CHAPTER 7055
MINNESOTA POLLUTION CONTROL AGENCY
WATER QUALITY DIVISION
CLASSIFICATION AND STANDARDS OF QUALITY AND PURITY FOR INTERSTATE WATERS

CRITERIA FOR CLASSIFICATION OF INTERSTATE WATERS; ESTABLISHMENT OF STANDARDS OF QUALITY AND PURITY

7055.0010 POLICY AND PURPOSE.

The official policy and purpose of the state of Minnesota in regard to these matters is set forth in the Minnesota Water Pollution Control statutes as amended by Laws of Minnesota 1973, chapter 374:

"Sec. 115.42. It is the policy of the state to provide for the prevention, control, and abatement of pollution of all waters of the state, so far as feasible and practical, in furtherance of conservation of such waters and protection of the public health and in furtherance of the development of the economic welfare of the state.

... It is the purpose of Laws of Minnesota 1963, chapter 874, to safeguard the waters of the state from pollution by: (a) preventing any new pollution; and (b) abating pollution existing when Laws 1963, chapter 874, become effective, under a program consistent with the declaration of policy above stated.

Sec. 115.44 Subd. 2. In order to attain the objectives of Laws 1963, chapter 874, the agency after proper study, and after conducting public hearing upon due notice, shall as soon as practicable, group the designated waters of the state into classes and adopt classifications and standards of purity and quality therefor. Such classification shall be made in accordance with considerations of best usage in the interest of the public and with regard to the considerations mentioned in subdivision 3 hereof.

Sec. 115.44 Subd. 8. If the agency finds in order to comply with the federal water pollution control act or any other federal law or rule or regulation promulgated thereunder that it is impracticable to comply with the requirements of this section in classifying waters or adopting standards or in meeting any of the requirements thereof, compliance with the requirements of such section are waived to the extent necessary to enable the agency to comply with federal laws and rules and regulations promulgated thereunder. The agency may classify waters and adopt criteria and standards in such form and based upon such evidence as it may deem necessary and sufficient for the purposes of meeting requirements of such federal laws, notwithstanding any provisions in chapter 115 or any other state law to the contrary. In the event waters are classified and criteria and standards are adopted to meet the requirements of federal law, the

agency shall thereafter proceed to otherwise comply with the provisions of this section which were waived as rapidly as is practicable. This authority shall extend to proceedings pending before the agency on May 20, 1973.

... Wherever advisable and practicable the agency may establish standards for effluent or disposal systems discharging into waters of the state regardless of whether such waters are or are not classified.

Sec. 115.03 Subd. 5. Notwithstanding any other provisions prescribed in or pursuant to chapter 115 and, with respect to the pollution of waters of the state, in chapter 116, or otherwise, the agency shall have the authority to perform any and all acts minimally necessary including, but not limited to, the establishment and application of standards, procedures, regulations, orders, variances, stipulation agreements, schedules of compliance, and permit conditions, consistent with and, therefore, not less stringent than the provisions of the Federal Water Pollution Control Act, as amended, applicable to the participation by the state of Minnesota in the National Pollutant Discharge Elimination System (NPDES)..."

In accordance with this declaration of policy and legislative intent, and under the powers delegated to the agency, the following interstate water use classifications and corresponding standards of quality and purity are hereby adopted by the Minnesota Pollution Control Agency as provided by law."

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0020 SCOPE.

The following classification, criteria, and standards of water and effluent quality and purity as hereby adopted and established shall apply to all interstate waters of the state, notwithstanding any other interstate water quality or effluent rules of general or specific application, except that any more stringent water quality or effluent standards or prohibitions in the other applicable regulations are preserved.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0030 SEVERABILITY.

All provisions of this rule shall be severable and the invalidity of any lettered paragraph or any subparagraph or subdivision thereof shall not void any other lettered paragraph or subparagraph, subdivision or any part thereof.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0040 DEFINITIONS.

The terms "waters of the state" for the purposes of this chapter shall be construed to mean interstate waters as herein below defined, and the terms "sewage," "industrial wastes," and "other wastes," as well as any other terms for which definitions are given in the Water Pollution Control statutes, as used herein have the meanings ascribed to them in Minnesota Statutes, sections 115.01 and 115.41, with the exception that disposal systems or treatment works operated under permit of the agency shall not be construed to be "waters of the state" as the term is used herein. "Interstate waters" are defined as all rivers, lakes, and other waters that flow across or form part of the state boundaries. Other terms and abbreviations used herein which are not specifically defined in applicable federal or state law shall be construed in conformance with the context, and in relation to the applicable section of the statutes pertaining to the matter at hand, and current professional usage.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0050 USES OF INTERSTATE WATERS.

The classifications are listed separately in accordance with the need for interstate water quality protection, considerations of best use in the interest of the public, and other considerations as indicated in Minnesota Statutes, section 115.44. The classifications should not be construed to be an order of priority, nor considered to be exclusive or prohibitory of other beneficial uses.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0060 DETERMINATION OF COMPLIANCE.

In making tests or analyses of the interstate waters of the state, sewage, industrial wastes, or other wastes to determine compliance with the standards, samples shall be collected in such manner and place, and of such type, number, and frequency as may be considered necessary by the agency from the viewpoint of adequately reflecting the condition of the interstate waters, the composition of the effluents, and the effects of the pollutants upon the specified uses. Reasonable allowance will be made for dilution of the effluents, which are in compliance with part 7055.0110, subpart 6, following discharge into waters of the state. The agency by allowing dilution may consider the effect on all uses of the interstate waters into which the effluents are discharged. The extent of dilution allowed regarding any specific discharge shall not violate the applicable water quality standards. The samples shall be preserved and analyzed in accordance with procedures given in the 1971 edition of Standard Methods for the Examination of Water and Waste-Water, by the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation, and any revisions or amendments thereto. The agency may accept or may develop other methods, procedures, guidelines, or criteria for measuring, analyzing, and collecting samples.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0070 NATURAL INTERSTATE WATER QUALITY.

The interstate waters may, in a state of nature, have some characteristics or properties approaching or exceeding the limits specified in the water quality standards. The standards shall be construed as limiting the addition of pollutants of human activity to those of natural origin, where such be present, so that in total the specified limiting concentrations will not be exceeded in the interstate waters by reason of such controllable additions. Where the background level of the natural origin is reasonably definable and normally is higher than the specified standard, the natural level may be used as the standard for controlling the addition of pollutants of human activity which are comparable in nature and significance with those of natural origin. The natural background level may be used instead of the specified water quality standard as a maximum limit of the addition of pollutants, in those instances where the natural level is lower than the specified standard and reasonable justification exists for preserving the quality to that found in a state of nature.

In the adoption of standards for individual interstate waters, the agency will be guided by the standards set forth herein but may make reasonable modifications of the same on the basis of evidence brought forth at a public hearing if it is shown to be desirable and in the public interest to do so in order to encourage the best use of the interstate waters or the lands bordering such interstate waters.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0080 NONDEGRADATION POLICY.

Waters which are of quality better than the established standards shall be maintained at high quality unless a determination is made by the agency that a change is justifiable as a result of necessary economic or social development and will not preclude appropriate beneficial present and future uses of the waters. Any project or development which would constitute a source of pollution to waters of the state shall be required to provide the best practicable control technology currently available not later than July 1, 1977, and the best available technology economically achievable not later than July 1, 1983, and any other applicable treatment standards as defined by and in accordance with the requirements of the Federal Water Pollution Control Act, United States Code, title 33, section 1251 et seq., as amended, in order to maintain high water quality and keep water pollution at a minimum. In implementing this policy, the administrator of the United States Environmental Protection Agency will be provided with such information as he requires to discharge his responsibilities under the Federal Water Pollution Control Act, as amended.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0090 VARIANCE FROM STANDARDS.

