Realtors 3/4/99 letter, comment #4. RR25.3-23. S49-51. L79.

COMMENT: Comment #4 also states that the rule can be confusing for a septic system owner making it difficult to thoroughly understand their rights.

RESPONSE: No rule change proposed.

The agency has always recognized the complexity of the rules so a rule implementation and educational process during and after a rule is adopted. This 1999 rule will require a thorough implementation to assure persons understand statute and rule and have a comprehensive knowledge of how the rule and statute requirements impact them. The agency develops comprehensive factsheets for each topic (e.g., vertical separation, compliance inspection requirements and local ordinance requirements). Factsheets are reviewed by peers before distribution. Factsheets are offered at the nearly 40 annual statewide onsite sewage treatment workshops held jointly by the MPCA and the University of Minnesota, at Association workshops, the ISTS Advisory Committee members, the dozens of speaking engagements conducted by MPCA staff, etc. After the 1997 lawmaking and the 1996 rulemaking we conducted mailings of information to all ISTS professionals in the agency’s database, and all the interested parties (approximately 5000 persons), including all representatives on the ISTS Advisory Committee.

7080.0060, subp. 3. Compliance criteria. City of Orono 3/31/99 letter, comment #1, 2, and 3. RR25.3-23. S49-51. Attachment 3 and 1999 SONAR Exhibit 39(1996 SONAR). L137.

COMMENT: The rule states systems built before 4/1/96 are compliant.

RESPONSE: No rule change proposed. It is not clear whether the letter writer has the noticed rule. See 1996 SONAR (1999 exhibit 39). The rule does not state systems built before 4/1/96 are compliant. The date is used solely for defining what is an existing system and thus what is the complying vertical separation. The date for what is considered an existing system was agreed upon verbally between the MPCA and the House author (and is presently under consideration in a bill before the legislature). Minn. Stat. § 115.55, subd. 5 (c) then requires systems built before 4/1/96 to have at least 2 feet of vertical separation, regardless whether a local government desires more than that. If systems are located within shoreland, within a wellhead protection area or serve a food, beverage and lodging

facility, the 2 feet does not apply (it must be 3 feet). The rule reflects the law and verbal agreement made.

Systems built after 3/31/96 are considered new construction and the legislature allowed chapter 7080 to continue to require 3 feet of vertical separation because systems were required to be designed and built by licensed professionals and those licensed professionals were required to follow chapter 7080. Three feet of vertical separation is required for any system built on or after 4/1/96.

7080.0060 subp 3. A (4) and 3 B. Agency Recommended Change. RR25.11-15

COMMENT: Change of references for clarity

CHANGE: Rule change proposed.

7080.0060 subp 3. A (4) and 3 B.

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

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

REASON: Clarity. The change groups existing and new systems into their respective categories. During the hearing process the agency will continue to check referenced parts to ensure accuracy.

7080.0060, subp. 3 A 4 and 3B. MN Association of Realtors 3/4/99 letter, comment #5. and Pine County 3/31/99 letter comment # 10, RR25.11-15. S49-51. L79 and L143

COMMENT: Realtor letter comment #5 asks why language was added for vertical separation to be “measured outside the area of system influence in an area of similar soil. Pine county is concerned that inspectors could hunt and peck until they find an area of suitable soil.

RESPONSE: No rule change is proposed. It is unreasonable to require inspectors to take a soil boring within the system to verify vertical separation compliance. This could result in system damage and a greater number of Notices of Noncompliance being issued. Current practice of taking the boring outside of the system is not being changed. Inspectors typically determine the bottom of the system by probing and find the mottled soil or bedrock through soil probes. Inspector judgments and sometimes multiple borings are necessary to make a reasonable judgment. Please see the attached vertical separation Factsheet describing the difference between vertical separation during system operation versus determining vertical separation in the field by conducting a soil boring (Exhibit 1).

7080.0060, subp. 3. A. (4) Compliance criteria. City of Orono letter, comment # 2. RR25.11-12. S49-50. L137.

COMMENT: What is the classification of a system built on April 1, 1996

CHANGE: Rule change proposed.

7080.0060 subp. 3 B (1) all existing systems built after ~~April 1~~, March 31, 1996, shall have a three-foot vertical separation as measured outside the area of system influence in an area of similar soil.

REASON: It is necessary to eliminate this apparent time gap.

7080.0060, subp. 3. B. Compliance criteria. City of Orono letter, comment # 1. RR25.13-14. S49-50. L137.

COMMENT: The statute does not describe a system built prior to April 1, 1996 with 2 to 3 feet of vertical separation distance to be non-failing.

RESPONSE: The Commenter is correct stating that the statute does not place a label (i.e., “failing”) on an existing system which is not in shoreland, a wellhead protection area, or systems serving a food beverage and lodging establishment, which has between 2 and 3 feet of vertical separation distance. In the same respects there is no prohibition placed on the agency not to call the above mentioned system compliant if they wished. It seems apparent to the agency that if the legislature does not require upgrade for the above mentioned systems, then it would be the intent to label these systems as compliant.

7080.0060 subp. 3 D and E. Agency recommended change. RR25.20-21 S50 L133

COMMENT: For an existing system inspection, do systems designed under 7080.0178 and 7080.0179 need a physical inspection to insure that it was built in accordance with the design, or just does the monitoring plan need to be assessed?

CHANGE: The agency proposes the following change:

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

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.

REASON: The noticed language may have been interpreted as saying that only the monitoring and mitigation plan would need to be checked to determine compliance. Therefore, the adequacy of the design and construction would not need to be checked. The agency feels that these systems should also be scrutinized for design and construction adequacy.

The change also modifies that all conditions of the operating permit must be adhered to. For example, if a sampling event is missed, the system is considered failing until the sampling is taken and shown to be within the compliance parameters listed in the monitoring plan.

7080.0065 ACCEPTABLE AND PROHIBITED DISCHARGES

7080.0065, subp. 3. System influent. Pumpco 2/24/99 meeting. RR26.6-12. S52.

COMMENT: Delete the word “clear”

CHANGE: Rule change proposed.

7080.0065, subp. 3. System influent. Footing or roof drainage, ~~clear~~ water and chemically treated

REASON: The agency got other informal comments regarding the ambiguity of this provision. The definition of sewage basically disallows the introduction of non-sewage (clear water).

7080.0110 DESIGN PHASE I: SITE EVALUATION

7080.0110, subp 2a. Preliminary evaluation. Pine County 3/31/99 letter comment # 12 RR26.23-25 and RR27.1-17 S53 L143

COMMENT: There is no value in conducting a preliminary site evaluation.

RESPONSE: No rule change proposed. A system cannot properly be designed unless the information in this subpart is known. For example, you can not determine the size of the system if the flow amounts are not calculated as required in this subpart.

7080.0110, subp 2a. Preliminary evaluation. Minnesota Department of Health 3/30/99 letter, comment #9. RR26-27. L134.

COMMENT: The preliminary evaluation should address whether the site is located within the inner wellhead management zone or wellhead protection area or a public water supply well that the MDH has determined to be susceptible to contamination by pathogens.

CHANGE: Rule change proposed.

7080.0110, subp 2a.(new) *K. inner wellhead management zone or wellhead protection area of a public water supply.*

REASON: This provision is now necessary due to the new statutory requirements for protection of sources of drinking water in wellhead protection areas per Minnesota Statutes 115.55 subdivision 7 (d).

7080.0110, subp 2a B (1). Preliminary evaluation. Minnesota Department of Health 3/30/99 letter, comment #10. RR27.1-2. S53. L134.

COMMENT: This subitem should be amended to read: “If alternative local standards are in effect:(a)non-community transient public water supply wells within 200 feet of the proposed individual sewage treatment system, (b) in the case of community or non-community non-transient water supply wells whether the proposed individual sewage treatment system would be located within a drinking water supply management area.”

CHANGE: The agency agrees with the comment and proposes the following change:

7080.0110 subp. 2a B (1). (i) location of water supply wells within 100 feet of the proposed individual sewage treatment system;

(ii) location of non-community transient public water supply wells within 200 feet of the proposed individual sewage treatment system if alternative local standards are in effect;

(iii) location of community or non-community non-transient water supply in a drinking water supply management area if alternative local standards are in effect;

REASON: This provision is now necessary due to the new statutory requirements for protection of sources of drinking water in wellhead protection areas per Minnesota Statutes 115.55 subdivision 7 (d).

7080.0110, subp. 2a H. Preliminary evaluation. Dakota County 3/31/99 letter, comment #8. RR27.15. S53. L.142.

COMMENT: After “shall be consulted” add “and the soil type(s) encountered specifically stated in the report with their referenced anticipated depth to saturated soils. Written explanation/justification shall be given for those soil types stated that have expected shallow depths to saturated soils or bedrock for which a trench system is proposed.” This would clearly require by documentation the use of a good tool to determine the type of ISTS necessary to use. It would also avoid that only trained soils professionals have to conduct this work.

CHANGE: Rule change proposed.

7080.0110 subp. 2a H. ~~the soil map unit, applicable soil characteristics, and soil suitability as determined by the soil survey report soil classifications and applicable characteristics at the proposed soil treatment areas. The soil survey report, if available, shall be consulted. Justification shall be made of the soils characteristics identified on the site which substantially differ from the characteristics identified in the soil survey report.~~

REASON: This will be a valuable addition because it provides a quick, easy check of the soil’s evaluation.

7080.0110, subp. 5a C. Field evaluation. Dakota County 3/31/99 letter, comment #9. RR27.20. No SONAR (no language change proposed). L142.

COMMENT: After “easements” add “the locations of the proposed soil treatment shall be staked or flagged and specifically labeled. The LGU may require that lot lines, lot improvements, required setbacks and easements also be staked or flagged and specifically labeled.”

CHANGE: The agency agrees with of the comment referring to this subitem and proposes the following change:

7080.0110 subp. 5a. C. (1) - *a map drawn to scale or dimension, with a north arrow, and including:*

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

REASON: This basic provision should be added.

7080.0110, subp. 4 C. Agency recommended change. RR28.6-9. S54.

COMMENT: Remove flight augers as a method to extract soil cores for assessment for suitability.

CHANGE: Rule change proposed.

7080.0110 subp. 4 C. *Soil observations. The number of soil Required safety precautions must be taken before entering soil pits. Flite augers ~~which that~~ are noncontinuous or that disturb extracted soil samples ~~are must~~ not allowed to allowable be used for soil observation. Soil observations shall*

REASON: It is imperative that the soil sample be undisturbed so soil characters can be properly identified. An examination of the properties in 7080.0110 indicate that an undisturbed sample is needed.

7080.0110, subp. 4 D (5) (a) i. Wright County 3/30/99 letter and agency recommended change. RR29.27-28. S56-57. L140.

CHANGE: Rule change proposed.

i. distinct iron accumulations as described in part 7080.0029 0, subpart 13a, or distinct iron depletions;

REASON: Mistake in reference. The term “distinct iron” is added because the distinctness of iron depletions is critical to the evaluation of the height of the seasonally saturated soil.

7080.0110, subp. 4 D (1) and (3). Agency recommended change. RR28.20 and RR29.3. S55-56.

CHANGE: Rule change proposed.

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

(3) A description of the soil texture and consistence described using the United States....

REASON: Allowing the sizing the system without using a percolation test is described in the SONAR (Hearing Exhibit 3), page 88. However in the noticed rule, the agency forgot to add that consistence must also be evaluated to estimate the percolation rate. Consistence is the degree of cementation of the soil. If the soil is highly cemented by natural processes (illuviation of iron, or dense layers from natural compaction) then the percolation rate can be markedly decreased. This decrease can hinder hydraulic performance and cause a system to fail. Therefore a simple field test, based on techniques described in the USDA's Soil Survey Manual, can be used to assess the degree of cementation. The test is to simply squeeze a moist sample of soil to determine it's cohesiveness. The agency realizes that this method is somewhat subjective, however, if a questionable situation does arise, a standard percolation test can be conducted to determine if a dense layer exist.

7080.0110, subp. 4 D (6). Agency recommended change. RR30.13. S57.

COMMENT: Delete "existing" and use the "new construction or replacement" as the exemption.

CHANGE: Rule change proposed.

(6) Depth to the seasonally saturated soil for all ~~existing~~ systems that are not new construction or replacement is determined by redoximorphic features in subitem (5), except for unit (b), subunit i; and unit (c), subunits i and iv.

REASON: The agency recommends removing the term "existing" from the proposed definitions (see 7080.0020, subp. 16b; RR9.10-12. discussion above) so a rule search was conducted and each use of the term "existing" re-evaluated to determine if the term is impacted by the change and to see if it is necessary to remove the term "existing." In this case, the term "existing" is better replaced with the defined "new construction and replacement" (RR12.25-26 and RR13.1-3, and RR15.11-13). No change in meaning or implementation is proposed.

7080.0110, subp. 4 D (6). Dakota County 3/31/99 letter, comment #10. RR30.13. S57. L142.

COMMENT: After (6) insert “The depth to the seasonally saturated soil for all existing systems shall be made determined by soil borings/probes in the natural soil profile beyond the zone of effluent influence from all trenches. It shall not be determined by any soil borings/probes near trenches or between close trenches. The vertical separation present for existing systems shall be determined by subtracting the maximum determined trench depth from the depth to seasonally saturated soil in the natural soil profile beyond the zone of effluent influence.”

CHANGE: Rule change proposed. The agency agrees with the comment. The language requested has already been proposed in 7080.0060 subpart 3 A. (4) and 7080.0060 subpart 3 B, however this item could refer to these sections for clarity. The agency proposes the following change:

7080.0110 subp. 4. D (6).

(6) subunits i and iv. Depth to redoximorphic features shall also be determined in accordance with 7080.0060 subp. 3 A. (4) and 7080.0060 subp. 3. B.

REASON: Clarity.

7080.0110, subp. 4 D (8). Dakota County 3/31/99 letter, comment #11. RR30.18. S57. L142.

COMMENT: after “soil characteristic” add “such as hard pans, restrictive layers, etc.”

CHANGE: Rule change proposed.

7080.0110 subp. 4 D (8). ~~(6)~~ (8) Any other soil characteristic ~~to be described, which~~ that may need to be described to properly design a system, such as hardpans or restrictive layers must be classified in accordance with chapter 3 of the Soil Survey Manual, Agricultural Handbook No. 18, which is incorporated by reference in ~~part 7080.0030~~ subitem (3).

REASON: The change is reasonable to highlight the common features in Minnesota soils which affect ISTS design.

7080.0110, subp. 4 E (1). Dakota County 3/31/99 letter, comment #12. RR31.2-3. S57-58. L142.

COMMENT: Change the sentence to read: “For mounds and at-grade systems, the bottom of each test hole shall be at a depth of 12 inches in the original soil.”

RESPONSE: No change is proposed. It is the agency’s belief that the current requirement that the percolation test for mound and at-grade systems be conducted

somewhere in the upper 12 inches is better than requiring the location of the test to be exactly at 12 inches. For example, if the soil has a clayey texture in the upper 10 inches overlying sandy textures, then flexibility should be provided so the test could be run shallower to determine the slowest percolation rate.

7080.0110, subp. 4 F. Dakota County 3/31/99 letter, RR 31.20. S.58.

COMMENT: Dakota county - Include language that the proposed system be staked or flagged and specifically labeled.

RESPONSE: No rule change proposed. This issue was discussed at the 4/1/99 meeting of the ISTS Advisory Committee meeting. The consensus was that the system need not be staked or flagged because some sites will not be built on for quite some time, especially when the evaluation was conducted for a preliminary plat for a subdivision.

7080.0110, subp 5a H. Phase I. Pumpco 2/24/99 meeting. RR32.13-14. S59.

COMMENT: Clarify definitions.

RESPONSE: No rule change proposed. The term certified statement being added to this item is defined in 7080.0020 subp. 10b (RR5.18-21).

7080.0115 DESIGN PHASE II

7080.0115, subp. 1. Design report. Agency recommended change. RR32.17-18. S59-60.

COMMENT: Current language may exempt design reports for systems designed under 7080.0178 and 7080.0179

CHANGE: The agency proposes the following change:

7080.0115, subp. 1 ***Design report.*** *A completed design report shall be considered the second phase for an individual sewage treatment system design. Design requirements are stated in the technical standards and criteria.*

REASON: This change is proposed because the current language would allow design reports *not* to be developed and submitted for 7080.0178 (other) and 7080.0179 (performance systems). This is unreasonable, particularly because systems designed under those parts may not have an adequate record of performance. In addition, local record keeping should include all design reports to ease future inspections or compliance issues for a particular property.

7080.0115, subp 1. Design report. Minnesota Department of Health 3/30/99 letter, comment #11. RR32.16-21. S59-60. L134.

COMMENT: Add “operational procedures” to the design report requirements, due to the use of performance based systems.

CHANGE: Rule change proposed.

7080.0115, subp 1. **Design report.**Phase II design reports shall include drawings, design flows, system component sizing and calculations, hydraulic loading rates, setbacks, construction considerations, and, as applicable, maintenance contracts, operational requirements, monitoring, and mitigation plans.

REASON: This is a valuable comment regarding a requirement needed to obtain operational scrutiny.

7080.0120 BUILDING SEWERS

7080.0120, Building sewers. Minnesota Department of Health 3/30/99 letter, comment #12. RR32.24-25 and 33.1-4 S60. L134.

COMMENT: This part could be amended to read: “Building sewers must be constructed of cast iron or plastic pipe meeting the material specifications, methods, and testing protocol described in Minnesota rules, part 4715.0530 and part 4715.2820”.

CHANGE: Rule change proposed.

7080.0120 subpart 1. **Plumbing and well codes.** *The design, construction, and location of, ~~and the materials for use in,~~ building sewers shall ~~be in~~ accordance comply with the Minnesota State Building Code, chapter 1300, which incorporates by reference portions of the Minnesota Plumbing Code, chapter 4715, ~~Only polyvinyl chloride (PVC) plastic pipe meeting the specification methods and testing protocol described in chapter 4715.0530 and 4715.2820 shall be used.~~ The design, construction, and location of, and the materials for use in wells and borings shall comply with Minnesota rules chapter 4725. relating to wells and boring.*

REASON: The agency will add the revised language concerning the specifications for building sewers, however the agency will only allow the PVC plastic pipe specified in Chapter 4715 to be used . This will exclude the use of cast iron, clay, bituminous and concrete pipe which is currently allowed in Chapter 4715. Cast iron pipe has reportedly plugged over time. Clay and concrete pipe are not water tight at the joints and bituminous pipe has strength deficiencies.

7080.0125 SEWAGE FLOW DETERMINATION FOR DWELLINGS

7080.0125. Design flow. Larry Fyle 3/19/99 letter, comment # 2 RR33.17-30 and RR34.19-26. S61-62 L130

COMMENT: Remove Classification III dwellings from the rule. Modern dwellings do not fit into this category.

RESPONSE: No rule change proposed. This issue has been contested for many years. The agency feels that chapter 7080 is a minimum code, therefore if a dwelling fits the type III classification, the system should be allowed to be made smaller due to less flow. This preference is based on the large safety factor used in the flow estimates with most type I homes only using 50% of the design flow. This extra safety factor is necessary for larger modern homes due to peak use times and increased longevity (the 25-year design life is based on the system receiving only 50% of the design flow). Therefore to require a type III home to be based on a type I or II classification does not seem reasonable. Local governmental units or individual designers can increase the flow for these smaller, less modern homes if desired. Allowing a smaller flow also allows a “standard” system to be placed on a small lot, in which it could not be placed if the larger flows were required to be used.

7080.0130 SEWAGE TANKS

7080.0130. Sewage tanks. Larry Fyle 3/19/99 letter, comment # 3 RR35.11-13 and RR36.26 S62-63 L130

COMMENT: Change the term “maintenance holes” to service or maintenance entrances.

RESPONSE: No rule change proposed. The 1996 rule changed the term manhole to maintenance hole because the term manhole was objectionable to an attendee at the ISTS Advisory Committee, To the attendee it meant the hole was there specifically for a man (person) to enter the tank -- an extreme safety hazard. The agency feels the change from man hole to maintenance hole is sufficient.

7080.0130, subp 2 A. Design of septic tanks. Pumpco 2/24/99 meeting. RR35.22-23. S64.

COMMENT: The current practice in manufacturing septic tanks is with a minimum liquid depth of 36 inches. Therefore, the code should be change from a 30 inch minimum to a 36 inch minimum. Also, the baffle depth requirements would result in the baffle length almost reaching the bottom of the tank.

RESPONSE: No rule change is proposed. The commenter stated that 36 inches is the industry standard. However the agency does not know if *every* tank manufacturer uses a 36 inch mold. If not, those with a 30 inch mold would need to design and construct new molds, which are very expensive. In addition, in areas with shallow bedrock, a thinner tank is desired to minimize excavation.

The baffle depth will never be to the bottom of the tank, since the baffle length is a percentage of the liquid depth (7080.0130 subp. 2 H, RR36.8-9)

7080.0130, subp 2 H. Design of septic tanks. Pumpco 2/24/99 meeting and Carlton County 3/22/99 letter, comment # 5 wanting justification for this provision. RR8-14. S65.

COMMENT: Baffles should be optional and/or not required on existing systems.

RESPONSE: The rule does not require baffles for compliance for existing systems (7080.0060). The proposed rule does require pumpers to evaluate baffles during a pumpout.

7080.0130, subp. 2 L. Aitkin County 2/26/99 letter, comment # 6. RR36.19-24. S65. L76.

COMMENT: Is the 6 inches requirement from the outlet pipe to the nearest point on the baffle a maximum or minimum distance?

CHANGE: Rule change proposed.

7080.0130 subp 2 L. *The nearest point on the inlet baffles, other than sanitary tees, shall be no less than six inches ~~or~~ and no more than 12 inches from the end of the inlet pipe to the nearest point on the baffle. The nearest point on the outlet baffles baffle, other than sanitary tees, shall be no closer than six inches and no more than 12 inches ~~measured~~ from the beginning of the outlet pipe to the nearest point on the baffle. Sanitary tees used as inlet or outlet baffles shall be at least four inches in diameter.*

REASON: The rule language did not provide any tolerance on the distance requirement from the outlet pipe to the baffle. This was not intended and the distance can vary the same as for the inlet baffle

7080.0130, subp. 2 O (3). Dakota County 3/31/99 letter, comment #13. RR38.16. No SONAR (no rule change proposed). L142.

COMMENT: After “series” add “except that, only for existing systems, a LGU may allow a larger new tank to follow an existing smaller tank.”

CHANGE: Rule change proposed.

7080.0130 subp. 2 O 3. (3) *For new construction, ~~The~~ first tank shall be equal to or larger than any subsequent tank in the series.*

REASON: This is a reasonable change which would allow extra capacity on an existing system, if desired.

7080.0130, subp 2 P. Outlet pipe. Minnesota Department of Health 3/30/99 letter, comment #12. RR38.24-25 and 38.18-26 and 39.1-3 S67-68. L134.

COMMENT: This part could be amended to read: “Outlet pipes must be constructed of cast iron or plastic pipe meeting the material specifications,

methods, and testing protocol described in Minnesota rules, part 4715.0530 and part 4715.2820”.

7080.0130 subp. 2 P. *Outlet pipe from septic tank-;*

(1)–The design, construction, and location shall comply with the Minnesota Plumbing Code, chapter 4715. Only polyvinyl chloride (PVC) plastic pipe meeting the specification methods and testing protocol described in chapter 4715.0530 and 4715.2820 shall be used. The outlet pipe from the septic tank must not be cast iron.

(2) The outlet pipe extending from the septic tank must be of sound and durable construction, and not subject to corrosion or decay.

REASON: The agency will add the revised language concerning the specifications for outlet pipes, however the agency will only allow the polyvinyl chloride (PVC) plastic pipe specified in Chapter 4715 to be used . This will exclude the use of cast iron, clay, bituminous and concrete pipe which is currently allowed in Chapter 4715. Cast iron pipe has reportedly plugged over time. Clay and concrete pipe are not water tight at the joints and bituminous pipe has strength deficiencies.

7080.0130, subp. 2, item P (1). Aitkin County 2/26/99 letter, comment #7. RR38.19. L76.

COMMENT: Aitkin county suggests the rule indicates the outlet pipe must be cast iron.

RESPONSE: No rule change proposed. Rule says the outlet pipe must *not* be cast iron. The comment was based on misreading the rule. See also RR38.22-26.

7080.0130 subp. 3 A. Sewage tanks Larry Fyle 3/19/99 letter, comment # 5 RR39.14 L130

COMMENT: Delete from the rules the sizing based on 2 bedroom dwellings. Few modern dwellings have 2 bedrooms or less.

RESPONSE: See response for Larry Fyle comment # 2.

