Exhibit C

OFFICE OF THE REVISOR OF STATUTES

Minnesota Legislature

Cindy K. Maxwell, Senior Assistant Revisor

September 27, 2016

Kevin Molloy
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155

RE: File No. 4237

Dear Kevin:

I am enclosing four copies of your rules, approved as to form. Submit the revisor file number from the upper right corner of this document to the State Register for publication. Copies of the rules approved as to form do not need to be submitted to the State Register.

If you have any questions, please call me.

Please use the revisor file number on all rulemaking documents and all communications with the governor's office.

Sincerely,

Cindy K. Maxwell

Cindy K. Maxwell
(651) 296-0955
cindy.maxwell@revisor.mn.gov

Pollution Control Agency

Proposed Permanent Rule Relating to Water Quality Standards and Tiered Aquatic Life Use

7050.0140 USE CLASSIFICATIONS FOR WATERS OF THE STATE.

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

Subp. 3. **Class 2 waters, aquatic life and recreation.** Aquatic life and recreation includes all waters of the state that support or may support ~~fish, other aquatic life~~ aquatic biota, bathing, boating, or other recreational purposes and for which quality control is or may be necessary to protect aquatic or terrestrial life or their habitats or the public health, safety, or welfare.

[For text of subps 4 to 8, see M.R.]

7050.0150 DETERMINATION OF WATER QUALITY, BIOLOGICAL AND PHYSICAL CONDITIONS, AND COMPLIANCE WITH STANDARDS.

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

Subp. 3. **Narrative standards.** For all Class 2 waters, the aquatic habitat, which includes the waters of the state 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~~ aquatic biota normally present shall not be prevented or hindered by the discharge of any sewage, industrial waste, or other wastes to the waters.

Subp. 3a. **Assessment criteria.** The criteria by which water bodies are assessed to determine if beneficial uses are supported, and definitions of the data and information required for that assessment, is in Guidance Manual for Assessing the Quality of Minnesota

Surface Waters for Determination of Impairment: 305(b) Report and 303(d) List (2014 and as subsequently amended), which is incorporated by reference. The guidance manual is not subject to frequent change and is available at http://www.pca.state.mn.us/lupg1125.

Subp. 4. **Definitions.** For the purposes of this chapter and chapter 7053, the following terms have the meanings given them.

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 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 $122Q_{10}$, as described in part 7050.0130, subpart 3.

B. "Altered materially," "material increase," "material manner," "seriously impaired," and "significant increase," as used in subparts 3, 5, and 6, mean that pollution of the waters of the state has resulted in degradation of the physical, chemical, or biological qualities of the water body to the extent that attainable or previously existing beneficial uses are actually or potentially lost.

C. "Aquatic biota" means the aquatic community composed of game and nongame fish, minnows and other small fish, mollusks, insects, crustaceans and other invertebrates, submerged or emergent rooted vegetation, suspended or floating algae, substrate-attached algae, microscopic organisms, and other aquatic-dependent organisms that require aquatic systems for food or to fulfill any part of their life cycle, such as amphibians and certain wildlife species.

D. "Assemblage" means a taxonomic subset of a biological community such as fish in a stream community.

E. "Biological condition gradient" means a concept describing how aquatic communities change in response to increasing levels of stressors. In application, the

biological condition gradient is an empirical, descriptive model that rates biological communities on a scale from natural to highly degraded.

F. "Biological criteria, narrative" or "biocriteria, narrative" means written statements describing the attributes of the structure and function of aquatic assemblages in a water body necessary to protect the designated aquatic life beneficial use. The singular form "biological criterion, narrative" or "biocriterion, narrative" may also be used.

G. "Biological criteria, numeric" or "biocriteria, numeric" means specific quantitative measures of the attributes of the structure and function of aquatic communities in a water body necessary to protect the designated aquatic life beneficial use. The singular form "biological criterion, numeric" or "biocriterion, numeric" may also be used.

~~C.~~ H. "BOD_5" or "five-day biochemical oxygen demand" means the amount of dissolved oxygen needed by aerobic biological organisms to break down organic material present in a given water sample at a certain temperature over a five-day period.

~~D.~~ I. "Chlorophyll-a" means a pigment in green plants including algae. The concentration of chlorophyll-a, expressed in weight per unit volume of water, is a measurement of the abundance of algae.

~~E.~~ J. "Diel flux" means the daily change in a constituent, such as dissolved oxygen or pH, when there is a distinct daily cycle in the measurement. Diel dissolved oxygen flux means the difference between the maximum daily dissolved oxygen concentration and the minimum daily dissolved oxygen concentration.

~~F.~~ K. "Ecoregion" means an area of relative homogeneity in ecological systems based on similar soils, land use, land surface form, and potential natural vegetation. Minnesota ecoregions are shown on the map in part 7050.0468.

~~G.~~ L. "Eutrophication" means the increased productivity of the biological community in water bodies in response to increased nutrient loading. Eutrophication

is characterized by increased growth and abundance of algae and other aquatic plants, reduced water transparency, reduction or loss of dissolved oxygen, and other chemical and biological changes. The acceleration of eutrophication due to excess nutrient loading from human sources and activities, called cultural eutrophication, causes a degradation of water quality and possible loss of beneficial uses.

~~H.~~ M. "Eutrophication standard" means the combination of indicators of enrichment and indicators of response as described in subpart 5. The indicators upon which the eutrophication standard for specific water bodies are based are as provided under subparts 5a to 5c.

~~I. "Fish and other biota" and "lower aquatic biota" mean the aquatic community including, but not limited to, game and nongame fish, minnows and other small fish, mollusks, insects, crustaceans and other invertebrates, submerged or emergent rooted vegetation, suspended or floating algae, substrate-attached algae, and microscopic organisms. "Other biota" includes aquatic or semiaquatic organisms that depend on aquatic systems for food or habitat such as amphibians and certain wildlife species.~~

~~J.~~ N. "Hydraulic residence time" means the time water resides in a basin or, alternately, the time it would take to fill the basin if it were empty.

~~K.~~ O. "Impaired water" or "impaired condition" means a water body that does not meet applicable water quality standards or fully support applicable beneficial uses, due in whole or in part to water pollution from point or nonpoint sources, or any combination thereof.

~~L.~~ P. "Index of biotic integrity," "index of biological integrity," or "IBI" means an index developed by measuring attributes of an aquatic community that change in quantifiable and predictable ways in response to human disturbance, representing the health of that community.

~~M.~~ Q. "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.

~~N.~~ R. "Lake morphometry" means the physical characteristics of the lake basin that are reasonably necessary to determine the shape of a lake, such as maximum length and width, maximum and mean depth, area, volume, and shoreline configuration.

~~O.~~ S. "Mixing status" means the frequency of complete mixing of the lake water from surface to bottom, which is determined by whether temperature gradients are established and maintained in the water column during the summer season.

~~P.~~ T. "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.

~~Q.~~ U. "Natural causes" means the multiplicity of factors that determine the physical, chemical, or biological conditions that would exist in a water body in the absence of measurable impacts from human activity or influence.

~~R.~~ V. "Normal ~~fishery~~ aquatic biota" and "normally present" mean ~~the fishery and other~~ a healthy aquatic ~~biota~~ community expected to be present in the water body in the absence of pollution of the water, consistent with any variability due to natural hydrological, substrate, habitat, or other physical and chemical characteristics. Expected presence is based on comparing the aquatic community in the water body of interest to the aquatic community in representative reference water bodies.

~~S.~~ W. "Nuisance algae bloom" means an excessive population of algae that is characterized by obvious green or blue-green pigmentation in the water, floating mats of algae, reduced light transparency, aesthetic degradation, loss of recreational use,

possible harm to the aquatic community, or possible toxicity to animals and humans. Algae blooms are measured through tests for chlorophyll-a, observations of Secchi disk transparency, and observations of impaired recreational and aesthetic conditions by the users of the water body, or any other reliable data that identifies the population of algae in an aquatic community.

~~T.~~ X. "Periphyton" means algae on the bottom of a water body. In rivers or streams, these forms are typically found attached to logs, rocks, or other substrates, but when dislodged the algae will become part of the seston.

~~U.~~ Y. "Readily available and reliable data and information" means chemical, biological, and physical data and information determined by the commissioner to meet the quality assurance and quality control requirements in subpart 8, that are not more than ten years old from the time they are used for the assessment. A subset of data in the ten-year period, or data more than ten years old can be used if credible scientific evidence shows that these data are representative of current conditions.

~~V.~~ Z. "Reference water body" means a water body minimally or least impacted by point or nonpoint sources of pollution that is representative of water bodies ~~in the same ecoregion or watershed~~ of a similar surface water body type and within a geographic region such as an ecoregion or watershed. Reference water bodies are used as a base for comparing the quality of similar water bodies in the same ~~ecoregion or watershed~~ geographic region.

~~W.~~ AA. "Reservoir" means a body of water in a natural or artificial basin or watercourse 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.

~~X.~~ BB. "River nutrient region" means the geographic basis for regionalizing the river eutrophication criteria as described in Heiskary, S. and K. Parson, Regionalization

of Minnesota's Rivers for Application of River Nutrient Criteria, Minnesota Pollution Control Agency (2013), which is incorporated by reference. The document is not subject to frequent change and is available through the Minitex interlibrary loan system.

~~Y.~~ CC. "Secchi disk" means a tool that is used to measure the transparency of lake water. A Secchi disk is an eight-inch weighted disk on a calibrated rope, either white or with quadrants of black and white. To measure water transparency with a Secchi disk, the disk is viewed from the shaded side of a boat. The depth of the water at the point where the disk reappears upon raising it after it has been lowered beyond visibility is recorded.

~~Z.~~ DD. "Secchi disk transparency" means the transparency of water as measured by ~~either~~ a Secchi disk, a Secchi tube, or a transparency tube.

~~AA.~~ EE. "Secchi tube" means a tool that is used to measure the transparency of stream or river water. A Secchi tube is a clear plastic tube, one meter in length and 1-3/4 inch in diameter, with a mini-Secchi disk on a string. To measure water transparency, the tube is filled with water collected from a stream or river and, looking into the tube from the top, the weighted Secchi disk is lowered into the tube by a string until it disappears and then raised until it reappears, allowing the user to raise and lower the disk within the same water sample numerous times. The depth of the water at the midpoint between disappearance and reappearance of the disk is recorded in centimeters, which are marked on the side of the tube. If the Secchi disk is visible when it is lowered to the bottom of the tube, the transparency reading is recorded as "greater than 100 centimeters."

~~BB.~~ FF. "Seston" means particulate matter suspended in water bodies and includes plankton and organic and inorganic matter.

~~CC.~~ GG. "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. Shallow lakes are differentiated from wetlands and lakes on a case-by-case basis. Wetlands are defined in part 7050.0186, subpart 1a.

~~DD.~~ HH. "Summer-average" means a representative average of concentrations or measurements of nutrient enrichment factors, taken over one summer season.

~~EE.~~ II. "Summer season" means a period annually from June 1 through September 30.

