EFFLUENT LIMITS AND TREATMENT REQUIREMENTS FOR DISCHARGES TO WATERS OF THE STATE

7053.0115 SCOPE.

Parts 7053.0135 to 7053.0405 apply to all discharges of sewage, industrial, and other wastss to all waters of the state, both surface and underground. This chapter applies to point source and nonpoint source discharges. Other regulations of general or specific application that include any more stringent effluent limits or prohibitions are preserved.

Water quality standards applicable to waters of the stste are in chapter 7050. Water quality standards applicable to waters in the Lake Superior basin are in chapter 7052.

7053.0135 GENERAL DEFINITIONS.

Subpart 1. Scope. For purposes of this chapter, the following terms have the meanings given them.

Subp. 2. Terms defined in statute. The terms "waters of the state," "point source," "sewage," "industrial wastes," and "other wastes," as well as any other terms for which definitions are given in ths pollution control statutes, have the meanings given them in Minnesota Statutes, sections 115.01 and 115.41, with the exception that disposal systems or treatment works operated under permit or certificate of complisnce of the agency are not "waters of the stats."

Subp. 3. Seven-day ten-year low flow or $7Q_{10}$.

A. "Seven-day ten-year low flow" or "$7Q_{10}$" means the lowest average seven-day flow with a once in ten-year recurrence

interval. A $7Q_{10}$ is derived by identifying the lowest average flow for a sevsn-consecutive-day period from daily flow records for each year of record, from a continuous flow gauging station. The seven-day average low flow values for each year are arrayed in order of magnitude and fitted to a probability distribution. The $7Q_{10}$ is the stream or river flow that is equal to or exceeded by 90 percent of the values in the distribution.

B. The period of record for determining the specific flow for the stated recurrence interval, where records are available, shall include at least the most recent ten years of record, including flow records obtained after establishment of flow regulation devices, if any. Where stream flow records are not available, the flow may be estimated on the basis of available information on the watsrshed characteristics, precipitation, runoff, and other relevant data. The calculations shall not be applied to lakes and their embayments which have no comparable flow recurrence interval.

Subp. 4. **Thirty-day ten-year low flow or $30Q_{10}$.** "Thirty-day ten-year low flow" or "$30Q_{10}$" means the lowest average 30-day flow with a once in ten-year recurrence interval. A $30Q_{10}$ is derived using the same methods used to derive a $7Q_{10}$, and the guidelines regarding period of record for flow data and estimating a $7Q_{10}$ apply equally to determining a $30Q_{10}$, as described in subpart 3. The calculations shall not be applied to lakes and their embayments which have no comparable flow recurrsnce interval.

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Subp. 5. Commissioner. "Commissioner" means the commissioner of the Pollution Control Agency or the commissioner's designee.

Subp. 6. Effluent limit. The terms "effluent limit" (equals "effluent limitation"), "point source," and "national pollutant discharge elimination system" have the meanings given them in part 7001.1020.

Subp. 7. Nonpoint source. "Nonpoint source" means a land management or land use activity that contributes or may contribute to ground and surface water pollution as a result of runoff, seepage, or percolation and that is not defined as a point source under Minnesota Statutes, section 115.01, subdivision 11.

Subp. 8. Physical alteration. "Physical alteration" means the dredging, filling, draining, or permanent inundating of a wetland. Restoring a degraded wetland by reestablishing its hydrology is not a physical alteration.

Subp. 9. Surface waters. "Surface waters" means waters of the state, excluding groundwater as defined in Minnesota Statutes, section 115.01, subdivision 6.

Subp. 10. Other terms. Other terms and abbreviations used in this chapter that are not specifically defined in applicable federal or state law must be construed in conformance with the context, in relation to the applicable section of the statutes pertaining to the matter, and current professional usage.

7053.0155 DETERMINATION OF COMPLIANCE.

In making tests or analyses of the waters of the state,

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sewage, industrial wastes, or other wastes to determine water quality condition and compliance with effluent limits and nonpoint source reduction meaeures, samples must be collected in a manner and place, and of such type, number, and frequency, as may be considered necessary by the agency to adequately reflect the condition of the waters, the composition of the effluents, and the effects of the pollutants upon the uses specified in part 7050.0140. The samples must be collected, preserved, and analyzed following accepted quality control and quality assurance methods and according to the procedurss in Code of Federal Regulations, title 40, part 136. The agency may accept or may develop other methods, procedures, guidelines, or criteria for collecting and analyzing effluent samples and measuring water quality characteristics.

7053.0195 VARIANCE FROM TREATMENT REQUIREMENTS.

Subpart 1. Variance. In any case when, upon application of ths rssponsible person or persons, the agency finds that by reason of exceptional circumatancea the strict enforcement of any provision of this chapter would cause undue hardship; that disposal of the sewage, industrial waste, or other waste is necessary for the public health, safety, or welfare; and that strict conformity with thc effluent limits would be unreasonable, impractical, or not feasible under the circumstances, the agency in its discretion msy grant a variance upon conditions it prescribes for prevention, control, or abatement of pollution in harmony with the general purposes of this chapter and the intent of the applicable state and federal

laws. The United States Environmental Protection Agency shall be advised of any permits that may be issued under this subpart, together with information as to the need for the variance.

Subp. 2. Listing. By October 1 each year, the commissioner shall prepare a list of the variances in effect granted by the agency under this part. The list must be available for public inspection and must be provided to the United States Environmental Protection Agency. The list must identify the person granted the variance, the rule from which the variance was granted, the water affected, the year granted, and any restrictions that apply in lieu of the rule requirement.

Subp. 3. Review. Variances from discharge effluent limits or treatment requirements granted by the agency under this part are subject to agency and public review at least every five years. Variances from water quality standards are granted by the agency under parts 7000.7000 and 7050.0190. Variances may be modified or suspended under the procedures in part 7000.7000.