7080.0130 subp. 3 B Sewage tanks Larry Fyle 3/19/99 letter, comment # 6 and Agency recommended change. RR40.7-8 S69 L130

COMMENT: An a outlet screen should not replace the current requirements for multiple tanks or compartmented tanks.

CHANGE: The agency agrees with the comment. This comment was also informally received from others. The agency proposes the following change:

7080.0020 Subp. 17a. ~~Gas deflecting baffle. "Gas deflecting baffle" means an obstructing device on at the septic tank outlet that limits the escape of solids that are carried by septic tank gases. Effluent screens serve as gas deflecting baffles.~~

7080.0130 subp. 3 ~~C~~. B. Garbage disposals. If a garbage disposal unit is anticipated or installed in a dwelling ~~or other establishment~~, the septic tank capacity must be at least 50 percent greater than that required in item A ~~or B~~, ~~subitem (1) or (2)~~, and must include either multiple compartments or ₁ multiple tanks must be provided, ~~or an effluent screen at the outlet end of the last septic tank.~~

7080.0130 subp. 3 C (3) ~~A dosing volume of up to five percent of the liquid capacity required under item A of the first tank or compartment of multiple tanks or compartment installations is allowed if an effluent screen is installed at the outlet end of the last septic tank.~~

7080.0600 subp 4. (3) ~~An effluent screen shall be used on the last septic tank prior to discharge to a soil treatment system. 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.~~

REASON: Due to the many official and unofficial comments regarding this provision, the agency has determined that the use of gas deflecting baffles may not be a sound practice as proposed. Effluent screens were deleted after problems were clearly identified at the ISTS Advisory Committee on 4/1/99. They can still be used; the committee recommends not requiring their use because in some circumstances it is not necessary.

7080.0130, subp 3 B. Garbage disposals. Metropolitan Council 3/9/99 letter, comment # 2. RR40.4-8. S68. L89.

COMMENT: Chambered tanks, multiple tanks, and/or effluent screens should be made a requirement, since you can't always anticipate a garbage disposal in a home, if one is not currently in place.

RESPONSE: No rule change proposed. Chapter 7080 is a minimal rule that can be applied across the state. The agency is often asked to add more requirements to the rule, particularly as problems or methods arise for a particular area. The agency continues to encourage LGU's, the Metropolitan Council, and other regulatory entities to take into consideration their localized concerns and address them within the local regulatory scheme.

7080.0130, subp. 4. Dakota County 3/31/99 letter, comment #14. RR41.6. No SONAR (rule change was not proposed). L142.

COMMENT: Add "For new tank installations, the top of the tank shall be installed no deeper than 4 feet from final grade. The LGU may apply this standard to replacement systems for existing dwellings regarding situations where it is determined by the LGU to be possible and feasible."

RESPONSE: This is a good requirement, however chapter 7080 is a minimum code and systems can adequately perform and be adequately serviced at deeper depths. This provision would be a good addition to a local ordinance as a more restrictive standard. This issue was discussed at the 1/14/98 ISTS Advisory Committee meeting. It was decided that the term “accessible” was sufficient and that no depth requirement was needed. Please refer to 1999 SONAR exhibit 5c.

7080.0130, subp. 4. Location of sewage tanks. Jason Peterson 2/25/99 concerns, comment # 1. RR41. 5-17. S70-71. L30.

COMMENT: The Building Code allows for construction in areas where septic tanks aren't allowed on the Mississippi and around some lakes.

RESPONSE: The agency prefers to leave the language as is. If there is a special situation where a tank would need to be placed in a floodway, a variance could be issued to the local unit of government, or an alternative standard could be written for their ordinance.

7080.0130 subp. 6 B. James Baker, Multi-Flo; 4/19/99 hearing testimony. RR42.5. S71-72. H64.17-22.

COMMENT: Mr. Baker indicated that NSF International No. 40 doesn't test for class II standards anymore. The correct reference should be class I standards.

RESPONSE: No rule change proposed. The agency investigated this comment by reviewing 1999 SONAR Hearing Exhibit 7 and contacting the National Sanitation Foundation for clarification. NSF 40 does still contain standards for Class II systems; however, most of the systems that are coming in meet Class I so Mr. Baker may be correct in his statement that “There are no systems approved under Class 2” however, that does not mean a system will never be tested as Class II since they remain in the standards. NSF is a costly process for certification so most products desire to meet higher standards.

Since downsizing is not allowed with the use of an aerobic tank, the effluent quality could be lower (i.e., at least the quality of septic tank effluent). For less vertical separation and/or downsizing, the agency would expect LGUs to know what effluent quality can be consistently discharged (considering power outages, vacation time, peak usage, and other common situations that could stress a system) before going through the operating permit approval process.

7080.0130 subp. 6 B. Agency Comment. RR41.24 S71-72

COMMENT: To specify a date for the NSF - 40 Standards.

CHANGE:

B. Aerobic tanks shall comply with the most recent 1999 version of the National Sanitation Foundation International

Standard (NSF International), No. 40 (November 1990), which is incorporated by reference. The publication is available through the National Sanitation Foundation International, ~~3475 Plymouth Road~~, P.O. Box ~~1468~~ 130140, Ann Arbor, Michigan ~~48106~~ 48113. The publication can be found at the Minnesota State Law Library, Judicial Center, 25 Constitution Avenue, St. Paul, Minnesota 55155 and is not subject to frequent change. Effluent quality shall meet or exceed NSF International No. 40 class II standards.

RESPONSE: The agency proposes this for two reasons. First, the agency may not agree with future changes to this standard. Second, the agency would have to ensure that the latest copies are available at the Minnesota State Law Library.

7080.0130, subp. 6, item C. Aitkin County 2/26/99 letter, comment # 8. RR42.6-8. S72. See also ISTS Options (Exhibit 5). L76.

COMMENT: Aitkin county asks if an aerobic tank produces a certain effluent quality whether a reduction in drainfield size should be given.

RESPONSE: No rule change is proposed. The language in the referenced rule indicates how downsizing can occur: through 7080.0178 Other Systems (RR76.11-26; S110-112), 7080.0400 New Technology (RR94.21-26, RR95.1-24, RR96.1-17; S153-157), 7080.0450 Warrantied Systems (RR96.18-26 and RR97.1-25 and RR98.1-8; S158-160) and 7080.0179 Performance Systems (RR.77.1-26, RR78.1-25, RR79.1-4; S113-126).

The agency will not place downsizing into the “standard system” portion of the rule unless the process described in 7080.0400 occurs. Standard systems have solid research behind them and offer reasonable protection at reasonable costs. Any problems and inefficiencies noted for standard systems have been clearly identified through this research as well. The agency offers other avenues (identified above) that suppliers and local units of government can use to make and implement other types of decisions as suggested in this comment.

7080.0130 subp. 6. Agency recommended change. RR42.6-8. S72.

CHANGE:

C. No additional reduction in ~~soil treatment~~ 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, 7080.0179, or 7080.0400-, or 7080.0450.

REASON: 7080.0450 (RR96.18-26, RR97.1-25, and RR98.1-8) was inadvertently omitted from the list of options for modifying design requirements for aerobic tanks. Warrantied systems definitely have this option.

7080.0150 DISTRIBUTION OF EFFLUENT

7080.0150, subp. 1 B. Distribution of Effluent. Agency recommended change. RR42.22-23. S73 (note SONAR rule change does not match the Revisor rule copy).

CHANGE: Rule change proposed.

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

REASON: See S73 for first recommended change justification. The addition of “or longitudinal bending” is added because it is a standard pipe term. Deflection means the pipe is compressed into an oval shape. Bending means the pipe actually is bent or sagging. It is reasonable to disallow both conditions to prevent limited or no ability to discharge tank effluent due to a reduced opening, or due to freezing of standing water in a sagged pipe, resulting in potential sewage backups into a home or business.

7080.0150 subp. 2 C (3) and D (6). Agency recommended change. RR44.1-3 and 22-24, S74.

COMMENT: Grammatical changes for clarity. Use consistent language for drop box, valve box, and distribution box, requiring an energy dissipater when pumping into these devices.

CHANGE: Rule change proposed.

7080.0150 subp 2 (3) When sewage tank effluent is pumped to a valve box, either a baffle wall must be installed in the valve box or 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 baffle must be secured to the box and extend at least one inch above the crown of the inlet pipe.

7080.0150 subp. 2 D (6) When sewage tank effluent is delivered by pump, either a baffle wall must be installed in the distribution box or the pump discharge must be directed against a wall, baffle, ~~or~~ 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 must extend at least one inch above the crown of the inlet pipe.

REASON: Clarity.

7080.0150 subp. 3 A (3). Agency recommended change. RR45.21 S75.

COMMENT: The soil textures listed in this section are inconsistent with textures used in Table Va.

CHANGE: Rule change proposed.

7080.0170 Table Va: (RR55.24)

Medium Sand** Single grain .83 1.0

7080.0170 Table V: (RR54.21)

0.1 to 5** Medium Sand, Loamy 0.83****
Sand

REASON: Clarity.

7080.0150 subp. 3 A (3). Agency recommended change. RR45.21 S75, L133 page 59.

COMMENT: This provision needs to be amended to require pressure distribution where there are coarse textured soils and where all components of the inground system are at the same elevation.

CHANGE: The agency proposes the following change:

7080.0150 subp. 3 A (3) ~~systems where the soil percolation rate is 0.1 to five minutes per inch if, where the soil has a medium sand texture or coarser, or where the effluent is pumped to a seepage bed or to trenches that are all at the same elevation; and all seepage beds where the soil percolation rate is 0.1 to five minutes per inch or where the soil has a medium sand texture or coarser, and all trench systems if the trenches are at the same elevation and placed in soils where the percolation rate is 0.1 to five minutes per inch or where the soil has a medium sand texture or coarser~~

REASON: Clarity.

7080.0150 subp. 3 A (4). Pine County 3/31/99 comment #13. RR45.23 S75, L143.

COMMENT: Soil treatment systems which will not form a clogging mat must be defined.

RESPONSE: No rule change proposed. This issue was discussed at the 4/1/99 ISTS Advisory Committee meeting. Since incomplete knowledge exists on the organic loading rate and biomat formation, the consensus is that the burden of

proof to determine if a biomat is formed will be on the designer. A monitoring and mitigation plan can be developed in the event that an anticipated biomat does not form. The committee did not want to choose a loading rate.

7080.0150, subp. 3. Pressure distribution. Jason Peterson 2/25/99 concerns, comment # 1. RR45.16-25. RR46.1-12. S75-76. L30.

COMMENT: Mandatory use on sandy soils will increase the cost of ISTS on cabins.

RESPONSE: The agency believes that the commenter misread the provision. The option of splitting the system into quarters (as mentioned in his comment) is still allowed (RR59.19-21). The only time pressure distribution would be required on sandy soils is if the trenches were all at the same elevation, which is stated clearly in this section.

7080.0150, subp 3 E. Pressure distribution. Pumpco 2/24/99 meeting. RR45.25. RR46.1-4. S75-76.

COMMENT: The ends of some distribution systems do not have end caps.

CHANGE: Rule change proposed.

7080.0150, subp. 3 E. Perforation holes must be drilled straight into the pipe and not at an angle. The perforated pipe laterals must be installed level with the perforations downward. Perforation holes must be free of burrs. Holes shall be spaced no more than five feet apart. One perforation must be drilled into the upper portion of the end cap to allow for the introduction of A method to introduce air into the pipe after dosing must be provided.

REASON: With the advent of up-turned ends of pressure distribution systems to check for pressure head changes and for cleaning, end caps are not always used.

7080.0160 DOSING OF EFFLUENT

7080.0160 subp. 1a E. Cass County letter submitted at the 4/19/99 hearing (note comment incorrectly references 7080.0060).

COMMENT: Cass County recommends a four inch elevation instead of 3 inches as proposed.

CHANGE: Rule change proposed.

E. The inlet of pumps shall be elevated at least ~~three~~ four inches from the bottom of the dosing chamber or protected in some other manner to ~~protect~~ prevent the pump from drawing in excessive settled solids. The pump, pump controls, and pump discharge line shall be installed ~~so as~~ to

~~be accessible~~ allow access for servicing without entering the dosing chamber.

REASON: Cass County originally requested a 3 inch separation and is now requesting a 4 inch separation based on experiences with too many solids in the pump tank. The agency also added the language “or protected in some other manner” and un-deleted “to protect the pump from settled solids” because recent seminars have shown pump boxes to be an effective means to protect the pump. The pump boxes are placed directly on the bottom of the dosing chamber. Both methods are reasonable options.

7080.0160, subp 2

B. Dosing devices for gravity distribution. Pumpco 2/24/99 meeting. RR47.14-15. S78.

COMMENT: This applies only to lift stations, and doesn’t regulate pump types.

RESPONSE: No rule change is proposed. The agency believes that the language is clear that this provision does not regulate pumps used for pressure distribution.

7080.0160, subp 2B. Dosing devices for gravity distribution. Pumpco 2/24/99 meeting. RR47.14-15. S78.

COMMENT: Add “gallons per minute” after “ten”.

CHANGE: Rule change proposed.

7080.0160 subp 2 B *For dwellings, the dosing device shall discharge at least ~~600 gallons per hour~~ ten gallons per minute but no more than ~~2,700 gallons per hour~~ 45 gallons per minute.*

REASON: Clarity

7080.0160 subp. 2 C. Pine County 3/31/99 comment #14. RR47.19-21

COMMENT: The term “owner’s agent” needs to be defined. Who can be an owner’s agent when servicing siphons?

RESPONSE: No rule change proposed. The agency believes that the term is a common usage of the term and needs no further clarification. Minn. Stat. § 115.56, subd. 2 (a) is clear that those maintaining ISTS need to hold an ISTS license.

7080.0160 subp. 3 B, Dosing devices for pressure distribution. Minnesota Department of Health 3/30/99 letter, comment #13. RR48.9-10 S79-80. L134.

COMMENT: Keep the 2 foot pressure head requirement for pressure distribution for other establishments.

CHANGE: The agency agrees with this comment. The deleted provision was supposed to be moved to 7080.0600, however the provision was only deleted and not transferred. Therefore the agency proposes the following change:

7080.0600 Subp. 4 D (1) (RR102.2-3) 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.

REASON: Correction.

7080.0170 FINAL TREATMENT AND DISPOSAL

7080.0170, subp. 1 C, subp. 5 B (24) to (26) and subp. 6 C (9) Dave Gustafson 3/31/99 letter. RR49.1-3, RR66.8-18 and RR69.5-7. S80, S99-100 and S103. L139.

COMMENT: Mr. Gustafson suggested that all systems have a diversion constructed upslope.

CHANGE: 7080.0170, subp.1 C.

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

CHANGE: 7080.0170, subp. 5 B (24) to (26)

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

CHANGE: 7080.0170, subp. 6 C (9).

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

REASON: It is reasonable and consistent that diversions be used on all systems. The addition of extraneous water from upslope areas causes the same hydraulic stresses, regardless of system type.

7080.0170, subp. 1 C. Aitkin County 2/26/99 letter, comment # 9. RR49.1-3. S80. L76 and 127

COMMENT: Aitkin county's comment seem to indicate that the proposed language *allows* the placement of systems in areas with “excessive run-on.”

RESPONSE: The agency believes the county misread the proposed language. The proposed language clearly states that systems *should not* be placed in areas subject to excessive run-on.

7080.0170, subp. 1, Table IV. Aitkin County 2/26/99 letter, comment # 10. RR49.12-33, RR50.1-9. S86-87. L76.

COMMENT: Commenter suggests there is no language for four asterisks as shown in the table.

RESPONSE: Four asterisks are described on RR50.9.

7080.0710, subp. 1 C. Agency recommended change. RR107.9-10. S176.

CHANGE: Rule change proposed.

C. the bond must ~~be written to~~ cover work to be done under all individual sewage treatment system licenses to be held by the business; and

REASON: Clarity.

7080.0170, subp 1 D, In general. Minnesota Department of Health 3/30/99 letter, comment #14 and Larry Fyle 3/19/99 letter, comment # 7 and Pumpco 2/24/99 meeting and Cass County letter submitted at the 4/19/99 hearing. RR101.7. S81. L134. L130. L124. Attachment 22.

COMMENT: MDH requests a clarification on who is responsible for these requirements. Mr. Fyle suggests placing who is responsible for taking these measurement in the rule to ensure that the wastes strength meets the limits described in this item. Pumpco wanted clarification if the stated limits were average numbers. Cass County suggests the limits be increased to 300 mg/l because some households with water conservation devices may have BOD₅ values at 300.

CHANGE: Rule changes proposed.

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

7080.0600, subp. 4 B. (3) (new) (RR 101.7) Estimated or measured average concentrations of biochemical oxygen demand, total suspended soils and oil and grease shall be determined.

7080.0115, subpart 1. Design Phase II. A completed design report shall be considered the second phase for and individual sewage treatment system design. Design requirements are stated in the technical standards and criteria. Phase II design reports shall include drawings, design

flows, system component sizings and calculations, hydraulic and organic loading rates, setbacks, construction considerations, and, as applicable, maintenance contracts, monitoring and mitigation plans.

REASON: Clarity. MDH and Mr. Fyle: This determination constitutes design work and can only be conducted by a designer I or designer II per 7080.0850 subp. 5 (RR119.19-25 and RR120.1-7); however, to provide further clarification the organic loading rates were added to the requirements for a design phase II report. Pumpco's and Cass County's comments raised concern about the values listed. Several sources were again referenced. The 1999 SONAR (and its exhibits 22 and 23) justify the originally proposed numbers. It is reasonable to provide a higher value for BOD₅ because typical texts offer a range. The agency proposed the value of 220 mg/l based on Wisconsin's proposed draft for soil discharge (Attachment 22). Proposed changes to part 7080.0600 are offered for clarity throughout the rule on this issue.

7080.0170 subp. 1. F. Pine County 3/31/99 comment #15. RR50.4-6 S82-83, L143.

COMMENT: The difference between structures and buildings is not clear. There is no definition of building.

RESPONSE: No rule change proposed. There is a definition for building at 7080.0020, subd. 7a. For discussion of the difference between a building and a structure please refer to the 1996 SONAR page 74 (Exhibit 39).

7080.0170 subp 1 F, In general. Craig Berg 3/29/99 letter, comment #4. RR49.12-33 and RR50.1-9 S82 L136

COMMENT: Include these setback distances in the table.

RESPONSE: No change proposed. The agency has decided to refer to other state rules so that, if those rules are ever revised, chapter 7080 would still be current. The setbacks are included in the U of M training manuals which are used for training ISTS professionals.

7080.0170 subp 1 F, In general. Minnesota Department of Health 3/30/99 letter, comment #15. RR49.12-33 and RR50.1-9 S82 L134.

COMMENT: The table needs to be amended to correctly reference Minnesota Rules ch. 4725 and 4715.

CHANGE: Rule change proposed.

7080.0170 subp 1 F

Table IV. Minimum setback distances (feet).

<u>Feature</u>	<u>Sewage Tank, Holding Tank,</u>	<u>Absorption Area or Unsealed Privy</u>	<u>Building Sewer or Supply Pipes</u>
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or
Sealed
Privy

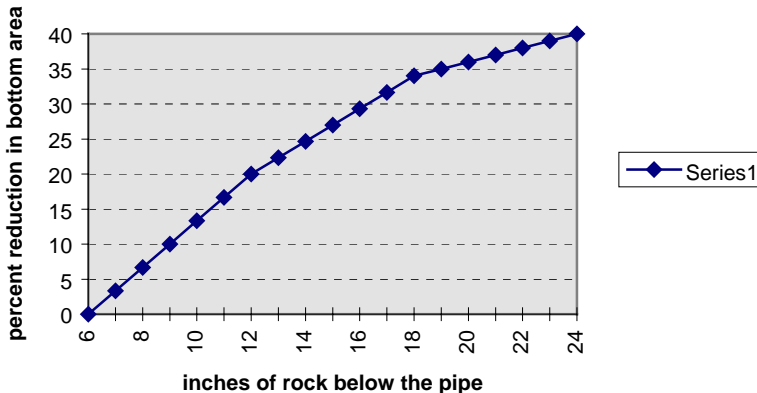
<u>Water Supply</u>	*	*	*
<u>Wells</u>	*	*	*
<u>Water Supply Wells</u>	*	*	*
<u>Buried Water lines</u>	*	*	*
<u>buildings</u>	<u>10</u>	<u>20</u>	
<u>Property Lines***</u>	<u>10</u>	<u>10</u>	
<u>The Ordinary High Water</u>			
<u>Level of Public Waters</u>	<u>****</u>	<u>****</u>	

REASON: Correction.

7080.0170, subp 2 C (1) (b). Carlton Co. 3/22/99 letter, comment # 6. RR54.10. S86 L131.

COMMENT: How will the interpolation be done for rock depths not found in this part?

RESPONSE: No change is proposed. An earlier draft of the rules included a chart for each depth of rock. However the agency was criticized for this approach, therefore a general interpolation statement was used instead. The following is the chart in the U of M training materials showing the reduction in bottom area based on increased sidewall.



7080.0170, subp 2 C (1) (b). Table Va. Carlton Co. 3/22/99 and 5/3/99 letters, Craig Berg 3/29/99 letter, comment #5, Minnesota Department of Health 3/30/99 letter, comment #16, Kevin Kloepfner 3/17/99 letter and Aitkin County 2/26/99 letter, comment # 11. RR55.9-38 and RR 56.1-31. S87-88. L131. L136. L134. L93. L76.

COMMENT: Only soil scientists should be allowed to determine soil structure for sizing of soil treatment systems, or more training may be needed to correctly use this table. Also determination of soil structure is too subjective.

RESPONSE: No rule change proposed. The agency has received this comment informally from at least two other individuals as well. The agency believes that this determination can be made by non-soil scientists, as it is being done in other states. The chart may be intimidating as far as the number of soil textures that are required to be identified, but is not intimidating as to identifying the soil structure. The identification of structure is only on the percent of the structural units (i.e., "peds") that are cohesive enough to withstand rupture upon handling. The shape of the structure is not required to be identified, except in the case of platy structure. Platy structure can be identified by the presence of a white "bleached" layer near the ground surface in soils with trees growing on them. The agency will include at its revised workshop on site evaluations a detailed description on how to determine the percent cohesive peds. In addition the chart was designed to be conservative in nature until the industry is comfortable and confident in making this determination. If the designer believes the sizing is too conservative, he/she can conduct a percolation test to determine if the system size, based on table Va, can be reduced. It is also the agency's belief that in many areas the percolation test is not being done, but sizing is being based on the soil texture noted during the borings. This is due to the large time commitment to conduct the percolation test. Basing sizing on soil texture alone is not a sound practice, and must be supplemented by a structure determination or the percolation test. Therefore, in effect, the proposed Table Va legitimizes but strengthens the use of a current practice, with the necessary safeguard of using soil structure.

Lastly, Aitkin county commented that this method requires the use of a non-disturbed sample. The agency agrees and the proposed rule should clearly state this. Therefore the agency will add language concerning the use of an undisturbed sample.

CHANGE: Amend 7080.0170 subp. 2 C. (1) (a): RR53.25.*design report. Soil sizing determined using Table Va must be based on an undisturbed soil sample from which an evaluation of the soil structure can be made.* The trench

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Also,

at its revised workshop on site evaluations. In addition the chart was designed to be conservative in nature until such time as the industry is comfortable and confident in making this determination. If the designer believes the sizing is too conservative, he/she can conduct a percolation test to determine if the system size, based on table Va can be reduced. It is also the agency's belief that in many areas the percolation test is not being done, but sizing is being based on the soil texture noted during the borings. This is due to the large time commitment to conduct the percolation test. Basing sizing on soil texture alone is not a sound practice, and must be supplemented by a structure determination or the percolation test. Therefore, in effect, the proposed Table Va legitimizes but strengthens the use of a current practice, with the necessary safeguard of using soil structure.

Lastly, Aitkin county commented that this method requires the use of a non-disturbed sample. The agency agrees and the proposed rule should clearly state this. Therefore the agency will add language concerning the use of a undisturbed sample.

CHANGE: 7080.0170, subp. 2 C (1) (b) Table Va.