~~FF.~~ JJ. "Transparency tube" means a tool that is used to measure the transparency of stream or river water. A transparency tube is a graduated clear plastic tube, 24 inches or more in length by 1-1/2 inches in diameter, with a stopper at the bottom end. The inside surface of the stopper is painted black and white. To measure water transparency, the tube is filled with water from a surface water; the water is released through a valve at the bottom end until the painted surface of the stopper is just visible through the water column when viewed from the top of the tube. The depth, in centimeters, is noted. More water is released until the screw in the middle of the painted symbol on the stopper is clearly visible; this depth is noted. The two observed depths are averaged to obtain a transparency measurement.

~~GG.~~ KK. "Trophic status or condition" means the productivity of a lake as measured by the phosphorus content, algae abundance, and depth of light penetration.

LL. "Use attainability analysis" means a structured scientific assessment of the physical, chemical, biological, and economic factors affecting attainment of the uses of water bodies. A use attainability analysis is required to remove a designated use specified in section 101(a)(2) of the Clean Water Act that is not an existing use. The allowable

reasons for removing a designated use are described in Code of Federal Regulations, title 40, section 131.10(g).

~~HH.~~ MM. "Water body" means a lake, reservoir, wetland, or a geographically defined portion of a river or stream.

NN. "Water body type" means a group of water bodies with similar natural physical, chemical, and biological attributes, where the characteristics are similar among water bodies within each type and distinct from water bodies of other types.

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

Subp. 6. **Impairment of biological community and aquatic habitat.** In evaluating whether the narrative standards in subpart 3, which prohibit serious impairment of the normal ~~fisheries and lower~~ aquatic biota ~~upon which they are dependent~~ and the use thereof, material alteration of the species composition, material degradation of stream beds, and the prevention or hindrance of the propagation and migration of ~~fish and other~~ aquatic biota normally present, are being met, the commissioner will consider all readily available and reliable data and information for the following factors of use impairment:

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

E. any other scientifically objective, credible, and supportable factors.

A finding of an impaired condition must be supported by data for the factors listed in at least one of items A to C. The biological quality of any given surface water body will be assessed by comparison to the biological conditions determined ~~for~~ by the commissioner using a biological condition gradient model or a set of reference water bodies which best represents the most natural condition for that surface ~~water body~~ water body type within a geographic region.

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

7050.0217 OBJECTIVES FOR PROTECTION OF SURFACE WATERS FROM TOXIC POLLUTANTS.

Subpart 1. **Purpose and applicability.** The purpose of this part is to establish the objectives for developing numeric water quality standards listed in parts 7050.0220, 7050.0222, 7050.0227, and 7052.0100 and site-specific water quality criteria for toxic pollutants or chemicals developed in the absence of numeric standards. The listed numeric standards for toxics and site-specific numeric criteria established by methods in parts 7050.0218 and 7050.0219 protect Class 2 waters for the propagation and maintenance of ~~fish and~~ aquatic ~~life~~ biota, the consumption of fish and edible aquatic life by humans, the use of surface waters for public and private domestic consumption where applicable, and the consumption of aquatic organisms by wildlife. These criteria also protect the uses assigned to Class 7, limited resource value, waters as described in parts 7050.0140 and 7050.0227.

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

7050.0218 FOR TOXIC POLLUTANTS: DEFINITIONS AND METHODS FOR DETERMINATION OF HUMAN HEALTH-BASED NUMERIC STANDARDS AND SITE-SPECIFIC NUMERIC CRITERIA FOR AQUATIC LIFE, HUMAN HEALTH, AND FISH-EATING WILDLIFE.

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

Subp. 3. **Definitions.** For the purposes of parts 7050.0217 to 7050.0227, the following terms have the meanings given them.

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

~~S. "Cold water fisheries" means a community of fish including species of trout and salmon from the Salmonidae family that inhabit trout waters as defined in part 7050.0420.~~

~~T.~~ S. "Criterion" means a number or numbers established for a pollutant derived under this part or part 7050.0219 or 7052.0110, or issued by the USEPA, to protect aquatic life, humans, or wildlife.

~~U.~~ T. "Developmental health endpoint" or "developmental toxicity" means an adverse effect on the developing organism that may result from parental exposure prior to conception, maternal exposure during prenatal development, or direct exposure postnatally until the time of sexual maturation. Developmental toxicity may be detected at any point in the lifespan of the organism. The major manifestations of developmental toxicity include:

(1) death of the developing organism;

(2) structural abnormality;

(3) altered growth; or

(4) functional deficiency.

~~V.~~ U. "Duration" means the time over which the instream concentration of a pollutant is averaged for comparison with the standard or criterion.

~~W.~~ V. "Durations for human health-based algorithms" or "D" means the length of the exposure period under consideration for noncancer and linear cancer algorithms.

(1) The four default D used in developing reference doses and corresponding intake rates are:

(a) acute: a period of 24 hours or less;

(b) short-term: a period of more than 24 hours, up to 30 days;

(c) subchronic: a period of more than 30 days, up to eight years based on application of the less than ten percent standard life expectancy of 70 years for humans; or

(d) chronic: a period of more than eight years.

(2) The default durations for use in the linear cancer algorithms with age dependent adjustment factors are:

(a) two years for the birth up to two-year age group;

(b) 14 years for the two- up to 16-year age group; and

(c) 54 years for the 16- up to 70-year age group.

For any algorithm, use of chemical-specific data to define durations for noncancer or linear cancer algorithms are preferred when acceptable data are available.

~~X.~~ W. "Effect concentration" or "EC50" means the toxicant concentration that causes equilibrium loss, immobilization, mortality, or other debilitating effects in 50 percent of the exposed organisms during a specific time of observation.

~~Y.~~ X. "Endocrine" or "E" means a change in circulating hormone levels or interactions with hormone receptors, regardless of the organ or organ system affected. Health endpoints with or without the E designation are deemed equivalent, for example, thyroid (E) = thyroid, and must be included in the same health risk index equation.

~~Z.~~ Y. "Final acute value" or "FAV" means an estimate of the concentration of a pollutant corresponding to the cumulative probability of 0.05 in the distribution of all the acute toxicity values for the genera or species from the acceptable acute toxicity tests conducted on a pollutant. The FAV is the acute toxicity limitation applied to mixing zones in part 7050.0210, subpart 5; and to dischargers in parts 7053.0215, subpart 1; 7053.0225, subpart 6; and 7053.0245, subpart 1.

~~AA.~~ Z. "Food chain multiplier" or "FCM" means the ratio of a bioaccumulation factor by trophic level to an appropriate bioconcentration factor. FCM refers to values developed using USEPA models or from available and reliable field studies.

~~BB.~~ AA. "Frequency" means the number of times a standard can be exceeded in a specified period of time without causing acute or chronic toxic effects on the aquatic community, human health, or fish-eating wildlife.

~~CC.~~ BB. "Genus mean acute value" or "GMAV" means the geometric mean of the SMAVs available for the genus.

~~DD.~~ CC. "Health risk index" means the sum of the quotients calculated by identifying all chemicals that share a common health endpoint or are based on linear carcinogenicity and dividing the water or fish tissue concentration for each chemical (measured or statistically derived) by its applicable chronic standard or chronic criterion. To meet the objectives in part 7050.0217, the health risk index must not exceed a value of one. The equations for the risk indices are found in part 7050.0222, subpart 7, items D and E.

~~EE.~~ DD. "Health risk index endpoint" or "health endpoint" means the general description of toxic effects used to group chemicals for the purpose of calculating a health risk index.

~~FF.~~ EE. "Intake rate" or "IR" means rate of ingestion, inhalation, or dermal contact, depending on the route of exposure, expressed as the amount of a media taken in, on a per body weight and daily basis, for a specified duration.

~~GG.~~ FF. "Lethal concentration" or "LC50" means the toxicant concentration killing 50 percent of the exposed organisms in a specific time of observation.

~~HH.~~ GG. "Lowest observable adverse effect level" or "LOAEL" means the lowest exposure level that caused a statistically or biologically significant increase in the frequency or severity of adverse effects observed between the exposed population and its appropriate control group.

~~II.~~ HH. "Magnitude" means the acceptable amount of a toxic pollutant in water or fish tissue expressed as a concentration.

~~JJ.~~ II. "Maximum criterion" or "MC" means the highest concentration of a toxicant in water to which aquatic organisms can be exposed for a brief time with zero to slight mortality. The MC equals the FAV divided by two.

~~KK.~~ JJ. "Maximum standard" or "MS" means the highest concentration of a toxicant in water to which aquatic organisms can be exposed for a brief time with zero to slight mortality. The MS equals the FAV divided by two. Maximum standards are listed in part 7050.0222.

~~LL.~~ KK. "MDH" means the Minnesota Department of Health.

~~MM.~~ LL. "Mode of action" or "MOA" means the sequence of key events following pollutant or chemical exposure upon which the toxic outcome depends.

~~NN.~~ MM. "National methods" means the methods the USEPA uses to develop aquatic life criteria as described in Stephan, C.E., D.J. Mount, D.J. Hansen, J.H. Gentile, G.A. Chapman, and W.A. Brungs, 1985, "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses," USEPA, Office of Research and Development, Environmental Research Laboratories, Duluth MN; Narragansett, RI, Corvallis, OR. 98 p; available through the National Technical Information Service, Springfield, VA. (Publication PB85-227049)

~~OO.~~ NN. "No observable adverse effect level" or "NOAEL" means the highest exposure level at which there is no statistically or biologically significant increase in the frequency or severity of adverse effects between the exposed population and its appropriate control group.

~~PP.~~ OO. "Octanol to water partition coefficient" or "K_{ow}" means the ratio of the concentration of a chemical in the octanol phase to its concentration in the aqueous phase of a two-phase octanol to water system after equilibrium of the chemical between the two phases has been achieved. The base 10 logarithm of the K_{ow} or log K_{ow} is used in the

calculation of bioaccumulation factors. The log K_{ow} has been shown to be proportional to the bioconcentration potential of lipophilic organic chemicals.

~~QQ.~~ PP. "Percent effluent" means the representation of acute or chronic toxicity of an effluent as a percent of whole effluent mixed in dilution water, where acute toxicity is expressed by LC50s or EC50s and chronic toxicity is expressed by NOAEL.

~~RR.~~ QQ. "Reference dose" or "RfD" means an estimate of a dose for a given duration to the human population, including susceptible subgroups such as infants, that is likely to be without an appreciable risk of adverse effects during a lifetime. It is derived from a suitable dose level at which there are few or no statistically or biologically significant increases in the frequency or severity of an adverse effect between the dosed population and its associated control group. The RfD includes one or more divisors, applied to the suitable dose level, accounting for:

(1) uncertainty in extrapolating from mammalian laboratory animal data to humans;

(2) variation in toxicological sensitivity among individuals in the human population;

(3) uncertainty in extrapolating from effects observed in a short-term study to effects of long-term exposure;

(4) uncertainty in using a study in which health effects were found at all doses tested; and

(5) uncertainty associated with deficiencies in the available data.

The product of the divisors is not to exceed 3,000 in an RfD used for a chronic standard. The RfD is expressed in units of daily dose as milligrams of chemical per kilogram of body weight-day or mg/kg-day.

~~SS.~~ RR. "Relative source contribution factor" or "RSC" means the percentage or apportioned amount (subtraction method) of the reference dose for a pollutant allocated to surface water exposures from drinking or incidental water ingestion and fish consumption. In the absence of sufficient data to establish a pollutant- or chemical-specific RSC value, the default RSC is 0.2 or 0.5 as described in part 7050.0219, subpart 5.