7053.0205 GENERAL REQUIREMENTS FOR DISCHARGES TO WATERS OF THE STATE.

Subpart 1. Untreated sewage. No untreated sewage may be discharged into any waters of the state. Effective disinfection of any discharges, including combined flows of sewage and storm water, shall be required when necessary to protect the specified uses of the waters of the state.

Subp. 2. Nuisance conditiona prohibited. No sewage, industrial waste, or other wastes may be discharged from either point or nonpoint sources into any waters of the state so as to

causs any nuisance conditions, such as the presence of significant amounts of floating solids, scum, visible oil film, excessive suspended solids, material discoloration, obnoxious odors, gas ebullition, deleterious sludge deposits, undesirable slimes or fungus growths, aquatic habitat degradation, excessive growths of aquatic plants, or other offensive or harmful effects.

Subp. 3. **Inadequate treatment.** Existing discharges of inadequately treated sewage, industrial waste, or other wastes shall be abated, treated, or controlled so aa to comply with the applicable limits. Separation of sanitary sewage from natural runoff may be required when necessary to ensure continuous effective treatment of sewage.

Subp. 4. **Highest levels of effluent quality.** The highest levels of effluent quality, including, but not limited to, five-day carbonaceous biochemical oxygen demand, that are attainable through continuous operation at the maximum capability of all primary and secondary units of treatment works or their equivalent, discharging effluents into the waters of the state, must be maintained in order to enhance conditions for the specified uses.

Subp. 5. **Mixing xoues aud compliance with water quality standards.**

A. Reasonable allowance must be made for dilution of the effluents that are in compliance with this chapter, following discharge into waters of the state. The agency, by allowing dilution, shall consider the effect on all uses of the waters of ths state into which the effluents are discharged.

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The extent of dilution allowed regarding any specific discharge as specified in subpart 7 must not violate the applicable water quality standards in chapters 7050 and 7052, including the nondegradation requirements contained in those chapters. This subpart also applies in cases where a Class 7 water is tributary to a Class 2 water.

B. Means for expediting mixing and dispersion of sewage, industrial waste, or other waste effluents in the receiving waters must be provided so far as practicable when deemed necessary by the agency to maintain the quality of the receiving waters according to chapters 7050 and 7052.

C. Mixing zones must be established by the agency on an individual basis, with primary consideration being given to the following guidelines:

(1) mixing zones in rivers shall permit an acceptable passageway for the movement of fish;

(2) the total mixing zone or zones at any transect of the stream should contain no more than 25 percent of the cross sectional area or volume of flow of the stream and should not extend over more than 50 percent of the width;

(3) mixing zone characteristics shall not be lethal to aquatic organisms;

(4) for contaminants other than heat, the final acute value, as defined in part 7050.0218, subpart 3, item O, for toxic pollutants should not be exceeded as a one-day mean concentration at any point in the mixing zone;

(5) mixing zones should be as small as possible

and not intersect spawning or nursery areas, migratory routes, water intakes, or mouths of rivers; and

(6) overlapping of mixing zones should be minimizsd and measures taken to prevent adverse synergistic effects.

Subp. 6. **Other requirements preserved.** The requirements of this chapter, and specifically the requirements in parts 7053.0215 and 7053.0225, are in addition to any requirement imposed on a discharge by the Clean Water Act, United States Code, title 33, aections 1251 et seq., and its implementing regulations. In the case of a conflict between the requirements of this chapter, chapters 7050 and 7052, and the requirements of the Clean Water Act or its implementing regulations, the more stringent requirement controls.

Subp. 7. **Minimum stream flow.**

A. Discharges of sewage, industrial waste, or other waatea must he controlled so that the water quality standards are maintained at all stream flows that are equal to or greater than the $7Q_{10}$ for the critical month or months, except for the purpose of setting ammonia effluent limits. Discharges of ammonia in sewage, industrial waste, or other wastes must be controlled so that the ammonia water quality standard is maintained at all stream flows that are equal to or exceeded by the $30Q_{10}$ for the critical month or monthe.

B. Allowance must not be made in the design of treatment works for low stream flow augmentation unleas the flow augmentation of minimum flow is dependable and controlled under

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applicable laws or regulations.

Subp. 8. **Water quality based effluent limits.** Notwithstanding parts 7053.0235 and 7053.0245, the agency may require a specific discharger to meet effluent limits for specific pollutants or whole effluent toxicity that are necessary to maintain the water quality of the receiving water at the standards established in chapters 7050 and 7052, including the nondegradation requirements contained in those chapters. Any effluent limit determined to be necessary under this subpart and part 7053.0235 may only be required of a discharger after the discharger has been given notice of the specific effluent limits and an opportunity for public hearing, provided that compliance with the requirements of chapter 7001 regarding notice of national pollutant discharge elimination system and state disposal system permits satisfies the notice and opportunity for hearing requirements of this subpart.

Subp. 9. **Water quality standard-based ammonia effluent limits.** For the purpose of establishing limits to meet the ammonia water quality standard, a statistic that estimates the central value, such as the mean or median, for ambient pH and temperature of the receiving water for the critical months must be used.

Subp. 10. **Alternative waste treatment.** After providing an opportunity for public hearing, the agency shall accept effective loss prevention, water conservation measures, or process changes or other waste control measures or arrangements if it finds that the measures, changes, or arrangements are

equivalent to the waste treatment measures required for compliance with applicable effluent or water quality standards or load allocations.

Subp. 11. Liquid substances. Liquid substances that are not commonly considered to be aewage or industrial wsste, but that could constitute a pollution hazard, must be stored according to chapter 7151. Other wastes as defined by law or other substances that could constitute a pollution hazard, including substances from nonpoint sources and households, must not be deposited in any manner auch that the same may be likely to gain entry into any waters of the state in excess of or contrary to any of the standards in this chapter and chapters 7050 and 7052 or cause pollution as defined by law.