<u>Coarse sand*</u>	<u>Single grain</u>	<u>.83</u>	<u>1.0</u>
<u>Medium Sand, Loamy sand**</u>	<u>Single grain</u>	<u>.83</u>	<u>1.0</u>
<u>Loamy sand**</u>	<u>Single grain</u>	<u>.83</u>	<u>1.0</u>
<u>Fine sand, Loamy fine sand</u>	<u>Single grain</u>	<u>1.67</u>	<u>1.0</u>
<u>Loamy fine sand</u>	<u>Single grain</u>	<u>1.67</u>	<u>1.0</u>
<u>Very fine sand</u>	<u>Single grain</u>	<u>2.0</u>	<u>1.0</u>
<u>Loamy very fine sand</u>	<u>Single grain</u>	<u>2.0</u>	<u>1.0</u>
<u>Sandy loam</u>	<u>Weak Moderate to strong</u>	<u>1.27</u>	<u>1.5</u>
<u>Sandy loam</u>	<u>Massive, Weak or platy</u>	<u>1.67</u>	<u>2.0</u>
<u>Sandy loam</u>	<u>Massive</u>	<u>2.0</u>	<u>2.4</u>
<u>Loam</u>	<u>Moderate to strong</u>	<u>1.67</u>	<u>2.0</u>
<u>Loam</u>	<u>Weak or platy</u>	<u>2.0</u>	<u>2.4</u>
<u>Loam</u>	<u>Massive</u>	<u>2.5</u>	<u>3.0</u>
<u>Silt loam</u>	<u>Moderate to strong</u>	<u>2.0</u>	<u>2.4</u>
<u>Silt loam</u>	<u>Weak or platy</u>	<u>2.5</u>	<u>3.0</u>
<u>Silt loam</u>	<u>Massive</u>	<u>3.0</u>	<u>3.6</u>
<u>Sandy clay loam***, clay loam***, silty clay loam***</u>			
	<u>Moderate to strong</u>	<u>2.2</u>	<u>2.6</u>

<u>Sandy clay loam***, clay loam***, silty clay loam***</u>			
<u>Weak or platy</u>	<u>3.2</u>	<u>3.8</u>	
<u>Sandy clay loam, clay loam, silty clay loam</u>			
<u>Massive</u>	=	=	
Clay loam	Moderate to strong	2.2	2.6
Clay loam***	Weak or platy	3.2	3.8
Clay loam***	Massive		
Silty clay loam***	Moderate to strong	2.2	2.6
Silty clay loam***	Weak or platy	3.2	3.8
Silty clay loam****	Massive		
<u>Sandy clay***, clay***, silty clay***</u>			
<u>Moderate to strong</u>	<u>4.2</u>	<u>5.0</u>	
<u>Sandy clay****, clay****, silty clay****</u>			
<u>Weak to moderate, massive, or platy</u>	=	=	
Clay***	Moderate to strong	4.2	5.0
Clay****	Massive, weak or platy		
Silty clay***	Moderate to strong	4.2	5.0
Silty clay****	Massive, weak or platy		

REASON: The chart has been regrouped and modified to reduce the number of classifications for ease of field identification.

CHANGE: 7080.0170 subp. 2 C. (1) (a): RR53.25.
....design report. Soil sizing determined using Table Va must be based on an undisturbed soil sample from which an evaluation of the soil structure can be made. The trench

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CHANGE: Add 7080.0110 subp. 4 D. (7) RR30.16 .
A determination of the soil structure from an undisturbed soil sample if sizing is to be determined using Table Va.

REASON: The only way to examine the soil structure is with an undisturbed sample. At this time the agency does not wish to prescribe the methods necessary to extract this sample. Currently a soil pit or a larger diameter

soil probe could be used. However, a large diameter hand auger may be sufficient to extract an undisturbed sample.

Old (8) will be renumbered as (9).

7080.0170, subp. 2, Table Va. Aitkin County 2/26/99 letter, comment # 12. RR55.9-38, RR56.1-38, and RR57.1-5. S87-88. L76.

COMMENT: The first sentence is missing some information.

RESPONSE: No rule change is proposed. The first sentence after the table refers to subpart 4, item B, for soil treatment systems that are suitable for these soils.

7080.0170 subp. 2 D (1) Agency recommended change. RR57.16-20. S88-89.

COMMENT: Add the phrase “and constructed” to this line, so as to be complete in what exactly needs to occur with these designs.

CHANGE: Rule change proposed.

7080.0170 subp. 2 D (1) *The ~~bottom and sides~~ absorption area of trenches and seepage beds shall be in original soils and designed and constructed with at least three feet of vertical separation above saturated soil or bedrock.*

REASON: Clarity.

7080.0170, subp. 2 C (1) Table Va. Soil Sizing Factors and Absorption Ratios Table. Dave Gustafson 3/31/99 letter. RR55-57. S86-88. L139.

COMMENT: Minnesota sizing factors and Wisconsin sizing factors should not be mixed. If Wisconsin criteria are used, then the sizing factors should be those recommended by the developers. Also, the educational information needs time to catch up to the design criteria. This addition only causes confusion in the industry.

The use of texture has been taught for at least 10 years and the use of a percolation test has been taught as a second test, not the first, in determining the proper soil sizing factor. Using the percolation test is not mandated by rule.

RESPONSE: See S94.

7080.0170, subp. 2 C (2). Gravelless drainfield pipe media. Dave Gustafson 3/31/99 letter. RR57. S88. L139.

COMMENT: A soil sizing chart should be developed for gravelless pipes instead of using the equivalence relationships in the rule.

RESPONSE: The agency reviewed an earlier document submitted by Mr. Gustafson showing the sizing factors for gravelless pipe and determined that it

was more confusing to place the chart in the rule than using an equivalency. This is due to the new Table Va which uses more sizing classifications. Mr. Gustafson's chart is SONAR exhibit 3d and sizes only on percolation rate and not on soil texture and structure.

7080.0170 subp. 3 A. Dual field systems. RR59.2-7 S90-91 L133

COMMENT: Grammatical changes are necessary for accuracy. Proposed deleted language is obsolete due to new methods and requirements in the rule.

CHANGE: The agency agrees with the comment and proposes the following change:

A. Dual field systems shall be used only where the percolation rate is slower than five minutes per inch, unless a liner or pressure distribution system is employed as specified in part 7080.0150, subpart 3, or 7080.0910, subpart 3, item B or 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.

REASON: Clarity.

7080.0170, subp 4 A. Agency change RR59.12-16 S91 L133.76

COMMENT: Clarification needs to be added to this item. The clarification is that 3 feet of soil with a texture of sand or fine sand or finer must exist between the distribution medium and the saturated soil level or bedrock.

CHANGE: Rule change proposed.

7080.0170 subp. 4 A. Three feet of soil with a texture or medium sand or finer must exist immediately below the distribution medium. Soil treatment systems placed in soils absorption areas with a soil sizing factor of 0.83 gallons per day per square foot in Table V or Va. 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 sand or loamy sand (Table Va) must provide use at least one of the following treatment techniques:

REASON: Clarity.

7080.0170, subp. 5 A (1) Pine County 3/31/99 comment #17. RR60.7-9 S92, L143.

COMMENT: How can mounds be built on original soils if the rockbed must be elevated by a minimum of 12 inches of clean sand?

RESPONSE: No rule change proposed. The commenter is confused between the rockbed on the mound system and the mound itself. Proposed changes to the mound definition (7080.0020 subp. 24 RR12.21-24) should help to make this distinction.

7080.0170, subp. 5 B (3). Mounds, clean sand. Dave Gustafson comment. RR61. S94. L139. S93-94

COMMENT: The clean sand specification should not be modified, especially to be more restrictive.

RESPONSE: See S94.

7080.0170, subp. 5 B (3). Mounds, clean sand Craig Berg 3/29/99 letter, comment #6. RR61. S94. L136 S93-94

COMMENT: No more than 25% of material should pass the #60 sieve to qualify for clean sand.

RESPONSE: This is a good comment, however the agency proposes no rule change at this time. The sand specification has been an issue for a number of years. The commenter made this comment without the benefit of reviewing the SONAR (Exhibit 3) for this rule revision. The agency feels adequate justification exists for this change in the SONAR for this revision (page 94) and the 1996 SONAR (1999 SONAR exhibit 39) for the 1996 revisions pages 18 and 19. This standard can be made more restrictive in a local ordinance if desired.

7080.0170, subp 5 B (2). Mound Design. Carlton Co. 3/22/99 letter, comment # 8 and agency recommended change. RR61.3-9 S93 L131

COMMENT: Have not seen problems with mounds built with 10 foot wide rockbeds on soils with a perc rate between 60 and 120 MPI. Therefore the proposed change is not justifiable.

CHANGE: The agency agrees with the comment. This issue was discussed at the 4/1/99 ISTS Advisory Committee meeting and the consensus was that this requirement is not necessary for soils with a perc rate between 60 and 120 minutes per inch. The agency proposes the following change:

- (1) Rock bed width shall be calculated by multiplying the linear loading rate by 0.83. The width of the rockbed width shall not exceed 10 feet. The linear loading rate shall be determined by the relationship between vertical and horizontal water movement in the original soil of the absorption area. .
- (2) The system should be as long and narrow as practical and the width of a single the rock bed must not exceed ten feet. If the soil within the upper foot of the absorption area has a soil sizing factor of 3.2 square feet per gallon per day or greater as described in subpart 2, item C, Table Va, or has a percolation rate slower than 60 minutes per inch, the rock bed length shall be determined by dividing the average design flow by 4.5 and the rock bed width determined by dividing the bottom area by the rock bed length.

and,

~~7080.0170 subp. 6 B (1) *Rock bed absorption width shall be calculated by multiplying the linear loading rate. The bottom area of the rock bed shall be calculated by multiplying the average design flow by the soil sizing factor as identified in subpart 2, item C, Table V, or using the percolation rate or soil sizing factors in subpart 2, item C, Table Va of the upper 12 inches of soil in the proposed absorption area. The linear loading rate shall be between two and eight gpd/ft as determined by the relationship between vertical and horizontal water movement in the soil. The system should be as long and narrow as practical but the rock bed absorption width shall be no greater than ten feet. If the soil within the upper foot of the absorption area has a soil sizing factor of 3.2 square feet per gallon per day or greater as described in subpart 2, item C, Table Va, or has a percolation rate slower than 60 minutes per inch, the rock bed length shall be determined by dividing the average design flow by 4.5 and the rock bed width determined by dividing the bottom area by the rock bed length. The total rock bed width for sloping ground shall consist of the rock bed absorption width plus enough rock on the upslope side to provide stability.*~~

REASON: Please see the justification for 7080.0170 subp. 6 B (1). After receiving the comments from Carlton County, the agency no longer feels that the requirement is necessary.

7080.0170, subp. 5 B 3. Aitkin County 2/26/99 letter, comment #13. RR61.10-23. S94. L76.

COMMENT: The clean sand specification should be moved to the definitions.

RESPONSE: No rule change is proposed. The advice from the attorney general and the State Revisor of Statutes was to place the specifications within the text of the rule and leave definitions as definitions or direction markers. 7080.0020, subp. 11b (RR6.8-27) provides a definition and a directive. See also S16-17.

7080.0170, subp. 5 B (3) and (14). Crow Wing County 3/29/99 letter, comment #4. RR61.10-11 and RR65.8-9. S94 and S. L141.

COMMENT: Subitems (3) and (14) conflict.

CHANGE: Rule change proposed.

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

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

REASON: Clarity. The comment does identify the need for clarity.

7080.0170, subp. 5 B (4). Aitkin County 2/26/99 letter, comment # 14. RR61.24-29, RR62.1-19. S94-95. L76.

COMMENT: Commenter suggests the rule is incorrect when calculating downslope mound width.

RESPONSE: The agency believes that the rule is correct in calculating absorption width. RR61.25-26 clearly states that the absorption width is calculated by multiplying the rock bed width by the absorption ratio. The commenter has no disagreement with that. However the final width of the mound may not be determined by the absorption width because subitem (5) states that the side slopes of the mound may not be steeper than 3:1. Therefore the final bottom area of the mound depends on the larger of the absorption width or the maximum steepness of the side slope.

The agency disagrees that more absorption width is needed on a 12 percent slope than a one percent slope, however the placement of that absorption width is different. For mounds on flat slopes the absorption area is centered under the rock bed 7080.0170 subp. 5 B (12) (RR64.25-26), and for sloping mounds, the absorption area is placed under and downslope of the rock bed (RR65.1-3). This concept has been in the rule and taught at University of Minnesota workshops for many years.

7080.0170, subp. 5 B (6). Wright County 3/30/99 letter. RR63.7-10. S100. L140.

COMMENT: The reference should be to 7080.0160, subpart 3, because 7080.0160, subpart 2, is for gravity distribution and there is no subpart 4.

CHANGE: Rule change proposed.

7080.0170, subp. 5 B (6) Distribution of effluent over the rock bed must be by level perforated pipe under pressure in accordance with parts 7080.0150, subparts 1 and 3, and 7080.0160, subparts 2 and 4.3.

REASON: Correction.

7080.0170, subp. 5 B (24). Mound construction. Dave Gustafson 3/31/99 letter. RR66 and RR69.5-7. S99-100 and S103. L139.

COMMENT: A surface water diversion requirement should apply to all systems, including inground and performance systems.

CHANGE: Proposed rule change.

7080.0170, subp. 1 G (new) (RR50.10) Whenever soil treatment systems are located on slopes greater than one percent, a diversion must be constructed immediately upslope from the mound to intercept and direct runoff.

7080.0170 subp. 5 B (24) Whenever mounds are located on slopes greater than one percent, a diversion must be constructed immediately upslope from the mound to intercept and direct runoff.

7080.0170 subp. 6 C. (9) Whenever at-grade systems are located on slopes greater than one percent, a diversion must be constructed immediately upslope from the at-grade system to intercept and direct runoff.

REASON: This is a good provision and is consistent with good engineering practice to remove excess water away from the system.

7080.0170, subp. 6, A (4). At-grade systems. Agency recommended change. RR67.7-8. S101.

CHANGE: Rule change proposed.

(4) Setbacks must be established in accordance with subpart 2 L, item A F, subitem (3), Table IV. Setbacks shall be measured from the edge of the rock bed absorption area.

REASON: Setbacks are measured from the point at which the sewage effluent first enters the natural soil. This concept is reflected in the proposed definition of absorption area (RR3.16-22). Therefore it is appropriate to refer to this definition. The new definition also clarifies that the upslope edge of the at-grade rockbed is not the measuring point for the setbacks, but from the distribution pipe.

7080.0170, subp. 6 B (1). Design of at-grade systems. Dave Gustafson comment and agency recommended change. RR67.10-24. S101-102. L139.

COMMENT: Linear loading rate should be placed in the rule. Guidance on what “long and narrow” means is necessary. Also, limiting rockbeds to 10 feet in at-grade systems does not move the code toward performance standards. Science should be used, not equivalency of an at-grade and a mound design.

CHANGE: Rule change proposed.

(1) Rock bed absorption width shall be calculated by multiplying the linear loading rate ~~The bottom area of the rock bed shall be calculated by multiplying the average design flow~~ by the soil sizing factor as identified in subpart 2, item C, Table V, or using the percolation rate or soil sizing factors in subpart 2, item C, Table Va of the upper 12 inches of soil in the proposed absorption area. ~~The linear loading rate shall be between two and eight gpd/ft as~~ determined by the relationship between vertical and

horizontal water movement in the soil. The system should be as long and narrow as practical but the rock bed absorption width shall be no greater than ten feet. If the soil within the upper foot of the absorption area has a soil sizing factor of 3.2 square feet per gallon per day or greater as described in subpart 2, item C, Table Va, or has a percolation rate slower than 60 minutes per inch, the rock bed length shall be determined by dividing the average design flow by 4.5 and the rock bed width determined by dividing the bottom area by the rock bed length. The total rock bed width for sloping ground shall consist of the rock bed absorption width plus enough rock on the upslope side to provide stability.

REASON: The agency feels that the numbers used for linear loading rate have not been adequately justified in Wisconsin's proposed rule. Therefore, Minnesota will retain the concept of long and narrow systems by using the linear loading rate, however the exact numbers to be used will be based on the site conditions.

See S101-102. This portion of the rule is for standard system designs, not performance. Rockbeds that are not 10 feet wide would be allowed under 7080.0178 (RR76) and 7080.0179 (RR77). The maximum of a ten-foot wide rock bed is chosen not only on hydraulic performance but on ease of constructability and oxygen transfer under the rock bed. A ten foot wide rock bed for at-grade systems is the maximum proposed in Wisconsin (attachment 12).

7080.0170, subp. 6 B (3). Wright County 3/30/99 letter. RR68.2. S102. L140.

COMMENT: The reference should be 7080.0160, subpart 3.

CHANGE: Rule change proposed.

7080.0170 subp. 6 B (3) *At-grade systems shall be pressurized in accordance with parts 7080.0150, ~~subpart~~ subparts 1 and 3, and 7080.0160, subpart ~~1~~ 2 and ~~3~~ 4. Distribution pipe shall*

REASON: Correction.

7080.0170 subp 6 C (2) At-grade systems. Larry Fyle 3/19/99 letter, comment # 8 RR68.8-9 L130

COMMENT: Why is the Infiltrator product not allowed to be used in at-grade systems?

RESPONSE: No rule change proposed. The Infiltrator product has not been tested, researched or field tested over a long period of time under normal use to be designated as a standard technology for at-grade systems. If desired, the Infiltrator product can be used in at-grade systems under proposed 7080.0178 or 7080.0179 to gain the data required to become a standard technology.

7080.0170, subp. 6 C (7). Aitkin County 2/26/99 letter, comment # 15. M.R.42. L76.

COMMENT: Inspection pipe placement in at-grade systems should be clarified.

RESPONSE: No rule change is proposed. The rule describes inspection pipe location, and workshop materials visually express the locations. The inspection pipe criteria were derived from recommendations by the developer of the at-grade system, Dr. Jim Converse. See the 1996 SONAR (1999 SONAR exhibit 39) rule revisions).

7080.0172 ALTERNATIVE SYSTEMS

7080.0172. Alternative systems. Carlton County Zoning Office 3/12/99 letter (letter bases the comment on 7080.0172; it's more appropriate to address under 7080.0175, subp. 4 as shown below). RR74.20-21. S108-109. L91.

COMMENT: The rule should address or define composting toilets and proper disposal of the compost or ash waste.

CHANGE: Change proposed to 7080.0175.

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

REASON: Need. The letter clearly indicates a void in the rule. It is necessary to add language so it is clear what must be done for composting and other toilet waste treatment devices. The rule clearly defines their waste as septage; the rule does not clearly state that septage from toilet waste treatment devices is pumped and disposed of as described from sewage tanks.

It is reasonable to break the requirements into two parts. First, primitive dwellings and dwellings (as defined in RR9.2-7) with greywater systems will most likely have small quantities of toilet waste to dispose of. The proposed requirement is consistent with hand-carried greywater requirements under RR24.24-26 and RR25.1-2. Local ordinances should regulate whether this is applicable. Low density areas is the key and is offered in the text for LGU acknowledgment. Facilities that may generate larger quantities of waste (e.g., parks or resorts) must follow the pumping and disposal requirements in subpart 6.

7080.0172, subp 1. Floodplain areas. Minnesota Department of Health 3/30/99 letter, comment #17. RR70.18-20. S103-104. L134.

COMMENT: Increase the standards for system placed in floodplains. Specify that systems should be pumped prior to, not after, inundation.

RESPONSE: No rule change proposed. The current language is reasonable because flash floods may not allow pumping prior to inundation.

7080.0172, subp. 1 B. Floodplain areas. Pine County 3/31/99 letter, Kelly Osterdyk. Comment #6. RR69.17-18. S104. L143.

COMMENT: Clarifying language desired.

CHANGE: Rule change proposed.

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

REASON: Clarity. There are areas where ten-year flood data are not available. It is reasonable to state that this requirement can be implemented only if the information exists.

7080.0172, subp. 1 D (1). Floodplain areas. Pine County 3/31/99 letter, Kelly Osterdyk. Comment #7. RR69.27. S104. L143.

COMMENT: Clarifying language desired.

CHANGE: Rule change proposed.

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

REASON: Clarity. There are areas where ten-year flood data are not available. It is reasonable to state that this requirement can be implemented only if the information exists.

7080.0172, subp. 2 B. Wright County 3/30/99 letter. RR71.1. S105. L140.

COMMENT: The last line should read “water supply wells as required under 7080.0170, subp. 1, item F, Table IV.”

CHANGE: Rule change proposed.

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

REASON: Clarity. When referencing an outside part of the rule, the part should be referenced.

7080.0172, subp 2C. Privies. Aitkin County 2/26/99 letter (incorrectly referenced as 7080.0170, subp. 8C) and Carlton County 3/22/99 letter. RR71.3-4. S105. L76 and L131.

COMMENT: Aitkin County suggests a 50 cubic foot privy requirement is too large then suggests 50-100 gallons. Carlton County suggests that the privy size requirement be eliminated because of the multiple uses, e.g., a hunting cabin vs. a resort. Carlton County states that plastic 50/55 gallon barrels are typically used and allow many years of use without the need for pumping.

RESPONSE: No rule change proposed. The minimum 25 cubic feet is not new language, it is the minimum and the agency has not seen problems. Local ordinances can increase this size, and should for certain systems, such as large resort privies. 25 cubic feet (less than 3'x3'x3') is a reasonable minimum.

7080.0172, subp. 3. Holding tanks. Larry Fyle 3/19/99 letter. RR72.10-14. S105-106. L130.

COMMENT: If holding tanks are used, water meters should be required.

RESPONSE: No rule change proposed. Subp. 3 A requires a monitoring and disposal plan to be signed by the owner and administered and enforced by the permitting authority. Flexibility in when water meters would be required falls within this management plan.

7080.0172, subp 3. Holding tanks. Minnesota Department of Health 3/30/99 letter, comment #18. RR71.14-25 and RR72.1-14. S105-106. L134.

COMMENT: Add requirements for when holding tanks can be employed.

RESPONSE: No rule change proposed. The agency's policy is to move all rules toward local controls. The language in subpart 3, item A allows the local units of government to determine when holding tanks would be allowed for new construction. Holding tanks are used frequently to eliminate an imminent threat situation and these local controls seem to be working effectively.

7080.0172, subp. 3 A. Holding tanks. Carlton County 3/22/99 letter. RR71.15-17. S105-106. L131.

COMMENT: Privies should not to be considered a "standard" system. Restrict the use of holding tanks to where a "standard" system cannot be used. Enforcement should not be placed as a burden on counties.

RESPONSE: Partial rule change proposed (see proposed rule change below for 7080.0172, subp. 3 A, based on Aitkin County letter). The proposed language continues to create a "red flag" of sorts that holding tanks may not be used for new construction unless the permitting authority allows this to occur. This is equivalent to what happens now: current rule (7080.0910, subp. 3) states "use of alternative systems in items A to K is allowed only in areas where a standard

system cannot be installed or is not the most suitable treatment.” The second part of the sentence has been used by LGUs to allow holding tanks in particular situations, just as the proposed rule requires.

The requirement for a monitoring and disposal plan to be signed by the owner and administered and enforced by the permitting authority is described in S105-106 and may be considered a burden by some LGUs. Management of holding tank waste is necessary and reasonable to discourage “midnight pumping” of raw sewage into lakes, ditches, rivers, lands, and streams.

7080.0172, subp. 3 A. Holding tanks. Aitkin County 2/26/99 letter, comment # 19 (letter references 7080.0170, subp. 9 A incorrectly), Craig Berg 3/29/99 letter, comment # 7 and Dave Gustafson 3/31/99 letter. RR71.15-17. S105-106. L76, L130 and L139.

COMMENT: Aitkin county suggests a different method for assuring monitoring and proper disposal of holding tank waste. Mr. Berg has a similar comment asking would a contract with a pumping company cover this area? Mr. Gustafson suggests that holding tanks should have to meet the operating permit requirements of performance systems. The county must be actively involved.

CHANGE: Rule change proposed as follows:

A. Holding tanks for new construction are prohibited unless approved by the permitting authority, based on submission of a monitoring and disposal contract ~~plan~~ between the owner and a licensed pumper. The contract must guarantee the removal of the tank contents prior to overflow or any discharge.

REASON: It is reasonable to make this change because it requires a more formal agreement between the owner and a pumper while still keeping the local unit of government informed. The contract assures pumping at appropriate times and proper disposal. Based on Carlton County’s comment above, it releases LGUs of most of the burden. An operating permit would be an unreasonable burden to place on LGUs for holding tanks.

7080.0172, subp. 3 C. Holding tanks. Dakota County 3/31/99 letter, comment #15. RR71.20. S105-106. L142.

COMMENT: Replace “a cleanout” with “an inspection.”

RESPONSE: No rule change proposed. The cleanout can also be used as an inspection pipes. Holding tanks can be pumped out through a cleanout and are not required to be pumped out through a maintenance hole. This is a different requirement than septic tanks where it is critical that all solids and liquids be removed to protect the soil treatment system

7080.0172, subp. 3 G. Holding tanks. Aitkin County 2/26/99 letter (letter references 7080.0170, subp. 9 A incorrectly). RR72.12-14. S106.

COMMENT: Monitoring should trigger attention when the holding tank is at 75% capacity.

CHANGE: Rule change proposed.

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

REASON: This change is reasonable because monitoring for 75% full will allow time for the owner to arrange for holding tank pumping and it is required only for mechanical or electrical monitoring that can set any alarm point. Many holding tanks use non-mechanical floats that rise and show a red line when the tank needs to be pumped.