~~TT.~~ SS. "Species mean acute value" or "SMAV" means the geometric mean of all the available and acceptable acute values for a species.

~~UU.~~ TT. "Standard" means a number or numbers established for a pollutant or water quality characteristic to protect a specified beneficial use as listed in parts 7050.0221to 7050.0227. The standard for a toxic pollutant includes the CS, MS, and FAV. Some pollutants do not have an MS or an FAV due to insufficient data. For these pollutants, the CS alone is the standard.

~~VV.~~ UU. "Toxic effect" means an observable or measurable adverse biological event in an organ, tissue, or system. The designation of health endpoints does not exclude other possible observable or measurable biological events. For the purpose of grouping chemicals and creating a health risk index when multiple chemicals are present, toxic effects may be ascribed to more general health risk index endpoints or health endpoints.

~~WW.~~ VV. "Toxic pollutant" has the meaning given it in part 7050.0185, subpart 2, item F. Toxic pollutant is used interchangeably in this part and parts 7050.0217, 7050.0219, and 7050.0222, subpart 7, items B to G, with the terms "pollutant" and "chemical."

~~XX.~~ WW. "Toxic unit" means a measure of acute or chronic toxicity in an effluent. One acute toxic unit (TUa) is the reciprocal of the effluent concentration that causes 50 percent effect or mortality to organisms for acute exposures (100/LC50); one chronic toxic unit (TUc) is the reciprocal of the effluent concentration that causes no observable adverse effect level on test organisms for chronic exposures (100/NOAEL).

~~YY.~~ XX. "Trophic level" or "TL" means the food web level in an ecosystem that is occupied by an organism or group of organisms because of what they eat and how they are related to the rest of the food web. For example, trophic level 3 in an aquatic ecosystem consists of small fish such as bluegills, crappies, and smelt and trophic level 4 consists of larger carnivorous fish such as walleye, northern pike, and most trout species.

~~ZZ.~~ YY. "USEPA" means the United States Environmental Protection Agency.

~~AAA.~~ ZZ. "Water quality characteristic" means a characteristic of natural waters, such as total hardness or pH. Some water quality characteristics can affect the toxicity of pollutants to aquatic organisms.

~~BBB.~~ AAA. "Whole effluent toxicity test" means the aggregate toxic effect of an effluent measured directly by a toxicity test. Effects on tested organisms are measured and expressed as toxic units or percent effluent for both acute and chronic whole effluent toxicity tests.

Subp. 4. **Adoption of USEPA national criteria.** The USEPA establishes aquatic life and human health-based criteria under section 304(a)(1) of the Clean Water Act, United States Code, title 33, section 1314. The USEPA criteria, subject to modification as described in this subpart, are applicable to Class 2 waters of the state. The USEPA has described the national methods for developing aquatic life criteria in "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses."

USEPA criteria that vary with an ambient water quality characteristic such as total hardness or pH will be established for specific waters or reaches using data available to the commissioner. Central values such as the means or medians for the characteristic will be used unless there is evidence to support using different values. Values for water quality characteristics can be estimated for specific waters or reaches that have no data by using data from a nearby watershed with similar chemical properties.

A. The USEPA aquatic life criteria are adopted unchanged by the agency, unless modified under item C, as the criteria applicable to designated Class 2A waters in parts 7050.0420 and 7050.0470.

B. The USEPA criteria are adopted, subject to modification as described in this item or item C, for application to cool and warm water ~~fisheries~~ habitats and wetlands. Cool and warm water ~~fisheries~~ habitats (Class 2Bd~~,~~ and 2B~~, and 2C~~) ~~waters~~ are defined in part 7050.0430 or listed in part 7050.0470. Wetlands (Class 2D) waters are defined in part 7050.0425 or listed in part 7050.0470.

(1) Acute data, in the form of the ranked genus mean acute values used by the USEPA to determine the national criteria, are the data used to determine the Class 2Bd, 2B, ~~2C,~~ and 2D criteria.

[For text of subitems (2) to (4), see M.R.]

(5) If, as a result of the recalculation of the USEPA criterion for application to Class 2Bd, 2B, ~~2C,~~ and 2D waters, the FAV for these water classes is lower than the FAV for Class 2A waters, the Class 2Bd, 2B, ~~2C,~~ or 2D FAV will be changed to equal the Class 2A FAV, unless the lower Class 2Bd, 2B, ~~2C,~~ or 2D FAV is justified based on the available toxicological data.

[For text of subitems (6) and (7), see M.R.]

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

[For text of subps 5 to 8, see M.R.]

Subp. 9. **Wildlife-based criteria.** The agency shall use the procedures in this subpart to establish wildlife-based criteria. Wildlife criteria shall protect wildlife consumers of freshwater aquatic organisms from adverse effects of toxic pollutants. Wildlife criteria are applicable to all surface waters, subject to the exceptions in subpart 10, item B, subitem (1).

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

D. A final BAF for calculating a wildlife chronic criterion (CC_w) is determined as in subpart 7, except that the BCFs and BAFs are adjusted to represent whole body BCFs and BAFs.

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

(2) Normalized BCFs and BAFs are multiplied by five percent lipid for CC_w applicable to Class 2Bd, and 2B, ~~and 2C~~ waters.

[For text of subitem (3), see M.R.]

(4) BCFs estimated using the relationship between BCFs and the log K_{ow} are normalized by dividing the estimated BCF by 7.6 and then multiplying by 12 for Class 2A waters or by five for Class 2Bd, and 2B, ~~and 2C~~ waters.

[For text of subitem (5), see M.R.]

Subp. 10. **Applicable criteria or human health-based standard.** The final criteria or chronic standard for human health for toxic pollutants for surface waters must be the lowest of the applicable criteria or standards for human health derived under this part and part 7050.0219.

A. Applicable criteria or standards for human health by use for Class 2A, 2Bd, 2B, ~~2C,~~ and 2D surface waters are listed for each applicable population protected (aquatic life, humans, and fish-eating wildlife). The applicable criteria or standards for human health must be the lowest of the CC or CS as described in subitems (1) to (3):

[For text of subitems (1) to (3), see M.R.]

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

7050.0219 HUMAN HEALTH-BASED CRITERIA AND STANDARDS.

[For text of subps 1 to 10, see M.R.]

Subp. 11. **Final baseline BAF by trophic level.** Determine the final baseline BAF by trophic level (TL):

A. Calculate geometric mean baseline BAF for TL_3 and TL_4 using available species-means for each baseline BAF method. For Class 2A water, preference is given for *Salmonidae* data and developed as a single representative TL_4 baseline BAF ~~for cold-water aquatic communities~~.

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

[For text of subps 12 to 15, see M.R.]

7050.0220 SPECIFIC WATER QUALITY STANDARDS BY ASSOCIATED USE CLASSES.

Subpart 1. **Purpose and scope.** The numeric and narrative water quality standards in this chapter prescribe the qualities or properties of the waters of the state that are necessary for the designated public uses and benefits. If the standards in this chapter are exceeded, it is considered indicative of a polluted condition which is actually or potentially deleterious, harmful, detrimental, or injurious with respect to designated uses or established classes of the waters of the state.

All surface waters are protected for multiple beneficial uses. Numeric water quality standards are tabulated in this part for all uses applicable to four common categories of surface waters, so that all applicable standards for each category are listed together in subparts 3a to 6a. The four categories are:

A. cold water ~~sport fish (trout waters)~~ aquatic life and habitat, also protected for drinking water: Classes 1B~~, 2A,~~; 2Ae or 2Ag; 3A or 3B~~,~~; 4A and 4B~~,~~; and 5 (subpart 3a);

B. cool and warm water ~~sport fish~~ aquatic life and habitat, also protected for drinking water: Classes 1B or 1C~~, 2Bd,~~; 2Bde, 2Bdg, or 2Bdm; 3A or 3B~~,~~; 4A and 4B~~,~~; and 5 (subpart 4a);

C. cool and warm water ~~sport fish, indigenous aquatic life, and wetlands~~ aquatic life and habitat and wetlands: Classes ~~2B, 2C,~~ 2Be, 2Bg, 2Bm, or 2D; 3A, 3B, 3C, or 3D; 4A and 4B or 4C; and 5 (subpart 5a); and

D. limited resource value waters: Classes 3C~~,~~; 4A and 4B~~,~~; 5~~,~~; and 7 (subpart 6a).

Subp. 2. **Explanation of tables.**

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

D. The tables of standards in subparts 3a to 6a include the following abbreviations and acronyms:

AN	means aesthetic enjoyment and navigation, Class 5 waters
*	an asterisk following the FAV and MS values or double dashes (–) means part 7050.0222, subpart 7, item G, applies
(c)	means the chemical is assumed to be a human ~~carcinoge~~ carcinogen
CS	means chronic standard, defined in part 7050.0218, subpart 3
DC	means domestic consumption (drinking water), Class 1 waters
–	double dashes means there is no standard
exp. ()	means the natural antilogarithm (base e) of the expression in parenthesis
FAV	means final acute value, defined in part 7050.0218, subpart 3
IC	means industrial consumption, Class 3 waters
IR	means agriculture irrigation use, Class 4A waters
LS	means agriculture livestock and wildlife use, Class 4B waters
MS	means maximum standard, defined in part 7050.0218, subpart 3
NA	means not applicable
(S)	means the associated value is a secondary drinking water standard
su	means standard unit. It is the reporting unit for pH
TH	means total hardness in mg/L, which is the sum of the calcium and magnesium concentrations expressed as $CaCO_3$
TON	means threshold odor number

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

Subp. 3. [Repealed, 24 SR 1105]

Subp. 3a. **Cold water ~~sport fish~~ aquatic life and habitat, drinking water, and associated use classes.** Water quality standards applicable to use Classes 1B~~, 2A,~~; 2Ae or 2Ag; 3A or 3b~~,~~; 4A and 4B~~,~~; and 5 surface waters.

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

Subp. 4. [Repealed, 24 SR 1105]

Subp. 4a. **Cool and warm water ~~sport fish~~ aquatic life and habitat, drinking water, and associated use classes.** Water quality standards applicable to use Classes 1B or 1C~~, 2Bd,~~; 2Bde, 2Bdg, or 2Bdm; 3A or 3B~~,~~; 4A and 4B~~,~~; and 5 surface waters.

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

Subp. 5. [Repealed, 24 SR 1105]

Subp. 5a. **Cool and warm water ~~sport fish~~ aquatic life and habitat and associated use classes.** Water quality standards applicable to use Classes ~~2B~~ 2Be, 2Bg, 2Bm, ~~2C,~~ or 2D; 3A, 3B, or 3C; 4A and 4B; and 5 surface waters. See parts 7050.0223, subpart 5; 7050.0224, subpart 4; and 7050.0225, subpart 2, for Class 3D, 4C, and 5 standards applicable to wetlands, respectively.

A. MISCELLANEOUS SUBSTANCE, CHARACTERISTIC, OR POLLUTANT

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

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

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitem (6), see M.R.]

(7) Eutrophication standards for lakes, shallow lakes, and reservoirs (phosphorus, total, µg/L; chlorophyll-a, µg/L; Secchi disk transparency, meters)

See part 7050.0222, subparts 4~~,~~ and 4a~~, and 5~~	–	–	–	–	–	–

[For text of subitems (8) to (11), see M.R.]