Subp. 12. Point source dischargers must report to agency. All persons operating or responsible for sewage, industrial waste, or other waste disposal systems that are adjacent to or that discharge effluents to waters of the state shall submit a report to the agency upon request on the operation of the disposal system, the effluent flow, and the characteristics of the effluents and receiving waters. Sufficient data on measurements, observations, sampling, and analyses, and other pertinent information must be furnished as may be required by the agency to adequately evaluate the condition of the disposal system, the effluent, and the waters receiving or affected by the effluent.

Subp. 13. Compliance witb permit conditions. A person who is in compliance with the terms and conditions of the person's

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permit issued under chapter 7001 must not be deemed in violation of any water quality standard in chapters 7050 and 7052 for which a corresponding effluent limit is established in the permit. However, exceedances of the water quality standards in a receiving water constitutes grounds for modification of a permit for any discharger to the receiving water who is causing or contributing to the exceedances. Chapter 7001 governs the modification of any such permit.

7053.0215 REQUIREMENTS FOR POINT SOURCE DISCHARGES OF SEWAGE.

Subpart 1. **Minimum secondary treatment for municipal point source and other point source dischargers of sewage.** The agency shall require secondary treatment as a minimum for all municipal point source dischargers and other point source dischargers of sewage. For purposes of this part, "municipal" has the adjective meaning of municipality as defined in part 7001.1020, subpart 18. "Secondary treatment facilities" means works that will provide effective sedimentation, biochemical oxidation, and disinfection, or the equivalent, including effluents conforming to the following:

Characteristic or Pollutant	Limiting Concentration or Range*
Five-day carbonaceous biochemical oxygen demand*	25 mg/L
Fecal coliform group organisms **	200 organisms per 100 milliliters
Total suspended solids*	30 mg/L
Dil	Essentially free of visible oil
Phosphorns	See part 7053.0255

pH range	6.0 – 9.0
Toxic or corrosive pollutants	Concentrations of toxic or corrosive pollutants shall not cause acute toxicity to humans or other animals or plant life or directly damage real property or exceed the final acute value unless the effluent satisfies the whole effluent toxicity test. If a whole effluent toxicity test performed on the effluent results in less than 50 percent mortality of the test organisms, the effluent must not be considered acutely toxic unless the commissioner finds that the test species do not represent sensitive organisms in the affected surface water body or the whole effluent test was performed on a sample not representative of the effluent quality. The final acute value and whole effluent toxicity test are defined in part 7050.0218, subpart 3, items O and HH, respectively

*The arithmetic mean for concentrations of five-day carbonaceous biochemical oxygen demand and total suspended solids shall not exceed the stated values in any calendar month. In any calendar week, the arithmetic mean for concentrations of five-day carbonaceous biochemical oxygen demand shall not exceed 40 milligrams per liter and total suspended solids shall not exceed 45 milligrams per liter.

**Disinfection of wastewater effluents to reduce the levels of fecal coliform organisms to the stated value is required from April 1 through October 31 for Class 2 waters and May 1 through October 31 for Class 7 waters, except that where the effluent is

discharged 25 miles or less upstream of a water intake supplying a potable water system, the reduction to the stated value is required all year. The stated value is not to be exceeded in any calendar month as determined by the geometric mean of all the samples collected in a given calendar month. The application of the fecal coliform group organism limit is limited to sewage or other effluents containing admixtures of sewage and do not apply to industrial wastes, except when the presence of sewage, fecal coliform organisms, or viable pathogenic organisms in such wastes is known or reasonably certain. Analysis of samples for fecal coliform group organisms by either the multiple tube fermentation or the membrane filter techniques is acceptable.

Subp. 2. **Exception for existing trickling filter facilities.**

A. The secondary treatment effluent limits in subpart 1, for five-day carbonaceous biochemical oxygen demand and total suspended solids, do not apply to municipal point source dischargers and other point source dischargers of sewage that meet all of the following conditions:

(1) the treatment facility was in operation on January 1, 1987;

(2) the treatment facility uses a trickling filter as the principal method of biologically treating the wastewater; and

(3) the discharger has been incapable of consistently meeting the effluent limits for five-day

carbonaceous biochemical oxygen demand or total suspended solids contained in subpart 1.

B. For those municipal point source dischargers and other point source dischargers of sewage that meet the conditions of item A, the following effluent limits for five-day carbonaceous biochemical oxygen demand and total euepended solids apply as the arithmetic mean of all samples collected during a calendar month.

Five-day carbonaceous biochemical oxygen demand	40 mg/L*
Total suspended solids	45 mg/L**

*In any calendar week, the arithmetic mean for five-day carbonaceous biochemical oxygen demand shall not exceed 60 milligrams per liter.

**The arithmetic mean for any calendar week shall not exceed 65 milligrams per liter for total suspended solids.

C. The other effluent limits in subpart 1 apply to those municipal point source dischargers and other point source dischargers of sewage whose limits for five-day carbonaceous biochemical oxygen demand and total suspended solids are established by this subpart.

Subp. 3. **Exception for pond facilities.**

A. The secondary treatment effluent limits in subpart 1 for total suspended eolids do not apply to municipal point source dischargers and other point source dischargers of sewage that operate stabilization ponds or aerated ponds as the principal method of biologically treating the wastewater.

B. For such treatment works, the effluent limit for

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total auapended solids for a discharge from the pond is as follows:

Total suspended solids	45 mg/L* (arithmetic mean of all samples collected during any calendar month)

*The arithmetic mean for any calendar week shall not exceed 65 milligrams per liter for total suspended solids.

C. The other effluent limits in subpart 1 apply to those municipal point source dischargers and other point source dischargers of sewage whose limits for total suspended solids are established by this subpart.

7053.0225 REQUIREMENTS FOR POINT SOURCE DISCHARGES OF INDUSTRIAL OR OTHER WASTES.

Subpart 1. Applicable effluent limits. Any person discharging industrial or other wastes from a point source shall comply with the requirements in itams A to C.