7080.0172, subp. 4. Greywater systems. Agency recommended change. 72.15-26 and RR73.1-25. S 106-107.

COMMENT: Greywater systems should be labeled as a “standard system” technology.

CHANGE: *Delete 7080.0172, subpart 4 and move the language to a new subpart: 7080.0170, subpart 7.*

REASON: Correction. In a previous draft of the rule, the agency removed titles for systems, such as “standard” system and “alternative” system. The goal was to promote the use of all technologies as a first choice. During the initial rulemaking process, the agency heard from many that the labels were necessary. For example, LGUs wanted holding tanks to be alternative and not a first choice option.

The agency wishes to promote greywater systems. The concept of removing toilet waste through separation (composting toilets, incinerator toilets, etc.) is a positive move in Minnesota. It was not the agency’s intention to leave greywater systems in the alternative part of the rule so we now propose to move it to the standard system part of the rule, 7080.0170, subpart 7. This is reasonable because these systems prevent toilet waste from discharge to a soil treatment system and water volumes are reduced by approximately 40% so a smaller soil treatment system can be used. It moves Minnesota in the direction of nitrogen reduction in our groundwaters from sewage sources.

7080.0172, subp. 4. Greywater systems. Craig Berg 3/29/99 letter. RR72.15-26 and RR73.1-25. S106-107. L136.

COMMENT: Does this imply that greywater may simply be disposed of so long as it goes underground?

RESPONSE: No rule change proposed. No, subpart 4 identifies system design components for greywater systems. It should also be made clear that the toilet waste treatment device is defined separately from the greywater system.

7080.0172, subp. 4. Greywater systems. Pine County 3/31/99 letter, Shirley Basta. RR72.25. S106-107. L143.

COMMENT: Move line 25 to mid-paragraph on line 21 after “water flush toilet.”

RESPONSE: No rule change proposed. The agency does not see a need for this modification or that it would improve the rule.

7080.0172, subp. 4. Greywater systems. Minnesota Department of Health 3/30/99 letter, comment #19. RR72.15-26 and RR73.1-25. S106-107. L134.

COMMENT: Reference the Well Code setbacks for greywater systems.

RESPONSE: No rule change proposed. Minimum setback distances are provided in Table IV (7080.0170, subp. 1 F; RR49.14-33). Traditional greywater systems consist of a sewage tank (included in the table) and soil system (absorption area; also included in the table).

7080.0172, subp. 4 A. Greywater systems. Carlton County 3/22/99 letter. RR72.16-18. S106-107. L131.

COMMENT: Privies are also used for greywater systems.

RESPONSE: No rule change based on this comment.

7080.0172, subp. 4 A. Greywater systems. Agency recommended change. RR72.16-18. S106-107. L131.

CHANGE: Rule change proposed. 7080.0172, subp. 4 A:

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

REASON: Since greywater systems are proposed to become a standards technology, it could be concluded that the toilet waste treatment devices used in conjunction with a greywater system could also be construed as being standard. These toilet waste treatment devices are considered plumbing and are not covered by this chapter.

7080.0172, subp. 4 B. Greywater systems. Pine County 3/31/99 letter, Kelly Osterdyk. Comment #8. RR72.25. S106-107. L143.

COMMENT: Specify that garbage disposals should not be connected to the greywater system.

CHANGE: Rule change proposed.

B. 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 ~~soil treatment system~~ greywater system.

REASON: Correction. Replacing soil treatment system with greywater system conforms the rule to its subject matter.

7080.0172, subp. 4 D. Greywater systems. Wright County 3/30/99 electronic mail, comment # 7. RR73.15. S106-107. L140.

COMMENT: For ten or more bedrooms or other establishments, the greywater septic tank shall be sized as for any other establishment except that the minimum liquid capacity shall be at least 300 gallons.

CHANGE: Rule change proposed.

For ten or more bedrooms or other establishments, the greywater septic tank shall be sized as for any other establishment (see part 7080.0600, subp. 4, item C 7080.0130, subpart 3, item B) except that the minimum liquid capacity shall be at least 300 gallons.

REASON: Correction of rule reference.

7080.0172, subp. 4 D. Greywater systems. Clint Elston 3/31/99 letter. Comment # 2 D. RR73.18. S106-107.

COMMENT: The rule requires that all greywater aerobic tanks must be analyzed by NSF. This is costly and is unnecessary since no soil treatment area reduction is allowed.

RESPONSE: No rule change proposed. The rule (RR41.24-26 and RR42.1-5) does not require NSF certification; it does require testing of aerobic units under the conditions proposed by NSF. The agency knows of at least three testing companies that test for NSF. Testing can also be done outside of these companies as long as the NSF conditions are met. These conditions include testing under stress, after power failures, after vacations, etc., to assure continued performance under traditional family use. Testing of the aerobic unit is to show performance; its

performance is not considered for soil treatment sizing to be labeled as a standard system. It is allowed as a performance system. Greywater contains significant amounts of pathogens and aerobic tanks are not a passive treatment process so it is reasonable that they be tested. Also, greywater aerobic tanks are followed by downsized soil treatment areas as allowed in rule (RR73.19).

7080.0172, subp. 4 E. Greywater systems. Wright County 3/30/99 electronic mail, comment # 8. RR73.19-21. S106-107. L140.

COMMENT: Insert correct reference for subpart 2, 5 or 6.

CHANGE: Rule change proposed.

RR73.21: accordance with 7080.0170, subpart 2, 5 or 6.

REASON: Adding “7080.0170” is necessary because the language refers to subparts outside 7080.0172.

7080.0172, subp. 4 E, F and G. Greywater systems. Pine County 3/31/99 letter, Kelly Osterdyk. Comment #9 and #10. RR73.20-25. S106-107. L143.

COMMENT: Commenter does not see the need for flow, distribution, dosing or final treatment and disposal requirements in the rule for greywater systems.

RESPONSE: No rule change proposed. By removing toilet waste, greywater systems continue to discharge approximately 60% of the flow. This rule is a subsurface discharge rule. Item E recognizes the decrease in flow and allows a reduction in soil area. Item F recognizes that some type of distribution and dosing will occur in the soil treatment design. Item G may be unnecessary; it highlights that all of the requirements for a greywater system apply this part of the rule, which also allows downsizing a septic tank. Greywater system designs outside of this subpart that continue to use 3’ of soil must meet the requirements proposed in 7080.0178 (RR76) or 7080.0450 (RR96). Greywater system designs outside of this subpart that do not use 3’ of soil must meet the requirements proposed in 7080.0179 (RR77) or be described in an alternative local standard (RR79). See also ISTS Options Factsheet, Attachment 5.

7080.0175 MAINTENANCE

7080.0175, subp. 2, subp. 3 C and subp. 4. Maintenance. Pine County 3/31/99 letter, Shirley Basta. Attachment 6. RR74.2, RR74.17 and RR74.20. S107-110. L143.

COMMENT: The rule should define “owner’s agent.”

RESPONSE: No rule change proposed. LGU ordinances can define the term if the flexibility in the rule is ineffective in that area.

It is unreasonable to define owner's agent because it may limit owners' flexibility. It may help to understand the agency's viewpoint for each. For RR74.2, the agency states that someone (owner or owner's agent) must regularly check the sewage tank to see if pumping is necessary. Any person can do this work. The owner using a clear plastic tube or towels wrapped around a pole or the owner's neighbor, can conduct this work. This information is published and available (Attachment 6). The agency recommends all counties distribute this guide to ISTS owners. A pumper may also do this work; it is part of their responsibilities if called to make that determination (RR120.15-17).

For RR74.17, the agency states that someone (owner or owner's agent) must install maintenance holes for maintenance. Any person can do this work. The owner or a friend of the owner, etc., can install their own maintenance holes and risers to save money. Owner's agent may also include a pumper because it is also listed as part of the responsibilities as described above.

For RR74.20, the agency states that someone (owner or owner's agent) shall operate a toilet waste treatment device. This person could be the owner, a visitor, a neighbor, etc. If detailed operation is needed, perhaps a distributors trained agent could do the work. If septage is removed it falls under the pumper's responsibilities again as listed above.

7080.0175, subp. 2 A. Maintenance. Aitkin County 2/26/99 letter, comment # 20. RR74.4-5. S107-108. L76.

COMMENT: Using "designed operating depth" allows tanks to leak at maintenance hole risers, covers, etc.

CHANGE: Rule change proposed as follows:

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

REASON: Commenter reminds the agency not to ignore the construction mandates added in 7080.0130 Septic Tanks for watertight tank tops, riser joints and riser connections. These items can also be evaluated by an owner or pumper every three years. It is reasonable to add "and whether sewage tank tops, riser joints, and riser connections leak" because these additional checks prevent excess water from entering the system and potentially limiting system longevity.

7080.0175, subp. 3 (no rule reference in the letter was offered). Carlton County 3/22/99 letter. RR74.20-21. S108-109. L131.

COMMENT: The rule should address disposal of alternative toilet waste, e.g., compost, incineration and chemical.

RESPONSE: See indicated rule language.

**7080.0175, subp 3 C Minnesota Department of Health 3/30/99 letter, comment #20.
RR74.17-19. S108. L134.**

COMMENT: Clarify the rule to say whether maintenance holes are required to be installed on existing systems.

CHANGE: Rule change proposed.

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

REASON: Clarity. The rule was not clear describing the circumstances when the owner or owner's agent would install maintenance holes. This occurs typically on existing systems. Experience in the industry shows that pumpers cannot adequately remove all liquids and solids from the tank if there is not a maintenance hole. Adding the term "sewage tank" by default states that inspection maintenance holes need not be installed on a failing systems such as a seepage pit, drywell, leaching pit, cesspool or other non-complying tank.

**7080.0175, subp. 5 E. Maintenance. Aitkin County 2/26/99 letter, comment # 22.
RR75.1-2. S109. L76.**

COMMENT: Keep item E that states "any accumulation of solids in pump stations, distribution devices, valve boxes, or drop boxes shall be considered septage," and adding "and shall be removed and disposed of with the septic tank contents."

RESPONSE: No rule change proposed. Solids in pump stations, distribution devices, valve boxes and drop boxes are all a part of the definition of septage (RR.16.5-7). In addition, the deleted rule language implied that a pumper must uncover distribution devices, valve and drop boxes and evaluate whether solids are present on a three-year basis. This was not intended, especially because they are designed to be buried with no inspection pipes coming to the surface and no maintenance holes.

**7080.0175, subp 6. Minnesota Department of Health 3/30/99 letter, comment #21.
RR75.3-4. S109-110. L134.**

COMMENT: The rule should contain or refer to specific statewide requirements for septage disposal.

RESPONSE: No rule change proposed. Many federal regulations describe septage and sludge requirements. These regulations vary on intermixture of septage and sludge with other wastes. The state rule (Minn. R. ch. 7041) addresses sludge disposal and septage disposal only for municipal wastewater treatment facilities. There is no state rule specifically addressing ISTS septage disposal requirements for individual systems. The agency has recommended land application guidelines that are taught at the pumper workshops and some LGUs have adopted septage requirements into local ordinance. The agency may adopt rules for ISTS septage management; however, it is not currently an agency priority.

7080.0175, subp. 8 A. System rejuvenation. Aitkin County 2/26/99 letter, comment # 23. RR75.14. S109-110. L76.

COMMENT: The proposed language restricts using technologies with highly pretreated effluent to rejuvenate a failing system.

CHANGE: Rule change proposed.

(+) A. not be used on failing systems, unless the activity meets part 7080.0179 requirements;

REASON: Clarity. In this rule, the definitions for failing and imminent public health threat (IPHT) are treated separately. Maintenance, particularly in the terms of soil cracking, is allowed on failing systems. This type of maintenance is also allowed for IPHT systems as long as the performance criteria of 7080.0179 are met. It is reasonable to allow technologies to be used for system rejuvenation because of the proposed performance systems administration and enforcement (7080.0179, RR77-19).

7080.0176 SYSTEM ABANDONMENT

7080.0176, subp. 1. Tank abandonment. Carlton County 3/22/99 letter. RR75.22-24. S110. L131.

COMMENT: Why have dry wells been deleted? Why do solids and liquids have to be removed for privies?

CHANGE: Rule change proposed.

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

REASON: Correction for consistency. Deletion of drywells was a mistake. Consistency in this part with the proposed changes above (RR71.10-13) are reasonable as described.

7080.0176, subp. 1 A. System abandonment. Wright County 3/30/99 electronic mail, comment # 9. RR75.26. S110. L140.

COMMENT: The rule should also refer to subpart 3.

CHANGE: Rule change proposed.

RR75.26: 7080.0175, ~~and~~, subparts 3 and 6;

REASON: Correction. Subpart 3 should be referenced because it addresses septage removal and subpart 6 needs to be referenced because it addresses septage disposal. Both items in this rule reference are addressed.

7080.0176, subp. 1 C. System abandonment. Agency proposed change. RR76.3-4. S110.

CHANGE: Rule change proposed as follows:

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

REASON: Flexibility. It is reasonable to have the option of removal, too.

7080.0178 OTHER SYSTEMS

7080.0178 and 7080.0179 Minnesota Department of Health 3/30/99 letter, comment #22. RR76.11-26 and RR77.1-26 and RR78.1-25 and RR791-4 S110-126. Attachments 7, 8, and 9. L134.

COMMENT: The agency should establish more detailed, measurable standards for such things as operation, discharge, monitoring and mitigation. And the agency should have a direct role in approving and monitoring the performance of such systems.

RESPONSE: No rule change proposed. See SONAR (Hearing Exhibit 3) and related discussions in this document and attachments 7, 8 and 9. When brought to the 4/1/99 ISTS Advisory Committee, they strongly agreed that no effluent numbers should be placed in this rule. Regarding the second comment, the agency's policy is to have local governments assume responsibility for tasks such as approving monitoring plans.

7080.0178, subp. 1. Other systems. General. Pine County 3/31/99 letter, Shirley Basta. RR76.15. S110-112. L143.

COMMENT: Who decides what "reasonable assurance" is, the designer or the permitting authority?

RESPONSE: No rule change proposed. The permitting authority has the final say as to what is a reasonable submittal before issuing a permit.

7080.0178, subp.2. Minimum requirements. Carlton County 2/8/99 letter (letter incorrectly cited 7080.0910, subp 3a). RR76.18-20. RR77.14-26. RR78.1-2. RR78.19-25. RR79.1-4. S110-112. L26.

COMMENT: The monitoring plan requirements for experimental systems have been unsuccessful because of lack of compliance with licensees.

RESPONSE: The 1996 rules opened the door for new technologies as long as monitoring and mitigation plans were in place. Current 7080.0910 also required the installation of a water meter. Carlton county has successfully implemented this; however, licensee compliance is still a concern. Two things should help: first, licensee enforcement should be taken seriously, and the agency should be notified of those that do not comply. Second, with the implementation of performance standards, monitoring and mitigation plans will eventually become commonplace, rather than a “new” idea and method. The agency hopes to encourage the development of monitoring and mitigation plans in conjunction with LGUs and the University of Minnesota so establishment of the plans isn’t a big hurdle. Compliance and enforcement should then be a natural follow-up.

7080.0178, subp. 2. Minimum requirements. Agency recommended change. RR76.22. S110-112.

CHANGE: Rule change proposed.

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 with a minimum of one foot of original soil.

REASON: Correction. This part was adopted in 1996 to provide a way to use new technologies and to modify technical standards and criteria without going through a variance process. One major area of use was technologies placed on sites with disturbed soils. The proposed rule destroyed the allowance for placing systems on disturbed sites by requiring original soil to be used. The rephrasing allows use of fill sites.

7080.0179 PERFORMANCE

7080.0179. Performance systems. Richard Walker 2/18/99 Letter. RR94.25-26. RR77.8-26. RR77 - 79. S153-154. L28.

COMMENT: Objection to the definition of what comprises protection of public health and environment.

RESPONSE: No particular rule change is proposed directly related to this comment. Comments and rule changes are offered below. The agency suggests reading the SONAR (Hearing Exhibit 3), this document and other manuals or books related to sewage and protection of public health.

7080.0179. Performance systems. James Baker, Multi-Flo; 4/19/99 hearing testimony. H67.9.

COMMENT: Will it now be possible for an septic tank with a fish tank aerator be approved?

RESPONSE: No rule change proposed. The rule allows any new technology to be used under part 7080.0179 as long as a monitoring and mitigation plan are created and approved by the LGU and enforced by the LGU through the operating permit. If the technology fails to show performance as indicated in the monitoring plan, mitigation measures must take place. The agency is placing the responsibility on manufacturers, ISTS professionals and LGUs to take the performance system allowance in the rule and make it work on the local level.

7080.0179. Performance systems. James Baker, Multi-Flo; 4/19/99 hearing testimony and Cass County letter submitted at the 4/19/99 hearing. H68.17.

COMMENT: It would be much more cost-effective if approvals were done at the state level.

RESPONSE: No rule change proposed. The new technology process is offered for a central location and will most likely be used as a first choice by most manufacturers. If not, a local performance system option is offered because of the significant public comment during the rulemaking to assure this option is there. The agency does have an annual reporting requirement and has the ability to review local files if necessary.

7080.0179, subp. 1 and 7080.0450, subp. 1 Carlton County 3/22/99 letter. RR96.1-13 and RR96.19-26. S156-157 and S158-159. L131.

COMMENT: Both cited rules indicate “approved unless specifically prohibited.” Is this necessary? The first sentence of 7080.0450, subp. 1, seems to conflict with the rest of the paragraph.

CHANGE: Rule change proposed.

Subpart 1. Incorporation by reference of this part. Past or current incorporation by reference of this chapter into a local ordinance of the minimum technical standards and criteria for individual sewage treatment systems 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.....”

REASON: The technical standards and criteria phrase is unnecessary in this rule. Part 7080.0179 is expressly prohibited unless the local unit of government adopts it specifically (see SONAR, Hearing Exhibit 3). 7080.0450 has been modified below.

7080.0179 Performance systems. Minnesota Department of Health 3/30/99 letter, comments # 24 and 25 (repeat comments). RR77 and RR78 and RR 79.1-4. S113-126. L134.

COMMENT: Add that a local unit of government may prohibit the installation of performance systems in wellhead protection areas where the aquifer has been determined by the MDH to be vulnerable to pathogen contamination (including viruses).

RESPONSE: No rule change proposed. The LGU can make its ordinances more restrictive than chapter 7080. In addition, prohibition of performance standards in areas that are vulnerable to pathogen contamination is adverse to the concept of performance standards. It is unreasonable for the agency to place the suggested statement in the rule because the agency supports the use of performance systems. The proposed rules require performance systems to produce high effluent qualities that will not negatively impact groundwater and surface water. The proposed rules also require that these systems be managed appropriately through the operating permit. With this rationale, performance systems could be a better match in pathogen contamination areas than standard systems.

7080.0179. Performance. Dave Gustafson comment and Minnesota Department of Health 3/30/99 letter, comment #25. RR77-79. S113-124. Attachments 7 and 9. L139. L134.

COMMENT: Effluent limitations should be specified at no less than BOD₅ 10 mg/l, TSS 10 mg/l and Fecal Coliform 200/100mL.

RESPONSE: See SONAR Hearing Exhibit 3 and Attachments 7 and 9. In addition, this topic was discussed at the ISTS Advisory Committee on 4/1/99 and they agreed that the performance standards should remain flexible and open since research is still being gathered on pretreated effluent discharges, loading rates, varied vertical separations, and distribution methods.

7080.0179, subp. 2 C (1). Performance. Aitkin County 2/26/99 letter (letter incorrectly cites Subp. 2 B (1)), comment # 24. RR78.8-10. S121-122. L76.

COMMENT: Where is vertical separation measured?

RESPONSE: No rule change proposed. The vertical separation and redoximorphic features definitions are inclusive? and part 7080.0060, subp. 3 B (3) and 4 explain the process.

7080.0179, subp. 1, 2 C (1) and (2). James Baker, Multi-Flo; 4/19/99 hearing testimony, Minnesota Department of Health 3/30/99 letter, comment #23, Aitkin County 2/26/99 letter (letter incorrectly cites Subp. 2 B (2)), comment # 25, Minnesota Department of Health 3/30/99 letter, comment #23, Cass County 4/19/99 letter submitted at the 4/19/99 hearing, and agency recommended change. RR78.8-10. S121-122. L134. L76. L132. H66.17-21 and H67.4-12.

COMMENT: Do performance standards require 1 foot of separation? One foot of separation may not be appropriate for aerobic units that don't treat to a high quality.

Minnesota Department of Health: Viable fecal organisms needs to be defined. Are background concentrations required to be determined? Viruses should be considered and test data should indicate the effectiveness of such treatment.

Aitkin and Minnesota Department of Health: Delete this requirement because the "no viable fecal organisms" standard can include both animal and human waste in the indicator. Also, what are the methods for measurement? Is the 25-foot distance measured vertically or horizontally?

Cass County: See 7080.0020, subp. 41a, comment above. The standard, as written, cannot be verified. Combine effluent fecal concentrations with an acceptable loading rates with soil textures to arrive at an acceptable vertical separation distance.

Agency: Modify item C(1) to delete the minimum vertical separation requirement for design purposes.

CHANGE: Rule change proposed.

(1) Soil ~~dispersal~~ treatment systems must be designed with a ~~minimum of one foot of vertical separation distance~~ appropriate for the sewage treatment system designs, 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 ~~dispersal~~ system and the seasonally saturated soil or bedrock during loading of effluent. . The following compliance limits are based on measurements within the sewage effluent plume.

(2) The sewage effluent/groundwater mixture shall contain: ~~(a) no viable fecal organisms from the system, 25 feet horizontally from the soil dispersal treatment area; or (b) concentrations of viable fecal organisms from human sources and shall not exceed background concentrations 25 feet horizontally from the soil dispersal treatment area. These This limits shall not be exceeded during typical periods of climatic stress and/or under maximum designed flow volumes. xx~~

REASON: Mr. Baker: The agency testified that the proposed rules require 1 foot of separation for all performance systems. Mr. Baker testified that this would not be good because the effluent quality and the designs of devices vary greatly, implying that some systems may need more vertical separation. Data from Dr. Jim Converse of the University of Wisconsin confirms this (attachment 19). The agency now recognizes that it is unreasonable to establish a vertical separation

without considering many factors. The agency may almost “guarantee” hydraulic performance by stating a vertical separation. Establishing a one-foot minimum may imply the agency can confirm that all devices used as a performance system can be discharged and hydraulically function. But performance can vary greatly depending on the factors listed in the proposed revision and many other factors. The SONAR also discusses this issue. The agency wants designers to include many factors in their decision-making and not rely on an untested 1-foot rule to guarantee hydraulic performance. This is reasonable to assure continued system performance.

Minnesota Department of Health: The 25-foot distance is measured horizontally. Background concentration determination is included as an option in the rule because in some cases background concentrations may be higher than the performance system discharge. (See RR78.9 and RR78.14). The goal of the performance standards is to allow flexibility in determining compliance. The reasonableness of this is supported in many portions of this document and the sonar. It should be noted that viruses can be tested for and it is very costly. Indicator tests are not perfect, but are the best means to date for determining sewage risk. Fecal test numbers can include viruses, but absence of fecal test numbers does not mean viruses are not present. Fecal coliform bacteria testing is the standard indicator used in the industry. A movement toward Coliphage indicators has been noted in research.

Aitkin county/ Minnesota Department of Health : There is a difference between fecal organisms from humans and other warm-blooded animals. Many use a fecal coliform/fecal streptococci ratio to determine the difference. A fecal coliform/fecal streptococci ratio with a result of 4 is considered human feces and 0.7 for animal feces. Coliphage indicators have been used extensively in research to also determine human impact, particularly in virus studies.

Cass County: The agency is aware of a chart developed by the State of Wisconsin showing numerical limits for effluent quality, soil textures and loading rates with the corresponding required vertical separation distance. This chart is a much more definitive method to implement the performance standards than what is outlined in 7080.0179. The agency discussed with the ISTS Advisory committee at the April 1, 1999, meeting the issue of dropping the 7080 approach to performance measurements in lieu of using Wisconsin’s chart. The committee voted to retain our current method in the rule but was not opposed to using this chart or a similar method to aid in implementation of performance systems. The agency will likely use Wisconsin’s chart for design purposes but will still likely require other justification or follow-up monitoring to determine compliance. Please refer to Attachment 7 and 22.

7080.0179, subp. 2 C (3). Performance. Aitkin County 2/26/99 letter (letter incorrectly cites subp. 2 B (3)), comment # 26 and Cass County letter submitted at the 4/19/99 hearing. RR78.8-10. S122-124. L76. Attachments 7 and 8.

