Pollution Control Agency

Proposed Permanent Rules Making Minor Corrections to Miscellaneous Water-Related Rules

7041.1200 MANAGEMENT PRACTICES AND LIMITATIONS.

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

Subp. 3. **Suitable soil conditions, slopes, and separation distances.** The suitable soil conditions in item A and the suitable slopes and separation distances in item B must be met when bulk sewage sludge is applied to agricultural land application sites. These conditions and limitations must also be met when bulk sewage sludge is applied to nonagricultural sites such as reclamation, forest, or public contact sites unless approved by the commissioner under the requirements of part 7041.0800, subpart 5. Bulk sewage sludge must not be applied to agricultural land, forest, a public contact site, or a reclamation site that is 33 feet or less from surface waters or wetlands unless specified otherwise in a permit.

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

B. Suitable slopes and separation distances must be as described in this item. If applied through irrigation equipment, aerosol drift shall not be in contact with the feature specified.

BULK SEWAGE SLUDGE APPLIED TO THE LAND

SUITABLE SLOPES AND SEPARATION DISTANCES

Criteria	Surface Applied	Incorporation within 48 hrs.	Injection
Depth to bedrock	3[1] ft.	3[1] ft.	3[1] ft.
Depth to seasonal high water table[2] or drain tile[3]	3[1] ft.	3[1] ft.	3[1] ft.
Allowable slopes	0% to 6%	0% to 12%	0% to 12%
Distance to wells			

Private supply	200 ft.	200 ft.	200 ft.
Public supply	1000 ft.	1000 ft.	1000 ft.
Irrigation	50 ft.	25 ft.	25 ft.
Distance to residences[4]	200 ft.	200 ft.	100 ft.
Distance to residential development[4]	600 ft.	600 ft.	300 ft.
Distance to public contact site[4]	600 ft.	600 ft.	300 ft.
Down gradient[5] lakes, rivers, streams, type 3, 4, and 5 wetlands, intermittent streams[6], or tile inlets connected to these surface waters, and sinkholes			
Slope 0% to 6%	200 ft.	50 ft.	50 ft.
Slope >6 to 12%	N/A	100 ft.	100 ft.
Grassed Waterways[7]			
Slope 0% to 6%	100 ft.	33 ft.	33 ft.
Slope 6% to 12%	N/A	33 ft.	33 ft.

[1]The depth is calculated from the zone of sewage sludge application and the separation distance for highly permeable soils is 5 feet.

[2]For the purpose of this item, a perched water condition shall not be considered a seasonal high water table.

[3]The depth to subsurface drainage tiles shall be considered the depth to the seasonal high water table for sites with tile drainage systems that are designed according to or equivalent to Natural Resources Conservation Service engineering standards and criteria.

[4]Separation distances may be reduced with written permission from all persons responsible for residential developments and places of recreation and all persons inhabiting within the otherwise protected distance.

[5]If downgradient surface water does not receive runoff because the site is bermed, separation distances can be reduced to 33 feet.

[6]For the purpose of this item, intermittent stream means a drainage channel with definable banks that provides for runoff flow to any of the surface waters listed in this item during snow melt or rainfall events.

[7]Separation distances are from the centerline of grassed waterways. For grassed waterways which are wider than these separation distances, application is allowed to the edge of the grass strip. Grassed waterways are natural or constructed, typically broad and shallow, and seeded to grass as protection against erosion.

[For text of subps 4 to 9, see M.R.]

7041.1300 OPERATIONAL STANDARDS; PATHOGEN REDUCTION.

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

Subp. 2. **Pathogens in sewage sludge; Class A.** To be classified Class A with respect to pathogen reduction, the requirements in items A and B must be met.

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

G. Class A, Alternative 5. Sewage sludge shall be treated in one of the processes to further reduce pathogens in subitems (1) to (7).

[For text of subitem (1), see M.R.]

(2) Heat drying. Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80 degrees Celsius or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80 degrees Celsius.

[For text of subitems (3) to (7), see M.R.]

[For text of item H, see M.R.]

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

7041.1800 PROVISIONS FOR SEWAGE SLUDGE FROM SEPTIC TANKS.

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

Subp. 4. **Monitoring, record keeping, and reporting.** The permittee must obtain and keep on record for five years, the information required to be in compliance with this chapter including:

A. the following certification statement for all septage applied to the land:

"I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen and vector attraction reduction requirements in subpart ~~2~~ 3, item A, B, or C [insert either subpart 3, item A, B, or C] the management practices in part 7041.1200, and the site restrictions in part 7041.1300, subpart 3, item D, has been prepared under my direction and supervision according to the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

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

7041.3400 ANALYSIS OF SOILS.

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

Subp. 3. **Seasonal high water table.** ~~The documents in items A and B are incorporated by reference for determining the depth to and type of seasonal high water table for different soil types~~ When the necessary information for determining the depth to and type of seasonal water table is not available from the Natural Resources Conservation Service, the information may be obtained from either the document in item A or the procedure identified in item B. ~~These references are not subject to frequent change and are available through the Minitex interlibrary loan system or addresses given.~~

A. Determination of the depth of soil having mottles with a chroma of two or less as discussed ~~on pages 15 to 17 of~~ in Keys to Soil Taxonomy, ~~Sixth Edition~~ (~~1994~~ 2010 and as subsequently amended), issued by the United States Department of Agriculture, Natural Resources Conservation Service ~~(Washington D.C., United States Government Printing Office)~~. The document is incorporated by reference, is subject to frequent change, and is available at http://soils.usda.gov/technical/classification/tax_keys/.