A. Point source dischargers of industrial or other wastes must comply with all applicable federal standards adopted by the United States Environmental Protection Agency under sections 301, 306, and 307 of the Clean Water Act, United States Code, title 33, aections 1311, 1316, and 1317. Code of Federal Regulations, title 40, parts 401 through 469, are incorporated by reference.

B. If effluent limits for five-day carbonaceous biochemical oxygen demand, total suspended solids, pH, or oil are not established by the federal standards under item A for any point source discharger of industrial or other wastes, the

point source discharger shall comply with the effluent limits for those substances established in part 7053.0215, subpart 1, or with such other equivalent mass limits established under part 7053.0205, subpart 8, if applicable.

C. Point source dischargers of induetrial or other wastes shall comply with all additional effluent limits established by the agency in any permit proceeding for that discharger through application of the criteria provided by Code of Federal Regulations, title 40, part 125, subpart A.

Subp. 2. **Feedlot exemption.** The requirements of subpart 1, items B and C, do not apply to animal feedlots.

Subp. 3. **Dredge disposal exemption.** The requirements for total suspended solids and phosphorus under subpart 1, item B, and for phosphorus under subpart 4, do not apply to waters discharged from a dredge disposal facility and returned to the water body where the water was removed if:

A. best management practices and best practicabie technology are established in a state disposal system permit for the facility; and

B. the designated uses ss established under parts 7050.0140 and 7050.0400 to 7050.0470 are maintained.

Subp. 4. **Nutrient control requirements.** In addition to the requirements of subpart 1, a person discharging industrial or other wastes from a point source shall comply with the nutrient control requirements of part 7053.0255.

Subp. 5. **Exception for total suspended solids limits for ponds.** A point source discharger of industrial or other wastes

that uses a stabilization pond or aerated pond as the principal method of biologically treating the waste shall comply with aubparts 1 to 4, except that the total suspended solids effluent limits applicable to a discharger under subpart 1, item B, are the limits in part 7053.0215, subpart 3, rather than the total suspended solids limits in part 7053.0215, subpart 1.

Subp. 6. **Toxic or corrosive pollutants.** In addition to the requirements of subpart 1, a person discharging industrial or other wastea from a point source shall comply with the control requirements of part 7053.0215, subpart 1, for toxic or corrosive pollutants.

7053.0235 ADVANCED WASTEWATER TREATMENT REQUIREMENTS.

Subpart 1. **Inadequate dilution.** In any instance where it is evident that the minimal treatment specified in part 7053.0215, aubpart 1, or 7053.0225 and dispersion are not effective in preventing pollution, or if at the applicable flows it is evident that the specified stream flow is inadequate to protect the water quality standards specified in chapters 7050 and 7052, the specific standards may be interpreted as effluent limits for control purposes. In addition, the following effluent limits may be applied without any allowance for dilution where stream flow or other factors are such as to prevent adequate dilution or where it is otherwise necessary to protect the waters of the state for the stated uses:

Pollutant	Limits
Five-day carbonaceous biochemical oxygen demand	5 mg/L (arithmetic mean of all samples taken during any

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calendar month)

The five milligrams per liter limit shall not apply to discharges to surface waters classified as limited resource value waters, pursuant to parts 7050.0140, subpart 8, and 7050.0400 to 7050.0470, except as may be needed to comply with part 7053.0245, subpart 3.

Subp. 2. **Limits for pond facilities.** The concentrations specified in part 7053.0215, subpart 1, or, if applicable, part 7053.0225, may be used in lieu of the limit in this part if the discharge of effluent is restricted to the spring flush or other high runoff periods when the stream flow rate above the discharge point is sufficiently greater than the effluent flow rate to ensure that the applicable water quality standards are met during the discharge period.

Subp. 3. **Variability of operation.** If treatment works are designed and constructed to meet the specified limits given in this part for a continuous discharge, at the discretion of the agency the operation of such works may allow for the effluent quality to vary between the limits specified in this part and in part 7053.0215, snbpart 1, or, if applicable, part 7053.0225, provided the water quality standards and all other requirements of the agency and the United States Environmental Protection Agency are being met. The variability of operation must be based on adequate monitoring of the treatment works and the effluent and receiving waters as specified by the agency.

7053.0245 REQUIREMENTS FOR POINT SOURCE DISCHARGES TO LIMITED RESOURCE VALUE WATERS.

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Subpart 1. Effluent limits. For point source discharges of sewage, industrial, or other wastes to surface waters classified as limited resource value waters pursuant to parts 7050.0140, subpart 8, and 7050.0400 to 7050.0470, the agency shall require treatment facilities that will provide effluents conforming to the following limits:

Pollutant	Limiting Concentration
Five-day carbonaceous biochemical oxygen demand	15 mg/L* (arithmetic mean of all samples taken during any calendar month)

*This 15 milligrams per liter limit does not apply to discharges to limited resource value waters if the principal method of treatment is through stabilization ponds, in which case the limits in parts 7053.0215, subpart 3, and 7053.0225, subpart 5, apply. All effluent limits specified in part 7053.0215, subpart 1, are also applicable to dischargers of sewage to limited resource value waters, provided that toxic or corrosive pollutants are limited to the extent necessary to protect the designated uses of the receiving water or affected downstream waters.

Subp. 2. Alternative secondary treatment effluent limits. The agency shall allow treatment works to be constructed or operated to produce effluents to limited resource value waters at levels up to those stated in part 7053.0215, provided that it is demonstrated that the water quality standards for limited resource value waters will be maintained during all periods of discharge from the treatment facilities.

Subp. 3. Protection of downstream waters. Notwithstanding

the effluent limits established by this part, the quality of limited resource value waters must not allow a violation of applicable water quality standards in waters of the state that are connected to or affected by water classified aa limited reaource value waters.

Subp. 4. Public waters designation unaffected. The claaaification of surface waters as limited resource value waters purauant to parts 7050.0140, subpart 8, and 7050.0400 to 7050.0470, does not supersede, alter, or replace the classification and desiqnation of such waters as public waters pursuant to Minnesota Statutes, chapter 103G.