COMMENT: a) Aitkin County would expand the description to include streams, rivers, reservoirs by saying “protective waters.” b) Aitkin County also asks how this will be tested. c) Cass county would eliminate items (3) and (4) because they require performance systems to meet a higher standard than standard systems.

RESPONSE: No rule change proposed. a) Phosphorus limits apply specifically to lakes. Testing can be done either, or both of, two ways.

b) The designer can choose to install wells, nested wells, or lysimeters beneath soil treatment areas, etc. to check the ground water condition 25 feet from the system. Or the designer can back-calculate for each site based on soil classification, groundwater gradient, pathogen die-off rate, pathogen movement in groundwater, etc. to determine the effluent discharge (end-of-pipe) measurement and the technology necessary to meet that phosphorus limit. (See Attachment 8). These same two choices apply to the fecal coliform standard. The agency encourages designers to back-calculate because it provides reasonable theoretical determinations at little cost. Currently, designers are choosing the second method and researchers are using the first method. The agency hopes to learn from the results of both and offer information through the ISTS Report and UofM/MPCA workshops.

c) Performance systems are not being held to a higher standard. Standard ISTS when designed, constructed and maintained properly meet these standards. As with any system, there are times when this might not be the case; that is the reason for the standard system’s requirement for a 3-foot vertical separation and horizontal setbacks.

The justification for 3 feet has been reviewed and discussed and its reasonableness previously established. As a brief summary, 3 feet of vertical separation provides reasonable risk protection for public health under most conditions that occur. More vertical separation is needed for less risk. Climatic stresses are recognized when establishing the 3 foot requirement. Standard systems also have horizontal setback requirements to protect public health and the environment (e.g., setbacks from wells and waterways). Nitrogen not treated in a standard system can move in the groundwater as nitrate; setbacks, good site evaluations and designs and good well construction are keys to public health protection. Setbacks to waterways are key to protection from phosphorus. The standards are not arbitrary; they are well-established standards for environmental protection.

7080.0179 subp. 2C (2&3). Performance. Kloepfner 3/17/99 letter. RR78.8-18. S121-123. L93.

COMMENT: The rule needs to spell out the protocols for sampling, testing methods, storage, transportation, and lab qualifications.

RESPONSE: No rule change proposed. The agency has been asked this question by many and continues to state that performance standards are allowed for the industry to implement and control. Placing particular specifications within the rule does not make them applicable to all types of systems that may be proposed. It is more reasonable to allow individual monitoring plans to identify this criteria. This has been the industry's demand. The agency will play a role in assisting persons in developing these types of plans. Factsheets should be developed for common technology's monitoring plans and standard laboratory protocols must be followed if sampling occurs.

The agency is, however, considering adding a requirement to use a State Certified Laboratory for any sampling procedures.

7080.0179, subp. 2 C (3). Performance. Pumpco 2/24/99 meeting. RR78.11-12. S123.

COMMENT: What does the term "lot" apply to? Need to be more specific.

RESPONSE: The term lot is defined in 7080.0020, subp. 22e. Pumpco is also concerned about making these compliance points apply to all lots adjacent to lakeshore, particularly if a system is located on one end of the lot and the lake is at a far distance at the other end of the lot. This should not be a concern at all because then the phosphorous limit can most surely be met as described previously.

7080.0179, subp 2 C (4). Minnesota Department of Health 3/30/99 letter, comment #26, Clint Elston 3/31/99 letter, and MPCA/MOSTCA 9/17/98 meeting. Comment # 2 E. RR78.17-18. S123-124. L134, L145 and L2.

COMMENT: Performance designed systems should treat for nitrogen to protect public health from nitrate contamination in groundwater.

RESPONSE: No rule change proposed. The agency is not opposed to adding a nitrate standard to the rule; however, it would be extremely difficult to add this requirement currently. The requirement would add expense to a system in a state where it is difficult to convert entire counties to eliminate their partially-treated or raw sewage surface discharges. Wisconsin tried to establish a nitrate standard over the past two years and was unsuccessful in moving it forward. The agency sees nitrogen becoming an issue in the future and suggests that LGUs keep this in perspective and establish a nitrate standard (RR78.17-18). This is reasonable because nitrate is a small percentage of the total nitrate load to groundwater (typically about 4%); local water planning activities identify nitrogen as a priority if background groundwater sampling indicates nitrogen in excess of 10 mg/l and will develop plans to eliminate or reduce; and the agency currently has

groundwater sampling data that build toward a better understanding of nitrogen in the state. This information is used to develop plans to eliminate or reduce nitrogen in particular areas.

7080.0179, subp 2 C (4). Cass County letter submitted at the 4/19/99 hearing. RR78.17-18. S123-124.

COMMENT: Eliminate or modify this statement to say “local units of government may require additional standards for local resource protection.”

CHANGE: Rule change proposed.

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

REASON: Nitrogen is emphasized because it is a standard we should at some time address. See comments directly above. The additional statement is a reasonable recommendation from Cass County to add, in case there are other parameters that should be enacted locally (e.g., Volatile Organic Compounds).

7080.0179, subp. 2 D (1) (a). Larry Fyle 3/19/99 letter. RR78.22-23. S124. L130.

COMMENT: It is not the LGUs responsibility to do this; this should be covered by local management under Item E (RR79.3-4).

RESPONSE: The item of comment is not a LGU responsibility. The designer has responsibility to submit the information in item D.

7080.0179, subp. 2 E Agency recommended change RR79.3-4. S124.

CHANGE:

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

REASON: This provision is redundant to 7080.0060 subp. 3 D. (RR25.20-21).

7080.0305 GENERAL REQUIREMENTS FOR LOCAL ORDINANCES

7080.0305, subp 1. Compliance with this chapter. Minnesota Department of Health 3/30/99 letter, comment #27 and Pumpco 2/24/99 meeting. RR79.8-12 S127. L134.

COMMENT: Would a county need to adopt an ordinance if all cities and towns in the county have adopted an ordinance, regardless whether areas of the county are not covered by a city or town. Pumpco asked whether subpart 1 was too broad.

CHANGE: Rule change proposed.

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.

REASON: Clarity. Taking a partial statement out of the statute does make this read as the commenter suggests. It is reasonable to use direct quotes from the statute (Minn. Stat. § 155.55, subd. 2) to communicate to all readers a complete understanding of the requirement.

7080.0305, subp. 2. North American Wetland Engineering 3/17/99 letter, comment # 2. RR79.8-27. S127-129. L94.

COMMENT: The new rule language addresses a City/County ordinance jurisdictional issue, but we can't find anywhere in the current rule where it says county ordinances have precedence.

RESPONSE: No rule change proposed. The precedence language will not be found in the current rule because it is in 1997 law (rule was written prior to the law requirement). Minn. Stat. § 115.55, subd. 2 says: "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."

This subdivision also says LGU ordinances adopted before May 7, 1994 must meet Chapter 7080 by 1/1/98 and LGU ordinances adopted after May 7, 1994 must adopt chapter 7080 by 1/1/99.

7080.0305, subp. 2. General requirements for county, town, and city local ordinances. Pumpco 2/24/99 meeting, comment #2. RR79.13-27. RR80.1-8. S127-128. L74.

COMMENT: LGUs need to develop protocol and their ordinances on when such systems can be used.

RESPONSE: No rule change proposed. The rule contains system options with some limitations on use. The local ordinance may add requirements as necessary.

7080.0305, subp. 2 C. General requirements for county, town and city local ordinances. Aitkin County 2/26/99 letter, comment # 29. RR80.1-3. S127-129. L76.

COMMENT: Need to clear up wording.

CHANGE: Rule change proposed.

C. Local ordinance requirements regulating vertical separation for ~~existing~~ systems built prior to April 1, 1996, in non-SWF must meet the requirements in part 7080.0060, subp. 3, item B.

REASON: Clarity. The term "existing" is not necessary for this sentence. The new terminology of SWF is defined in proposed 7080.0020, 46a and will take a

transitional period for the industry to adjust. Agency training and factsheets have already made this transition since the law was changed and many in the industry now understand the new terminology.

7080.0305, subp. 3A. Variances. Aitkin County 2/26/99 letter, comment #30. RR80.10-15. S130-131. L76.

COMMENT: Should cross out “Bathroom”, instead of “Bedroom”.

RESPONSE: This was changed and offered in the noticed rule.

7080.0305, subp. 3 B. Pine County 3/31/99 letter, Shirley Basta. RR80.16 S130-131. L143.

COMMENT: Why have technical standards if they can be varied? This opens the rule up to a lot of possibilities of getting around the standards. Also, can a variance be granted for tank size and what would be the supporting evidence to obtain one?

RESPONSE: No rule change proposed. Minn. Stat. § 115.55, subd. 5a (e) and (f) and 7, allow local ordinances to vary from the minimum code. Variances can be granted by the LGU for all parts of the technical standards and criteria, except for the required vertical separation. Supporting evidence would be submitted to the LGU under the local variance process and the LGU would determine whether the evidence is sufficient to grant a variance.

7080.0305, subp. 3 B. Agency recommended change. RR80.19-20. S130-131.

CHANGE: Rule change proposed.

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

REASON: The agency has now set in rule methods that can be used if less than a 3 foot vertical separation distance is desired due to difficult site conditions. The agency then does not need to issue a variance since the requirements for issuance are clearly described in this chapter. In the past the agency was opposed to letting local governments allow less than the 3 foot separation, because the separation was the primary treatment component of the system. If local permitting authorities wanted to issue other variances to this chapter, the change would only affect system longevity and not treatment. This proposed change means that the agency will not be issuing variances to any technical portion of this rule. Those decisions will be left to the local permitting authority.

7080.0305, subp. 4 A. Administrative requirements for local ordinances. Craig Berg 3/29/99 letter. RR81.13-16. S131-133. L 136.

COMMENT: What is the maximum length of time allowed to replace a failing system?

RESPONSE: No rule change proposed. Minn. Stat. § 115.55, subd. 5b) allows a local unit of government to specify the upgrade time period in its ordinance. Minn. Stat. § subd. 5a (g) also allows local units of government to select the time period. Minn. Stat. § 115.55, subd. 7 also allows this. Minn. Stat. § 115.55, subd. 5 (b) requires upgrade by June 1 of the same year a bedroom permit is requested if the request occurs in the winter (Nov. 1 - April 30). Minn. Stat. § 115.55, subd. 5b (b) requires upgrade at five years if the inspection results from a bedroom addition permit and the system was built between 5/27/89 and 1/23/96. The agency cannot modify or make more restrictive the statutory requirements. See Attachments 2 and 4.

7080.0305, subp. 4 C. Administrative requirements for local ordinances. Larry Fyle 3/19/99 letter. RR81.20. S131-133. L130.

COMMENT: The rule should give the owner five years or upon sale of the property.

RESPONSE: No rule change proposed. The legislature has directed the agency by statute and by oral statements not to delve into property transfer. We are unable to consider this comment. The language provided in the rule is extracted from Minn. Stat. § 115.55, subd. 5.

7080.0305, subp. 4 C. Crow Wing County 3/29/99 letter, comment #1. RR81.20. S131-133. Attachment 2. L130.

COMMENT: A five year upgrade provision is too long.

RESPONSE: No rule change proposed. The legislature has directed the agency by statute and by oral statements not to delve into property transfer. We are unable to consider this comment. The language provided in the rule is extracted from Minn. Stat. § 115.55, subd. 5b (b).

7080.0305 subp 4 C. Minnesota Department of Health 3/30/99 letter, comment #28 and Crow Wing County 3/31/99 letter. Attachment 2. RR81.20-22. S132-133. L134 and L141.

COMMENT: A five year upgrade requirement for failing systems is too long a time period. The language should be deleted entirely.

RESPONSE: No rule change proposed. State law mandate (Minn. Stat. §115.55; see SONAR (Hearing Exhibit 3)). This applies only to failing systems found after a bedroom permit application has been requested. Also, state law allows any

upgrade time period for failing systems other than bedroom additions. Typical ordinances allow a 3-5 year period; some ordinances allow the failing system to continue to operate until an IPHT is discovered.

7080.0305, subp. 4 C and 7080.0310, subp. 3 C. MN Association of Realtors 1/19/99 letter, comment # 4. RR81.20-25, RR82.1-2, and RR8.14-23. S131-133 and S. L11.
COMMENT: The Association requests clarification on these two subparts.

RESPONSE: No rule change proposed. See S131-133, S140-141 (Note the reference at the top of page 140 is incorrect. It should be 7080.0310, subp. 3 rather than 7080.0305, subp. 3), Statute (Attachment 2), and Bedroom Flowchart (Attachment 4). The commenter raises a valid question as to why the two language portions are separated; it is again how the rule is distinctly divided. The rule is divided between administrative local ordinance requirements (7080.0305 -- RR79) and permit requirements (7080.0310 -- RR87). There is some duplication of language within the two parts because of this.

In an attempt to clarify, Minn. Stat. § 115.55, subd. 5 (b) establishes requirements for when bedroom addition inspections are required. The statute states that compliance inspections depend on when the system was built, when the application for a bedroom addition was made, and whether the LGU issues permits at all for bedroom additions. Waiving the upgrade time period is allowed only if the application for the bedroom addition is submitted in the winter months (11/1 to 4/30) and only if the LGU issues bedroom addition permits (IPHT remains a 10 month upgrade regardless of the waiver). This allows a bedroom addition to be completed in the winter with the ISTS inspection conducted during reasonable weather. The chart below offers some perspective; please see Attachment 4.

<u>Bedroom Addition Permit Request (LGU has a bedroom addition permit program)</u>	When Inspection Required	When Upgrade, Replacement or Discontinued Use Required
Request 11/1 - 4/30 (winter)	By the following 6/1	By the following 9/30
Request 5/1 - 10/30 (spring, summer, fall)	Before bedroom addition permit granted.	<u>Failing:</u> before issuance of bedroom addition permit <u>IPHT:</u> within 10 months after the Notice of Noncompliance; sooner per local ordinance; before issuance of bedroom addition permit
Existing system built between 5/27/89 and 1/23/96	<u>Request in winter:</u> by the following 6/1 <u>Request rest of year:</u> before bedroom addition permit	<u>Failing:</u> Five years from the permit date. <u>IPHT:</u> within 10 months from the Notice of Noncompliance;

	granted.	sooner per local ordinance; before issuance of bedroom addition permit
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7080.0305, subp. 4 C (4). Variances. Agency recommended change. 3/25/99 comment. RR82.1. S132-133. L127.

COMMENT: Items A and B of this subpart refer to terms for non-compliant systems that are found in 7080 (i.e., imminent threat to public health or safety or failing system), however this item refers to “applicable requirements”. How does this term relate to imminent threat to public health or safety or failing system.

CHANGE: Rule change proposed.

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

REASON: Clarity and accuracy. “Applicable requirements” causes confusion because it relates back to local ordinance. The rule is set up such that the rule speaks for itself. LGUs can choose to adopt it as is, with more restrictive requirements, or through the alternative local standards process. Applicable requirements should not be used in the specifications portions of the rule because it mixes chapter 7080 with the local ordinance flexibility process.

7080.0305, subp. 4 G. Agency recommended change. RR82.13-15. S131-133.

CHANGE: Rule change proposed.

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

REASON: This amendment is necessary because, as written, proper abandonment would only be required if a replacement system were to be installed. However there are many situations in which a replacement system is not to be installed due to the arrival of central collection and treatment. The deletion amends the section to say that proper abandonment must be done regardless of what new treatment method is employed.

7080.0305, subp. 4 H. Variances. Agency recommended change. 3/25/99 comment. RR82.16, S132-133, L127.

COMMENT: Item H is not clear on what is meant by regulating the installation of holding tanks.

RESPONSE: No rule change proposed. The holding tank subpart clarifies this comment sufficiently (RR71.15-17 and as modified in this document).

7080.0305, subp. 6 A (2). Agency recommended change. RR90.9. S143-145.

CHANGE: Rule change proposed.

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

REASON: Correction. “Mitigation” is commonly used in the rule, not “mitigative.”

**7080.0305, subp. 6 B, subp. 6 D and subp. 9. Agency recommended change.
RR84.21-22. S135-136.**

CHANGE: Rule change proposed.

Subp. 6 B. Requirements for alternative local standards.

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

Subp. 6 D. Requirements for alternative local standards.

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 ~~applicable requirements~~ this chapter difficult or otherwise inappropriate. Counties seeking to adopt alternative local standards for new construction or replacement must submit the following information:

Subp. 9. Enforcement of local ordinances.

Local units of government shall enforce local ordinances that regulate individual 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 ~~that are applicable requirements~~ under Minnesota Statutes, section 115.071, subdivisions 3 and 4.

REASON: Clarity. A rule search was conducted to determine whether the term “applicable requirements” was used appropriately. The term “applicable requirements” is used specifically in reference to this chapter (see 7080.0020, subp. 4a definition). For subp. 6 B, it is confusing to use “applicable” because it doesn’t match the other applications of the terms within the rule. It is reasonable to modify the statutory language for clarity; no change in implementation will occur.

For subp. 6 D, the proposed change also clarifies that the discussion is about the requirements of Chapter 7080, not a local ordinance. For subp. 9, the terms are not necessary and can cause confusion. Again, it is reasonable to modify statutory language as stated above.

7080.0305, subp. 6 E. Carlton County 3/22/99 letter. RR75.22-2RR86.6-114. S136-137. L131.

COMMENT: Why must alternative local standards go to the Local Water Planning Advisory Committee?

RESPONSE: This is a legislative mandate. Minn. Stat. § 115.55, subd. 7 (b). Ordinances will also continue to be noticed and reviewed as historically done.

7080.0305, subp 8. Aitkin County 2/26/99 letter, comment # 31. RR86.13. S137. L76.

COMMENT: Add “Warrantied Systems” to the end of the first sentence.

RESPONSE: No rule change proposed. Subpart 8 has been repealed and it is not clear whether this comment still applies to some part of the rule.

7080.0305, subp 10. Incorporation by reference parts 7080.0179 and 7080.0450. Pumpco 2/24/99 meeting, comment #4. RR86.20-26. RR87.1-2. S138. L74.

COMMENT: Clarify.

CHANGE: Rule change proposed.

Subp. 10. Incorporation by reference parts 7080.0179 and 7080.0450. Past or future incorporation by reference into a local ordinance of all or part of this chapter or the minimum technical standards and criteria for individual sewage treatment system, parts 7080.0060 to 7080.0176, does not include adoption of 7080.0179, the part establishing standards for performance. 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.....” or for part 7080.0450, “Minnesota Rules, part 7080.0450, is incorporated by reference into Ordinance.....”

REASON: Correction. 7080.0450 does not have to be expressly adopted. It is unnecessary to include the minimum technical standards and criteria.

7080.0305, subp. 6 E. Carlton County 3/22/99 letter. RR75.22-2RR86.6-114. S136-137. L131.

COMMENT: Why must alternative local standards go to the Local Water Planning Advisory Committee.

RESPONSE: This is a legislative mandate. Minn. Stat. § 115.55, subd. 7 (b). Ordinances will also continue to be noticed and reviewed as historically done.

7080.0305, subp 8. Aitkin County 2/26/99 letter, comment # 31. RR86.13. S137. L76.

COMMENT: Add “Warrantied Systems” to the end of the first sentence.

RESPONSE: No rule change proposed. Subpart 8 has been repealed and it is not clear whether this comment still applies to some part of the rule.

7080.0305, subp 10. Incorporation by reference parts 7080.0179 and 7080.0450. Pumpco 2/24/99 meeting, comment #4. RR86.20-26. RR87.1-2. S138. L74.

COMMENT: Clarify.

CHANGE: Rule change proposed.

Subp. 10. Incorporation by reference parts 7080.0179 and 7080.0450. Past or future incorporation by reference into a local ordinance of all or part of this chapter or the minimum technical standards and criteria for individual sewage treatment system, parts 7080.0060 to 7080.0176, does not include adoption of 7080.0179, the part establishing standards for performance. 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....." or for part 7080.0450, "Minnesota Rules, part 7080.0450, is incorporated by reference into Ordinance....."

REASON: Mistake. 7080.0450 does not have to be expressly adopted.

7080.0310 PERMIT PROGRAM FOR ISTS

7080.0310, subp. 2. ISTS permit application requirements. Agency recommended change. RR87.19. S139-140.

CHANGE: Rule change proposed for RR87.19:

"described under subpart 4, items A, ~~B~~, ~~D~~ and ~~B~~ and include E, along with general"

REASON: Correction. Item B was inadvertently deleted. All permit applications must contain the items listed in subpart 4 A, B, D and E. Item B requires the submittal of a design report.

7080.0310, subp. 3 B. Permit approval requirements and procedures. Pine County 3/31/99 letter, Shirley Basta. RR88.10. S140-141. L143.

COMMENT: Why use the term "preliminary?" A permit is issued to do the work; a Certificate of Compliance says the work was completed according to the permit issued and that it meets code.

CHANGE: Rule change proposed.

B. The local unit of government will either grant preliminary approval or denial must review and approve or deny the application. Construction

shall not be initiated until a permit ~~preliminary approval~~ is granted. Final approval shall be evidenced by issuance of a certificate of compliance.

REASON: This change is reasonable because it matches the methods implemented by LGUs. A permit is issued for construction and other documents, such as the Certificate of Compliance and Certificates of Occupance follow the construction. Permit issuance is not the final administrative step as was assumed in the originally proposed language.

7080.0310, subp. 5 D. Reporting requirements. Carlton County 3/22/99 letter. RR89.22-26. S142-143. Attachment 9. L131.

COMMENT: Opposes reporting requirements.

RESPONSE: This issue was brought to the ISTS Advisory Committee on 4/1/99 and Bruce Benson, author of this comment attended. He said he is not opposed to reporting. He is opposed to reporting information and nothing gets done with it and he sees no response showing the information is used. Shirley Basta emphasized that submittal of data by all counties should be enforced and reporting forms sent to all. Paula Schroeder said the information is often useful to county commissioners. Al Goodman said the data is easy to pull off computer files. Ensuing discussions addressed how valuable the data are for various purposes: legislative, educational trends, industry trends, pockets of certain technology use, pockets of inappropriate technology use, etc. No rule change was recommended.

7080.0310, subp. 5 D. Minnesota Department of Health 3/30/99 letter, comment #29. RR89.22-26. S142-143. L134.

COMMENT: Suggest that “alternative systems” be included the systems that need to be included in the permitting authorities annual report.

CHANGE: Rule change proposed.

D. the number and type of ~~alternative and experimental systems, and the monitoring results for experimental systems as specified in part 7080.0910, subpart 3a.~~ systems, including number of mound systems; at-grade systems; seepage beds; gravelless, chamber, and drainfield rock trenches; ~~alternative, warrantied and performance systems; and other systems; estimated total number of systems and estimated % in compliance within their jurisdictional boundaries; and~~

REASON: Comprehensive annual report. The use of this report is discussed in the SONAR (Hearing Exhibit 3) and the text of this document. The term “alternative” in the first line was originally deleted because a previous draft of the rule deleted the segregation of systems (i.e., eliminated the terms standard system, experimental system and alternative system). It is reasonable to include alternative systems here because the term “alternative” systems has been

reinstated. It also creates a comprehensive annual report because all types of systems will then be covered.

7080.0310, subp. 5 E. Joyce Cieluch 1/20/99 electronic mail. L1

COMMENT: Requests the language of item E be in the rule.

RESPONSE: Placed in rule prior to certified copy, already justified.

7080.0310, subp. 6. Operating permit. Aitkin County 2/26/99 letter, comment # 32. RR90.4-15. S143-145. Attachment 9. L76.

COMMENT: The operating permit requires too much and will discourage the use of these systems.

RESPONSE: No rule change proposed. This comment was brought before the 4/1/99 ISTS Advisory Committee. The predominant comment supporting the deletion of the operating permit was the time and enforcement necessary to use it. The majority of the Committee agreed with the agency's position that an operating permit is the manner to make performance systems implementation work in Minnesota. It's working now in Cass County, St. Louis County and Rice County. It's also working through the Metropolitan Council administration requirements. If the permit is considered too burdensome, the LGU can decide NOT to adopt part 7008.0179 of the rule.

7080.0310, subp. 6 B. Agency recommended change. RR90.15. S143-145.

CHANGE: Rule change proposed.

7080.0310 subp. 6 B Agency recommended change RR90.15. S145

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

REASON: This provision is redundant to 7080.0060 subp. 3 D. (RR25.20-21).

7080.0310, subp. 7 A (2). Agency proposed change. RR90.20-22. S145-147.

CHANGE: Rule change proposed.

(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 permitting authority.

REASON: Clarity. The Association of Minnesota Realtors indicated confusion on what type of systems require monitoring and mitigation plans; the rule citations designated were corrected. Agency staff noted it should also be clarified in this location.