B. Measurement of water levels at monthly intervals over the course of one year in ~~piezometers~~ water table monitoring devices. The highest water level measurement obtained is acceptable as the seasonal high water table. ~~Piezometers must be installed according to the Minnesota Department of Health Well Code, chapter 4725, available from Office of State Register, Minnesota Bookstore, 117 University Avenue, Saint Paul, Minnesota 55155.~~

7053.0405 REQUIREMENTS FOR AQUACULTURE FACILITIES.

Subpart 1. **Definitions.** For purposes of this part, the terms in items A to ~~J~~ G have the meanings given them.

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

~~F. "Continuous discharge" means a discharge that occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.~~

~~G. "Existing beneficial uses" means the uses that have been made or may be reasonably anticipated to be made during the time of the proposed operations of waters of the state for domestic water supply, tourism and recreational industries, transportation, industrial consumption, wellhead protection, wildlife sustenance, wetland protection, fire protection, fire prevention, or other uses within this state, and, at the discretion of the agency, any uses in another state or interstate waters flowing through or originating in this state.~~

~~H~~ F. "Fish food" means materials including processed feeds, grains and seeds, plants, plant wastes, meat, and dead fish or other dead animal parts, but not including living aquatic animals, for the purposes of sustaining growth, repairing vital processes, or furnishing energy for aquatic animals present in the facility.

~~I. "Recirculating flow" means wastewater, within a concentrated aquatic animal production facility, that is collected from aquatic animal rearing units, treated, and then returned to aquatic animal rearing units for reuse.~~

~~J~~ G. "Warm and cool water aquatic animals" means all other aquatic animals not included in the Salmonidae family of fish.

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

Subp. 3. **Treatment technology discharge requirements.**

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

~~C. The owner or operator of a recirculating flow facility may apply for a variance from the requirements of item B according to parts 7000.7000 and 7053.0195. The variance application must provide detailed information on:~~

~~(1) the treatment, collection, removal, and disposal of wastes after wastewater flow leaves aquatic animal rearing units and before the wastewater is returned for reuse to rearing units;~~

~~(2) the rate of wastewater discharge flow compared to the volume of water in the aquatic animal rearing units;~~

~~(3) the reduction in the mass discharge of pollutants due to the design, operation, and maintenance of the recirculating system; and~~

~~(4) the reduction in water appropriation due to the design, operation, and maintenance of the recirculating system.~~

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

Subp. 5. [See repealer.]

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

7076.0140 NOTICE OF FINANCIAL ASSISTANCE AVAILABILITY.

Subpart 1. **Notice.** The commissioner will ~~publish in the State Register a~~ provide notice that proposals for project grants and loans will be accepted whenever the commissioner determines that funds are available to award the financial assistance. Notice will be provided through the agency's Web site, through the state's electronic financial portal, or by publication in the State Register. The notice will contain the requirements necessary for the proposal and a deadline for proposal submittal, which must be no less than 60 days from the date of ~~publication~~ notification.

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

7080.2050 DISTRIBUTION OF EFFLUENT.

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

Subp. 3. **Gravity distribution.**

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

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

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

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

box must not result in surfacing of sewage from the ~~drop~~ box. Pressure must not build up in the box during pump discharge.

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

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

7080.2150 FINAL TREATMENT AND DISPERSAL.

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

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

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

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

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

		Treatment Level C	Treatment Level C	Treatment Level A, A-2, B, B-2	Treatment Level A, A-2, B, B-2
		Absorption area loading rate (gpd/ft^2)	Mound absorption ratio	Absorption area loading rate (gpd/ft^2)	Mound absorption ratio***
USDA soil texture	Soil structure and grade				

Sand, coarse sand, loamy sand, loamy coarse sand, fine sand, very fine sand, loamy fine sand, loamy very fine sand, 35 to 50% rock fragments	Single grain, granular, blocky, or prismatic structure; weak grade	**	1.0	**	1.0
Sand, coarse sand, loamy sand, loamy coarse sand, <35% rock fragments	Single grain, granular, blocky, or prismatic structure; weak grade	1.2	1.0	1.6	1.0
Fine sand, very fine sand, loamy fine sand, loamy very fine sand, ~~>35%~~ <35% rock fragments	Single grain, granular, blocky, or prismatic structure; weak grade	0.6	2.0	1.0	1.6
Sandy loam, coarse sandy loam, fine sandy loam, very fine sandy loam	Granular, blocky, or prismatic structure; weak to strong grade	0.78	1.5	1.0	1.6
Sandy loam, coarse sandy loam, fine sandy loam, very fine sandy loam	Platy with weak grade or massive	0.68	1.8	0.87	1.8
Loam	Granular, blocky, or prismatic structure; weak to strong grade	0.6	2.0	0.78	2.1