In any case where, upon application of the responsible person or persons, the agency finds that by reason of exceptional circumstances the strict enforcement of any provision of these standards 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 the standards would be unreasonable, impractical, or not feasible under the circumstances; the agency in its discretion may grant a variance therefrom upon such conditions as it may prescribe for prevention, control, or abatement of pollution in harmony with the general purposes of these classifications and standards and the intent of the applicable state and federal laws. The United States Environmental Protection Agency will be advised of any permits which may be issued under this clause together with information as to the need therefor.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0100 WATER USE CLASSIFICATIONS FOR INTERSTATE WATERS.

Based on considerations of best usage in the interest of the public and in conformance with the requirements of the applicable statutes, the interstate waters of the state shall be grouped into one or more of the following classes:

1. Domestic consumption shall include all interstate waters which are or may be used as a source of supply for drinking, culinary, or food processing use or other domestic purposes, and for which quality control is or may be necessary to protect the public health, safety, or welfare.

2. Fisheries and recreation shall include all interstate waters which are or may be used for fishing, fish culture, bathing, or any other recreational purposes, and for which quality control is or may be necessary to protect aquatic or terrestrial life, or the public health, safety, or welfare.

3. Industrial consumption shall include all interstate waters which are or may be used as a source of supply for industrial process or cooling water, or any other industrial or commercial purposes, and for which quality control is or may be necessary to protect the public health, safety, or welfare.

4. Agriculture and wildlife shall include all interstate waters which are or may be used for any agricultural purposes, including stock watering and irrigation, or by waterfowl or other wildlife, and for which quality control is or may be necessary to protect terrestrial life or the public health, safety, or welfare.

5. Navigation and waste disposal shall include all interstate waters which are or may be used for any form of water transportation or navigation, disposal of sewage, industrial waste or other waste effluents, or fire prevention, and for

which quality control is or may be necessary to protect the public health, safety, or welfare.

6. Other uses shall include interstate waters which are or may serve the above listed uses or any other beneficial uses not listed herein, including without limitation any such uses in this or any other state, province, or nation of any interstate waters flowing through or originating in this state, and for which quality control is or may be necessary for the above declared purposes, or to conform with the requirements of the legally constituted state or national agencies having jurisdiction over such interstate waters, or any other considerations the agency may deem proper.

7. Limited resource value waters: this class includes surface waters of the state which are of limited value as a water resource and where water quantities are intermittent or less than one cubic foot per second at the once-in-ten-year, seven-day-low flow as defined in part 7055.0110, subpart 7. These waters shall be protected so as to allow secondary body contact use, to preserve the groundwater for use as a potable water supply, and to protect aesthetic qualities of the water. It is the intent of the agency that very few waters be classified as limited resource value waters. In conjunction with those factors listed in Minnesota Statutes, section 115.44, subdivisions 2 and 3, the agency, in cooperation and agreement with the Department of Natural Resources with respect to determination of fisheries values and potential, shall determine the extent to which the waters of the state demonstrate the conditions set forth below:

a. the existing fishery and potential fishery are severely limited by natural conditions as exhibited by poor water quality characteristics, lack of habitat, or lack of water; or

b. the quality of the resource has been significantly altered by human activity and the effect is essentially irreversible; and

c. there are limited recreational opportunities, such as fishing, swimming, wading, or boating, in and on the water resource.

Conditions "a" and "c" or "b" and "c" must be established by the agency water assessment procedure before the waters can be classified as limited resource value waters.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0110 GENERAL STANDARDS APPLICABLE TO INTERSTATE WATERS OF STATE.

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

Subp. 2. **Nuisance prohibited.** No sewage, industrial waste, or other wastes shall be discharged into any interstate waters of the state so as to cause any nuisance conditions, such as the presence of significant amounts of floating solids, scum, oil slicks, excessive suspended solids, material discoloration, obnoxious odors, gas ebullition, deleterious sludge deposits, undesirable slimes or fungus growths, or other offensive or harmful effects.

Subp. 3. **Treatment of existing discharge.** Existing discharges of inadequately treated sewage, industrial waste, or other wastes shall be abated, treated, or controlled so as to comply with the applicable standards. Separation of sanitary sewage from natural runoff may be required where necessary to ensure continuous effective treatment of sewage.

Subp. 4. **Highest levels of water quality.** The highest levels of water quality, including, but not limited to, dissolved oxygen, which are attainable in the interstate waters by continuous operation at their maximum capability of all primary and secondary units of treatment works or their equivalent discharging

effluents into the interstate waters shall be maintained in order to enhance conditions for the specified uses.

Subp. 5. **Mixing zones.** Means for expediting mixing and dispersion of sewage, industrial waste, or other waste effluents in the receiving interstate waters are to be provided so far as practicable when deemed necessary by the agency to maintain the quality of the receiving interstate waters in accordance with applicable standards. Mixing zones must be established by the agency on an individual basis, with primary consideration being given to the following guidelines:

A. mixing zones in rivers shall permit an acceptable passageway for the movement of fish;

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

C. mixing zone characteristics shall not be lethal to aquatic organisms;

D. for contaminants other than heat, the 96-hour median tolerance limit for indigenous fish and fish food organisms should not be exceeded at any point in the mixing zone;

E. mixing zones should be as small as possible, and not intersect spawning or nursery areas, migratory routes, water intakes, nor mouths of rivers; and

F. overlapping of mixing zones should be minimized and measures taken to prevent adverse synergistic effects. This provision shall also apply in cases where a Class 7 water is tributary to a Class 2 water.

Subp. 6. **Minimum secondary treatment.** It is herein established that the agency shall require secondary treatment as a minimum for all municipal sewage and biodegradable industrial or other wastes to meet the adopted water quality standards. A comparable high degree of treatment or its equivalent also shall be required of all nonbiodegradable industrial or other wastes unless the discharger can demonstrate to the agency that a lesser degree of treatment or control will provide for water quality enhancement commensurate with present and proposed future water uses and a variance is granted under the provisions of the variance clause. Secondary treatment facilities are defined as works which will provide effective sedimentation, biochemical oxidation, and disinfection, or the equivalent, including effluents conforming to the following:

Substance or Characteristic	Limiting Concentration or Range*
5-Day Biochemical oxygen demand*	25 milligrams per liter
Fecal coliform group organisms***	200 organisms per 100 milliliters
Total suspended solids*	30 milligrams per liter
Oil	Essentially free of visible oil
Phosphorus**	1 milligram per liter
Turbidity	25
pH range	6.5 - 8.5
Unspecified toxic or corrosive substances	None at levels acutely toxic to humans or other animals or plant life, or directly damaging to real property.

*The arithmetic mean for concentrations of five-day biochemical oxygen demand and total suspended solids shall not exceed the stated values in a period of 30 consecutive days and 45 milligrams per liter in a period of seven consecutive days.

**Where the discharge of effluent is directly to or affects a lake or reservoir. Removal of nutrients from all wastes shall 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.