7080.0315 INSPECTION PROGRAM FOR ISTS

7080.0315, subp. 2 A, D and E. Agency recommended change. RR91.27, RR92.11 and RR92.15.

CHANGE: Rule change proposed.

RR91.27: ~~7080.0300, subpart 6 item E F;~~

RR92.11: ~~E, F~~ for all new construction and replacement. A licensed inspector or licensed

RR92.15: ~~F, E~~ for disclosures as described under part 7080.0300, subpart 6 any evaluation,

REASON: Correction. The item letter was missing for “for all new construction and replacement...” By adding item E, the item letter for the next item needs to be modified. By adding item E, the reference on RR91.27 needed to be changed.

7080.0315, subp. 2 D. Agency recommended change. RR92.11. S148-149

CHANGE: Rule change proposed.

D. by a qualified employee or under a license licensee, authorized by the local unit of government, who is independent of the owner and the installer E. to reasonable ensure an individual sewage treatment system is in compliance as specified under part 7080.0060; and for all new construction and replacement....

REASON: Correction. The last phrase “for all new construction and replacement” is found as the requirement for item C of this subpart. All of item E should have been deleted.

7080.0315, subp. 2 D (new E). Crow Wing County 3/29/99 letter, comment #2. RR92.11-14. S148. L141.

COMMENT: This provision allows a licensed contractor to do a compliance inspection and then design a new ISTS. This should be deleted.

RESPONSE: No rule change proposed. The agency is unable to consider this comment. The language provided in the rule is extracted from Minn. Stat. § 115.55, subd. 5 (e). Rule clarifies that the contractor must be appropriately licensed or registered to conduct inspections.

7080.0315, subp. 2 E. Crow Wing County 3/31/99 letter. RR92.11-13. No SONAR. L141.

COMMENT: Does not want to allow a licensed contractor to do a compliance inspection, then design and install the ISTS.

RESPONSE: No rule change proposed. State law mandate: Minn. Stat. § 115.55, subd. 5 (e). Rule clarifies that the contractor must be appropriately licensed or registered to conduct inspections.

7080.0315, subp. 3 A (3). Pumpco 2/24/99 meeting. RR93.19-23. S150.

COMMENT: What is “applicable requirements”?

RESPONSE: Applicable requirements is defined in Minn. Stat. 115.55 § subd. 1 (c) as: “(1) local ordinances that comply with the individual sewage treatment system rules, as required in subdivision 2; or (2) in areas not subject to the ordinances described in clause (1), the individual sewage treatment system rules.”

7080.0315, subp. 3 A (2). Pine County 3/31/99 letter. RR93.17. S150. L143.

COMMENT: Who is the “owner’s agent.”

RESPONSE: No rule change proposed. SONAR (Hearing Exhibit 3) sufficiently describes this proposal.

7080.0315, subp. 3 A. MN Association of Realtors 3/4/99 letter. Comment #1. RR93.7-27 and RR94.1-20. S149-151. L79.

RESPONSE: Please see response under 7080.0060, number 1.

xx 7080.0315, subp. 3 A (3) and (4). MN Association of Realtors 3/4/99 letter. Comments #1 and #4. RR93.19-27. S150-151. Statute (Attachment 2).

COMMENT: The Association’s concerns identified in comment #1 and #4 were further clarified in a phone conversation on 3/14/99 between Lori Frekot and Susan Diorey. The concern was the use of “applicable requirements” as the criteria for an inspection.

CHANGE: Rule change proposed.

(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 inspection, and indicate whether the individual sewage treatment system is in compliance with applicable requirements part 7080.0060.

(4) If a compliance inspection indicates that the system is not in compliance with applicable requirements 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 within the required time period.

REASON: The agency used “applicable requirements” consistent with the statutory language. It was a broad term that to the agency meant the appropriate

parts of the local ordinance would apply, in this case the compliance criteria. That was clear to the agency, but apparently not to others. The agency proposes to address the Association's concerns with the above proposed rule changes. It is reasonable to make this change to assure understanding by all rule readers, particularly the inspectors. It should be noted, however, that 7080.0060 could be modified under a local ordinance. It still remains reasonable to propose this change because local ordinance differences from Chapter 7080 must be presented in writing to anyone who asks. The University of Minnesota/MPCA workshops already emphasize the need for persons to obtain the list.

CHANGE: **Agency proposed change.** You will also see above that the last sentence in subitem (4) deletes the end of the sentence "within the required time period."

REASON: The Association noted that the rule is segmented into duties, authorities and requirements. Placing this language in this subitem could mean that the inspector is responsible for knowing and enforcing the upgrade time period. This is clearly not the case; LGUs are the responsible party. Part 7080.0305, subp. 4 A and B of the proposed rule and the statutory mandate that the proposed rules identify how LGUs enforce ordinances, including requirements for permits and inspection programs (Minn. Stat. § 115.55, subd. 3 (2)) establishes this LGU role.

7080.0315, subp. 3 B (1). New construction or replacement. Pine County 3/31/99 letter, Shirley Basta. Crow Wing County 3/29/99 letter, comment #3. RR94.3-6. S147. L43 and L141.

COMMENT: Why does the rule use reasonably and reasonable. Either the system complies or it doesn't. How much out of compliance is reasonable? Crow Wing county states the language allows the inspector to do a windshield inspection or something less.

CHANGE: Rule change proposed.

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

REASON: Mistake. This change is needed because the commenters clearly indicate that this could mean the system can be out of compliance because the interpretation of reasonable would be applied differently by different people. The LGU has flexibility in the *methods* to assure compliance, and compliance means compliance.

7080.0315, subp. 3 C (1). Existing systems. Agency proposed change, Carlton County 3/22/99 letter and Washington County 1/13/99 letter. RR94.12-14. S151-152. L131 and L10 (see justification within letter).

COMMENT: Tank watertightness is a new requirement. The rule should specify how this inspection takes place. Washington county recommends more specific language in determining vertical separation for compliance inspections.

CHANGE: Rule change proposed.

(1) An inspection report ~~certificate of compliance~~ for existing systems shall include the methodology used to determine vertical separation distance, tank leakage water tightness, and whether if 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.

REASON: Corrections and an improved rule requirement. An inspection report is the appropriate document to contain methodologies, not the certificate of compliance. Distance is not necessary because vertical separation is defined in 7080.0020, subp. 49b (RR19.8-10). Replacing water tightness with tank leakage is consistent with the definition for failing, 7080.0020, subp. 16c (RR9.14-15). The last sentence has been a discussion item with the ISTS Advisory Committee and was essentially included in a previous draft, as approved by the committee. This allowance only applies if local authority is involved (thus the language “If...under a local unit of government permit process”). The agency does not think it reasonable to allow no lifetime vertical separation testing based on the original soil testing and governmental review as suggested by the commenter. This does not take into account system placement. The core of determining vertical separation is knowing where the in-place soil system is located and soil knowledge. It is reasonable to allow this to occur because the most frequent problems brought to the legislature and to the agency are those over repeated inspections making different determinations, particularly those without local unit of government involvement. Thus, the addition of “as-built” to tie everything together if option 1 is used. A mistake in the SONAR (Exhibit 3) actually now allows the reader to see the justification and reasonableness of this approach because the SONAR language was written for this type of concept and language subsequently deleted. Please see S151-152.

7080.0315, subp. 3 C (2). Existing systems. Pine County 3/31/99 letter, Shirley Basta and Wright County 3/30/99 letter. RR94.18. S152. L143 and L140.

COMMENT: How can a Certificate of Compliance remain valid if some component of it is no longer valid or in compliance? Wright County asks if the language is referring to the vertical separation, tank verification, and IPHT documents that were removed from a previous version of chapter 7080.

CHANGE: Rule change proposed.

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

REASON: Correction. A previous version of the rule contained verification documents as part of an existing system inspection. All the language was not removed as pointed out by Ms. Basta. It is necessary to remove this language since it relates to nothing in the rule as proposed.

7080.0315, subp. 3 (letter cites subp. 3, A, 2, (b) and (c) which were deleted for the certified copy). Aitkin County 3/5/99 Letter. RR93.12. S149-151. L76.

COMMENT: All tanks should be watertight, including risers and pipes. Also the language that an IPHT document is good for three years unless the LGU identifies a problem.

RESPONSE: No rule change proposed. The first part of the comment is addressed within this document and on RR93.12. The IPHT document was deleted prior to noticing the proposed rule and already justified.

7080.0400 NEW TECHNOLOGY

7080.0400 New technology. Herman Miller Hearing Testimony. 4/19/99 Public Hearing on Chapter 7080. RR94.21.26 and RR95 and 96.1-17. H108.9-10.

COMMENT: Mr. Miller asked:

- a) how long a system must be in use before it can be a standard system;
- b) how long mounds were tested before they became standard; and
- c) if the state should run the county or the county run the county.

RESPONSE: No rule change proposed.

- a) Answered in testimony H108.11-23 to H111.1-14.

b) Mounds were first developed in North Dakota (called a NODAK system) in the 1950's. The design of the NODAK system was refined in the 1960's by the Small Scale Waste Management Project at the University of Wisconsin. Mound systems have been used and are still studied in Wisconsin to this day. Mound systems appeared in the agency's first ISTS rules (WPC-40) in 1978 as an alternative system. Mounds were reclassified as a standard system in the 1989 revisions to 7080 after many years of successful use in the state.

c) Minn. Stat. § 115.55, subd. 2, states that counties must adopt ISTS ordinances. The statute continues to say through rules (Minn. Stat. § 115.55, subd. 3 (a) (2)) that LGUs enforce ordinances through permitting and inspection programs; it is county's responsibility to run a county program.

7080.0400 (all). James Baker, Multi-Flo; 4/19/99 hearing testimony. H64.23-25.

COMMENT: Mr. Baker asked for clarification of who will approve new devices, the state or the county.

RESPONSE: No rule change proposed. The rule allows many avenues to approval. Parts 7080.0178 and 7080.0179 allow LGUs (typically the county, but not always) to review and approve new technologies through the permitting process. Part 7080.0400 requires the agency to review and approve a new technology and designate it as alternative or standard.

7080.0400. New technology. Debbi Kinney, Pumpco. Testimony from 4/19/99 hearing. Comment and response: H49.23-25, H50.1-25, H51.1-25, H52.1-18.

COMMENT: Ms. Kinney requested clarification on Mr. Wespetal's discussion of new technology during the agency's presentation.

RESPONSE: No rule change proposed. The agency is now proposing to require two designations for new technologies: alternative and standard. Alternative systems currently are proposed to include installations in floodplain areas, privies, and holding tanks. The alternative category is proposed to allow new technologies that submit supporting documentation as described in part 7080.0400 such as a requirement for structural life (twenty-five years) and soil component life (7 years) loaded at its designed maximum loadings.

To become a standard system, additional requirements are included in part 7080.0400, **subp. 4**. Proposed items include system usage of at least 100 systems across different soil classifications over a 7 year period. See part 7080.0400 discussion below.

7080.0400. New technology. Ayres Associates 3/19/99 letter, comment # 2. RR94.22-26. RR95.1-24. RR96.1-17. S153-157. L123.

COMMENT: Remove all references to the word design or designs.

RESPONSE: Rule changes proposed below throughout 7080.0400. The proposed changes in subpart 1 below relate directly to the modified new technology definition also shown above. The new technology term can now be a stand-alone without extra terms like device or design as suggested by the commenter. It is reasonable to make this change as described through the definition and other changes to clarify what is being submitted and approved and what the technology's final status is.

7080.0400. New technology. Don Brauer comment. RR13.4-8. S29. L146

COMMENTS: Mr. Brauer had multiple, detailed word change suggestions on various portions of this part.

RESPONSE: The agency has amended this part as proposed in this document. The agency recommends Mr. Brauer review the proposed changes again. His concepts are equivalent to the proposed part; however, detailed word changes may still be of concern to him.

7080.0400. New technology. Agency recommended changes. RR13.4-8. S29.

AGENCY COMMENT: This new technology part has been targeted as one of the areas that may need some streamlining. It is also an area where the agency received many external comments. The industry strongly desires to use new technology with at least a cursory review and some sort of designation that gives the local unit of government comfort so that new technology use can expand.

The statute mandates the agency to have a new technology approval process and the current language was developed, proposed and justified in the SONAR (Hearing Exhibit 3). Because of the many internal discussions and the external letters, the agency is proposing to make modifications to the new technology segment of the rule to accomplish both needs: 1) to quickly get new technologies designated by MPCA for use and for LGU encouragement and 2) to assure that a process exists that can be reasonably implemented.

The following changes are not significant in nature; much of the proposed language remains in place. Clarity is now proposed to allow a system to be designated as "alternative" allows technologies to be used and reasonable performance expected. Designation to a "standard" system will then allow systems with years of experience to be such designated. Both methods are currently used within the ISTS Advisory Committee and are reasonable and necessary ways to move the new technology forward.

The entire part 7080.0400 is shown as follows (individual comments and justifications are offered next):

7080.0020, subp. 24c. New Technology. “New technology” means a product sewage and disposal or design process, combination of components, component of a product, or modification to existing components, that has been approved by the agency in accordance with this chapter and is to be considered a standard system before actually being included by amendment to this chapter designated as such by the commissioner in part 7080.0400.

Subpart 1. Procedures for approval designation. The commissioner may approve designate a new technology technologies, device or design as a standard or alternative system or system component if the submittal meets the requirements of this part. as meeting the technical standards and criteria of this chapter if documentation submitted to the commissioner demonstrates that the new technology:

A. meets or exceed the requirements of part 7080.0179, subpart 2, items A and B, and this part:

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

A. meets or exceed the requirements of part 7080.0179, subpart 2, items A and B, and this part;

B. have structural components that meet or exceed a 25-year design life has long-term treatment and hydraulic reliability while serving typical domestic households under adverse climatic conditions and varied soil conditions through in-field testing and have soil treatment that meets or exceeds a 7-year design life when loaded at maximum design flows established in part 7080.0125 or 7080.0600. The new technology must be tested at its design maximum hydraulic and organic loading rates. Structural and soil treatment testing must be adequate to extrapolate the life expectancies required in this item;

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

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

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

A. plans and specifications;

B. theory of operation;

C. testing protocol as appropriate for the system;

D. testing or research data with extrapolating calculations;

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

F. installation requirements and procedures;

G. inspection requirements;

H. capital costs;

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

H J. operation and maintenance requirements and schedules;

I K. documented review by an independent professional with extensive knowledge of ISTS engineering principles, soil science, construction processes, and material quality, as applicable; and

J L. additional data and information as requested by the commissioner.

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

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

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

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

Subp. ~~2~~ 5. **Designation. Approval.** New technology designation shall be based on whether the new technology successfully demonstrates performance as described in this part. If upon review, the commissioner determines that the new technology complies with this part, the agency shall issue the designation ~~an approval~~ in writing. If it has been determined that the new technology has limitations for its use, the commissioner shall impose conditions under which the designation ~~an approval~~ is granted. Within 90 days after ~~of designation approval~~, the applicant must submit to the commissioner fact sheets, which can then be offered directly to ISTS professionals. The fact sheets must include a general description of the new technology and clearly written instructions and graphical representations for design, construction, inspection, operation, and maintenance requirements. If ~~an designated approved~~ new technology, ~~component, or design~~ is modified or additional assertions of function or performance are made, modification and additions are not covered by the designation ~~approval shall be considered null and void~~, unless the changes ~~is~~ are submitted to the agency for review and the designation ~~approval~~ is reaffirmed. After obtaining a commissioner designation ~~approval~~ letter or modified designation letter, the new technology ~~may~~ must be employed as designated unless specifically prohibited in local ordinance.

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

Individual comments, changes and justifications to part 7080.0400 are set out next:

7080.0400. New Technology. Agency recommended change. RR94.22-24. S153-157.
CHANGE: Rule change proposed.

Subpart 1. Procedures for ~~approval~~ designation. The commissioner may ~~approve~~ designate a new technology ~~technologies, device or design~~ as a standard or alternative ~~system or system component~~ if the submittal meets the requirements of this part. ~~as meeting the technical standards and criteria of this chapter if documentation submitted to the commissioner demonstrates that the new technology:~~

REASON: Clarity and flexibility. LGUs and new technology promoters have expressed the desire for their technologies to be labeled (see SONAR; Hearing Exhibit 3). The agency has proposed this section to produce two results: first, to describe a new technology approval that would designate the system as “alternative.” Second, to describe a new technology approval that would designate the system as “standard.” The term “designation” is now proposed, rather than approval, to indicate the approval process goal. Reasonable submittal data proposed in proposed subp. 3 will hasten MPCA review and approval greatly.

Adding “alternative system” into proposed part 7080.0400 gives the agency flexibility to move systems directly into an alternative designation. This is reasonable because it allows use of a technology showing reasonable confidence in performance, rather than waiting for data over a length of time. Many of the technologies that are waiting to be used have been used for years in other parts of the country and even the world. The agency recognizes this fact and proposes to promote their use in a reasonable, safe manner. It should be noted (because it is not shown in the Revisor’s version) that there is no limiting language for alternative systems, so they can be used as a first design option (i.e., proposed rule deletes the current language stating that alternative systems are “allowed only in areas where a standard system cannot be installed or is not the most suitable treatment.” when we did the “delete all” for current 7080.0910).

Moving systems into the standard category can then be retained as was anticipated in this new technology process -- designating systems that have been proven reliable over time and location. Industry confusion over “what does approval really mean” also makes this a reasonable change. The industry fully understands the standard and alternative categories within the rule.

Rephrasing the last line is solely for clarity.

7080.0400. New Technology. Agency recommended change. RR94.25-26. S153-157.

CHANGE:

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

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

REASON: Modified subpart 2 and new subpart 4 are proposed to distinctly describe the requirements that allow agency flexibility for designating a new technology as alternative or standard. It is unnecessary to say “and this part” with the proposed rule change above (RR94.22-24). No changes are proposed for the referenced items.

7080.0400, subp. 1 B (now 2 B). Procedures for approval. Pumpco 2/24/99 meeting. Clint Elston 3/31/99 letter, comment # 2 . Attachment 10. RR.95.1-3. S154. L74 and L144.

COMMENT: What is long term? Mr. Elston asks why only typical domestic waste households are allowed.

CHANGE: Rule change proposed.

B. ~~have structural components that meet or exceed a 25-year design life has long term treatment and hydraulic reliability while serving typical domestic households under adverse climatic conditions and varied soil conditions through in-field testing and have soil treatment that meets or exceeds a 7-year design life when loaded at maximum design flows established in part 7080.0125 or 7080.0600. The new technology must be tested at its design maximum hydraulic and organic loading rates. Structural and soil treatment testing must be adequate to extrapolate the life expectancies required in this item;~~

REASON: Specificity. When the rule language was first drafted and brought to the ISTS Advisory Committee, they chose not to define long-term. During the comment periods the ISTS industry, such as Pumpco identified above, encouraged the agency to provide detail on what the agency really expects for long-term performance. The agency has responded by replacing the vague terms “long-term treatment and hydraulic reliability” with a standard time period. A 25-year design life for structural components is proposed because it is a typical design standard in the construction industry, not only in the ISTS industry. The standard wastewater engineering textbook Metcalf & Eddy: *Wastewater Engineering Treatment Disposal Reuse: a Textbook*, 3rd ed., McGraw-Hill, New York, 1991, page 141 states:

“In selecting materials of construction, three principles are fundamental to the engineering design of process-oriented facilities: (1) durability -- the life of the equipment is expected to last at least 20 years and structures, 30 to 40 years; (2) good quality materials and equipment to minimize maintenance and replacement; and (3) environmental suitability, realizing that wastewater and its attendant chemicals are corrosive.”

It is reasonable to expect structural components to last at least 25 years. It is also reasonable to require at least a 7-year life for soil treatment or disposal. Seven years is the typical fluctuation cycle seen for Minnesota weather conditions. Seven years has also been shown to be reasonable through research (Attachment 10) of systems loaded at maximum hydraulic conditions. Systems last longer than seven years because they are often hydraulically loaded at a much lower level than design. Safety factors in this rule are found in hydraulic designs.

It is reasonable to delete the domestic household language because new technologies should indeed be used for both dwellings and other establishments. In fact, other establishments are in the most need for some of the new technologies suggested.

7080.0400, subp. 1 C and D (now 2 C and 2 D). Procedures for approval. Ayres Associates 3/19/99 letter, comment # 3. Also, Ronald Hedlund 11/28/99 letter, comment # 1. RR95.4-5. S154. L154 and L5.

COMMENT: Change the wording to say “is readily operated and maintained.” Mr. Hedlund’s comment was to change the wording for clarity.

CHANGE: Rule change proposed.

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

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

REASON: Clarity.

7080.0400, subp 1 D (now 2 D). Procedures for approval. Ronald Hedlund 11/28/99 letter, comment # 2 and Ayres Associates 3/19/99 letter, comment #4. RR95.6-7. S154-155. L5 and L123.

COMMENT: Mr. Hedlund suggests that item D does not seem appropriate here. Ayres suggests rewording to say “can be recommended for use under specific conditions, notwithstanding that under other conditions its use may be limited.”

RESPONSE: No rule change proposed. The sentence as proposed clearly will identify recommended and limited use. The commenter’s suggested alteration states essentially the same thing; however, it does not specifically require the proposer to provide information to the agency of any known limitations. The

agency would have to hear from the industry if the new technology was not recommended under certain conditions. For example, Geoflow, Inc. clearly identifies in their literature use differences between their Wasteflow™ PC product versus their Wasteflow™ Classic product. This type of information is invaluable to the entire industry when system choices are being made.

7080.0400, subp. 2 (now subp. 3). Submittal requirements. Agency recommended change. RR95.8-24.

CHANGE: Rule change proposed.

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

A. plans and specifications;

B. theory of operation;

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

D. testing or research data with extrapolating calculations;

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

F. installation requirements and procedures;

G. inspection requirements;

REASON: This subpart clearly establishes that it is for alternative designation and sets up nearly the same procedures for the submittal as previously proposed. Amendments follow. Adding research data and allowing extrapolation calculations greatly increases the chances of information being available for new technologies to be approved and designated.

7080.0400, subp. 2, items H and I (now subp. 3). Submittal requirements. Ayres Associates 3/19/99 letter, comment # 5. Clint Elston 3/31/99 letter, comment # 2 G. RR95.18. S155-156. L123 and L144.

COMMENT: Ayres requests elimination of items H and I. Mr. Elston asks whether mound costs were considered before they became standard.

CHANGE: Rule change proposed.

~~H. capital costs;~~

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

REASON: For new technology it seemed reasonable to ask for costs, mainly for informational purposes. However, the commenter raises a question of need. Items H and I are not needed because they do not impact how a new technology is designated.

The agency did consider mound costs. First mounds were moved into the alternative labeled category as another technology option where there was only 12 inches to saturated soil or bedrock. After years of use in Minnesota they were moved to the standard part of the code. Mounds are cost effective solutions to sites with limited unsaturated soils. Costs were considered and deemed reasonable (current state average is about \$7000/mound) when mounds were first introduced and when they became standard.

7080.0400, subp. 2 K (now subp. 3 I). Submittal requirements. Clint Elston 3/31/99 letter. Comment #2 H. RR95.21. S155-156. L145.

COMMENT: Disagrees that soil science be a requirement for the documented review of the new technology.

RESPONSE: No rule change proposed. RR95.23 states “as applicable” so options are available to the knowledge level of the evaluating third party.

7080.0400, subp. 2 J, K, L (now subp. 3 H, I J). Submittal requirements. Agency recommended change. RR95.8-24.

CHANGE: Rule change proposed.

H. J. operation and maintenance requirements and schedules;
I. K. documented review by an independent professional with extensive knowledge of ISTS engineering principles, soil science, construction processes, and material quality, as applicable; and
J. L. additional data and information as requested by the commissioner.

REASON: Consistency.

7080.0400, subp. 2 K (now subp. 3 K). Submittal requirements. Ayres Associates 3/19/99 letter, comment # 6. RR95.21-23. S155-156. L123.

COMMENT: Change the wording to say “proof of review by an individual with experience relevant to the new technology and who is credentialed by the Agency.”.

RESPONSE: No rule change proposed. This language has been discussed at great length with industry personnel and with the ISTS Advisory Committee. This negotiated requirement is reasonable because it recognizes options and necessary because it provides important third party review. The agency will rely on other credential processes already in place, such as Professional Engineers, Professional Soil Scientists, Sanitarians, academic researchers, and other professionals with knowledge required in the proposed rule. This is reasonable to provide flexibility and eliminate another step in the new technology review process. See SONAR (Hearing Exhibit 3).

7080.0400, subp. 2 (now subp. 4.) Agency recommended change. RR96.

CHANGE: Rule change proposed.