7053.0255 PHOSPHORUS EFFLUENT LIMITS FOR POINT SOURCE DISCHARGES OF SEWAGE, INDUSTRIAL, AND OTHER WASTES.

Subpart 1. Scope. The phosphorus effluent limits in this part are in addition to the effluent limits specified elsewhere in this chapter. In the event of any conflict between this part and other applicable regulations, the more stringent requirement applies.

Subp. 2. Definitions. For the purposes of this part, the following definitions apply. Other relevant definitions are found in part 7050.0150, aubpart 4.

A. "122-day ten-year low flow" or "$122Q_{10}$" means the lowest average 122-day flow with a once in ten-year recurrence interval. A $122Q_{10}$ is derived usinq the same methods used to derive a $7Q_{10}$, and the guidelines regarding period of record for flow data and estimatinq a $7Q_{10}$ apply equally to determininq a $122Q_{10}$ as described in part 7053.0135, subpart 3.

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B. "Affects" means a measurable increase in the adverse effects of phosphorus loading as determined by monitoring or modeling, including, but not limited to, an increase in chlorophyll-a concentrations, a decrease in water transparency, or an increase in the frequency or duration of nuisance algae blooms, from an individual point source discharge.

C. "Expanded discharge" means a disposal system that after May 1, 2008, discharges more than 1,800 pounds of total phosphorus per year to a surface water on an annual average basis, and increases in wastewater treatment capacity as indicated by an increase in the:

(1) design average wet weather flow for the wettest 30-day period for point source dischargers of sewage with a continuous discharge, typically a mechanical facility;

(2) design average wet weather flow for the wettest 180-day period for point source dischargers of sewage with a controlled discharge, typically a pond facility; or

(3) design average daily flow rate for dischargers of industrial or other wastes.

D. "Lake" means an enclosed basin filled or partially filled with standing fresh water with a maximum depth greater than 15 feet. Lakes may have no inlet or outlet, an inlet or outlet, or both an inlet and outlet.

E. "Measurable increase" or "measurable impact" means a change in trophic status that can be discerned above the normal variability in water quality data using a weight of evidence approach. The change in trophic status does not

require a demonstration of statistical significance to be considered measurable. Mathematical models may be used as a tool in the data analysis to help predict changes in trophic status.

F. "New discharge" means a discharge that was not in existence before May 1, 2008, and discharges more than 1,000 pounds of total phosphorus per year.

G. "Reservoir" means a body of water in a natural or artificial basin or water course where the outlet or flow is artificially controlled by a structure such as a dam. Reservoirs are distinguished from river systems by having a hydraulic residence time of at least 14 days. For purposes of this item, residence time is determined using a flow equal to the $122Q_{10}$ for the months of June through September, a $122Q_{10}$ for the summer months.

H. "Shallow lake" means an enclosed basin filled or partially filled with standing fresh water with a maximum depth of 15 feet or less or with 80 percent or more of the lake area shallow enough to support emergent and submerged rooted aquatic plants (the littoral zone). It is uncommon for shallow lakes to thermally stratify during the summer. The quality of shallow lakes will permit the propagation and maintenance of a healthy indigenous aquatic community, and they will be suitable for boating and other forms of aquatic recreation for which they may be usable. For purposes of this chapter, shallow lakes will be differentiated from wetlands and lakes on a case-by-case basis. Wetlands are defined in part 7050.0186, subpart 1a.

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Subp. 3. **Total phosphorus effluent limits.**

A. Phosphorus removal to one milligram per liter is required when subitem (1), (2), or (3) applies:

(1) the discharge of effluent is directly to or affects a lake, shallow lake, or reservoir;

(2) the discharge is to the specific basins and water bodies designated in subpart 5; or

(3) the discharge is new or expanded as defined in subpart 2, except when the discharger can demonstrate to the commissioner that the discharger qualifies for an alternative phosphorus limit as provided in subpart 4.

B. If a phosphorus effluent limit is required under item A, removal of nutrients from all wastes must be provided to the fullest practicable extent wherever sources of nutrients are considered to be actually or potentially detrimental to preservation or enhancement of the designated water uses. Dischargers required to control nutrients under this part are subject to the variance provisions of parts 7000.7000 and 7053.0195.

Subp. 4. **Alternative phosphorus effluent limits for new or expanded discharges.** New or expanded discharges subject to a one milligram per liter phosphorus effluent limit in subpart 3, item A, subitem (3), may request an alternative limit or no limit if one or more of items A to C apply. New or expanded discharges are defined in subpart 2. The exemptions in this subpart do not apply to facilities that discharge directly to or affect a lake, shallow lake, or reservoir or to discharges to

the waters listed in eubpart 5. Dischargers seeking an alternative limit due to very high per capita treatment costs or economic hardship must apply for a variance under parts 7000.7000 and 7053.0195.

The information submitted to the commissioner for consideration of an alternative limit must include, at a minimum, a description of the treatment technology used, influent and effluent total phosphorus concentrations, a phosphorus management plan for the facility, descriptions of any measures already taken to reduce phosphorus sources to the facility, and expected reductions in phosphorus concentrations following implementation of the phosphorus management plan. The discharger may qualify for an alternative total phosphorus limit or no limit if it can demonstrate:

A. the discharge is to or upatream of a water body listed on the applicable impaired water list, section 303(d) of the Clsan Water Act, and the total maximum daily load study is complete and approved by the United States Environmental Protection Aqency at the time the new or expanding facility is in the planninq and design phase. The total maximum daily load study must have considered impacts from phosphorus loadinq on the impaired water body. In this cass, the total maximum daily load study will determine the applicable phosphorus effluent limit;

B. the environmental benefits to be achieved by meetinq a phosphorus limit are outweighed or neqated by the cnvironmental harm caused by mestinq a limit; or

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C. the treatment works, regardless of the type of treatment technology, must use chemical addition to achieve compliance with the one milligram per liter limit and the discharge is to a receiving stream in a watershed listed in subitems (1) to (3). In this case the discharger may be granted a seasonal one milligram per liter limit, applicable from May 1 through September 30 and not applicable from October 1 through April 30:

(1) the lower Mississippi River and its tributaries from the mouth of the Chippewa River in Wisconsin to the Minnesota border;

(2) the Bois de Sioux and Red Rivers and their tributaries from the southern end of Lake Traverse at Browns Valley to the Canadian border; and

(3) the Missouri, Des Moines, and Cedar Rivers and their tributaries in Minnesota.