***Disinfection of wastewater effluents to reduce the levels of fecal coliform organisms to the stated value is required from March 1 through October 31 (Class 2 waters) and May 1 through October 31 (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 year around. The stated value is not to be exceeded in any calendar month as determined by the logarithmic mean of a minimum of five samples, nor shall more than ten percent of all samples taken during any calendar month individually exceed 400 organisms per 100 milliliters. The application of the fecal coliform group organism standards shall be limited to sewage or other effluents containing admixtures of sewage and shall not apply to industrial wastes except where 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.

The requirements of this rule and specifically the requirement of secondary treatment as stated above shall be in addition to any requirement imposed on a discharge by the Clean Water Act, United States Code, title 33, parts 1251 et seq., and its implementing regulations. In the case of a conflict between the requirements of this rule and the requirements of the Clean Water Act or its implementing regulations, the more stringent requirement shall be controlling.

Subp. 7. **Stream flows.** Dischargers of sewage, industrial waste, or other waste effluents shall be controlled so that the water quality standards will be maintained at all stream flows which are equal to or exceeded by 90 percent of the seven consecutive daily average flows of record (the lowest weekly flow with a once in ten-year recurrence interval) for the critical month(s). 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. Such calculations shall not be applied to lakes and their embayments which have no comparable flow recurrence interval. Where stream flow records are not available, the flow may be estimated on the basis of available information on the watershed characteristics, precipitation, run-off, and other relevant data.

Allowances shall not be made in the design of treatment works for low stream flow augmentation unless such flow augmentation of minimum flow is dependable and controlled under applicable laws or regulations.

Subp. 8. **Specific standards interpreted as effluent standards in certain cases.** In any instance where it is evident that the minimal treatment specified in subpart 6 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 specified water quality standards, the specific standards may be interpreted as effluent standards for control purposes. In addition, the following effluent standards 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 interstate waters for the stated uses:

Item*	Limits**
5-day Biochemical oxygen demand	5 milligrams per liter

*The concentrations specified in subpart 6 may be used in lieu thereof 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 insure that the applicable water quality standards are met during such discharge period. If treatment works are designed and constructed to meet the specified limits given above 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 above and in subpart 6 provided the water quality standards and all other requirements of the agency and the United States Environmental Protection Agency are being met. Such variability of operation must be based on adequate monitoring of the treatment works and the effluent and receiving waters as specified by the agency.

**If a discharger is required by the director to implement a pretreatment program for the control of toxic pollutants from industrial contributors and the program has not yet been implemented, the discharger's effluent limitation for total suspended solids shall be five milligrams per liter until such time as the program has been implemented.

This section shall not apply to discharges to surface waters classified as limited resource value waters pursuant to part 7055.0100, number 7 and parts 7055.0250 to 7055.0310.

Subp. 9. **Requirements for specific dischargers.** Notwithstanding the provisions of subparts 8 and 16, the agency may require a specific discharger to meet effluent limitations which are necessary to maintain the water quality of the receiving water at the standards of quality and purity established by this rule. Any effluent limitation determined to be necessary under this section shall only be required of a discharger after the discharger has been given notice of the specific effluent limitations and an opportunity for public hearing provided that compliance with the requirements of part 7070.1400 regarding notice of national pollutant discharge elimination system and state disposal system permits shall satisfy the notice and opportunity for hearing requirements of this subpart.

Subp. 10. **Acceptance of equivalent controls.** After providing an opportunity for public hearing the agency shall accept effective loss prevention and/or water conservation measures or process changes or other waste control measures or arrangements if it finds that such measures, changes, or arrangements are equivalent to the waste treatment measures required for compliance with applicable effluent and/or water quality standards or load allocations.

Subp. 11. **Permit required.** All sources of sewage, industrial waste, or other waste which do not at present have a valid operation and discharge permit, or an application for the same pending before the agency, shall apply for the same within 30 days of the adoption of this regulation, or the agency may abate the source forthwith. The provisions of subpart 6 relating to effluent quality standards, and the other provisions of this regulation, are applicable to existing sewage, industrial waste, or other waste disposal facilities and the effluent discharged therefrom. Nothing herein shall be construed to prevent the agency subsequently from modifying any existing permits so as to conform with federal requirements and the requirements of this chapter.

Subp. 12. **Liquid substances.** Liquid substances which are not commonly considered to be sewage or industrial wastes but which could constitute a pollution hazard shall be stored in accordance with parts 7100.0010 to 7100.0090, and any revisions or amendments thereto. Other wastes as defined by law or other substances which could constitute a pollution hazard shall not be deposited in any manner such that the same may be likely to gain entry into any interstate waters of the state in excess of or contrary to any of the standards herein adopted, or cause pollution as defined by law.

Subp. 13. **Pollution prohibited.** No sewage, industrial waste, or other wastes shall be discharged into the interstate waters of the state in such quantity or in such manner alone or in combination with other substances as to cause pollution thereof as defined by law. In any case where the interstate waters of

the state into which sewage, industrial wastes, or other waste effluents discharge are assigned different standards than the interstate waters into which such receiving interstate waters flow, the standards applicable to the interstate waters into which such sewage, industrial waste, or other wastes discharged shall be supplemented by the following:

The quality of any waters of the state receiving sewage, industrial waste, or other waste effluents shall be such that no violation of the standards of any interstate waters of the state in any other class shall occur by reason of the discharge of such sewage, industrial waste, or other waste effluents.

Subp. 14. **Questions about permissible levels.** Questions concerning the permissible levels, or changes in the same, of a substance, or combination of substances, of undefined toxicity to fish or other biota shall be resolved in accordance with the latest methods recommended by the United States Environmental Protection Agency. The agency shall consider the recommendations of the Quality Criteria for Water, USEPA 1976, in making determinations under this section. Toxic substances shall not exceed one-tenth of the 96 hour median tolerance limit (TLM) as a water quality standard except that other application factors shall be used when justified on the basis of available scientific evidence.

Subp. 15. **Monthly reports.** All persons operating or responsible for sewage, industrial waste, or other waste disposal systems which are adjacent to or which discharge effluents to these waters or to tributaries which affect the same, shall submit regularly every month a report to the agency 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 shall 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. 16. **Limited resource value waters.** Limited resource value waters:

A. For point source discharges to surface waters classified as limited resource value waters pursuant to parts 7055.0100, number 7; and 7055.0250 to 7055.0310 the agency shall require treatment facilities which will provide effluents conforming to the following limitations:*

Substance or Characteristic	Limiting Concentration
5-Day Biochemical oxygen demand	15 milligrams per liter**

*All effluent limitations specified in subpart 6 shall also be applicable to dischargers to Class 7 waters, provided that unspecified toxic or corrosive substances shall be limited to the extent necessary to protect the designated uses of the receiving water or affected downstream waters.

**As measured by the arithmetic mean of all samples taken during any calendar month.

B. The agency shall allow treatment works to be constructed and/or operated to produce effluents to limited resource value waters at levels up to those stated in subpart 6 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.

C. Notwithstanding the effluent limitations established by this section the quality of limited resource value waters shall not be such as to allow a violation of applicable water quality standards in waters of the state which are connected to or affected by water classified as limited resource value waters.

D. The classification of surface waters as limited resource value waters pursuant to parts 7055.0100, number 7; and 7055.0250 to 7055.0310 shall not supersede, alter, or replace the classification and designation of such waters as public waters pursuant to applicable provisions and requirements of Minnesota Statutes, chapter 105.