2B~~,C~~&D CS	**2B~~,C~~&D MS**	**2B~~,C~~&D FAV**	**3A/3B/3C IC**	**4A IR**	**4B LS**	**5 AN**

---

(12) Oxygen, dissolved, mg/L

See part 7050.0222, subparts 4 ~~to~~ and 6	–	–	–	–	–	–

[For text of subitems (13) to (16), see M.R.]

2B~~,C~~&D CS	**2B~~,C~~&D MS**	**2B~~,C~~&D FAV**	**3A/3B/3C IC**	**4A IR**	**4B LS**	**5 AN**

[For text of subitems (17) to (22), see M.R.]

B. METALS AND ELEMENTS

2B~~,C~~&D CS	**2B~~,C~~&D MS**	**2B~~,C~~&D FAV**	**3A/3B/3C IC**	**4A IR**	**4B LS**	**5 AN**

[For text of subitems (1) to (4), see M.R.]

(5) Cadmium, total, µg/L

1.1	33	67	–	–	–	–

Class 2B~~, 2C~~, and 2D cadmium standards are hardness dependent. Cadmium values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 4, for examples at other hardness values and equations to calculate cadmium standards for any hardness value not to exceed 400 mg/L.

2B~~,C~~&D CS	**2B~~,C~~&D MS**	**2B~~,C~~&D FAV**	**3A/3B/3C IC**	**4A IR**	**4B LS**	**5 AN**

(6) Chromium +3, total, µg/L

207	1,737	3,469	–	–	–	–

Class 2B~~, 2C~~, and 2D trivalent chromium standards are hardness dependent. Chromium +3 values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 4, for examples at other hardness values and equations to calculate trivalent chromium standards for any hardness value not to exceed 400 mg/L.

[For text of subitems (7) and (8), see M.R.]

(9) Copper, total, µg/L

9.8	18	35	–	–	–	–

Class 2B~~, 2C~~, and 2D copper standards are hardness dependent. Copper values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 4, for examples at other hardness values and equations to calculate copper standards for any hardness value not to exceed 400 mg/L.

(10) Lead, total, µg/L

3.2	82	164	–	–	–	–

Class 2B~~, 2C~~, and 2D lead standards are hardness dependent. Lead values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 4, for examples at other hardness values and equations to calculate lead standards for any hardness value not to exceed 400 mg/L.

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (11) and (12), see M.R.]

(13) Nickel, total, µg/L

158	1,418	2,836	–	–	–	–

Class 2B~~, 2C,~~ and 2D nickel standards are hardness dependent. Nickel values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 4, for examples at other hardness values and equations to calculate nickel standards for any hardness value not to exceed 400 mg/L.

[For text of subitem (14), see M.R.]

(15) Silver, total, µg/L

1.0	2.0	4.1	–	–	–	–

Class 2B~~, 2C,~~ and 2D silver MS and FAV are hardness dependent. Silver values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 4, for examples at other hardness values and equations to calculate silver standards for any hardness value not to exceed 400 mg/L.

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitem (16), see M.R.]

(17) Zinc, total, µg/L

106	117	234	–	–	–	–

Class 2B~~, 2C,~~ and 2D zinc standards are hardness dependent. Zinc values shown are for a total hardness of 100 mg/L only. See part 7050.0222, subpart 4, for examples at other hardness values and equations to calculate zinc standards for any hardness value not to exceed 400 mg/L.

C. ORGANIC POLLUTANTS OR CHARACTERISTICS

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

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

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (6) to (10), see M.R.]

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (11) to (15), see M.R.]

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (16) to (20), see M.R.]

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (21) to (25), see M.R.]

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (26) to (30), see M.R.]

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

(31) Pentachlorophenol, µg/L

5.5	15	30	–	–	–	–

Class 2B~~, 2C,~~ and 2D standards are pH dependent, except that the CS will not exceed 5.5 µg/L. Pentachlorophenol values shown are for a pH of 7.5 only. See part 7050.0222, subpart 4, for examples at other pH values and equations to calculate pentachlorophenol standards for any pH value.

[For text of subitems (32) to (35), see M.R.]

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (36) to (40), see M.R.]

2B~~,C~~&D	**2B~~,C~~&D**	**2B~~,C~~&D**	**3A/3B/3C**	**4A**	**4B**	**5**
CS	**MS**	**FAV**	**IC**	**IR**	**LS**	**AN**

[For text of subitems (41) to (43), see M.R.]

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

G. Temperature must not exceed:

(1) Class 2B standard: five degrees Fahrenheit above natural in streams and three degrees Fahrenheit above natural in lakes, based on monthly average of maximum daily temperature, except in no case shall it exceed the daily average temperature of 86 degrees Fahrenheit; and

~~(2) Class 2C standard: five degrees Fahrenheit above natural in streams and three degrees Fahrenheit above natural in lakes, based on monthly average of maximum daily temperature, except in no case shall it exceed the daily average temperature of 90 degrees Fahrenheit; and~~

~~(3)~~ (2) Class 2D standard: maintain background as defined in part 7050.0222, subpart 6.

Subp. 6. [Repealed, 24 SR 1105]

Subp. 6a. **Limited resource value waters and associated use classes.**

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

C. The level of dissolved oxygen ~~shall~~ must be maintained at concentrations:

(1) that will avoid odors or putrid conditions in the receiving water;

(2) ~~or at concentrations~~ at not less than one milligram per liter (daily average); and

(3) ~~provided that measurable concentrations are present~~ above zero milligrams per liter at all times.

[For text of items D and E, see M.R.]

[For text of subp 7, see M.R.]

7050.0222 SPECIFIC WATER QUALITY STANDARDS FOR CLASS 2 WATERS OF THE STATE; AQUATIC LIFE AND RECREATION.

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

Subp. 2. **Class 2A waters; aquatic life and recreation.** The quality of Class 2A surface waters shall be such as to permit the propagation and maintenance of a healthy community of cold water ~~sport or commercial fish and associated~~ aquatic ~~life~~ biota, and their habitats according to the definitions in subpart 2c. These waters shall be suitable for

aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface waters is also protected as a source of drinking water. Abbreviations, acronyms, and symbols are explained in subpart 1.

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Acenaphthene	µg/L	20	HH	56	112	Tox
Acetochlor	µg/L	3.6	Tox	86	173	Tox
Acrylonitrile (c)	µg/L	0.38	HH	1,140*	2,281*	Tox
Alachlor (c)	µg/L	3.8	HH	800*	1,600*	Tox
Aluminum, total	µg/L	87	Tox	748	1,496	Tox
Ammonia un-ionized as N	µg/L	16	Tox	–	–	NA

The percent un-ionized ammonia can be calculated for any temperature and pH by using the following equation taken from Emerson, K., R.C. Russo, R.E. Lund, and R.V. Thurston, Aqueous ammonia equilibrium calculations; effect of pH and temperature. Journal of the Fisheries Research Board of Canada 32: 2379-2383 (1975):

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

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

$pk_a = 0.09 + (2730/T)$ (dissociation constant for ammonia)

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

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV

Anthracene	µg/L	0.035	Tox	0.32	0.63	Tox
Antimony, total	µg/L	5.5	HH	90	180	Tox
Arsenic, total	µg/L	2.0	HH	360	720	Tox
Atrazine (c)	µg/L	3.4	HH	323	645	Tox
Benzene (c)	µg/L	5.1	HH	4,487*	8,974*	Tox
Bromoform	µg/L	33	HH	2,900	5,800	Tox
Cadmium, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.7852[ln(total hardness mg/L)]-3.490)

The MS in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-3.828)

The FAV in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-3.1349)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total cadmium standards for five hardness values:

TH in mg/L	50	100	200	300	400
Cadmium, total					
CS µg/L	0.66	1.1	2.0	2.7	3.4
MS µg/L	1.8	3.9	8.6	14	19
FAV µg/L	3.6	7.8	17	27	37

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**

Carbon tetrachloride (c)	µg/L	1.9	HH	1750*	3500*	Tox
Chlordane (c)	ng/L	0.073	HH	1200*	2400*	Tox
Chloride	mg/L	230	Tox	860	1720	Tox
Chlorine, total residual	µg/L	11	Tox	19	38	Tox

Chlorine standard applies to conditions of continuous exposure, where continuous exposure refers to chlorinated effluents that are discharged for more than a total of two hours in any 24-hour period.

Chlorobenzene (Monochlorobenzene)	µg/L	20	HH	423	846	Tox
Chloroform (c)	µg/L	53	HH	1,392	2,784	Tox
Chlorpyrifos	µg/L	0.041	Tox	0.083	0.17	Tox
Chromium +3, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+1.561)

The MS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+3.688)

The FAV in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+4.380)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total chromium +3 standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Chromium +3, total					
CS µg/L	117	207	365	509	644
MS µg/L	984	1,737	3,064	4,270	5,405
FAV µg/L	1,966	3,469	6,120	8,530	10,797

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Chromium +6, total	µg/L	11	Tox	16	32	Tox
Cobalt, total	µg/L	2.8	HH	436	872	Tox
Color value	Pt/Co	30	NA	–	–	NA
Copper, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.620[ln(total hardness mg/L)]-0.570)

The MS in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-1.464)

The FAV in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-0.7703)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total copper standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Copper, total					
CS µg/L	6.4	9.8	15	19	23
MS µg/L	9.2	18	34	50	65
FAV µg/L	18	35	68	100	131

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV

33.1	Cyanide, free	µg/L	5.2	Tox	22	45	Tox
33.2	DDT (c)	ng/L	0.11	HH	550*	1100*	Tox
33.3	1,2-Dichloroethane (c)	µg/L	3.5	HH	45,050*	90,100*	Tox
33.4	Dieldrin (c)	ng/L	0.0065	HH	1,300*	2,500*	Tox
33.5	Di-2-ethylhexyl phthalate (c)	µg/L	1.9	HH	–*	–*	NA
33.6	Di-n-octyl phthalate	µg/L	30	Tox	825	1,650	Tox
33.7	Endosulfan	µg/L	0.0076	HH	0.084	0.17	Tox
33.8	Endrin	µg/L	0.0039	HH	0.090	0.18	Tox
33.9	*Escherichia (E.) coli*	See below	See below	HH	See below	See below	NA

33.11 Not to exceed 126 organisms per 100 milliliters as a geometric mean of not less
33.12 than five samples representative of conditions within any calendar month, nor shall
33.13 more than ten percent of all samples taken during any calendar month individually
33.14 exceed 1,260 organisms per 100 milliliters. The standard applies only between April
33.15 1 and October 31.

33.16	Ethylbenzene	µg/L	68	Tox	1,859	3,717	Tox

33.17	**Substance,**						**Basis**
33.18	**Characteristic,**						**for**
33.19	**or Pollutant**			**Basis**			**MS,**
33.20	**(Class 2A)**	**Units**	**CS**	**for CS**	**MS**	**FAV**	**FAV**

33.21 ---

33.22 Eutrophication standards for Class 2A lakes and reservoirs.

33.23 Designated lake trout lakes in all ecoregions (lake trout lakes support natural populations
33.24 of lake trout, *Salvelinus namaycush*):

33.25	Phosphorus, total	µg/L	12	NA	–	–	NA
33.26	Chlorophyll-a	µg/L	3	NA	–	–	NA
33.27	Secchi disk transparency	meters	No less than 4.8	NA	–	–	NA

33.29 Designated trout lakes in all ecoregions, except lake trout lakes:

Phosphorus, total	µg/L	20	NA	–	–	NA
Chlorophyll-a	µg/L	6	NA	–	–	NA
Secchi disk transparency	meters	No less than 2.5	NA	–	–	NA

Additional narrative eutrophication standards for Class 2A lakes and reservoirs are found under subpart 2a.