Subp. 5. **Designated waters.** The one milligram per liter phosphorus limit established in subpart 3 applies to the waters designated in items A to F.

A. All intrastate waters lying within the drainage basin of Lake Superior in the counties of Aitkin, Carlton, Cook, Itasca, Lake, Pine, and St. Louis (Townships 45 to 65 North, Ranges 7 East to 23 West).

B. The interstate waters of Lake St. Croix in Washington County (Townships 26 to 30 North, Range 20 West).

C. The St. Louis River from its source at Seven Beaver Lake (Township 58 North, Range 12 West) to and including

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St. Louis Bay (Townships 49 and 50 North, Ranges 14 and 15 West) and Superior Bay (Townships 49 and 50 North, Ranges 13 and 14 West).

D. The Mississippi River from its source to the Blandin Dam at the outlet of Paper Mill Reservoir in the city of Grand Rapids approximately 400 feet upstream from the bridge on U.S. Highway 169 including Lake Andrusia (Township 146 North, Range 31 West), Lake Bemidji (Townships 146 and 147 North, Range 33 West), Cass Lake (Townships 145 and 146 North, Ranges 30 and 31 West), Lake Itasca (Township 143 North, Range 36 West), Pokegama Lake (Townships 54 and 55 North, Ranges 25 and 26 West), and Winnibigoshish Lake (Townships 145, 146, and 147 North, Ranges 27, 28, and 29 West).

E. The Little Minnesota River and Big Stone Lake from the South Dakota border crossing to the outlet of Big Stone Lake at the dam immediately upstream from the U.S. Highway 12 bridge in Ortonville.

F. Albert Lea Lake (Township 102 North, Ranges 20 and 21 West) in Freeborn County.

Subp. 6. **Averaging period for phosphorus limit.** The phosphorus limit required under subpart 3 must be a calendar month arithmetic mean unless the commissioner finds, after considering the criteria listed in iteme A and H, that a different averaging period is acceptable. In no case shall the one milligram per liter limit exceed a moving mean of 12 monthly values reported on a monthly basis or a simple mean for a specified period, not to exceed 12 months. Calendar month

effluent limits in effect as of February 7, 2000, must remain in effect unless an asseeement of the criteria listed in items A and B indicate a different averaging period is acceptable. An averaging period other than monthly is acceptable when:

A. there is no measurable or predictable difference in the adverse effects of the phosphorus loading from the facility on the receiving water or downetream water resources compared to the loading that would result using a 30-day average limit; and

B. the treatment technologies being considered offer environmental, financial, or other benefits.

7053.0265 DISCHARGE RESTRICTIONS APPLICABLE TO MISSISSIPPI RIVER FROM RUM RIVER TO ST. ANTHONY FALLS.

Subpart 1. Scope and beneficial uses. The reetrictions on dischargss specifisd in this part are applicable to that portion of the Mississippi River from, but not including, the mouth of the Rum River to the upper lock and dam at St. Anthony Falls, approximately at the northeastward extension of Fifth Avenue South in the city of Minneapolis, and tributary streams. The primary use of these waters is as a source of public watsr supply for drinking, food processing, and related purposes. Other usee applicable to these waters are defined in parts 7050.0410, 7050.0430, and 7050.0470, subpart 4.

Subp. 2. Discharges prohibited. Dischsrges listed in items A to C are prohibited to the waters defined in subpart 1.

A. Raw sewage and industrial waste or other wsstes, treated or untreated, containing viable pathogenic organisms or

any substances that may cause disease, endanger the public health, or otherwise impair the quality of the receiving waters for public water supply.

B. Treated sewage effluent from any source, including, without limitation, discharges from watercraft.

C. Treated sewage, industrial waste, or other wastes so as to cause any material increase in taste, odor, color, or turbidity above natural levels or otherwise to impair the quality of the water so as to render it objectionable or unsuitable as a source of water supply.

Subp. 3. **Variance.** The variance provisions of parts 7000.7000 and 7053.0195 are applicable to this part.

7053.0275 **ANTIBACKSLIDING.**

Subpart 1. **Antibacksliding applies.** Any point source discharger of sewage, industrial, or other wastes for which a national pollutant discharge elimination system permit has been issued by the agency that contains effluent limits more stringent than those that would be established by parts 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, unless the permittee establishes that less stringent effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, United States Code, title 33, section 1342.

Subp. 2. **Less stringent effluent limits.** If a permittee establishes that it is entitled to less stringent effluent limits under subpart 1, the agency shall establish new effluent limits according to the criteria in items A to F.

A. If past treatment performance data are representative of future performance, the new effluent limits must reflect the level of pollutant control that has been consistently achieved by the permittee in the past.

B. If changes in the rate of production or in other operational aspects of the facility make past treatment performance data unrepresentative of future performance, in establishing new effluent limits, the agency shall consider: (1) the performance capabilities of the existing treatment facility under the changed factors; and (2) the performance capabilities of any additional treatment facilities that may be required by the agency as a result of the changed factors. The new effluent limits must be as stringent as is reasonable, applying good engineering design practices and operational and maintenance practices for the existing treatment facilities and any additional treatment facilities that may be required.

C. The new effluent limits must reflect the performance capabilities of all treatment facilities under proper operation and maintenance practices.

D. In no event may the new effluent limits be less stringent than the effluent limits established under parts 7053.0215 to 7053.0265.

E. In all cases, the beneficial uses and the water quality standards in chapters 7050 and 7052 must be maintained in the receiving water.