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

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

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

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

REASON: Subpart 4 is proposed to distinguish alternative and standard systems. The specific numbers included in this language are requested by industry and internal staff to clearly identify what the agency intends. The previously proposed rule was too vague in stating “long-term treatment and hydraulic reliability.” Requiring 100 systems to be installed is reasonable because the agency expects to see data showing long-term use under varying conditions. This data does not have to be generated in Minnesota; many technologies will have this data available because they have been used across the country for years. If no data exists the system can be loaded at maximum capacities and data extrapolated for the 25-year and 7-year design lives for an alternative system and granted approval very quickly. Standard systems will have to prove themselves over time and location as has been done in the past for ISTS technologies.

It is important that soil treatment systems be tested in all major soil types because of the unknown biomat created by the different technologies. Hydraulic longevity of the soil component may vary depending on the type of system and soil classification. It has become clear that when higher quality effluent creates a biomat in the soil treatment system, the biomat is much different than the biomat seen from septic tank effluent.

Testing will assist all in Minnesota in terms of performance. The agency proposes to approve the monitoring plan to provide direction to and consistency of testing methods for the different technologies. “As applicable” continues to be used because some manufacturers are stating that they won’t have a soil portion that is used at all for treatment.. Electrical or mechanical components will not have longevity requirements, but will be required to meet any electrical code standards.

7080.0400, subparts 3 and 4 (now subp. 5 and 6). Approval and Denial. Agency recommended change. RR96.1-13. S156-157.

CHANGE: Rule change proposed.

Subp. 5. **Designation. Approval.** New technology designation shall be based on whether the new technology successfully demonstrates performance as described in this part. If upon review, the commissioner

determines that the new technology complies with this part, the agency shall issue the designation ~~an approval~~ in writing. If it has been determined that the new technology has limitations for its use, the commissioner shall impose conditions under which the designation ~~an approval~~ is granted. Within 90 days after ~~of designation approval~~, the applicant must submit to the commissioner fact sheets, which can then be offered directly to ISTS professionals. The fact sheets must include a general description of the new technology and clearly written instructions and graphical representations for design, construction, inspection, operation, and maintenance requirements. If ~~a designated approved new technology, component, or design~~ is modified or additional assertions of function or performance are made, modification and additions are not covered by the designation approval shall be considered null and void, unless the changes ~~is~~ are submitted to the agency for review and the designation approval is reaffirmed. After obtaining a commissioner designation approval letter or modified designation letter, the new technology ~~may~~ must be employed as designated unless specifically prohibited in local ordinance.

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

REASON: Clarity and consistency. First sentence if for clarity. Remaining changes are for consistent use of the term designation instead of approval.

7080.0450 WARRANTIED ISTS

7080.0450, subp. 1 Carlton County 3/22/99 letter. RR96.19-26. S158-159. L131.

COMMENT: Why do 7080.0400, subp. 3 and 7080.0450 state that the technologies may be used unless specifically prohibited in local ordinance.

CHANGE: Rule change proposed.

Subpart 1. Adoption and use. Warrantied individual sewage treatment systems meeting the requirements under this part may be employed unless specifically prohibited in local ordinance. ~~Past or current incorporation by reference of this chapter into a local ordinance of the minimum technical standards and criteria for individual sewage treatment systems 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 7080.0450, is incorporated by reference into Ordinance....."~~

RESPONSE: Correction. This proposed rule change does not address Carlton County's asking why the rule states the parts may be employed unless prohibited by local ordinance. The first sentence is taken from Minn. Stat. § 115.55, subd. 8.

The correction is deleting all of the remainder of the paragraph. It was written for performance standards and should not be included here. It conflicts with the statutory requirement of the first sentence that allows warrantied system use unless specifically prohibited. The deleted portions of the paragraph says the reverse, that warrantied systems can be used ONLY if expressly adopted.

**7080.0450, subp. 2. Submittal requirements. Agency recommended change.
RR97.1-3. S159-160.**

CHANGE: Rule change proposed.

~~Warrantied individual sewage treatment systems may be employed provided The manufacturer or designer must submit satisfactory information to the commissioner as follows to qualify for placement on the warrantied systems list.~~

REASON: Clarity.

**7080.0450, subp. 3 E. Submittal requirements. Agency recommended change.
RR98.7-8. S159-160.**

CHANGE: Rule change proposed.

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

REASON: Consistency.

7080.0600 OTHER ESTABLISHMENTS

**7080.0600. Other establishments. Clint Elston 3/31/99 letter. Comment # 2 I.
RR98.9. S160-169. L145.**

COMMENT: This part should be rewritten to address separation technologies.

RESPONSE: No rule change proposed. RR100.10-12 identify that the technical standards and criteria of the rule (including greywater and other toilet waste treatment devices) are also allowed under this part. The agency will continue to consider whether additional encouragement is necessary during the remaining time of the public hearing process.

**7080.0600. Other establishments. Hugh Veit, P.E. 3/29/99 letter, comment #1.
RR98. S160-169. L129.**

COMMENT: a). The rules are titled "Individual" sewage treatment systems and there is no limit on the number of users that the systems can serve. What are the

rules trying to regulate? b) Are additional requirements necessary for regulating larger systems? For example following 10-States Standards.

RESPONSE: a) The term “individual” has been the industry standard for a long time and many discussions at the ISTS Advisory Committee have occurred over the years in regard to changing the term. The agency has been faced with much industry resistance because of the common usage of the acronym ISTS. The agency is not opposed to some type of change; however, it’s not clearly needed or necessary since the majority of people in the industry use the term generically and their work is not impacted by the term “individual.” Also, individual is deemed to apply toward the system itself -- typically an individual system.

b) Which additional requirements should be placed in the rule for larger systems is another challenging comment. The 7080.0170 specifications in the rule are typically for systems serving flows up to 2000 gallons per day (GPD). Systems over 10,000 gpd are regulated through a state permit. The permit design review uses chapter 7080 as a baseline, not a requirement. Ten-States Standards are also used as well as other engineering texts, such as Metcalf & Eddy’s *Wastewater Engineering*. Flexibility on design requirements is proposed and negotiated through the permit process.

The rule has been divided into two parts based on the federal requirements of Code of Federal Regulations, title 40, parts 144 and 146 (anything over 20 persons of flow is governed federally). This moves the systems between 2000 and 10,000 gpd into the proposed 7080.0600. See SONAR (Hearing Exhibit 3) pages referenced above.

7080.0600, subp 1 A. Minnesota Department of Health 3/30/99 letter, comment #30. RR98.11-12. S162-163. L134.

COMMENT: Clarify this item by substituting “7080.0060 to 7080.0176” for “subpart 46b”.

RESPONSE: No rule change proposed. Subpart 46b defines technical standards and criteria and is a reasonable reference.

7080.0600, subp 2. Administration by state agencies. Paul Batt 3/23/99 letter (incorrectly referred to as 7080.0030 subp. 1A). RR98.15-26. RR99.1-14. S163-164. L125.

COMMENT: What are the new guidelines and requirements for SDS permits?

RESPONSE: No rule change proposed. The items deleted in 7080.0030 (RR22) for SDS permits are proposed to be moved to 7080.0600 (RR98). See S163-164.

7080.0600, subp. 2 B. Aitkin County 3/5/99 letter (commenter incorrectly references subp. 2 C). RR98.18-22. S164. Attachment 9. L76.

COMMENT: Commenter asks why the rule includes 1/2 mile as a permit trigger. Suggests that it is too far away.

RESPONSE: No rule change proposed. See SONAR (Hearing Exhibit 3), pg. 164. This comment was brought to the ISTS Advisory Committee on 4-1-99. Discussions ensued as to groundwater mounding, volume of sewage in one area. Concerns were raised about MPCA staffing and the increased needs for small communities and around lakeshore. The agency is committed to working with hydrogeologists to further estimate risks and to work further with the agency permit writers on processes that are cumbersome.

7080.0600, subp 4. Technical requirements, design. Metropolitan Council 3/9/99 letter. RR100.10-25. RR101.1-25. RR102.1-25. RR103.1-24. S165-169. L89.

COMMENT: Does the rule promote the use of two tank designs and water meters for ISTS in areas expected to remain rural over the long term, as well as areas where soil or water conditions may warrant additional protection.

RESPONSE: No rule change proposed. Chapter 7080 is a minimal rule that can be applied across the state. The agency is often asked to add or delete requirements to the rule, particularly as problems or methods arise for a particular area. The agency continues to encourage LGUs, the Metropolitan Council, and other regulatory entities to take into consideration their localized concerns and address them within the local regulatory scheme.

7080.0600, subp 4 A. Technical requirements, design. Metropolitan Council 3/9/99 letter. RR100.13-14. 162-163. L89.

COMMENT: All ISTS regardless of type or size should be installed with a water meter.

RESPONSE: No rule change proposed. The agency has discussed this many times in the past with its clientele and with the ISTS Advisory Committee. Industry desires this because it would help in trouble-shooting problems, establishing who was/is in error (e.g., construction error vs. homeowner system abuse), etc. Many good reasons have been suggested. However, when considering reality, the agency has been told that it is an unnecessary cost for the majority of small systems installed. LGUs have difficulty enforcing it and property owners rarely write down their water measurement readings. Inflow and infiltration (I/I) problems are not caught by the water meter and the agency has been told that hydraulic failures are more common from I/I rather than system abuse. It is required for other establishments because of the need for monitoring and maintenance of those types of facilities, troubleshooting, and few safety factors for designs are included in the present rule. Flow measurement is implied

in the use of monitoring plans for “other systems” described in 7080.0178 (RR76) and is required for performance systems as described in 7080.0179 (RR77).

7080.0600, subp 4 B (1) and (2) (b). Minnesota Department of Health 3/30/99 letter, comment #31. Attachments 9. RR100.16-19 and RR101.1-6. S165-166. L134.

COMMENT: Add: “a design factor of 1.5 shall be applied to measured flows for system sizing purposes.

RESPONSE: No rule change proposed. To date, there is no evidence that a 1.5 safety factor is better or worse than the language proposed in the 1996 rule (the commented language is not a change; it is underlined because it has been moved). When taken to the 4-1-99 ISTS Advisory Committee for discussion, the consensus was that using only metered flow will not allow a safety factor. The committee acknowledged that a better educational process for determining flows for existing systems was needed. No alternative language to the existing 1996 language was proposed and the committee did not support the 1.5 safety factor over current language.

7080.0600, subp 4 C (1). Larry Fyle 3/19/99 letter. RR101.8-9. S166-167. L130.

COMMENT: Why should a tank be compartmented if you have two tanks.

RESPONSE: No rule change proposed. The rule allows compartmentation OR the use of multiple tanks.

7080.0600, subp 4 C (2) (a). Larry Fyle 3/19/99 letter. RR101.13. S166-167. L130.

COMMENT: Minimum liquid capacity should be 1000 gallons, not the 750 gallons specified.

RESPONSE: No rule change proposed. This is not new rule language; it language that has been used. The agency has not seen the need to modify this. The code is a minimum standard. If 1000 gallon tanks are more common in various areas of Minnesota, many installers just use 1000 gallons. This is allowed in the rule.

7080.0600, subp 4 C 2 (c). Technical requirements, design. Joe Hibberd 3/3/99 letter, comment #2 and Pumpco 2/24/99 meeting. RR101.17-19. S166-167. L77.

COMMENT: Restaurants are included with “other non-sewage discharge facilities” and disagrees that wastewater from restaurants is non-sewage. Pumpco states this subitem must be referenced back to something.

CHANGE: Rule change proposed. 7080.0060, subp. 4 C (2) (c):

(c) ~~For restaurants, laundromats, and other nonsewage discharge facilities,~~
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, subp. 1, Item D.

REASON: It is not necessary to specify restaurants, laundromats and other nonsewage facilities within this text. The text intends only to assure adequate treatment exists before discharge into a soil system. See also S160-162.

7080.0600, subp 4 C (3). Larry Fyle 3/19/99 letter. RR101.20-23. S166-167. L130.

COMMENT: Should say a filtering device such as a screen or other filtering device to cover any new type of device.

CHANGE: Rule changes proposed. All references to effluent screens are proposed to be eliminated from the rule based on comments of the 4-1-99 ISTS Advisory Committee. For this part:

(3) An effluent screen shall be used on the last septic tank prior to discharge to a soil treatment system. 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.

RESPONSE: Effluent screens were deleted after problems were clearly identified at the ISTS Advisory Committee on 4-1-99. They can still be used; the committee recommends not requiring their use because in some circumstances it is not appropriate.

7080.0600, subp 4 E (2). Larry Fyle 3/19/99 letter. RR102.14. S168-169. L130.

COMMENT: Concerned that if this requirement was applied to a six inch pipe discharging to a trench system, the system could not handle it.

RESPONSE: No rule change proposed. Collection systems follow different design standards than discharge pipes to trenches. Designing for inflow is typical for most collection systems in the engineering industry to assure the designed ISTS is not hydraulically overloaded. The 200 gallons per inch of pipe diameter per mile per day has also been a longtime industry standard.

7080.0600 subp 4 E (2). Collector Systems. North American Wetland Engineering 4/20/99 letter RR102.12-18. S168-169. L147.

COMMENT: Omission of a needed reference

CHANGE: The agency agrees with this comment and proposes the following change:

(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. ~~The~~ If the system is shall be designed with each dwelling or other establishment having a sewage tank, or designed with a common sewage tank serving less than ten bedrooms, the liquid capacity of the tank(s) shall be in

accordance with 7080.0130 subp. 3. If the system is designed with a common sewage tank serving ten bedrooms or more, or serving an other establishment, the liquid capacity of the tank(s) shall be in accordance with subp. 4 C. ~~or a common sewage tank. If a common septic tank is used, the capacity of the septic tank shall be the sum of the tanks sized according to part 7080.0130, subpart 3, item A. All sewage tanks shall meet the applicable requirements of part 7080.0130 that apply.~~

RESPONSE: Correction. Reference is needed in order to size septic tanks for collector systems.

7080.0600, subp 4 E (4). Larry Fyle 3/19/99 letter. RR102.23. S166-167. L130.

COMMENT: Commenter sees only 3” piping in the house and has not seen problems with the 3” versus the 4” required.

RESPONSE: Collection systems typically have larger pipe diameters. In this case, a minimum of 4” is required. Designs use pipe diameter, number of user connections, velocity (topography/slope, etc. in calculations to assure hydraulic and solids movement can occur. The Environmental Protection Agency manual (EPA/6251/1-91/024; October 1991; Alternative Wastewater Collection Systems) recommends a minimum 4-6” for these types of designs, although some 2” pipe sizes have been used successfully.

7080.0600 subp 4 E (7). Minnesota Department of Health 3/30/99 letter, comment #23. RR103.8-11. S168-169. L134.

COMMENT: The last sentence of the subitem should be deleted, or a statement made that water-tight and pressure-tested connections are not equivalent to compliance with the well setback rules.

CHANGE: Rule change proposed.

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

REASON: Clarity. The language does give the impression that well setbacks can be violated. The deleted sentence applies only for solid pipe (i.e., no perforations) installation between 20 and 50 feet from a well. It is reasonable to delete this from the rule for clarity. Workshops and factsheets will continue to describe the allowances under the well code. This rule should not duplicate efforts, especially if confusion is the result.

7080.0700 LICENSES

7080.0700, subp. 1 B. Carlton County 3/22/99 letter and Pine County 3/31 letter, Shirley Basta. RR104.5. S170. Attachment 9. L131.

COMMENT: The term “consulted with” should be defined.

CHANGE: Rule change proposed.

B. an individual who ~~is constructing~~, after obtaining a signed design report from consulting with 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 ~~after consulting with a designer I or II~~. 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.

REASON: Minn. Stat. § 115.56, subd. 2 (b) (4), does not define “consult.” This proposed rule language will define “consult” as desired by the industry. It is reasonable to provide assistance through rule to LGUs who are having difficulty receiving adequate information for their permits from persons installing their own systems. This comment was brought to the 4/1/99 ISTS Advisory Committee and the proposed language above was agreed upon.

7080.0700, subp. 1 D. State license required. Pine County 3/31/99 letter, Shirley Basta and Aitkin County 2/26/99 letter, comment #36. RR104.13 S171. L143 and L76.

COMMENT: Septage disposal must comply with state guidelines so setbacks are met. Aitkin County suggests adding the words “in accordance with EPA 40 Code of Federal Regulations Part 503 and/ or local ordinance.”

RESPONSE: No rule change proposed. This part of the rule only identifies who does not need to have a license. Septage application requirements are identified in 7080.0175 (RR75.3-4).

7080.0700, subp 2. State license categories. Aitkin County 2/26/99 letter, comment # 37. RR104.14-26. RR105.1-15. S171-173. L76.

COMMENT: Where is the Inspector category?

RESPONSE: No rule change proposed. See current rule because it is not shown in the proposed rule.

7080.0700, subp. 2 A. State license categories. Aitkin County 2/26/99 letter, comment # 38. RR104.18-20. S171. L76.

COMMENT: Issuing Notices of Noncompliance should be included.

RESPONSE: No rule change was proposed. See current rule that includes a notice of noncompliance requirement.

7080.0700, subp. 2 B. State license categories. Aitkin County 2/26/99 letter, comment # 39. RR104.21-22. S171-172. L76.

COMMENT: Why can't designer II's issue certificates of compliance and noncompliance?

RESPONSE: No rule change proposed. Designer II's cannot conduct inspections or issue certificate of compliance or notices of noncompliance.

7080.0700, subp. 2 D. Larry Fyle 3/19/99 letter. RR105.14. S173. L130.

COMMENT: The rule should require pumpers to also check the baffles.

RESPONSE: The rule already requires this. Please see RR105.10.

7080.0700, subp. 2 E. Aitkin County 3/5/99 letter. RR105. L76.

COMMENT: The inspector category should include design and performing site evaluations.

RESPONSE: No rule change proposed. Designer I or Designer II's include design and performing site evaluations, not Inspectors.

7080.0705 APPLICATION FOR LICENSE; FEES; RENEWAL

No comments received for this part..

7080.0710 BONDING AND INSURANCE FOR LICENSES

7080.0710. Bonding and Insurance for Licenses. Hugh Veit, P.E. 3/29/99 letter, comment #4. RR106-107. S176-177. Attachment 2. L129.

COMMENT: Design service should be covered under professional liability insurance.

RESPONSE: State mandate, see Minn. Stat. § 115.56, subd. 2 (e). The agency attempted to require additional bonding and insurance requirements when the legislation was written. A legislative change would be necessary and the change would have to be supported by appropriate justification.

7080.0715 LICENSE CONDITIONS

7080.0715, subp. 2 B (2) (b). Conditions for designated registered professional. Pine County 3/31/99 letter, Shirley Basta and Carlton County 3/22/99 letter. RR109.6. No SONAR because a rule change was not proposed. Attachment 9. L143 and L131.

COMMENT: Requiring the installer to be present for the inspection doesn't make sense if the inspection requirements can be satisfied by review of video, photographs, etc. as described in RR94.4-6.

CHANGE: Rule change proposed. Delete 7080.0715, subp. 2 B (2) (b).
(b) be present during inspections;

REASON: Minn. Stat. § 115.55, subd. 5 (Attachment 2) does allow the use of other methods for inspections if evidence is gathered by the installer. With this statutory authority it is reasonable to delete the requirement for an installer to be present at the site for inspections. In addition, this proposed deletion was discussed at the 4/1/99 ISTS Advisory Committee. The ISTS Advisory Committee agreed with this proposal, particularly for local flexibility. The LGUs know the installers in their area and typically can get to a site within reasonable time periods. If the installer is not there, other methods are used to communicate problems if identified. LGUs can also require video, electronic, photographic or other evidence of compliance through their local ordinance, particularly for key components of construction.

7080.0715, subp. 2 B (3). Carlton County 3/22/99 letter. RR109.15. S177-181. L131.

COMMENT: Qualified employees should be added.

RESPONSE: No rule change proposed. Part 7080.0715, subp. 2 identifies requirements for designated registered professionals, not qualified employees.

7080.0715, subp. 2 B (4). Carlton County 3/22/99 letter. RR109.16-20. S177-181. L131.

COMMENT: Add requirements for the location and method of land application or disposal.

CHANGE: Rule change proposed.

(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.

REASON: Adding “location and method of land application or disposal” is reasonable, especially since there are no state rules regulating the land application of septage (guidelines only). This information would be invaluable for compliance/enforcement complaint follow-up for pumper license issues.

7080.0715, subp. 2B(4). Conditions for designated registered professional. Aitkin County 2/26/99 letter, comment # 41. RR109.16-20. S177-181. L76.

COMMENT: The wording for the pumper specialty should be changed.

RESPONSE: No rule change proposed. It is not clear how the wording causes a problem.

7080.0720 QUALIFIED EMPLOYEE

No comments received for this part.

7080.0800 ISTS PROFESSIONALS REGISTRATION PROGRAM REVIEW

No comments received for this part.

7080.0805 TRAINING

No comments received for this part.

7080.0810 EXAMINATION

No comments received for this part.

7080.0815 EXPERIENCE

7080.0815, subp. 1 B. Options to gain experience. Daniel Hecht hearing testimony. RR112.15-27. H105.14-24.

COMMENT: The language doesn't clearly say that a restricted license is necessary before the person can gain experience.

CHANGE: Rule change proposed.

B. ~~If the individual is seeking~~ obtains a restricted license, qualifying experience may be completed under a signed agreement for direction 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 and under a restricted license held by the individual seeking the experience.

REASON: Clarity. The intention of the rule is to require a person to obtain a restricted license if option B is selected for obtaining experience.

7080.0815 subp. 8. Reduction of required experience. Wright County 3/30/99 email. RR115.17-20. S189. L140.

COMMENT: Are references correct?

CHANGE: Rule change proposed.

RR20: subpart 1; ~~7080.0810, subpart 2-3;~~ and 7080.0820.

REASON: Correction of reference.

7080.0820 CONTINUING EDUCATION

**7080.0820, subp. 1. Renewal requirements. Agency recommended change.
RR117.3-4. S191-193.**

CHANGE: Rule addition proposed.

D. In each registration period, individuals must accrue continuing education hours specified in the preceding items. At least ~~six~~ (6) hours of this required training must be directly related to the administrative and technical parts of this chapter.

REASON: The agency continues to be plagued by enforcement cases that show lack of knowledge with the rule. The SONAR (Hearing Exhibit 3) describes why some of this is occurring. This change was originally offered and discussed in the cited SONAR and is being partially reinstated based on continued problems. Only partial use of the originally recommended language is offered because the key issue the agency is trying to address is for ISTS professionals to get some exposure to the rule requirements and changes within each registration period. The ISTS Advisory Committee did support this language when it was originally placed in the rule. No discussions took place upon its removal, an item neglected by the agency.

7080.0820, subp. 1 C. Renewal Requirements. Aitkin County 2/26/99 letter and Larry Fyle 3/19/99 letter. RR116.23-26. RR117.1-3. S193-194. L76.

COMMENT: It is not fair, wise or perhaps constitutional for pumpers that make less than \$9,000.00 to be exempt from continuing education requirements. Everyone should be required to attend to keep current and informed.

RESPONSE: This exception is provided in Minn. Stat. § 115.56, subd. 2 (h).

**7080.0830 ACCREDITATION OF TRAINING PROGRAMS AND
AUTHORIZATION OF TRAINING FOR CONTINUING EDUCATION
CREDITS**

No comments received for this part.

7080.0850 ISTS PROFESSIONAL REGISTRATION

7080.0850, subp 5 A. Specific Responsibilities. Aitkin County 2/26/99 letter, comment # 45. RR119.21-25. S196. L76.

COMMENT: Should read “Inspectors must have the knowledge and ability to perform and assess site evaluations, evaluate and design ISTS, evaluate installations and....”

RESPONSE: No rule change proposed. Inspectors are not required to have this knowledge and ability. Designer I’s must have this knowledge and ability. Inspectors who wish to design systems must be upgraded through the training, examination and experience requirements of a Designer I. The agency encourages LGU inspectors to become Designer I’s but does not mandate it.

7080.0850. Larry Fyle 3/19/99 letter. RR120.15-22. S198. L130.

COMMENT: Language should include ascertaining whether the inlet and outlet pipe are working properly.

RESPONSE: No rule change proposed. Rule states pumpers identify problems related to sewage tanks, baffles, etc. Plugged inlets and outlets are a natural extension of the maintenance. It does not seem necessary to add the language.

7080.0850, subp. 5 F. Agency recommended change. RR120. S198.

CHANGE: Rule change proposed.

F. A person who designs, installs, alters, repairs, maintains, pumps, or inspects all or part of an individual sewage treatment system shall comply with applicable requirements and the most restrictive standards within the county.

REASON: Correction. This statement is inconsistent with the rule language following the statutory mandates.

7080.0855 APPRENTICE

No comments received for this part.

7080.0860 ADMINISTRATION OF PROFESSIONAL REGISTER AND APPRENTICE PROGRAM

No comments received for this part.