Subp. 17. **Compliance with permit terms and water quality standards.** No person who is in compliance with the terms and conditions of its permit issued pursuant to chapter 7070 shall be deemed in violation of any water quality standard in this rule for which a corresponding effluent limitation is established in the permit. However, exceedances of the water quality standards in a receiving water shall constitute grounds for modification of a permit(s) for any discharger(s) to the receiving water who is (are) causing or contributing to the exceedances. Chapter 7070 shall govern the modification of any such permit.

Subp. 18. **Ammonia water quality standard.** For the purpose of establishing limitations to meet the ammonia water quality standard, a statistic which estimates the central value (such as the mean or median) for ambient pH and temperature of the receiving water for the critical months shall be used.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0120 SPECIFIC STANDARDS OF QUALITY AND PURITY FOR DESIGNATED CLASSES OF INTERSTATE WATERS.

The following standards shall prescribe the qualities or properties of the interstate waters of the state which are necessary for the designated public use or benefit and which, if the limiting conditions given are exceeded, shall be considered indicative of a polluted condition which is actually or potentially deleterious, harmful, detrimental, or injurious with respect to such designated uses or established classes of the interstate waters.

1. Domestic consumption.

Class A. The quality of this class of the interstate waters of the state shall be such that without treatment of any kind the raw waters will meet in all respects both the mandatory and recommended requirements of the Public Health Service Drinking Water Standards-1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the United States Department of Health, Education and Welfare, and any revisions, amendments, or supplements thereto. This standard will ordinarily be restricted to underground waters with a high degree of natural protection. The basic requirements are given below:

Substance or Characteristic	Limit or Range
Total coliform organisms	1 most probable number per 100 milliliters
Turbidity value	5
Color value	15
Threshold odor number	3
Methylene blue active substance (MBAS)	0.5 milligram per liter
Arsenic (As)	0.01 milligram per liter
Chlorides (Cl)	250 milligrams per liter
Copper (Cu)	1 milligram per liter
Carbon Chloroform extract	0.2 milligram per liter
Cyanides (CN)	0.01 milligram per liter
Fluorides (F)	1.5 milligrams per liter
Iron (Fe)	0.3 milligram per liter
Manganese (Mn)	0.05 milligram per liter
Nitrates (NO_3)	45 milligrams per liter
Phenol	0.001 milligram per liter
Sulfates (SO_4)	250 milligrams per liter
Total dissolved solids	500 milligrams per liter
Zinc (Zn)	5 milligrams per liter
Barium (Ba)	1 milligram per liter

Cadmium (Cd)	0.01 milligram per liter
Chromium (Hexavalent, Cr)	0.05 milligram per liter
Lead (Pb)	0.05 milligram per liter
Selenium (Se)	0.01 milligram per liter
Silver (Ag)	0.05 milligram per liter
Radioactive material	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

Class B. The quality of this class of the interstate waters of the state shall be such that with approved disinfection, such as simple chlorination or its equivalent, the treated water will meet in all respects both the mandatory and recommended requirements of the Public Health Service Drinking Water Standards-1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the United States Department of Health, Education and Welfare, and any revisions, amendments or supplements thereto. This standard will ordinarily be restricted to surface and underground waters with a moderately high degree of natural protection. The physical and chemical standards quoted above for Class A interstate waters shall also supply to these interstate waters in the untreated state.

Class C. The quality of this class of the interstate waters of the state shall be such that with treatment consisting of coagulation, sedimentation, filtration, storage, and chlorination, or other equivalent treatment processes, the treated water will meet in all respects both the mandatory and recommended requirements of the Public Health Service Drinking Water Standards-1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the United States Department of Health, Education and Welfare, and any revisions, amendments, or supplements thereto. This standard will ordinarily be restricted to surface waters, and ground waters in aquifers not considered to afford adequate protection against contamination from surface or other sources of pollution. Such aquifers normally would include fractured and channeled limestone, unprotected impervious hard rock where interstate water is obtained from mechanical fractures, joints, etc., with surface connections, and coarse gravels subjected to surface water infiltration. The physical and chemical standards quoted above for Class A interstate waters shall also apply to these interstate waters in the untreated state, except as listed below:

Substance or Characteristic	Limit or Range
Turbidity value	25

Class D. The quality of this class of the interstate waters of the state shall be such that after treatment consisting of coagulation, sedimentation, filtration, storage, and chlorination, plus additional pre, post, or intermediate stages of treatment, or other equivalent treatment processes, the treated water will meet in all respects the recommended requirements of the Public Health Service Drinking Water Standards-1962 for drinking water as specified in Publication No. 956 published by the Public Health Service of the United States Department of Health, Education and Welfare, and any revisions, amendments, or supplements thereto. This standard will ordinarily be restricted to surface waters, and ground waters in aquifers not considered to afford adequate protection against contamination from surface or other sources of pollution. Such aquifers normally would include fractured and channeled limestone, unprotected impervious hard rock where water is obtained from mechanical fractures, joints, etc., with surface connections, and coarse gravels subjected to surface water infiltration. The concentrations or ranges given below shall not be exceeded in

the raw waters before treatment:

Substance or Characteristic	Limit or Range
Arsenic (As)	0.05 milligram per liter
Barium (Ba)	1 milligram per liter
Cadmium (Cd)	0.01 milligram per liter
Chromium (Cr + 6)	0.05 milligram per liter
Cyanide (CN)	0.2 milligram per liter
Fluoride (F)	1.5 milligrams per liter
Lead (Pb)	0.05 milligram per liter
Selenium (Se)	0.01 milligram per liter
Silver (Ag)	0.05 milligram per liter
Radioactive Material	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

In addition to the above listed standards, no sewage, industrial waste, or other wastes, treated or untreated, shall be discharged into or permitted by any person to gain access to any interstate waters classified for domestic consumption so as to cause any material undesirable increase in the taste, hardness, temperature, toxicity, corrosiveness, or nutrient content, or in any other manner to impair the natural quality or value of the interstate waters for use as a source of drinking water.

2. Fisheries and recreation.

Class A. The quality of this class of the interstate waters of the state shall be such as to permit the propagation and maintenance of warm or cold water sport or commercial fishes and be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. Limiting concentrations or ranges of substances or characteristics which should not be exceeded in the interstate waters are given below:

Substance or Characteristic	Limit or Range
Dissolved oxygen	Not less than 7 milligrams per liter at all times (instantaneous minimum concentration)***
Temperature	No material increase
Ammonia (N)*	0.016 milligram per liter (un-ionized as N)
Chlorides (Cl)	50 milligrams per liter
Chromium (Cr)	0.02 milligram per liter
Copper (Cu)	0.01 milligram per liter or not greater than 1/10 the 96 hour TLM value.
Cyanides (CN)	0.02 milligrams per liter
Oil	0.5 milligram per liter
pH value	6.5 - 8.5
Phenols	0.01 milligram per liter and none that could impart odor or taste to fish flesh or other fresh-water edible products such as crayfish, clams, prawns, and like creatures. Where it

	seems probable that a discharge may result in tainting of edible aquatic products, bio-assays and taste panels will be required to determine whether tainting is likely or present.
Turbidity value	10
Color value	30
Fecal coliform organisms	200 organisms per 100 milliliters as a logarithmic mean measured in not less than five samples in any calendar month, nor shall more than 10% of all samples taken during any calendar month individually exceed 400 organisms per 100 milliliters. (Applies only between March 1 and October 31.)
Radioactive materials	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.
Total residual chlorine**	0.005 milligrams per liter

*The percent un-ionized ammonia can be calculated for any temperature and pH by using the following formula taken from Thurston, R.V., R.C. Russo, and K. Emerson, 1974. Aqueous ammonia equilibrium calculations. Technical Report Number 74-1, Fisheries Bioassay Laboratory, Montana State University, Bozeman, MT. 18 p.

$$f = \frac{1}{10^{(pk_a - pH)} + 1} \times 100$$

where:

f = the percent of total ammonia in the un-ionized state

$$pk_a = 0.0901821 + \frac{2729.92}{T}, \text{ dissociation constant for ammonia}$$

T = temperature in degrees Kelvin (273.16 degrees Kelvin = 0 degrees Celsius)

**Applies to conditions of continuous exposure, where continuous exposure refers to chlorinated effluents which are discharged for more than a total of two hours in any 24-hour period.