F. If less stringent effluent limits are established in the permit, the agency may also establish other reasonable

and necessary conditions for the new permit.

A request for less stringent effluent limits in a permit shall be made according to part 7001.0190, subpart 1. The agency shall follow the procedures in part 7001.0190, subpart 1, in acting upon a request for new effluent limits.

7053.0305 REQUIREMENTS FOR ANIMAL FEEDLOTS.

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

A. "Animal feedlot" has the meaning given in part 7020.0300, subpart 3.

B. "Animal manure" has the meaning given in part 7020.0300, subpart 4.

C. "Manure storage area" has the meaning given in part 7020.0300, subpart 14.

D. "Treatment works" has the meaning given in Minnesota Statutes, section 115.01, subdivision 21, and includes a vegetated filter or buffer strip located between an animal feedlot or a manure storage area and a receiving water.

Subp. 2. Effluent limits for a discharge.

A. Any person discharging pollutants to surface waters of the state from an animal feedlot or manure storage area who is not regulated by federal requirements under part 7053.0225, subpart 1, shall comply with the following limits after allowance for pollutant removal by a treatment works:

Pollutant	Limiting Concentration
Five-day biochemical oxygen demand	25 mg/L (arithmetic mean of all samples taken during any

calendar month)

If the discharge is directly to or affects a lake, shallow lake, or reservoir, or to the waters lieted in part 7053.0255, eubpart 5, the pereon discharging the pollutants shall comply with the nutrient control requirements in part 7053.0255, subpart 3, items A and B. Feedlots are not considered new or expanded discharges as defined in part 7053.0255, subpart 2.

B. The effluent limite in item A are not applicable whenever rainfall events, either chronic or catastrophic, cause an overflow from an animal feedlot or manure storage area designed, constructed, and operated:

(1) to meet the effluent limits in item A for rainfall events less than or equal to a 25-year, 24-hour rainfall event for that location; or

(2) to collect and contain the runoff from a 25-year, 24-hour rainfall event for that location.

7053.0405 REQUIREMENTS FOR AQUACULTURE FACILITIES.

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

A. "Aquaculture therapeutics" means drugs, medications, or disease control chemicals that are approved for concentrated aquatic animal production facility use by the United States Food and Drug Administration or the United States Environmental Protection Agency.

B. "Aquatic animal production" means harvest of unprocessed aquatic animals, including mortalities, where the animals are fed fish food.

C. "Chemical additive" means an aquaculture therapeutic, growth-inducing compound, hormone, or algal control product that is added to a concentrated aquatic animal production facility.

D. "Cold water aquatic animals" means aquatic animals in the Salmonidae family of fish, such as trout and salmon.

E. "Concentrated aquatic animal production facility" means a hatchery, fish farm, or other facility that contains, grows, or holds aquatic animals ss described in subitems (1) to (4).

(1) Cold water aquatic animal facilities that produce more that 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year or feed more than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.

(2) Warm and cool water aquatic animal facilities that produce more than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.

(3) Case-by-case designation of concentrated aquatic animal production facilities. The commissioner may designate any warm, cool, or cold water aquatic animal production facility as a concentrated aquatic animal facility upon determining that it may cause a violation of an applicable state or federal water quality rule or regulation. In making this designation, the commissioner shall consider the following factors:

(a) the location and quality of the

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receiving waters;

(b) the holding, feeding, and production capacities of the facility; and

(c) the quantity and nature of the pollutants reaching waters of the state.

A permit application is not required from a concentrated aquatic animal production facility designated under this item until the commissioner has conducted an on-site inspection of the facility and has determined that the facility is required to be regulated under the permit program. A permit is required under this subitem only after the facility has been given notice of the commissioner's determination and an opportunity to request a hearing as provided in part 7000.1800.

(4) Harvest weight ia considered the weight of aquatic animal product that leaves a production facility, minus the weight of aquatic animal product that enters the same production facility.

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

Subp. 2. **Permit required.** No person may construct, operate, or maintain a concentrated aquatic animal production facility until the agency has issued a national pollutant discharge elimination system and state disposal system (NPDES/SDS) permit for the facility according to chapter 7001. Production levels of multiple projects and multiple stages of a single project that are connected actions or phased actions shall be considered in total under subpart 1, item E.

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

A. All concentrated aquatic animal production

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facilities shall collect, remove, treat, and properly dispose of unconsumed fish food and fish wastes.

B. All concentrated aquatic animal production facilities that discharge industrial or other wastes to waters of the state shall comply with the requirements of parts 7053.0225, subparts 1, 3, 4, and 5, and 7053.0275.

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 maintenancs of the recirculating system.

Subp. 4. Additional requirements. Except as expressly excluded in this psrt, the construction, operation, and maintenance of a concentrated aquatic animal production facility shall comply with the requirements of this chapter and chapters

7050 and 7052.

Subp. 5. **Interim reversible impacts.**

A. Upon application of the responsible person or persons and according to parts 7000.7000 and 7053.0195, the agency shall grant a variance from subpart 3, item A or B, if the agency also finds that:

(1) the construction, operation, and maintenance of the facility will not impair the existing beneficial uses and the level of water quality necessary to protect the existing beneficial uses;

(2) the economic or social development of concern will not occur due to the standards in subpart 3;

(3) allowing lower water quality is necessary to accommodate important economic or social development in the area in which the receiving waters are located;

(4) the baseline quality of the receiving waters has been established according to item C;

(5) a closure plan for the facility has been submitted according to item E;

(6) financial assurance for the facility has been established and maintained according to item F;

(7) the applicant has submitted a permit application for the facility for which the variance is sought in compliance with subpart 2;

(8) the applicant has submitted a completed variance application according to item B; and

(9) the receiving waters will be restored to

baseline quality within three years of initiation of closure.

However, no variances may be granted that would result in noncompliance with applicable federal rules, regulations, or standards for water quality.