7080.0900 ENFORCEMENT ACTION

No comments received for this part.

7080.0950 SEEPAGE PITS, DRYWELLS, AND LEACHING PITS

7080.0950, subp. 1. Carlton County 3/22/99 letter. RR124. S204-207. L131.

COMMENT: Drywells should, in all cases, be considered failing.

RESPONSE: Minn. Stat. § 115.55, subd. 7 (a) and (b) allows local ordinances to contain local standards that are less restrictive than chapter 7080. Further, Minn. Stat. § 115.55, subd. 5 a (e) and (f) address local ordinance flexibility regarding drywells.

7080.0950, subp. 2 A. Agency recommended change. RR124.17. S204-207.

CHANGE: Rule change proposed.

A. has a watertight septic sewage tank that does not obviously leak below the designed liquid capacity preceding the pit;

REASON: Consistency with other “watertight/liquid capacity” changes throughout the rule.

7080.0950, subp. 2 D (1) and (2). Agency recommended change. RR124.22-26 and RR125.1-4. S204-207.

CHANGE: Rule change proposed.

D. has an absorption area which has been determined by:
(1) multiplying the average design flow (under part 7080.0125, subpart 2, Table I or under part 7080.0600 subpart 4, item B) by the soil sizing factor (under part 7080.0170, subpart 2, item C, Table V or Va) based on the weighted average of each vertical stratum penetrated by the seepage pit, drywell or leaching pit; and
(2) using the sidewall area below the inlet, exclusive of any hardpan, rock, or clay formations and based on the outer diameter of the pit lining plus 12 inches of rock in the annular space, with no reduction for increased filter material below or around the pit;

REASON: Consistency.

7080.0950, subp. 2 E. Agency recommended change. RR125.5-6. S204-207.

CHANGE: Rule change proposed.

E. has a pit ~~which~~ that has not been placed in soils where the percolation rate of any stratum is faster than one-tenth minute per inch or in (coarse sand);

REASON: Clarity.

9400.0500 CLASSIFICATION OF FACILITIES

No comments received for this part.

II. ADDITIONAL COMMENTS:

Debbi Kinney. Pumpco 3/19/99 letter, comment #1. L124.

COMMENT: The rule contains too many grey areas and too much is left for interpretation.

RESPONSE: The agency tries to preserve a balance between prescriptive and performance specifications and the many and often opposing requests by outside parties. Agency staff work diligently, respectfully and directly with industry representatives to establish a reasonable, minimal code for the entire state that reasonably protects public health and the environment.

Hugh Veit, P.E. 3/29/99 letter, comment #2. S210-211. L129.

COMMENT: Why are professional engineers not included in the ISTS requirements for systems (such as designing activated sludge systems that discharge subsurface)?

RESPONSE: See SONAR (Hearing Exhibit 3), pgs. 210-211. The agency continues to work with the Board of Registration to assure the two programs do not collide. We have expressed concern to the Board over the technological changes in the industry and the move toward cluster designs and have asked for a written memorandum and justification for any change in business. We have been told orally that our rules are fine. We have also been told that we will continue to work together to get a written memorandum of understanding. If changes are decided upon at that point, the industry will be notified in due course.

Hugh Veit, P.E. 3/29/99 letter, comment #3. L129.

COMMENT: Mr. Veit questions the use of the word “professional” throughout the rule.

RESPONSE: The statute employs the term professional. See Minn. Stat. §§ 115.55, subd. 1 (h); 115.56, subd. 1 a, 2 (c), (f), and (g), 3 (a) d (a) (2). The training, examination and experience components of the licensing program continue to be improved. The program most likely will never achieve the same level of professionalism as other fields of work such as medical doctors, attorneys, plumbers, professional engineers, and other professions. However, the professionalism in the ISTS industry is equivalent in many ways to the others because of the large extent of home business and the pride and responsibility that goes with that, the eagerness to learn new things, the willingness to expand on technology use, etc. These industry “professionals” are amazingly malleable and industrious. Most ISTS professionals act, conduct business and site, design, install, inspect and pump ISTS properly. As with all industries, there will always be some bad apples.

Stevens County. RR L12 - 18 and L22 - 25.

COMMENT: The rule should allow surface discharge of septic tank effluent without a permit.

RESPONSE: The scope of this comment is outside this rulemaking. It is a federal mandate that surface discharging systems be managed under a National Pollutant Discharge Elimination System (NPDES) permit. This rule is solely for the use of individual sewage treatment system technology that discharges or disperses final effluent below ground. See hearing testimony (H73-94), Attachment and discussions within this document.

Hugh Veit, P.E. 3/29/99 letter, comment #5. L129. See S210-211 and Minn. Stat. § 115.55, Attachment 2.

COMMENT: a) Are the rules written to provide disposal to the soil after a septic tank. b) Does the work need to be performed by a licensed ISTS professional and/or a professional engineer.

RESPONSE: a) This rule is written solely for individual sewage treatment system technology that discharges or disperses final effluent below ground. This may be a septic tank followed by a trench, a septic tank and pump tank followed by a mound, etc. It may also be a sand filter, recirculating gravel filter, aerobic tank, rotating biological contactor, etc., discharging final effluent subsurface. The technologies have expanded greatly since the advent of the 1996 rule. Protective qualifiers such as monitoring and mitigation plans and local operating permits have been added. If ultimate disposal is below the ground surface, it is governed under these rules.

b) Minn. Stat. § 115.56, subd. 2 states: “After March 31, 1996, a person may not design, install, maintain, pump, or inspect an individual sewage treatment system without a license issued by the commissioner.” The statute continues and provides licensing exemptions for qualified employees of state or local governments, farmers who pump and dispose on their own land, individuals performing labor or services for a person licensed under the law; and persons constructing their own ISTS. Professional Engineers were not exempted and repeated discussions with the Board of Registration clearly indicated that no exemption would be requested. To date, that has been true. The agency continues to discuss with the Board of Registration positions on any potential law changes that would impact the exemptions.

City of Orono 3/31/99 letter, comment #6. L137.

COMMENT: The main reason the 1996 rules were approved by the legislators was a large group of contractors and homeowners asked for one set of standards statewide.

RESPONSE: . The legislature requires or authorizes, but, does not approve, the rules. Since the 1978 rules, all rulemaking has involved a large number of people. The agency provides information at workshops, invites persons to meetings, attends local government meetings, calls ISTS Advisory Committee meetings, disperses questionnaires and factsheets for comment, etc. The draft of all these discussions is placed on public notice for review and are offered during hearing processes for review and are essentially approved by the citizens of Minnesota.

In 1994 the Minnesota Onsite Sewage Treatment Contractors Association, mainly representing the metropolitan area, approached the legislature with two main objectives: first, to require one statewide license to avoid paying multiple license fees across many local jurisdictional boundaries; second, to require one uniform code across the state. They were successful with their first objective and were not in the second. The 1994 law and the subsequent 1996 rule explained the minimum standards and also allowed local units of government to have “alternative local standards” as long as public health and the environment were protected. One county, McLeod, chose that as an option

City of Orono 3/31/99 letter, comment #7. L137.

COMMENT: Supports performance standards as long as the state allocates adequate resources to review and approve the various types of technologies.

RESPONSE: We encourage your support at the legislature and through your local city and county associations for funding assistance both to the state and the local governments.

Agency 10/2/98 letter to the Minnesota Onsite Sewage Contractor's Association. L2.

COMMENT: The agency called a meeting with MOSTCA board members to determine concerns and provide discussions for resolution. Comments were detailed in an agency follow-up letter (L2).

RESPONSE: During the development of the noticed rule, MOSTCA's meeting comments were considered and included as needed and reasonable.

MOSTCA 10/23/98 letter, Ron Palmen. L3.

COMMENT: Recommend delaying full implementation of rule changes until January 1, 2000; prefer to see the Agency continue to move forward on full implementation of 7080 rule changes.

RESPONSE: The agency will bring the implementation date discussion back to the ISTS Advisory Committee.

Wright County 12/9/98 letter, Judie Rose. L4.

COMMENT: We request the MPCA move forward with a concerted effort to implement a system for approving or disapproving new technologies for ISTS.

Focus 10,000 11/30/98 letter, Marcia Shepard. L6.

COMMENT: Expressing full support for the MPCA in adopting proposed amendments to Minnesota Rule Chapter 7080, without a public hearing.

Stearns County 12/17/98 note, Dave Koffman. L7

COMMENT: Complimented Mark Wespetal and Lori Frekot on the proposed rule.

County of Lake 12/30/98 letter, Willard Clark. L8. and Dick Sigel, Land Use Administrator from Lake County, 4/19/99 hearing testimony. RR76.11-26; RR77.1-26, RR78.1-25, RR79.1-4. S110-112 and S113-115. Comments: H6.20-25, H7.1-12. Hearing Exhibit 12. See also attachments 5 and 7.

COMMENT: Mr. Clark is concerned with the prescriptive approach that Minn. R. ch. 7080 is taking. Mr. Sigel stated the rule has become incredibly

prescriptive, that they are dealing with many varied site conditions and we should be looking at performance-based codes to address Minnesota's varying conditions.

RESPONSE: No rule change proposed. The agency recommends a complete review of agency documentation surrounding this topic. These general statements are justified in the completed SONAR (Hearing Exhibit 3), at the hearing, with hearing factsheets available, too. The rule has prescriptive changes because they represent minimum requirements accepted in the industry for systems that have been proven over time and location. In particular, the standard systems have prescriptive language so that it can be almost a "cookbook" approach to installation and inspection. The rule also offers 7080.0178 (other systems), 7080.0400 (new technology), and 7080.0179 (performance systems). In essence, the rule allows any type of system to be used as long as its discharge is below ground.

Dick Sigel, Land Use Administrator from Lake County, 4/19/99 hearing testimony. Comment: H54.15-19. Hearing Exhibit 12. See Attachment 14.

COMMENT: Counties are required to make available any differences between local ordinance and Chapter 7080. The MPCA should list the differences between Chapter 7080 and what is really required by existing state and federal law.

RESPONSE: Minn. Stat. § 115.55, subd. 2 (c) requires LGUs to provide a written list of any differences between its ordinance and Chapter 7080. The agency provided attachment 2 and attachment 14 at each hearing site. Attachment 14 attempts to provide what Mr. Sigel suggests. 1999 (Hearing Exhibit 3) and 1996 (1999 SONAR Exhibit 39) SONARs also describes rule vs. law decisions.

Amy Doll, Stevens County Property Owner, 4/19/99 hearing testimony. H61.2-5.

COMMENT: If each county is allowed to offer less restrictive standards, what is the benefit?

RESPONSE: No rule change proposed. In 1994, MOSTCA approached the legislature with two goals: first to get a statewide licensing program and second to get a uniform code across Minnesota. On the second goal, the legislature heard from counties that wanted different codes, both more restrictive allowances (typically metropolitan areas; e.g., requiring two tanks instead of one) and less restrictive. Less restrictive ordinances are allowed (per statute) only if evidence shows they still protect public health and the environment. A less restrictive ordinance allowing discharge of septic tank effluent does not protect public health and the environment as stated in this document

Dick Sigel, Land Use Administrator from Lake County, 4/19/99 hearing testimony. Comment: H54.10-14 and H56.22-25. Hearing Exhibit 12. See Attachment 2 and 14.

COMMENT: The ordinance requirements are burdensome because staff sizes are so small and too much data is required to be gathered.

RESPONSE: Minn. Stat. § 115.55, subd. 3 (a) (2) requires the agency to write rules including “(2) how local units of government shall enforce ordinances under subdivision 2, including requirements for permits and inspection programs;” Parts 7080.0305, 7080.0310 and 7080.0315 are written to meet this mandate. The majority of the ordinance requirements are based on statutory mandates. See SONAR 1996 (1999 SONAR exhibit 39), S127-152, and attachments. Agency additions are:

- establishing a date for existing systems [RR80.2];
In cooperation with the law’s author (Representative David Bishop).
- clarifying that variances for technical standards and criteria can be accomplished locally and permit/inspection variances go to the MPCA [RR80.16-20, with changes as shown in this document].
- requiring management of holding tanks [RR82.16];
- requiring monitoring plans, mitigation plans and operating permits for part 7080.0178 and 7080.0179 system options [RR89.7-9, RR904-24 and RR91.1-14].
Can be voluntarily adopted by LGUs with staff so effective programs can be run; if not enough staff the LGU should choose not to adopt these parts).
- requiring annual reporting [RR89.22-26];
In 1996 rule; modified here for additional information to meet needs such as answering legislative inquiries, understanding training needs and types of systems used across the state; ISTS Advisory Committee members voted for this, mainly because of the tracking necessary by other organizations and the ease of development with computers;
- requiring two system sites for newly platted sites [RR82.10-12];
Not a new requirement; it was in the 1996 rule; and
- requiring design and inspection documents to be submitted as part of the permit process [RR87.17-25].
Law grants authority; not a new requirement; it was in the 1996 rule.

It should be noted that LGUs do not have to conduct permitting and inspection programs; they can be contracted out to appropriately licensed ISTS businesses and the LGU can retain the files.

The requirements for groundwater flow patterns, low population density identified in hearing exhibit 12 follow the statutory requirements for local units of government who want to have alternative local standards. The requirement that alternative local standards cannot be applied in shoreland, wellhead protection areas and for any systems serving a food, beverage or lodging facility is also a statutory requirement. Counties have the option to adopt chapter 7080’s technical standards without the gathering of data. Determining groundwater flow patterns

for part 7080.0179 systems is not necessary; the agency expects end-of-pipe sampling and perhaps subsoil sampling as described elsewhere in this document.

Dale Olson, Koochiching County, 4/19/99 hearing testimony. Hearing comment H52-56.

COMMENT:

The agency should take into account costs to upgrade a system.

RESPONSE: No rule change proposed.

The agency does consider costs and cannot promote technology costs that are unreasonable. A clear example in this rule is the lack of a nitrogen standard. Comments were received asking why we do not require a nitrogen standard for all systems; one concern is cost. In Minnesota, it is difficult to educate persons that treating their own waste is a responsibility and entails some costs even though research clearly shows that if systems are not designed properly or are placed too close to the water table, pathogens move and spread. It would be an enormous challenge to state that all systems must meet a nitrogen standard at the discharge point and would require much external support.

Agency staff are extremely empathetic to the cost comments because they are frequently called and brought into these challenging discussions. The law and rule appear to be on the right track in promoting public health and environmental protection; the real issues are staffing and funding. Both the agency and the legislature have recognized this need and the legislature has provided additional funding options.

Funding options for all types of wastewater projects, including ISTS are summarized in the attached document, entitled "Financial Assistance Programs for Community, Individual and Business Wastewater Treatment Systems". These programs are found throughout several state and federal agencies. Recent programs authorized by the state legislature include the Agricultural Best Management Practices and Individual Sewage Treatment Systems Loan Programs funded through the Minnesota Department of Agriculture. These two programs provide low-interest loan funding to counties who in turn provide loans to property owners. Counties can provide these funding sources to individuals through their county offices or by contracting with local lending institutions, who make the loans directly to individuals. The maximum interest rate that can be charged under these two programs is four percent (4%).

Although the array of funding options may be confusing, there are avenues to provide assistance. Most of these are in the form of low-interest loans. Grant assistance for individual property owners is rare and typically only available to the most financially destitute. Grant funding for community wastewater projects is more common; however, it still can be argued that there is not enough to meet the

needs of all. The agency has taken every opportunity to present the need for more wastewater funding to the legislature.

It should be noted that systems that are failing are upgraded in the time period established by the county. The only exception is by statute: a bedroom addition permit request triggers the need for an ISTS inspection. The legislative logic was, if a property owner can pay for a room addition, they should be able to pay for a failing system upgrade. Ordinances show a wide range of time periods, including that the system remain in place as long as no imminent threat is present. An imminent threat requires a 10-month upgrade per statute, again the rule duplicates the requirement for comprehensiveness.

Dick Sigel, Land Use Administrator from Lake County, 4/19/99 hearing testimony. Comment: H54.20-25. Hearing Exhibit 12. Comment: H54.20-25. Response: H55.9-25, H56.1-19.

COMMENT: The county has been working hard to make a bad situation better. Please don't hinder these efforts by adopting a document of rules that is too difficult and too burdensome to follow.

RESPONSE: The agency does not deny the complexities involved. Statutory requirements influence the majority of the complexity. In addition, Minnesota is in a transition period where ordinances have now been mandated across the state and implementation is just now beginning. Counties with strong programs won't be affected nearly as much as counties with little staff or counties that have not yet implemented an ISTS program. The agency typically relies on implementation activities after the rulemaking process including LGU training, University of Minnesota/MPCA workshops throughout the year, mailings, quarterly ISTS report, and a multitude of factsheets to assist all ISTS professionals. Increased use of the WEB site will also take place.

The complexity of the rule addresses some of Mr. Olson's concerns by allowing any system option to be used if followed by a subsurface discharge. Based on this need, the rule is necessary and reasonable.

Steve Tschida, private citizen, St. Paul, MN; 4/19/99 hearing testimony. H112.16-21.

COMMENT: Mr. Tschida wanted to emphasize the importance of all the requirements going forward, that intentions are clearly correct. He indicates that how they are implemented is the key and frustrations currently with LGUs.

RESPONSE: No rule change proposed. It should be noted that the legislature has clearly indicated that the state should step back and allow LGUs to implement programs as they see fit within their jurisdictional boundaries. However, the agency still intends to have an implementation strategy in place to assist the industry in understanding the rule components. It will be the LGUs responsibility to assist the industry for local ordinance differences.

End of Comments and Testimony Received by the Minnesota Pollution Control Agency,
5/10/99

III. Hearing Request Letters

Total number of hearing requests (many do not identify specific rule citations of concern): 74

General -

- # 8 Troubled by prescriptive rule.
- # 21 Unclear what system options are.
- # 76 Aitkin County, submit multiple comments and request a hearing.
- # 128 Requests clarity for failing system definitions and application

Duluth Area Letters - #20, 31 - 41, 43, 55-56. These letters all request a hearing for a complete review of Chapter 7080.

Stevens County Letters - # 12 - 18 and 22 - 25, 27, 80. These letters all request a hearing because of the desire to surface discharge sewage effluent.

Letter 73. Aldean Luthi requests hearing to address economic burdens and to express concern about the use of systems that don't work. Steven's county.

Cass County Letters - # 81 - 87 are duplicate letters with different signatures requesting a public hearing. No reason was stated. When asked orally, the senders were unable to state why.

Letter 75. Corey Seppman. Requests a hearing because the public notice was confusing.

Letters 95 - 121 contain individual signatures with the identical statement:

"I am petitioning for an open hearing concerning ISTS ruling and regulations (7080). I would like a complete review of 7080, parts one and two."

Invalid Letters: Letters 42, 44 - 54, 57 - 72, and 78 are invalid hearing requests. They are duplicates of faxed letters within the 95 - 121 range described above and should not have been numbered.

Letter 122. Arnold and Sharon Koehl, disagree with the intent to adopt a rule without a public hearing and states that some of the systems the agency proposes will not work in the Hancock area.

Letter 123. Robert W. Whitmyer, requests parts 7080.0020, 7080.0400 and 7080.0450 to be rewritten in accordance with his comments and offered at a public hearing. The public hearing request also should include public testimony on any rule edits applied subsequent to the rule edits he suggests or any other letter received by the agency in regard to these rules.

Letter 124. Debbi Kinney, Pumpco, Inc., requests a public hearing for parts 1 and 2 of the 7080 rules. Her concern is that after a meeting held with her, the topics discussed did not and will not affect the proposed rules.

Letter 126. Mel McGowan requests a hearing for the public to be aware. Also concerned that the ISTS Advisory Committee had some very close votes on issues.

Letter 132. The City Council for Independence, MN requests a public hearing. There is some misunderstanding on setting up an inspection and pumping program.

Letter 141. Crow Wing County requests a hearing and identifies legal objections and rule conflicts.

IV. SONAR ERRORS

In drafting this comment response document, the agency noticed inaccuracies in the SONAR. Some are identified below:

S21. Bottom of the page Change - Amend 7080.0020, subp. 16a should be referenced as subp. 16c.

S73. The SONAR has the correct language; however, the Revisor's copy (RR42.22-23) does not. It appears the change was made after sending the document to the Revisor. The currently proposed language is written for 7080.0150, subp. 1 B, with justification above.

S140. Top of the page Change - 7080.0305 should be referenced as 7080.0310.

S151-152. The language at the bottom of page 151 starting with C. Existing Systems until after the discussion ends on page 152 (before Change - Add 7080.0315, subp. 3, item C (2)) should be deleted. This language is not proposed in the rule. It was removed late in the revision process.

S152. The language toward the bottom of the page is incomplete. It should read:
Change - Add 7080.0315, subp. 3, item C (2).

(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 or that other supporting verifications are not longer valid. The certificate of compliance remains valid for three years from the date of issuance even if a supporting verification as described in subitem (1) is used to issue the certificate has expired.

V. ATTACHMENTS

Attachment 1. Vertical Separation Factsheet

- Attachment 2. Minn. Stat. § 115.55
- Attachment 3. 3/30/99 bill language for an Act.
- Attachment 4. Bedroom Flowchart
- Attachment 5. ISTS Options Factsheet
- Attachment 6. Homeowners Guide
- Attachment 7. Performance Systems Factsheet
- Attachment 8. DRAFT theoretical approach for back-calculating effluent limits to meet performance standards of 7080.0179
- Attachment 9. 4/1/99 ISTS Advisory Committee meeting minutes.
- Attachment 10. Predicting life for wastewater absorption systems. J.R. Keys, E.J. Tyler J.C. Converse, Proceedings of the 8th National Symposium on and Small Community Sewage Systems, 1998.
- Attachment 11. Characteristics of Effluents from Separate Septic Tanks treating Grey and Black Waters from the Same House. GA Kerr, QC, KH Sharpe, Ministry of the Environment, Toronto, Ontario, October, 1977.
- Attachment 12. At-Grade Component using Pressure Distribution Manual for Private Onsite Wastewater Treatment Systems, State of Wisconsin, 5/98.
- Attachment 13. Surface Discharge of Sewage from Rural Homes and Businesses Factsheet
- Attachment 14. Minn. Stat. § 115 and Proposed 7080 Requirements Factsheet
- Attachment 15. Groundwater Contamination Articles
- 15a. - The Potential for Groundwater Contamination from Septic Effluents. C. Hagedorn, E.L. McCoy and T.M. Rahe. Journal of Environmental Quality, Vol. 10, no.1, January 1981.
- 15b. - Experiences with Ground Water Contamination in Unsewered Areas in Minnesota. F. L. Woodward, F. J. Kilpatrick and P.B. Johnson. Ground Water Contamination, Vol. 51 no. 8.
- 15c. - The Occurrence of Human Enteroviruses in a Long Island Groundwater Aquifer Recharged with Tertiary Wastewater Effluents. J.M. Vaughn and R. F. Landry. Department of Energy and Environment.
- 15d - Ground-Water Contamination from Two Small Septic Systems on Sand Aquifers. W.D. Robertson, J.A. Cherry and E.A. Sudicky. Ground Water Vol.29, no. 1 January 1991.
- 15e. - Transport of Antibiotic-resistant *Escherichia coli* Through Western Oregon Hillslope Soils Under Conditions of Saturated Flow. T.M. Rahe, C. Hagedorn, E.L. McCoy, and G.F. Kling. Journal of Environmental Quality, Vol. 7 no. 4, 1978.
- Attachment 16. Linking the Land and Water - Nonpoint Source Management. United States Environmental Protection Agency, May 1998.
- Attachment 17. Mound Longevity (For Herman Miller's comment) The NODAK Sewage Disposal System. R.L. Witz and J. C. Russell. Bimonthly Bulletin, Vol. XII, no. 6, July, 1950.

Attachment 18. Financial Assistance Programs for Wastewater Treatment Systems. Community, Individual & Business.

Attachment 19. Soil Treatment of Aerobically Treated Domestic Wastewater with Emphasis on Modified Mounds. J.C. Converse and E. J. Tyler. Proceedings of the Eighth National Symposium o Individual and Small Community Sewage Systems, American Society of Agricultural Engineers, 1998.

Attachment 20. 1996-1997 Survey of ISTS Professionals Results.

Attachment 21. Letter to Mr. Mark Wespetal identifying seasonal high water table information based on counties and Soil Survey Report information, dated March 15, 1996.

Attachment 22. Wisconsin's recommended standards for discharge of effluent into soils, considering soil texture, soil structure, Fecal Coliform discharge ranges, and application rates.

Attachment 23. MPCA's Phosphorus Strategy, DRAFT, March, 1999.

Respectfully submitted,
POLLUTION

MINNESOTA
CONTROL AGENCY

Lori L.C. Frekot, P.E.

Mark S. Wespetal, Hydrologist