Eutrophication standards for Class 2A rivers and streams.

North River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 50
Chlorophyll-a (seston)	µg/L	less than or equal to 7
Diel dissolved oxygen flux	mg/L	less than or equal to 3.0
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 1.5

Central River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 100
Chlorophyll-a (seston)	µg/L	less than or equal to 18
Diel dissolved oxygen flux	mg/L	less than or equal to 3.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 2.0

South River Nutrient Region:

Phosphorus, total	µg/L	less than or equal to 150
Chlorophyll-a (seston)	µg/L	less than or equal to 35
Diel dissolved oxygen flux	mg/L	less than or equal to 4.5
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 3.0

Additional narrative eutrophication standards for Class 2A rivers and streams are found under subpart 2b.

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Fluoranthene	µg/L	1.9	Tox	3.5	6.9	Tox
Heptachlor (c)	ng/L	0.10	HH	260*	520*	Tox
Heptachlor epoxide (c)	ng/L	0.12	HH	270*	530*	Tox
Hexachlorobenzene (c)	ng/L	0.061	HH	–*	–*	Tox
Lead, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-4.705)

The MS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-1.460)

The FAV in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-0.7643)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total lead standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Lead, total					
CS µg/L	1.3	3.2	7.7	13	19
MS µg/L	34	82	197	331	477
FAV µg/L	68	164	396	663	956

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV

Lindane (c) (Hexachlorocyclohexane, gamma-)	µg/L	0.0087	HH	1.0*	2.0*	Tox
Mercury, total in water	ng/L	6.9	HH	2,400*	4,900*	Tox
Mercury, total in edible fish	mg/kg ppm	0.2	HH	NA	NA	NA
Methylene chloride (c) Dichloromethane)	µg/L	45	HH	13,875*	27,749*	Tox
Metolachlor	µg/L	23	Tox	271	543	Tox
Naphthalene	µg/L	65	HH	409	818	Tox
Nickel, total	µg/L	equation	Tox/HH	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS shall not exceed the human health-based standard of 297 µg/L. For waters with total hardness values less than 212 mg/L, the CS in µg/L is toxicity-based and shall not exceed: exp.(0.846[ln(total hardness mg/L)]+1.1645)

The MS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+3.3612)

The FAV in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+4.0543)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total nickel standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Nickel, total					
CS µg/L	88	158	283	297	297
MS µg/L	789	1,418	2,549	3,592	4,582
FAV µg/L	1,578	2,836	5,098	7,185	9,164

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Oil	µg/L	500	NA	5,000	10,000	NA
Oxygen, dissolved	mg/L	See below	NA	–	–	NA

7.0 mg/L as a daily minimum. This dissolved oxygen standard requires compliance with the standard 50 percent of the days at which the flow of the receiving water is equal to the $7Q_{10}$.

Parathion	µg/L	0.013	Tox	0.07	0.13	Tox
Pentachlorophenol	µg/L	0.93	HH	equation	equation	Tox

The MS and FAV vary with pH and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.005[pH]-4.830)

The FAV in µg/L shall not exceed: exp.(1.005[pH]-4.1373)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For pH values less than 6.0, 6.0 shall be used to calculate the standard and for pH values greater than 9.0, 9.0 shall be used to calculate the standard.

Example of pentachlorophenol standards for five pH values:

pH su	6.5	7.0	7.5	8.0	8.5
Pentachlorophenol					
CS µg/L	0.93	0.93	0.93	0.93	0.93
MS µg/L	5.5	9.1	15	25	41
FAV µg/L	11	18	30	50	82

Substance, Characteristic, or Pollutant (Class 2A)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
pH, minimum	su	6.5	NA	–	–	NA
pH, maximum	su	8.5	NA	–	–	NA
Phenanthrene	µg/L	3.6	Tox	32	64	Tox
Phenol	µg/L	123	Tox	2,214	4,428	Tox
Polychlorinated biphenyls, total (c)	ng/L	0.014	HH	1,000*	2,000*	Tox
Radioactive materials	NA	See below	NA	See below	See below	NA

Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as permitted by the appropriate authority having control over their use.

Selenium, total	µg/L	5.0	Tox	20	40	Tox
Silver, total	µg/L	0.12	Tox	equation	equation	Tox

The MS and FAV vary with total hardness and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-7.2156)

The FAV in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-6.520)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of silver standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Silver, total					
CS µg/L	0.12	0.12	0.12	0.12	0.12

MS µg/L	1.0	2.0	6.7	13	22	
FAV µg/L	1.2	4.1	13	27	44	

Substance, Characteristic, or Pollutant (Class 2A)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Temperature	°C or °F	No material increase	NA	–	–	NA
1,1,2,2-Tetrachloroethane (c)	µg/L	1.1	HH	1,127*	2,253*	Tox
Tetrachloroethylene (c)	µg/L	3.8	HH	428*	857*	Tox
Thallium, total	µg/L	0.28	HH	64	128	Tox
Toluene	µg/L	253	Tox	1,352	2,703	Tox
Toxaphene (c)	ng/L	0.31	HH	730*	1,500*	Tox
1,1,1-Trichloroethane	µg/L	329	Tox	2,957	5,913	Tox
1,1,2-Trichloroethylene (c)	µg/L	25	HH	6,988*	13,976*	Tox
2,4,6-Trichlorophenol	µg/L	2.0	HH	102	203	Tox
Total suspended solids (TSS)	mg/L	10	NA	–	–	NA
TSS standards for Class 2A may be exceeded for no more than ten percent of the time. This standard applies April 1 through September 30						
Vinyl chloride (c)	µg/L	0.17	HH	–*	–*	NA
Xylene, total m,p,o	µg/L	166	Tox	1,407	2,814	Tox
Zinc, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.7615)

The MS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.8604)

The FAV in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+1.5536

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of zinc standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Zinc, total					
CS µg/L	59	106	191	269	343
MS µg/L	65	117	211	297	379
FAV µg/L	130	234	421	594	758

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

Subp. 2c. **Beneficial use definitions for cold water stream and river habitats (Class 2A).**

A. Subitems (1) to (4) apply to the beneficial uses in items B and C:

(1) The designation and attainment of beneficial uses are based on the biological criteria in subpart 2d.

(2) The attributes of species composition, diversity, and functional organization are measured using:

(a) the fish-based IBI as defined in Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014); or

(b) the macroinvertebrate IBI as defined in Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014).

(3) Water body types for streams and rivers are defined in the documents referenced in subitem (2).

(4) The following documents are incorporated by reference and are not subject to frequent change:

(a) Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012). The document is available on the agency's Web site at www.pca.state.mn.us;

(b) Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014). The document is available on the agency's Web site at www.pca.state.mn.us;

(c) Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014). The document is available on the agency's Web site at www.pca.state.mn.us; and

(d) Development of Biological Criteria for Tiered Aquatic Life Uses, Minnesota Pollution Control Agency (2016). The document is available on the agency's Web site at www.pca.state.mn.us.

B. "Exceptional cold water aquatic life and habitat" or "Class 2Ae" is a beneficial use that means waters capable of supporting and maintaining an exceptional and balanced, integrated, adaptive community of cold water aquatic organisms having a species composition, diversity, and functional organization comparable to the 75th percentile of biological condition gradient level 3 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

C. "General cold water aquatic life and habitat" or "Class 2Ag" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of cold water aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 4 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

Subp. 2d. **Biological criteria for cold water stream and river habitats (Class 2A).**

Water Body Type	Tier	Class	Assemblage	Biocriterion
Southern cold water streams	Exceptional	2Ae	Fish	82
	General	2Ag	Fish	50
Northern cold water streams	Exceptional	2Ae	Fish	60
	General	2Ag	Fish	35
Northern cold water streams	Exceptional	2Ae	Macroinvertebrates	52
	General	2Ag	Macroinvertebrates	32
Southern cold water streams	Exceptional	2Ae	Macroinvertebrates	72
	General	2Ag	Macroinvertebrates	43

Subp. 3. **Class 2Bd waters.** The quality of Class 2Bd surface waters shall be such as to permit the propagation and maintenance of a healthy community of cool or warm water ~~sport or commercial fish and associated~~ aquatic ~~life~~ biota and their habitats according to the definitions in subpart 3c. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface waters is also protected as a source of drinking water. The applicable standards are given below. Abbreviations, acronyms, and symbols are explained in subpart 1.

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Acenaphthene	µg/L	20	HH	56	112	Tox
Acetochlor	µg/L	3.6	Tox	86	173	Tox
Acrylonitrile (c)	µg/L	0.38	HH	1,140*	2,281*	Tox
Alachlor (c)	µg/L	4.2	HH	800*	1,600*	Tox
Aluminum, total	µg/L	125	Tox	1,072	2,145	Tox
Ammonia un-ionized as N	µg/L	40	Tox	–	–	NA

The percent un-ionized ammonia can be calculated for any temperature and pH by using the following equation taken from Emerson, K., R.C. Russo, R.E. Lund, and R.V. Thurston, Aqueous ammonia equilibrium calculations; effect of pH and temperature. Journal of the Fisheries Research Board of Canada 32: 2379-2383 (1975):

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

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

$pk_a = 0.09 + (2730/T)$ (dissociation constant for ammonia)

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

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Anthracene	µg/L	0.035	Tox	0.32	0.63	Tox
Antimony, total	µg/L	5.5	HH	90	180	Tox
Arsenic, total	µg/L	2.0	HH	360	720	Tox
Atrazine (c)	µg/L	3.4	HH	323	645	Tox
Benzene (c)	µg/L	6.0	HH	4,487*	8,974*	Tox
Bromoform	µg/L	41	HH	2,900	5,800	Tox
Cadmium, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.7852[ln(total hardness mg/L)]-3.490)

The MS in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-1.685)

The FAV in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-0.9919)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total cadmium standards for five hardness values:

TH in mg/L	50	100	200	300	400
Cadmium, total					
CS µg/L	0.66	1.1	2.0	2.7	3.4
MS µg/L	15	33	73	116	160
FAV µg/L	31	67	146	231	319

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Carbon tetrachloride (c)	µg/L	1.9	HH	1,750*	3,500*	Tox
Chlordane (c)	ng/L	0.29	HH	1,200*	2,400*	Tox
Chloride	mg/L	230	Tox	860	1,720	Tox
Chlorine, total residual	µg/L	11	Tox	19	38	Tox

Chlorine standard applies to conditions of continuous exposure, where continuous exposure refers to chlorinated effluents that are discharged for more than a total of two hours in any 24-hour period.