***This dissolved oxygen standard shall be construed to require compliance with the standard 50 percent of the days at which the flow of the receiving water is equal to the lowest weekly flow with a once in ten year recurrence interval (7Q10).

Class B. The quality of this class of the interstate waters of the state shall be such as to permit the propagation and maintenance of cool or warm water sport or commercial fishes and be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. Limiting concentrations or ranges of substances or characteristics which should not be exceeded in the interstate waters are given below:

Substance or Characteristic	Limit or Range
Dissolved oxygen****	Not less than 5 milligrams per liter at all times (instantaneous minimum concentration)*****
Temperature*	5°F above natural in streams and 3°F above natural in lakes, based on monthly average of the maximum daily temperature, except in no case shall it exceed the daily average temperature of 86°F.
Ammonia (N)**	0.04 milligram per liter (un-ionized as N)
Chromium (Cr)	0.05 milligram per liter
Copper (Cu)	0.01 milligram per liter or not greater than 1/10 the 96 hour TLM value.
Cyanides (CN)	0.02 milligram per liter
Oil	0.5 milligram per liter
pH value	6.5 - 9.0
Phenols	0.01 milligram per liter and none that could impart odor or taste to fish flesh or other fresh-water edible products such as crayfish, clams, prawns, and like creatures. Where it seems probable that a discharge may result in tainting of edible aquatic products, bio-assays and taste panels will be required to determine whether tainting is likely or present.
Turbidity value	25
Fecal coliform organisms	200 organisms per 100 milliliters as a logarithmic mean measured in not less than five samples in any calendar month, nor shall more than 10% of all samples taken during any calendar month individually exceed 2000 organisms per 100 milliliters. (Applies only between March 1 and October 31.
Radioactive materials	Not to exceed the lowest concentration permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.
Total residual chlorine***	0.005 milligrams per liter

*The following temperature criteria will be applicable for the Mississippi River from Lake Itasca to the outlet of the Metro Wastewater Treatment Works in Saint Paul in addition to or superseding the above. The weekly average temperature shall not exceed the following temperatures during the specified

months:

January	40°F	July	83°F
February	40°F	August	83°F
March	48°F	September	78°F
April	60°F	October	68°F
May	72°F	November	50°F
June	78°F	December	40°F

For the Mississippi River from Lock and Dam No. 2 at Hastings to the Iowa border, the weekly average temperature shall not exceed the following temperatures during the specified months:

January	40°F	July	84°F
February	40°F	August	84°F
March	54°F	September	82°F
April	65°F	October	73°F
May	75°F	November	58°F
June	84°F	December	48°F

**See ammonia footnote for Class 2A waters.

***See chlorine footnote for Class 2A waters.

****This standard shall apply to all interstate waters of the state except for the reach of the Mississippi River from the outlet of the Metro wastewater treatment works in Saint Paul (River Mile 835) to Lock and Dam No. 2 at Hastings (River Mile 815). For this reach of the Mississippi River the standard shall be not less than five milligrams per liter from April 1 through November 30, and not less than four milligrams per liter at other times.

*****See dissolved oxygen footnote for Class 2A waters.

Class C. The quality of this class of the interstate waters of the state shall be such as to permit the propagation and maintenance of rough fish or species commonly inhabiting waters of the vicinity under natural conditions, and be suitable for boating and other forms of aquatic recreation for which the interstate waters may be usable. Limiting concentrations or ranges of substances or characteristics which should not be exceeded in the interstate waters are given below:

Substance or Characteristic	Limit or Range
Dissolved oxygen****	Not less than 5 milligrams per liter at all times (instantaneous minimum concentration)*****
Temperature*	5°F above natural in streams and 3°F above natural in lakes, based on monthly average of the maximum daily temperature except in no case shall it exceed the daily average temperature of 90°F.
Ammonia (N)**	0.04 milligram per liter (un-ionized as N)
Chromium (Cr)	0.05 milligram per liter
Copper (Cu)	0.01 milligram per liter or not greater than 1/10 the 96 hour TLM value.
Cyanides (CN)	0.02 milligram per liter
Oil	10 milligrams per liter, and none in such quantities as to (1) produce a visible color

	film on the surface, (2) impart an oil odor to water or an oil taste to fish and edible invertebrates, (3) coat the banks and bottom of the watercourse or taint any of the associated biota, or (4) become effective toxicants according to the criteria recommended.
pH value	6.5 - 9.0
Phenols	0.1 milligram per liter and none that could impart odor or taste to fish flesh or other fresh-water edible products such as crayfish, clams prawns, and like creatures. Where it seems probable that a discharge may result in tainting of edible aquatic products, bio-assays and taste panels will be required to determine whether tainting is likely or present.
Turbidity value	25
Fecal coliform organisms	200 organisms per 100 milliliters as a logarithmic mean measured in not less than five samples in any calendar month, nor shall more than 10% of all samples taken during any calendar month individually exceed 2000 organisms per 100 milliliters. (Applies only between March 1 and October 31.)
Radioactive materials	Not to exceed the lowest concentration permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.
Total residual chlorine***	0.005 milligrams per liter

*The following temperature criteria will be applicable for the Mississippi River from the outlet of the Metro Wastewater Treatment Works in Saint Paul to Lock and Dam No. 2 at Hastings in addition to or superseding the above. The weekly average temperature shall not exceed the following temperatures during the specified months.

January	40°F	July	83°F
February	40°F	August	83°F
March	48°F	September	78°F
April	60°F	October	68°F
May	72°F	November	50°F
June	78°F	December	40°F

**See Ammonia footnote for Class 2A waters.

***See chlorine footnote for Class 2A waters.

****This standard shall apply to all interstate waters of the state except for the reach of the Mississippi River from outlet of the Metro wastewater treatment works in Saint Paul (River Mile 835) to Lock and Dam No. 2 at Hastings (River Mile 815). For this reach of the Mississippi River the standard shall be not less than five milligrams per liter from April 1 through November 30, and not less than four milligrams per liter at other times.

*****See dissolved oxygen footnote for Class 2A waters.

For all classes of fisheries and recreation waters, the aquatic habitat, which includes the interstate waters and stream bed, shall not be degraded in any material manner, there shall be no material increase in undesirable slime growths or aquatic plants, including algae, nor shall there be any significant increase in harmful pesticide or other residues in the waters, sediments, and aquatic flora and fauna; the normal fishery and lower aquatic biota upon which it is dependent and the use thereof shall not be seriously impaired or endangered, the species composition shall not be altered materially, and the propagation or migration of the fish and other biota normally present shall not be prevented or hindered by the discharge of any sewage, industrial waste, or other waste effluents to the interstate waters.