B. In addition to the requirements of part 7000.7000, subpart 2, the written application for a variance must contain:

(1) the baeeline quality data of the receiving waters collected under commissioner-approved protocol sccording to item C;

(2) the closure plan according to item E; and

(3) an up-to-date closure cost estimate for the facility prepared under item E and evidence of the financial assurance required in item F.

C. Baseline quality must be established by no less than two consecutive years, or equivalent, of preoperational data on the receiving waters. The equivalent testing program must require 12 sampling events for the parameters in item E collected during the months of May through October. Testing programs used to establish baseline quality must be reviewed and approved by the commiesioner before the start of testing. The commissioner shall supply the specific intra-year and inter-year variables.

D. If a variance is granted under item A, the permittee shall restore the receiving waters to baseline quality when:

(1) aquatic animal production from the facility ceases;

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(2) any of the limiting concentrations in item G are exceeded;

(3) the permit for the facility expires and reissuance of the permit is not applied for or is applied for and denied;

(4) the permit for the facility is revoked;

(5) an agency order to cease operation is issued; or

(6) the required financial assurance under item F for closure, postclosnre monitoring, or corrective actions is not maintained with the proper payment or substitute instrument.

E. The applicant shall submit s closure plan with the variance application. The closure plan shall demonstrate financial assurance under item F for closure, postclosure monitoring, and corrective actions for restoration of the receiving waters to baseline quality and shsll describe the methods and processes that will be implemented to restore the receiving waters to baseline quality within three years of initiation of closure. The demonstration must show that no additional restoration is needsd beyond three years. Restoration to baseline quality of the following parameters is required: dissolved oxygen, totai phosphorus, and chlorophyll-a. Restoration to the baseline quality level means that the mean postclosure baseiine quality levels are not significantly different, as determined with the appropriate statistical test, from the mean preoperational baseline quality level.

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F. The applicant shall submit to the commissioner, for review and approval, a closure, postclosure monitoring, and corrective action cost estimate and evidence of financial assurance, prepared according to parts 7035.2685 to 7035.2805.

G. The following limiting concentrations are established to prevent irreversible pollution and to protect the existing beneficial uses and apply to the receiving waters at all times:

Characteristic or Pollutant	Limiting Concentration or Range
Total organic carbon	5 mg/L*
Nitrate nitrogen	10 mg/L instantaneous value**
Chlorophyll-a	30 µg/L***
Dissolved oxygen	Not less than 3 mg/L in the bottom half of the hypolimnion and 5 mg/L in the upper half of the hypolimnion, instantaneous value****

* Annual mean.

** "Instantaneous value" means the concentration in one sample.

*** Monthly mean (May through September).

**** If the baseline monitoring shows that the preoperational oxygen concentration for the same time of the year is less than three milligrams per liter for the bottom half of the hypolimnion and five milligrams per liter for the upper half, there may be no further reduction of the preoperational oxygen concentrations. If the baseline quality of a pollutant is greater than the limiting concentration, or less in the case of dissolved oxygen, the baseline quality of the pollutant must be

used as the limiting concentration.

Subp. 6. Special conditions.

A. In addition to the requirements for monitoring, testing, and reporting under part 7001.0150, subpart 2, item B, the permittee shall report the aquatic animal production and amount of fish food used. The commissioner may require the permittee to monitor receiving waters to determine natural background levels and baseline quality and to determine compliance with state and federal antidegradation and water quality standard requirements. The monitoring shall consider natural seasonal and year-to-year variations in background levels and baseline quality.

B. The permittee shall transport aquatic animal mortalities for rendering or disposal at a land-based facility. Aquatic animal mortalities shall not be disposed of in waters of the state. The permittee shall prevent blood produced through harvest of aquatic animals from entering waters of the state untreated. The blood generated shall be transported to a land-based rendering or disposal facility approved by the commissioner or discharged to a publicly owned treatment works according to the applicable publicly owned treatment works national pollutant discharge elimination system or state disposal system (NPDES/SDS) permit.

C. The permittee shall maintain an operation record book of daily operations and other occurrences that may affect water quality including addition of fish food, composition of fish food, aquatic animal transfers and harvests, cleaning,

mortalities, major weather events, and power failures. The operation record book must be available at all times for inspection and copying by the commissioner.

D. The permittee shall submit an annual report to the commissioner. The report shall include:

(1) a general description of the operations conducted for the past calendar year;

(2) a summary of the monitoring data;

(3) the mass of aquatic animals currently at the facility;

(4) aquatic animal production at the facility for the past calendar year;

(5) methods, amounts, and locations of the removal and disposal of waste fish food, filter backwash, sludges, sediments, mortalities, and other accumulated solids generated at the facility; and

(6) proposed changes in operation or production for the coming year.

E. The discharge of water treatment and chemical additives must comply with parts 7050.0218 and 7050.0221 to 7050.0227.

REPEALER. Minnesota Rules, parts 7050.0200; 7050.0210, subparts 1, 3, 9, 10, 12, 13a, 15, 17, and 18; 7050.0211; 7050.0212; 7050.0213; 7050.0214; 7050.0215; 7050.0216; 7050.0221, subpart 5; 7050.0222, subpart 8; 7056.0010; 7056.0020; 7056.0030; 7056.0040; 7065.0010; 7065.0020; 7065.0030; 7065.0040; 7065.0050; 7065.0060; 7065.0070;

7065.0100; 7065.0110; 7065.0120; 7065.0130; 7065.0140; 7065.0150; 7065.0160; 7065.0200; 7065.0210; 7065.0220; 7065.0230; 7065.0240; 7065.0250; and 7065.0260, are repealed.

Office of the Revisor of Statutes
Administrative Rules

TITLE: Proposed Permanent Rules Relating to Water Quality

AGENCY: Pollution Control Agency

MINNESOTA RULES: Chapters 7001; 7050; 7053; 7056; and 7065

The attached rules are approved for
publication in the State Register

Cindy K. Maxwell

Cindy K. Maxwell
Senior Assistant Revisor