Chlorobenzene (Monochlorobenzene)	µg/L	20	HH	423	846	Tox
Chloroform (c)	µg/L	53	HH	1,392	2,784	Tox
Chlorpyrifos	µg/L	0.041	Tox	0.083	0.17	Tox
Chromium +3, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+1.561)

The MS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+3.688)

The FAV in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+4.380)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total chromium +3 standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Chromium +3, total					
CS µg/L	117	207	365	509	644
MS µg/L	984	1,737	3,064	4,270	5,405
FAV µg/L	1,966	3,469	6,120	8,530	10,797

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Chromium +6, total	µg/L	11	Tox	16	32	Tox
Cobalt, total	µg/L	2.8	HH	436	872	Tox
Copper, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.620[ln(total hardness mg/L)]-0.570)

The MS in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-1.464)

The FAV in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-0.7703)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total copper standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Copper, total					
CS µg/L	6.4	9.8	15	19	23

MS µg/L	9.2	18	34	50	65	
FAV µg/L	18	35	68	100	131	

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Cyanide, free	µg/L	5.2	Tox	22	45	Tox
DDT (c)	ng/L	1.7	HH	550*	1,100*	Tox
1,2-Dichloroethane (c)	µg/L	3.8	HH	45,050*	90,100*	Tox
Dieldrin (c)	ng/L	0.026	HH	1,300*	2,500*	Tox
Di-2-ethylhexyl phthalate (c)	µg/L	1.9	HH	–*	–*	NA
Di-n-octyl phthalate	µg/L	30	Tox	825	1,650	Tox
Endosulfan	µg/L	0.029	HH	0.28	0.56	Tox
Endrin	µg/L	0.016	HH	0.090	0.18	Tox
Escherichia (E.) coli	See below	See below	HH	See below	See below	NA

Not to exceed 126 organisms per 100 milliliters as a geometric mean of not less than five samples representative of conditions within any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between April 1 and October 31.

Ethylbenzene	µg/L	68	Tox	1,859	3,717	Tox

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV

Eutrophication standards for Class 2Bd lakes, shallow lakes, and reservoirs.

Lakes, Shallow Lakes, and Reservoirs in Northern Lakes and Forest Ecoregion

Phosphorus, total	µg/L	30	NA	–	–	NA
Chlorophyll-a	µg/L	9	NA	–	–	NA
Secchi disk transparency	meters	Not less than 2.0	NA	–	–	NA
Lakes and Reservoirs in North Central Hardwood Forest Ecoregion						
Phosphorus, total	µg/L	40	NA	–	–	NA
Chlorophyll-a	µg/L	14	NA	–	–	NA
Secchi disk transparency	meters	Not less than 1.4	NA	–	–	NA
Lakes and Reservoirs in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions						
Phosphorus, total	µg/L	65	NA	–	–	NA
Chlorophyll-a	µg/L	22	NA	–	–	NA
Secchi disk transparency	meters	Not less than 0.9	NA	–	–	NA
Shallow Lakes in North Central Hardwood Forest Ecoregion						
Phosphorus, total	µg/L	60	NA	–	–	NA
Chlorophyll-a	µg/L	20	NA	–	–	NA
Secchi disk transparency	meters	Not less than 1.0	NA	–	–	NA
Shallow Lakes in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions						
Phosphorus, total	µg/L	90	NA	–	–	NA
Chlorophyll-a	µg/L	30	NA	–	–	NA
Secchi disk transparency	meters	Not less than 0.7	NA	–	–	NA

Additional narrative eutrophication standards for Class 2Bd lakes, shallow lakes, and reservoirs are found under subpart 3a.

Eutrophication standards for Class 2Bd rivers and streams.

North River Nutrient Region			
Phosphorus, total	µg/L	less than or equal to 50	
Chlorophyll-a (seston)	µg/L	less than or equal to 7	
Diel dissolved oxygen flux	mg/L	less than or equal to 3.0	
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 1.5	
Central River Nutrient Region			
Phosphorus, total	µg/L	less than or equal to 100	
Chlorophyll-a (seston)	µg/L	less than or equal to 18	
Diel dissolved oxygen flux	mg/L	less than or equal to 3.5	
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 2.0	
South River Nutrient Region			
Phosphorus, total	µg/L	less than or equal to 150	
Chlorophyll-a (seston)	µg/L	less than or equal to 35	
Diel dissolved oxygen flux	mg/L	less than or equal to 4.5	
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 3.0	

Additional narrative eutrophication standards for Class 2Bd rivers and streams are found under subpart 3b.

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Fluoranthene	µg/L	1.9	Tox	3.5	6.9	Tox
Heptachlor (c)	ng/L	0.39	HH	260*	520*	Tox
Heptachlor epoxide (c)	ng/L	0.48	HH	270*	530*	Tox
Hexachlorobenzene (c)	ng/L	0.24	HH	–*	–*	Tox
Lead, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-4.705)

The MS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-1.460)

The FAV in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-0.7643)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total lead standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Lead, total					
CS µg/L	1.3	3.2	7.7	13	19
MS µg/L	34	82	197	331	477
FAV µg/L	68	164	396	663	956

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Lindane (c) (Hexachlorocyclohexane, gamma-)	µg/L	0.032	HH	4.4*	8.8*	Tox
Mercury, total in water	ng/L	6.9	HH	2,400*	4,900*	Tox
Mercury, total in edible fish tissue	mg/kg ppm	0.2	HH	NA	NA	NA
Methylene chloride (c) (Dichloromethane)	µg/L	46	HH	13,875*	27,749*	Tox
Metolachlor	µg/L	23	Tox	271	543	Tox
Naphthalene	µg/L	81	Tox	409	818	Tox
Nickel, total	µg/L	equation	Tox/HH	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS shall not exceed the human health-based standard of 297 µg/L. For waters with total hardness values less than 212 mg/L, the CS in µg/L is toxicity-based and shall not exceed: exp.(0.846[ln(total hardness mg/L)]+1.1645)

The MS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+3.3612)

The FAV in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+4.0543)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total nickel standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Nickel, total					
CS µg/L	88	158	283	297	297
MS µg/L	789	1,418	2,549	3,592	4,582
FAV µg/L	1,578	2,836	5,098	7,185	9,164

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Oil	µg/L	500	NA	5,000	10,000	NA
Oxygen, dissolved	mg/L	See below	NA	–	–	NA

5.0 mg/L as a daily minimum. This dissolved oxygen standard may be modified on a site-specific basis according to part 7050.0220, subpart 7, except that no site-specific standard shall be less than 5 mg/L as a daily average and 4 mg/L as a daily minimum. Compliance with this standard is required 50 percent of the days at which the flow of the receiving water is equal to the $7Q_{10}$.

Parathion	µg/L	0.013	Tox	0.07	0.13	Tox
Pentachlorophenol	µg/L	1.9	HH	equation	equation	Tox

The MS and FAV vary with pH and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.005[pH]-4.830)

The FAV in µg/L shall not exceed: exp.(1.005[pH]-4.1373)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For pH values less than 6.0, 6.0 shall be used to calculate the standard and for pH values greater than 9.0, 9.0 shall be used to calculate the standard.

Example of pentachlorophenol standards for five pH values:

pH su	6.5	7.0	7.5	8.0	8.5
Pentachlorophenol					
CS µg/L	1.9	1.9	1.9	1.9	1.9
MS µg/L	5.5	9.1	15	25	41
FAV µg/L	11	18	30	50	82

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
pH, minimum	su	6.5	NA	–	–	NA
pH, maximum	su	9.0	NA	–	–	NA
Phenanthrene	µg/L	3.6	Tox	32	64	Tox
Phenol	µg/L	123	Tox	2,214	4,428	Tox
Polychlorinated biphenyls, total (c)	ng/L	0.029	HH	1,000*	2,000*	Tox
Radioactive materials	NA	See below	NA	See below	See below	NA

Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as permitted by the appropriate authority having control over their use.

Selenium, total	µg/L	5.0	Tox	20	40	Tox
Silver, total	µg/L	1.0	Tox	equation	equation	Tox

The MS and FAV vary with total hardness and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-7.2156)

The FAV in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-6.520)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total silver standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Silver, total					
CS µg/L	1.0	1.0	1.0	1.0	1.0
MS µg/L	1.0	2.0	6.7	13	22
FAV µg/L	1.2	4.1	13	27	44

Substance, Characteristic, or Pollutant (Class 2Bd)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Temperature	°F	See below	NA	–	–	NA

5°F above natural in streams and 3°F above natural in lakes, based on monthly average of the maximum daily temperatures, except in no case shall it exceed the daily average temperature of 86°F.

1,1,2,2-Tetrachloroethane (c)	µg/L	1.5	HH	1,127*	2,253*	Tox
Tetrachloroethylene (c)	µg/L	3.8	HH	428*	857*	Tox
Thallium, total	µg/L	0.28	HH	64	128	Tox

53.1	Toluene	µg/L	253	Tox	1,352	2,703	Tox
53.2	Toxaphene (c)	ng/L	1.3	HH	730*	1,500*	Tox
53.3	1,1,1-Trichloroethane	µg/L	329	Tox	2,957	5,913	Tox
53.4	1,1,2-Trichloroethylene (c)	µg/L	25	HH	6,988*	13,976*	Tox
53.5	2,4,6-Trichlorophenol	µg/L	2.0	HH	102	203	Tox
53.6 53.7	Total suspended solids (TSS)						
53.8 53.9	North River Nutrient Region	mg/L	15	NA	-	-	NA
53.10 53.11	Central River Nutrient Region	mg/L	30	NA	-	-	NA
53.12 53.13	South River Nutrient Region	mg/L	65	NA	-	-	NA
53.14 53.15	Red River mainstem - headwaters to border	mg/L	100	NA	-	-	NA
53.16 53.17 53.18 53.19 53.20 53.21 53.22 53.23 53.24	TSS standards for the Class 2Bd North, Central, and South River Nutrient Regions and the Red River mainstem may be exceeded for no more than ten percent of the time. This standard applies April 1 through September 30						
53.25 53.26	Total suspended solids (TSS), summer average						
53.27 53.28 53.29	Lower Mississippi River mainstem - Pools 2 through 4	mg/L	32	NA	-	-	NA
53.30 53.31 53.32	Lower Mississippi River mainstem below Lake Pepin	mg/L	30	NA	-	-	NA

TSS standards for the Class 2Bd Lower Mississippi River may be exceeded for no more than 50 percent of the time. This standard applies June 1 through September 30

Substance, Characteristic, or Pollutant (Class 2Bd)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Vinyl chloride (c)	µg/L	0.18	HH	–*	–*	NA
Xylene, total m,p,o	µg/L	166	Tox	1,407	2,814	Tox
Zinc, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.7615)

The MS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.8604)

The FAV in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+1.5536)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total zinc standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Zinc, total					
CS µg/L	59	106	191	269	343
MS µg/L	65	117	211	297	379
FAV µg/L	130	234	421	594	758

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

Subp. 3c. **Beneficial use definitions for warm or cool water stream and river habitats (Class 2Bd).**

A. Subitems (1) to (4) apply to the beneficial uses in items B to D:

(1) The designation and attainment of beneficial uses are based on the biological criteria in subpart 3d.

(2) The attributes of species composition, diversity, and functional organization are measured using:

(a) the fish-based IBI as defined in Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014); or

(b) the macroinvertebrate IBI as defined in Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014).

(3) Water body types for streams and rivers are defined in the documents referenced in subitem (2).