Loam	Platy with weak grade or massive	0.52	2.3	0.68	2.4
Silt loam, silt	Granular, blocky, or prismatic structure; weak to strong grade	0.5	2.4	0.78	2.1
Silt loam, silt	Platy with weak grade or massive	0.42	2.9	0.65	2.5
Clay loam, sandy clay loam, silty clay loam	Granular, blocky, or prismatic structure; moderate to strong grade	0.45	2.6	0.6	2.7
Clay, sandy clay, silty clay	-	**	**	**	**

* ~~Only includes soil horizons with <50% rock fragments, with~~ Proposed absorption areas must meet item L and must have very friable and friable consistence~~, and~~ or loose noncemented sands. ~~Soil horizons with >50% rock fragments must not come in contact with soil dispersal system media.~~

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

*** Assume a hydraulic loading rate to the sand at 1.6 gpd/ft^2.

TABLE IXa

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

Percolation rate (MPI)	Treatment level C absorption area loading rate (gpd/ft^2)	Treatment level C mound absorption ratio	Treatment levels A, A-2, B, and B-2 absorption area loading rate (gpd/ft^2)	Treatment levels A, A-2, B, and B-2 mound absorption ratio
<0.1	-	1.0	-	1.0
0.1 to 5	1.2	1.0	1.6	1.0
0.1 to 5 (fine sand and loamy fine sand)	0.6	2.0	1.0	1.6
6 to 15	0.78	1.5	1.0	1.6
16 to 30	0.6	2.0	0.78	2.0
31 to 45	0.5	2.4	0.78	2.0
46 to 60	0.45	2.6	0.6	2.6
61 to 120	-	5.0	0.3	5.3
>120	-	-	-	-

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

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

7080.2450 MAINTENANCE.

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

Subp. 6. **Septage disposal.** Septage or any waste mixed with septage must be disposed of in accordance with state, federal, ~~or~~ and local requirements for septage and other wastes. If septage is disposed of into a sewage or septage treatment facility, a written agreement must be provided between the accepting facility and the maintenance business.

[For text of subps 7 and 8, see M.R.]

7081.0020 DEFINITIONS.

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

Subp. 2. [See repealer.]

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

Subp. 6. **Other establishment.** "Other establishment" means any public or private structure other than a dwelling that generates sewage that discharges to an ~~MSTS~~ SSTS.

[For text of subps 7 and 8, see M.R.]

7081.0150 NECESSITY OF SOIL AND SITE EVALUATIONS.

Soil and site evaluations must be conducted for MSTS design. The evaluations must be conducted according to parts 7081.0160 ~~and~~ to 7081.0200. Evaluations must identify and delineate an initial and replacement soil treatment and dispersal area with appropriate system site boundaries.

7081.0270 FINAL TREATMENT AND DISPERSAL.

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

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

A. Effluent loading rates to the soil must be determined in:

(1) part 7080.2150, subpart 3, item E, Table IX or IXa; or

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

B. If the absorption area receives septic tank or treatment level C effluent as described in ~~item A, subitem (1)~~ part 7083.4030, the absorption area shall be increased by 50 percent of the amount derived in item A, subitem (1), and zoned for dosing and resting.

[For text of subps 6 to 11, see M.R.]

7081.0280 CONSTRUCTION REQUIREMENTS.

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

B. The ~~MSTS~~ advanced designer must observe critical periods of system construction. The designer shall prepare a report of observed construction activities and submit the report to the local unit of government prior to final inspection.

7082.0040 REGULATORY ADMINISTRATION RESPONSIBILITY.

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

Subp. 4. **Required fiscal and physical capacity for local programs.** All local governments that administer SSTS programs must have:

A. adequate personnel to properly conduct SSTS technical and administrative functions. All local governments that administer SSTS programs must have:

(1) at least one certified inspector as described in part ~~7083.1010, subpart 2~~ 7083.1020, subpart 1, item C, who is employed by the local unit of government or a contracted licensed SSTS inspection business. Multiple local units of government are allowed to contract for services with the same certified inspector; and

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

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

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

7083.1060 CONTINUING EDUCATION.

Subpart 1. **Renewal requirements.**

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

B. An individual with a maintainer certification must complete 12 hours of continuing education related in general to SSTS or nine hours of continuing education specifically related to SSTS maintenance or land application of septage every three years. ~~A maintainer whose gross annual revenue from pumping systems is $9,000 or less and~~

~~whose gross revenue from pumping systems during the year ending May 11, 1994, was at least $1,000 is not subject to the continuing education requirements.~~

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

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

REPEALER. Minnesota Rules, parts 7053.0405, subpart 5; and 7081.0020, subpart 2, are repealed.