No sewage, industrial waste, or other wastes shall be discharged into any of the interstate waters of this category so as to cause any material change in any other substances or characteristics which may impair the quality of the interstate waters or the aquatic biota of any of the above listed classes or in any manner render them unsuitable or objectionable for fishing, fish culture, or recreational uses. Additional selective limits or changes in the discharge bases may be imposed on the basis of local needs.

3. Industrial consumption.

Class A. The quality of this class of the interstate waters of the state shall be such as to permit their use without chemical treatment, except softening for ground water, for most industrial purposes, except food processing and related uses, for which a high quality of water is required. The quality shall be generally comparable to Class B waters for domestic consumption, except for the following:

Substance or Characteristic	Limit or Range
Chlorides (Cl)	50 milligrams per liter
Hardness	50 milligrams per liter
pH value	6.5 - 8.5

Class B. The quality of this class of the interstate waters of the state shall be such as to permit their use for general industrial purposes, except for food processing, with only a moderate degree of treatment. The quality shall be generally comparable to Class D interstate waters used for domestic consumption, except the following:

Substance or Characteristic	Limit or Range
Chlorides (Cl)	100 milligrams per liter
Hardness	250 milligrams per liter
pH value	6.0 - 9.0

Class C. The quality of this class of the interstate waters of the state shall be such as to permit their use for industrial cooling and materials transport without a high degree of treatment being necessary to avoid severe fouling, corrosion, scaling, or other unsatisfactory conditions. The following shall not be exceeded in the interstate waters:

Substance or Characteristic	Limit or Range

Chlorides (Cl)	250 milligrams per liter
Hardness	500 milligrams per liter
pH value	6.0 - 9.0

Additional selective limits may be imposed for any specific interstate waters as needed.

In addition to the above listed standards, no sewage, industrial waste, or other wastes, treated or untreated, shall be discharged into or permitted by any person to gain access to any interstate waters classified for industrial purposes so as to cause any material impairment of their use as a source of industrial water supply.

4. Agriculture and wildlife.

Class A. The quality of this class of the interstate waters of the state shall be such as to permit their use for irrigation without significant damage or adverse effects upon any crops or vegetation usually grown in the waters or area, including truck garden crops. The following concentrations or limits shall be used as a guide in determining the suitability of the waters for such uses, together with the recommendations contained in Handbook 60 published by the Salinity Laboratory of the United States Department of Agriculture, and any revisions, amendments, or supplements thereto:

Substance or Characteristic	Limit or Range
Bicarbonates (HCO_3)	5 milliequivalents per liter
Boron (B)	0.5 milligram per liter
pH value	6.0 - 8.5
Specific conductance	1,000 micromhos per centimeter
Total dissolved salts	700 milligrams per liter
Sodium (Na)	60% of total cations as milliequivalents per liter
Sulfates (SO_4)	10 milligrams per liter, applicable to water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels.
Radioactive materials	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

Class B. The quality of this class of the interstate waters of the state shall be such as to permit their use by livestock and wildlife without inhibition or injurious effects. The limits or concentrations of substances or characteristics given below shall not be exceeded in the interstate waters:

Substance or Characteristic	Limit or Range
pH value	6.0 - 9.0
Total salinity	1,000 milligrams per liter
Radioactive materials	Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as prescribed by the appropriate authority having control over their use.

Unspecified toxic substances	None at levels harmful either directly or indirectly.

Additional selective limits may be imposed for any specific interstate waters as needed.

5. Navigation and waste disposal.

The quality of this class of the interstate waters of the state shall be such as to be suitable for esthetic enjoyment of scenery and to avoid any interference with navigation or damaging effects on property. The following limits or concentrations shall not be exceeded in the interstate waters:

Substance or Characteristic	Limit or Range
pH value	6.0 - 9.0
Hydrogen sulfide	0.02 milligrams per liter

Additional selective limits may be imposed for any specific interstate waters as needed.

6. Other uses.

The uses to be protected in this class may be under other jurisdictions and in other areas to which the interstate waters of the state are tributary, and may include any or all of the uses listed in the foregoing categories, plus any other possible beneficial uses. The agency therefore reserves the right to impose any standards necessary for the protection of this class, consistent with legal limitations.

7. Limited resource value waters.

The quality of this class of interstate waters shall be such as to protect aesthetic qualities, secondary body contact use, and groundwater for use as a potable water supply. The limits or concentrations of substances or characteristics given below shall not be exceeded in the interstate waters:

Substance or Characteristic	Limit or Range
Fecal Coliform Organisms	1,000 organisms per 100 milliliters* (Applies only between May 1 and October 31)
pH	6.0 - 9.0
Dissolved Oxygen	At concentrations which will avoid odors, or putrid conditions in the receiving water or at concentrations at not less than 1 mg/l (daily average) provided that measurable concentrations are present at all times.
Unspecified Substances	Unspecified substances shall not be allowed in such quantities or concentrations that will impair the specified uses.

*The stated value is not to be exceeded in any calendar month as determined by the logarithmic mean of a minimum of five samples, nor shall more than ten percent of all samples taken during any calendar month individually exceed 2,000 organisms per 100 milliliters.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

CLASSIFICATIONS OF INTERSTATE WATERS

7055.0250 PURPOSE.

Parts 7055.0260 to 7055.0310 establishing classifications apply to all interstate surface waters of the state.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0260 SCOPE.

All interstate waters are included, although some minor watercourses such as unnamed streams or interconnecting waters and/or intermittently flowing creeks, ditches, or draws, etc., are not listed individually herein. All interstate waters are classified herein and this classification shall supersede the classification of the interstate waters listed in previously adopted parts 7056.0010 to 7056.0040.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0270 USES INCLUDED IN CLASSIFICATIONS.

The rule includes known present uses and/or uses which may be made of the waters in the future. In addition to the classification(s) given below, all of the interstate waters whether or not specifically named herein are also included in Classes 2C, 3C, 4A, 4B, 5, and 6 for all reaches or areas where such uses are possible, provided that waters specifically classified as limited resource value shall only be included in the following additional classes: 3C, 4A, 4B, 5, and 6. Where specific criteria are common to two or more listed classes the more restrictive value shall apply. For additional information refer to parts 7055.0010 to 7055.0120.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0280 SEVERABILITY.

The provisions of this rule shall be severable and the invalidity of any lettered paragraph or any subparagraph or subdivision thereof shall not make void any other lettered paragraph, subparagraph, subdivision, or any other part thereof.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0290 PURPOSE OF SUPPLEMENT 1.

Supplement 1 to this rule lists interstate waters that are classified as limited resource value waters, Class 7. For those interstate waters identified with an asterisk (*), the revised classification in Supplement 1 shall supersede any previous classification; provided, however, that the limited resource value classification shall apply only to that portion of the water specifically described in Supplement 1.

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0300 TABLE OF CLASSIFICATIONS.