(4) The following documents are incorporated by reference and are not subject to frequent change:

(a) Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012). The document is available on the agency's Web site at www.pca.state.mn.us;

(b) Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014). The document is available on the agency's Web site at www.pca.state.mn.us;

(c) Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014). The document is available on the agency's Web site at www.pca.state.mn.us; and

(d) Development of Biological Criteria for Tiered Aquatic Life Uses, Minnesota Pollution Control Agency (2016). The document is available on the agency's Web site at www.pca.state.mn.us.

B. "Exceptional cool and warm water aquatic life and habitat, also protected as a source for drinking water" or "Class 2Bde" is a beneficial use that means waters capable of supporting and maintaining an exceptional and balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the 75th percentile of biological condition gradient level 3 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

C. "General cool and warm water aquatic life and habitat, also protected as a source for drinking water" or "Class 2Bdg" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 4 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

D. "Modified cool and warm water aquatic life and habitat, also protected as a source for drinking water" or "Class 2Bdm" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 5 as

established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

(1) To meet the definition in this item, waters must have been the subject of a use attainability analysis and must have been found to be incapable of supporting and maintaining the Class 2Bdg beneficial use because of human-induced modifications of the physical habitat that preclude the potential for recovery of the fauna. These modifications must be the result of direct alteration to the channel, such as drainageway maintenance, bank stabilization, and impoundments.

(2) Examples of Class 2Bdm waters are the stream channel modification activities regulated under:

(a) sections 401 and 404 of the Clean Water Act; or

(b) Minnesota Statutes, chapter 103E.

Subp. 3d. **Biological criteria for warm or cool water stream and river habitats (Class 2Bd).**

Water Body Type	Tier	Class	Assemblage	Biocriterion
Southern rivers	Exceptional	2Bde	Fish	71
	General	2Bdg	Fish	49
Southern streams	Exceptional	2Bde	Fish	66
	General	2Bdg	Fish	50
	Modified	2Bdm	Fish	35
Southern headwaters	Exceptional	2Bde	Fish	74
	General	2Bdg	Fish	55
	Modified	2Bdm	Fish	33
Northern rivers	Exceptional	2Bde	Fish	67
	General	2Bdg	Fish	38
Northern streams	Exceptional	2Bde	Fish	61

		General	2Bdg	Fish	47
		Modified	2Bdm	Fish	35
	Northern headwaters	Exceptional	2Bde	Fish	68
		General	2Bdg	Fish	42
		Modified	2Bdm	Fish	23
	Low gradient	Exceptional	2Bde	Fish	70
		General	2Bdg	Fish	42
		Modified	2Bdm	Fish	15
	Northern forest rivers	Exceptional	2Bde	Macroinvertebrates	77
		General	2Bdg	Macroinvertebrates	49
	Prairie and southern forest				
	rivers	Exceptional	2Bde	Macroinvertebrates	63
		General	2Bdg	Macroinvertebrates	31
	High-gradient northern				
	forest streams	Exceptional	2Bde	Macroinvertebrates	82
		General	2Bdg	Macroinvertebrates	53
	Low-gradient northern				
	forest streams	Exceptional	2Bde	Macroinvertebrates	76
		General	2Bdg	Macroinvertebrates	51
		Modified	2Bdm	Macroinvertebrates	37
	High-gradient southern				
	streams	Exceptional	2Bde	Macroinvertebrates	62
		General	2Bdg	Macroinvertebrates	37
		Modified	2Bdm	Macroinvertebrates	24
	Low-gradient southern				
	forest streams	Exceptional	2Bde	Macroinvertebrates	66
		General	2Bdg	Macroinvertebrates	43
		Modified	2Bdm	Macroinvertebrates	30
	Low-gradient prairie				
	streams	Exceptional	2Bde	Macroinvertebrates	69
		General	2Bdg	Macroinvertebrates	41
		Modified	2Bdm	Macroinvertebrates	22

Subp. 4. **Class 2B waters.** The quality of Class 2B surface waters shall be such as to permit the propagation and maintenance of a healthy community of cool or warm water ~~sport or commercial fish and associated~~ aquatic ~~life~~ biota, and their habitats according to the definitions in subpart 4c. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface water is not protected as a source of drinking water. The applicable standards are given below. Abbreviations, acronyms, and symbols are explained in subpart 1.

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Acenaphthene	µg/l	20	HH	56	112	Tox
Acetochlor	µg/L	3.6	Tox	86	173	Tox
Acrylonitrile (c)	µg/l	0.89	HH	1,140*	2,281*	Tox
Alachlor (c)	µg/L	59	Tox	800	1,600	Tox
Aluminum, total	µg/L	125	Tox	1,072	2,145	Tox
Ammonia un-ionized as N	µg/L	40	Tox	–	–	NA

The percent un-ionized ammonia can be calculated for any temperature and pH by using the following equation taken from Emerson, K., R.C. Russo, R.E. Lund, and R.V. Thurston, Aqueous ammonia equilibrium calculations; effect of pH and temperature. Journal of the Fisheries Research Board of Canada 32: 2379-2383 (1975):

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

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

$pk_a = 0.09 + (2730/T)$ (dissociation constant for ammonia)

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

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Anthracene	µg/L	0.035	Tox	0.32	0.63	Tox
Antimony, total	µg/L	31	Tox	90	180	Tox
Arsenic, total	µg/L	53	HH	360	720	Tox
Atrazine (c)	µg/L	10	Tox	323	645	Tox
Benzene (c)	µg/L	98	HH	4,487	8,974	Tox
Bromoform	µg/L	466	HH	2,900	5,800	Tox
Cadmium, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.7852[ln(total hardness mg/L)]-3.490)

The MS in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-1.685)

The FAV in µg/L shall not exceed: exp.(1.128[ln(total hardness mg/L)]-0.9919)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total cadmium standards for five hardness values:

TH in mg/L	50	100	200	300	400
Cadmium, total					
CS µg/L	0.66	1.1	2.0	2.7	3.4
MS µg/L	15	33	73	116	160
FAV µg/L	31	67	146	231	319

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Carbon tetrachloride (c)	µg/L	5.9	HH	1,750*	3,500*	Tox
Chlordane (c)	ng/L	0.29	HH	1,200*	2,400*	Tox
Chloride	mg/L	230	Tox	860	1,720	Tox
Chlorine, total residual	µg/L	11	Tox	19	38	Tox

Chlorine standard applies to conditions of continuous exposure, where continuous exposure refers to chlorinated effluents that are discharged for more than a total of two hours in any 24-hour period.

Chlorobenzene (Monochlorobenzene)	µg/L	20	HH	423	846	Tox
Chloroform (c)	µg/L	155	Tox	1,392	2,784	Tox
Chlorpyrifos	µg/L	0.041	Tox	0.083	0.17	Tox
Chromium +3, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations

The CS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+1.561)

The MS in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+3.688)

The FAV in µg/L shall not exceed: exp.(0.819[ln(total hardness mg/L)]+4.380)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total chromium +3 standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Chromium +3, total					

CS µg/L	117	207	365	509	644
MS µg/L	984	1,737	3,064	4,270	5,405
FAV µg/L	1,966	3,469	6,120	8,530	10,797

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Chromium +6, total	µg/L	11	Tox	16	32	Tox
Cobalt, total	µg/L	5.0	Tox	436	872	Tox
Copper, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.6200[ln(total hardness mg/L)]-0.570)

The MS in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-1.464)

The FAV in µg/L shall not exceed: exp.(0.9422[ln(total hardness mg/L)]-0.7703)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total copper standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Copper, total					
CS µg/L	6.4	9.8	15	19	23
MS µg/L	9.2	18	34	50	65
FAV µg/L	18	35	68	100	131

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Cyanide, free	µg/L	5.2	Tox	22	45	Tox
DDT (c)	ng/L	1.7	HH	550*	1,100*	Tox
1,2-Dichloroethane (c)	µg/L	190	HH	45,050*	90,100*	Tox
Dieldrin (c)	ng/L	0.026	HH	1,300*	2,500*	Tox
Di-2-ethylhexyl phthalate (c)	µg/L	2.1	HH	–*	–*	NA
Di-n-octyl phthalate	µg/L	30	Tox	825	1,650	Tox
Endosulfan	µg/L	0.031	HH	0.28	0.56	Tox
Endrin	µg/L	0.016	HH	0.090	0.18	Tox
Escherichia (E.) coli	See below	See below	HH	See below	See below	NA

Not to exceed 126 organisms per 100 milliliters as a geometric mean of not less than five samples representative of conditions within any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between April 1 and October 31.

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Ethylbenzene	µg/L	68	Tox	1,859	3,717	Tox

Eutrophication standards for Class 2B lakes, shallow lakes, and reservoirs.

Lakes, Shallow Lakes, and Reservoirs in Northern Lakes and Forest Ecoregions

Phosphorus, total	µg/L	30	NA	–	–	NA
Chlorophyll-a	µg/L	9	NA	–	–	NA
Secchi disk transparency	meters	Not less than 2.0	NA	–	–	NA

Lakes and Reservoirs in North Central Hardwood Forest Ecoregion

Phosphorus, total	µg/L	40	NA	–	–	NA
Chlorophyll-a	µg/L	14	NA	–	–	NA
Secchi disk transparency	meters	Not less than 1.4	NA	–	–	NA

Lakes and Reservoirs in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions

Phosphorus, total	µg/L	65	NA	–	–	NA
Chlorophyll-a	µg/L	22	NA	–	–	NA
Secchi disk transparency	meters	Not less than 0.9	NA	–	–	NA

Shallow Lakes in North Central Hardwood Forest Ecoregion

Phosphorus, total	µg/L	60	NA	–	–	NA
Chlorophyll-a	µg/L	20	NA	–	–	NA
Secchi disk transparency	meters	Not less than 1.0	NA	–	–	NA

Shallow Lakes in Western Corn Belt Plains and Northern Glaciated Plains Ecoregions

Phosphorus, total	µg/L	90	NA	–	–	NA
Chlorophyll-a	µg/L	30	NA	–	–	NA
Secchi disk transparency	meters	Not less than 0.7	NA	–	–	NA

Additional narrative eutrophication standards for Class 2B lakes, shallow lakes, and reservoirs are found in subpart 4a.