Waters	Reach or Area Involved or Location	Classification
	Red Cedar River Basin	
Streams		
Little Cedar River	Source to Iowa border	2C, 3B
Red Cedar River	Source to Austin	2B, 3B
Red Cedar River	Austin to Iowa border	2C, 3B
Deer Creek	Source to Iowa border	2C, 3B
Lime Creek	Source to Iowa border	2C, 3B
Otter Creek	Source to Iowa border	2B, 3B
Shell Rock River	Source to Iowa border	2B, 3B

Lakes		
Albert Lea Lake	(T. 102; R. 20, 21)	2B, 3B
Bear Lake	(T. 101; R. 22)	2B, 3B
Fountain Lake	(T. 102; R. 20, 21)	2B
State Line Lake	(T. 101; R. 22)	2B, 3B
	Des Moines River Basin	
Streams		
East Fork of the Des Moines River	Source to Iowa border	2B, 3B
West Fork of the Des Moines River	Lake Yankton outlet to Iowa border	2C, 3B
Soldier Creek	Source to Iowa border	2C, 3B
Lakes		
Long Lake	(T. 108, 109; R. 41)	2B, 3B
Okamanpeedan Lake	(T. 101; R. 31)	2B, 3B
Lake Shetek	(T. 107, 108; R. 40, 41)	2B, 3B
Talcot Lake	(T. 105; R. 38, 39)	2B, 3B
Tuttle Lake	(T. 101; R. 31)	2B, 3B
Lake Yankton	(T. 109; R. 42)	2B, 3B
	Minnesota River Basin	
Streams		
Brush Creek	Iowa border to mouth	2C, 3B
Canby Creek	South Dakota border to mouth, except trout waters	2C, 3B
Canby Creek	(S. 8, 9, 17, 18, T. 114, R. 45; S. 13, 14, 22, 23, T. 114, R. 46)	2A, 3B
Blue Earth River	Iowa border to mouth	2B, 3B
East Fork of the Blue Earth River	Brush Creek to mouth	2C, 3B
West Fork of the Blue Earth River	Iowa border to mouth	2C, 3B
Florida Creek	South Dakota border to mouth	2C, 3B
West Fork of the Lac Qui Parle River	South Dakota border to mouth	2C, 3B
Lazarus Creek	South Dakota border to Canby Creek	2C, 3B
Minnesota River	Big Stone Lake outlet to Granite Falls	1C, 2B, 3B
Minnesota River	Granite Falls to Mankato	2B, 3B
Minnesota River	Mankato to River mile 22 (Head of 9 feet navigation channel)	2B, 3B
Minnesota River	River Mile 22 to mouth	2C, 3B
Little Minnesota River	South Dakota border crossing to Big Stone Lake	2C, 3B
North Fork of the Yellow Bank River	South Dakota border to mouth	2C, 3B
South Fork of the Yellow Bank River	South Dakota border to mouth	2C, 3B

Yellow Medicine River	North Fork mouth to Minnesota River	2C, 3B
North Fork of the Yellow Medicine River	South Dakota border to mouth	2C, 3B
Lac Qui Parle River	Lake Hendricks outlet to Minnesota River	2C, 3B
South Creek	Rose Lake to mouth	2C, 3B
Whetstone River	South Dakota border to mouth	2C, 3B
Lakes		
East Chain Lake	(T. 101; R. 29, 30)	2B, 3B
Lake Hendricks	(T. 112; R. 46)	2B, 3B
Iowa Lake	(T. 101; R. 30)	2B, 3B
Rose Lake	(T. 102; R. 30)	2B, 3B
Sager Lake	(T. 102; R. 30)	2B, 3B
Salt Lake	(T. 117; R. 46)	2B, 3B
South Silver Lake	(T. 101; R. 30)	2B, 3B
Big Stone Lake	(T. 121, 122, 123, 124; R. 46, 47, 48, 49)	2B, 3B
Swan Lake	(T. 101; R. 30)	2B, 3B
	Lower Mississippi River Basin	
Streams		
Bear Creek	Source to Iowa border	2C, 3B
Beaver Creek	Source to Iowa border	2C, 3B
Crooked Creek	Source to mouth	1B, 2A, 3B
Upper Iowa River	Source to Iowa border and Iowa border to Iowa border	2B, 3B
Mississippi River	Outlet of Metro Wastewater Treatment Works in St. Paul to river mile 830 (Rock Island RR Bridge)	2C, 3B
Mississippi River	River mile 830 to Iowa border	2B, 3B
Pine Creek	Source to Iowa border	2C, 3B
Riceford Creek	Source to mouth	2B, 3B
Root River	South Fork mouth to mouth	2B, 3B
South Fork of the Root River	Riceford Creek mouth to mouth	2B, 3B
Wapsipinicon River	Source to Iowa border	2C, 3B
Waterloo Creek	Source to Iowa border	1B, 2B, 3B
Lakes		
Lake Pepin	(T. 111, 112, 113; R. 11, 12, 13 & 14)	2B, 3B
Minnesota Slough	(T. 101; R. 3, 4)	2B, 3B
	Upper Mississippi River Basin	
Streams		
Mississippi River	Lake Itasca to Fort Ripley	2B, 3B
Mississippi River	Fort Ripley to the Upper Lock	

	and Dam at St. Anthony Falls in Minneapolis	1C, 2B, 3B
Mississippi River	Upper Lock and Dam at St. Anthony Falls in Minneapolis to outfall of the Metro wastewater treatment plant in St. Paul	2B, 3B
Lakes		
Lake Andrusia	(T. 146; R. 31)	2B, 3B
Lake Bemidji	(T. 146, 147; R. 33)	2B, 3B
Cass Lake	(T. 145, 146; R. 30, 31)	2B, 3B
Lake Itasca	(T. 143; R. 36)	2B, 3B
Pokegama Lake	(T. 54, 55; R. 25, 26)	2A, 3B
Winnibigoshish Lake	(T. 145, 146, 147; R. 27, 28, 29	2B, 3B
	Missouri River Basin	
Streams		
Beaver Creek	Source to South Dakota border	2C, 3B
Flandreau Creek	Source to South Dakota border	2C, 3B
Kanaranzi Creek	Source to Iowa border	2C, 3B
Medary Creek	Source to South Dakota border	2C, 3B
Mud Creek	Source to Iowa border	2C, 3B
Ocheyedan River	Ocheda Lake outlet to Iowa border	2B, 3B
Pipestone Creek	Source to South Dakota border	2C, 3B
Rock River	Source to Iowa border	2C, 3B
Little Rock River	Source to Iowa border	2C, 3B
Little Sioux River	Source to Iowa border	2C, 3B
West Fork of the Little Sioux River	Source to Iowa border	2C, 3B
Split Rock Creek	Source to Split Rock Lake	2B, 3B
Split Rock Creek	Split Rock Lake outlet to South Dakota border	2C, 3B
Lakes		
Illinois Lake	(T. 101; R. 38)	2B, 3B
Iowa Lake	(T. 101; R. 38, 39)	2B, 3B
Loon Lake	(T. 101; R. 35, 36)	2B, 3B
Ocheda Lake	(T. 101, 102; R. 39, 40)	2B, 3B
Pearl Lake	(T. 101; R. 36)	2B, 3B
Round Lake	(T. 101; R. 38)	2B, 3B
Rush Lake	(T. 101; R. 37)	2B, 3B
Spirit Lake	(T. 101; R. 35, 36)	2B, 3B
Split Rock Lake	(T. 105; R. 46)	2B, 3B
Little Spirit Lake	(T. 101; R. 36)	2B, 3B
	Red River of the North Basin	
Streams		
Joe River	Source to Canadian border	2C
Pine Creek	Canadian border to Roseau River	2B, 3B
Pine Creek Diversion	Canadian border to and	

	including Pine Creek diversion pools	2B, 3B
Red River of the North	Breckenridge to Canadian border	1C, 2C, 3B
Roseau River	Source to Canadian border	2B, 3B
Bois de Sioux River	Mud Lake outlet to Breckenridge	2C
Sprague Creek	Canadian border to Roseau River	2B
Lakes		
Mud Lake	(T. 127; R. 47)	2B
Lake Traverse	(T. 125, 126; R. 47, 48, 49)	2B
	St. Croix River Basin	
Streams		
Hay Creek	Wisconsin border to mouth	1B, 2B, 3B
St. Croix River	Wisconsin border crossing to Taylors Falls	1B, 2B
St. Croix River	Taylors Falls to mouth	1C, 2B, 3B
Lower Tamarack River	Hay Creek to mouth	1B, 2B, 3B
Upper Tamarack River (Spruce River)	Wisconsin border to mouth	1B, 2B, 3B
	Lake Superior Basin	
Streams		
Clear Creek	Source to Wisconsin border	1B, 2A
Mud Creek	Source to Wisconsin border	1B, 2B
Nemadji River	Source to Wisconsin border	1B, 2A
Pigeon River	South of Fowl Lake to Pigeon Bay of Lake Superior	1B, 2B, 3A
Little Pokegama River	Source to Wisconsin border	2B, 3B
Red River	Source to Wisconsin border	1B, 2A, 3B
St. Louis River	Seven Beaver Lake outlet to Cloquet	2B, 3B
St. Louis River	Cloquet to Clough Island	2C, 3B
South Fork of Nemadji River	Source to Wisconsin border	1B, 2A
State Line Creek	Source to Wisconsin border	1B, 2A, 3B
Lakes		
Black Lake	(T. 45; R. 15)	1B, 2B, 3B
Fan Lake	(T. 65; R. 2E)	1B, 2B, 3A
North Fowl Lake	(T. 64, 65; R. 3E)	1B, 2B, 3A
South Fowl Lake	(T. 64, 65; R. 3E)	1B, 2B, 3A
Lily Lakes	(T. 65; R. 2E)	1B, 2B,

		3A
Moose Lake	(T. 65; R. 2, 3E)	1B, 2A, 3A
Mountain Lake	(T. 65; R. 1, 2E)	1B, 2A
Rat Lake	(T. 65; R. 1W)	1B, 2B
Rose Lake	(T. 65; R. 1W)	1B, 2A
Rove Lake	(T. 65; R. 1E)	1B, 2B
St. Louis Bay	(T. 49, 50; R. 14, 15)	2B, 3B
Seven Beaver Lake	(T. 58; R. 11, 12)	2B, 3A
South Lake	(T. 65; R. 1, 2W)	1B, 2A
Superior Bay	(T. 49, 50; R. 13, 14)	2B, 3B
Lake Superior	(T. 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64; R. 14W-7E	1B, 2A, 3A
Watab Lake	(T. 65; R. 1E)	1B, 2B

Lake of the Woods Basin

Streams

Basswood River	Basswood Lake to Crooked Lake	1B, 2B
Bear Creek	Canadian border to Lake of the Woods	2B, 3B
Bottle River	Bottle Lake to Lac La Croix	1B, 2B
Granite River	Clove Lake to Gneiss Lake	1B, 2B
Harrison Creek	Canadian border to Lake of the Woods	2B, 3B
Kawishiwi River	Source to Fall Lake	1B, 2B, 3B
Knife River	Seed Lake to Carp Lake	1B, 2B
Loon River	Loon Lake to Little Vermillion Lake	1B, 2B
Pine River	Magnetic Lake to Clove Lake	1B, 2B
Poplar Creek	Canadian border to Lake of the Woods	2B, 3B
Rainy River	Outlet of Rainy Lake to Dam in International Falls	1B, 2B, 3A
Rainy River	Dam in International Falls to Railroad Bridge in Baudette	1C, 2B, 3A
Rainy River	Railroad Bridge in Baudette to Lake of the Woods	2B, 3A
Stony Creek	Canadian border to Lake of the Woods	2B, 3B

Lakes

Basswood Lake	(T. 64, 65; R. 9, 10, 11)	1B, 2A
Birch Lake	(T. 64, 65; R. 8, 9)	1B, 2B
Bottle Lake	(T. 67; R. 13)	1B, 2B
Carp Lake	(T. 65; R. 8)	1B, 2B
Clove (Pine) Lake	(T. 65; R. 4)	1B, 2B
Crane Lake	(T. 67, 68; R. 16, 17)	1B, 2A, 3A
Crooked Lake	(T. 65, 66; R. 12, 13)	1B, 2A
Cypress Lake	(T. 66; R. 6)	1B, 2B
Fall Lake	(T. 63, 64; R. 11, 12)	1B, 2B
Gneiss Lake	(T. 66; R. 4)	1B, 2B

Gunflint Lake	(T. 65; R. 2, 3, 4)	1B, 2A
Little Gunflint Lake	(T. 65; R. 2)	1B, 2B
Iron Lake	(T. 66, 67; R. 12, 13)	1B, 2B
Kabetogama Lake	(T. 69, 70; R. 20, 21, 22)	1B, 2B, 3A
Knife Lake	(T. 64, 65; R. 7, 8)	1B, 2A
Little Knife Lake	(T. 65, 66; R. 6, 7)	1B, 2B
Lac La Croix	(T. 67, 68; R. 13, 14, 15)	1B, 2B
Loon Lake	(T. 66, 67; R. 15)	1B, 2A
Magnetic Lake	(T. 65; R. 3, 4)	1B, 2A
Maraboeuf Lake	(T. 66; R. 4)	1B, 2B
Melon Lake	(T. 65; R. 8)	1B, 2B
Namakan Lake	(T. 69; R. 17, 18, 19)	1B, 2B, 3A
Newton Lake	(T. 63, 64; R. 11)	1B, 2B
North Lake	(T. 65; R. 2)	1B, 2A
Little North Lake	(T. 65; R. 2)	1B, 2B
Pipestone Bay	(T. 64, 65; R. 10, 11)	1B, 2B
Rainy Lake	(T. 70, 71; R. 18, 19, 20, 21, 22, 23)	1B, 2B, 3A
Saganaga Lake	(T. 66; R. 4, 5)	1B, 2A
Sand Point Lake	(T. 68, 69; R. 17)	1B, 2A, 3A
Seed Lake	(T. 65; R. 8)	1B, 2B
Sucker Lake	(T. 64; R. 8, 9)	1B, 2B
Swamp Lake	(T. 66; R. 5, 6)	1B, 2B
Little Vermillion Lake	(T. 67; R. 16)	1B, 2B
Lake of the Woods	(T. 161, 162, 163, 164, 165, 166, 167, 168; R. 30, 31, 32, 33, 34, 35)	1B, 2B, 3A

Statutory Authority: *MS s 115.03 subd 1; 115.44*

7055.0310 SUPPLEMENT 1; CLASS 7 LIMITED RESOURCE VALUE WATERS.

Red Cedar River Basin

Streams	
Unnamed Creek Emmons	T. 101, R. 22 S. 31

Lower Mississippi River Basin

Streams	
*Bear Creek, North Spring Grove	T. 101, R. 7, S. 26, 27, 35
*Pine Creek	T. 101, R. 9, S. 31
Harmony	T. 101, R. 10, S. 24, 25, 36
*Riceford Creek Mabel	T. 101, R. 8, S. 24, 25, 26

Missouri River Basin

Streams	
*Flandreau Creek	T. 108, R. 46, S. 1, 2, 11

Lake Benton	T. 109, R. 45, S. 30, 31
	T. 109, R. 46, S. 36
*Rock River	T. 107, R. 44, S. 18, 19, 20, 29
Holland	T. 107, R. 45, S. 12, 13
Unnamed Ditch	T. 101, R. 46 S. 28, 33
Hills	

Statutory Authority: *MS s 115.03 subd 1; 115.44*