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Eutrophication standards for Class 2B rivers and streams.						
North River Nutrient Region						
Phosphorus, total	µg/L			less than or equal to 50		
Chlorophyll-a (seston)	µg/L			less than or equal to 7		
Diel dissolved oxygen flux	mg/L			less than or equal to 3.0		
Biochemical oxygen demand (BOD_5)	mg/L			less than or equal to 1.5		
Central River Nutrient Region						
Phosphorus, total	µg/L			less than or equal to 100		
Chlorophyll-a (seston)	µg/L			less than or equal to 18		
Diel dissolved oxygen flux	mg/L			less than or equal to 3.5		
Biochemical oxygen demand (BOD_5)	mg/L			less than or equal to 2.0		
South River Nutrient Region						
Phosphorus, total	µg/L			less than or equal to 150		
Chlorophyll-a (seston)	µg/L			less than or equal to 40		
Diel dissolved oxygen flux	mg/L			less than or equal to 5.0		
Biochemical oxygen demand (BOD_5)	mg/L			less than or equal to 3.5		
Site-specific standards for specified river reaches or other waters are:						
Mississippi River Navigational Pool 1 (river miles 854.1 to 847.7 reach from Fridley to Ford Dam in St. Paul)						
Phosphorus, total	µg/L			less than or equal to 100		
Chlorophyll-a (seston)	µg/L			less than or equal to 35		

	Mississippi River Navigational Pool 2 (river miles 847.7 to 815.2 reach from Ford Dam to Hastings Dam)		
	Phosphorus, total	µg/L	less than or equal to 125
	Chlorophyll-a (seston)	µg/L	less than or equal to 35
	Mississippi River Navigational Pool 3 (river miles 815.2 to 796.9 reach from Hastings Dam to Red Wing Dam)		
	Phosphorus, total	µg/L	less than or equal to 100
	Chlorophyll-a (seston)	µg/L	less than or equal to 35
	Mississippi River Navigational Pool 4 (river miles 796.9 to 752.8 reach from Red Wing Dam to Alma Dam). Lake Pepin occupies majority of Pool 4 and Lake Pepin site-specific standards are used for this pool.		
	Mississippi River Navigational Pools 5 to 8 (river miles 752.8 to 679.1 Alma Dam to Genoa Dam)		
	Phosphorus, total	µg/L	less than or equal to 100
	Chlorophyll-a (seston)	µg/L	less than or equal to 35
	Lake Pepin		
	Phosphorus, total	µg/L	less than or equal to 100
	Chlorophyll-a (seston)	µg/L	less than or equal to 28
	Crow Wing River from confluence of Long Prairie River to the mouth of the Crow Wing River at the Mississippi River		
	Phosphorus, total	µg/L	less than or equal to 75
	Chlorophyll-a (seston)	µg/L	less than or equal to 13
	Diel dissolved oxygen flux	mg/L	less than or equal to 3.5
	Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 1.7
	Crow River from the confluence of the North Fork of the Crow River and South Fork of the Crow River to the mouth of the Crow River at the Mississippi River		

Phosphorus, total	µg/L	less than or equal to 125
Chlorophyll-a (seston)	µg/L	less than or equal to 27
Diel dissolved oxygen flux	mg/L	less than or equal to 4.0
Biochemical oxygen demand (BOD_5)	mg/L	less than or equal to 2.5

Additional narrative eutrophication standards for Class 2B rivers and streams are found in subpart 4b.

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Fluoranthene	µg/L	1.9	Tox	3.5	6.9	Tox
Heptachlor (c)	ng/L	0.39	HH	260*	520*	Tox
Heptachlor epoxide (c)	ng/L	0.48	HH	270*	530*	Tox
Hexachlorobenzene (c)	ng/L	0.24	HH	–*	–*	Tox
Lead, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-4.705)

The MS in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-1.460)

The FAV in µg/L shall not exceed: exp.(1.273[ln(total hardness mg/L)]-0.7643)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total lead standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Lead, total					
CS µg/L	1.3	3.2	7.7	13	19

MS µg/L	34	82	197	331	477
FAV µg/L	68	164	396	663	956

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Lindane (c) (Hexachlorocyclobenzene, gamma-)	µg/L	0.036	HH	4.4*	8.8*	Tox
Mercury, total in water	ng/L	6.9	HH	2,400*	4,900*	Tox
Mercury, total in edible fish tissue	mg/kg ppm	0.2	HH	NA	NA	NA
Methylene chloride (c) (Dichloromethane)	µg/L	1,940	HH	13,875	27,749	Tox
Metolachlor	µg/L	23	Tox	271	543	Tox
Naphthalene	µg/L	81	Tox	409	818	Tox
Nickel, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+1.1645)

The MS in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/L)]+3.3612)

The FAV in µg/L shall not exceed: exp.(0.846[ln(total hardness mg/l)]+4.0543)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total nickel standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Nickel, total					
CS µg/L	88	158	283	399	509

MS µg/L	789	1,418	2,549	3,592	4,582
FAV µg/L	1,578	2,836	5,098	7,185	9,164

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Oil	µg/l	500	NA	5,000	10,000	NA
Oxygen, dissolved	mg/L	See below	NA	–	–	NA

5.0 mg/L as a daily minimum. This dissolved oxygen standard may be modified on a site-specific basis according to part 7050.0220, subpart 7, except that no site-specific standard shall be less than 5 mg/L as a daily average and 4 mg/L as a daily minimum. Compliance with this standard is required 50 percent of the days at which the flow of the receiving water is equal to the $7Q_{10}$. This standard applies to all Class 2B waters except for:

(1) those portions 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 is not less than 5 mg/L as a daily average from April 1 through November 30, and not less than 4 mg/L at other times; and

(2) the portion of the Minnesota River from the outlet of the Blue Lake wastewater treatment works (River Mile 21) to the mouth at Fort Snelling. For the specified reach of the Minnesota River, the standard is not less than 5 mg/L as a daily average year round.

Parathion	µg/L	0.013	Tox	0.07	0.13	Tox
Pentachlorophenol	µg/L	equation	Tox/HH	equation	equation	Tox

The CS, MS, and FAV vary with pH and are calculated using the following equations:

For waters with pH values greater than 6.95, the CS shall not exceed the human health-based standard of 5.5 µg/L.

For waters with pH values less than 6.96, the CS in µg/L shall not exceed the toxicity-based standard of exp.(1.005[pH]-5.290)

The MS in µg/L shall not exceed: exp.(1.005[pH]-4.830)

The FAV in µg/L shall not exceed: exp.(1.005[pH]-4.1373)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For pH values less than 6.0, 6.0 shall be used to calculate the standard and for pH values greater than 9.0, 9.0 shall be used to calculate the standard.

Example of pentachlorophenol standards for five pH values:

pH su	6.5	7.0	7.5	8.0	8.5
Pentachlorophenol					
CS µg/L	3.5	5.5	5.5	5.5	5.5
MS µg/L	5.5	9.1	15	25	41
FAV µg/L	11	18	30	50	82

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
pH, minimum	su	6.5	NA	–	–	NA
pH, maximum	su	9.0	NA	–	–	NA
Phenanthrene	µg/L	3.6	Tox	32	64	Tox
Phenol	µg/L	123	Tox	2,214	4,428	Tox
Polychlorinated biphenyls, total (c)	ng/L	0.029	HH	1,000*	2,000*	Tox
Radioactive materials	NA	See below	NA	See below	See below	NA

Not to exceed the lowest concentrations permitted to be discharged to an uncontrolled environment as permitted by the appropriate authority having control over their use.

Selenium, total	µg/L	5.0	Tox	20	40	Tox
Silver, total	µg/L	1.0	Tox	equation	equation	Tox

The MS and FAV vary with total hardness and are calculated using the following equations:

The MS in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-7.2156)

The FAV in µg/L shall not exceed: exp.(1.720[ln(total hardness mg/L)]-6.520

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total silver standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Silver, total					
CS µg/L	1.0	1.0	1.0	1.0	1.0
MS µg/L	1.0	2.0	6.7	13	22
FAV µg/L	1.2	4.1	13	27	44

Substance, Characteristic, or Pollutant (Class 2B)	**Units**	**CS**	**Basis for CS**	**MS**	**FAV**	**Basis for MS, FAV**
Temperature	°F	See below	NA	–	–	NA

5°F above natural in streams and 3°F above natural in lakes, based on monthly average of the maximum daily temperatures, except in no case shall it exceed the daily average temperature of 86°F.

1,1,2,2-Tetrachloroethane (c)	µg/L	13	HH	1,127	2,253	Tox
Tetrachloroethylene (c)	µg/L	8.9	HH	428	857	Tox
Thallium, total	µg/L	0.56	HH	64	128	Tox
Toluene	µg/L	253	Tox	1,352	2,703	Tox

72.1	Toxaphene (c)	ng/L	1.3	HH	730*	1,500*	Tox
72.2	1,1,1-Trichloroethane	µg/L	329	Tox	2,957	5,913	Tox
72.3	1,1,2-Trichloroethylene (c)	µg/L	120	HH	6,988	13,976	Tox
72.4	2,4,6-Trichlorophenol	µg/L	2.0	HH	102	203	Tox
72.5	Total suspended solids (TSS)						
72.6	North River Nutrient Region	mg/L	15	NA	–	–	NA
72.7	Central River Nutrient						
72.8	Region	mg/L	30	NA	–	–	NA
72.9	South River Nutrient Region	mg/L	65	NA	–	–	NA
72.10	Red River mainstem -						
72.11	headwaters to border	mg/L	100	NA	–	–	NA
72.12	TSS standards for the Class						
72.13	2B North, Central, and South						
72.14	River Nutrient Regions and						
72.15	the Red River mainstem may						
72.16	be exceeded for no more						
72.17	than ten percent of the time.						
72.18	This standard applies April 1						
72.19	through September 30						
72.20	Total suspended solids (TSS),						
72.21	summer average						
72.22	Lower Mississippi River						
72.23	mainstem - Pools 2 through 4	mg/L	32	NA	–	–	NA
72.24	Lower Mississippi River						
72.25	mainstem below Lake Pepin	mg/L	30	NA	–	–	NA
72.26	TSS standards for the Class						
72.27	2B Lower Mississippi River						
72.28	may be exceeded for no more						
72.29	than 50 percent of the time.						
72.30	This standard applies June 1						
72.31	through September 30						

Substance, Characteristic, or Pollutant (Class 2B)	Units	CS	Basis for CS	MS	FAV	Basis for MS, FAV
Vinyl chloride (c)	µg/L	9.2	HH	–*	–*	NA
Xylene, total m,p,o	µg/L	166	Tox	1,407	2,814	Tox
Zinc, total	µg/L	equation	Tox	equation	equation	Tox

The CS, MS, and FAV vary with total hardness and are calculated using the following equations:

The CS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.7615)

The MS in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+0.8604)

The FAV in µg/L shall not exceed: exp.(0.8473[ln(total hardness mg/L)]+1.5536)

Where: exp. is the natural antilogarithm (base e) of the expression in parenthesis.

For hardness values greater than 400 mg/L, 400 mg/L shall be used to calculate the standard.

Example of total zinc standards for five total hardness values:

TH in mg/L	50	100	200	300	400
Zinc, total					
CS µg/L	59	106	191	269	343
MS µg/L	65	117	211	297	379
FAV µg/L	130	234	421	594	758

[For text of subps 4a and 4b, see M.R.]

Subp. 4c. **Beneficial use definitions for warm or cool water stream and river habitats (Class 2B).**

A. Subitems (1) to (4) apply to the beneficial uses in items B to D:

(1) The designation and attainment of beneficial uses are based on the criteria in subpart 4d.

(2) The attributes of species composition, diversity, and functional organization are measured using:

(a) the fish-based IBI as defined in Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014); or

(b) the macroinvertebrate IBI as defined in Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014).

(3) Water body types for streams and rivers are defined in the documents referenced in subitem (2).

(4) The following documents are incorporated by reference and are not subject to frequent change:

(a) Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012). The document is available on the agency's Web site at www.pca.state.mn.us;

(b) Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014). The document is available on the agency's Web site at www.pca.state.mn.us;

(c) Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014). The document is available on the agency's Web site at www.pca.state.mn.us; and

(d) Development of Biological Criteria for Tiered Aquatic Life Uses, Minnesota Pollution Control Agency (2016). The document is available on the agency's Web site at www.pca.state.mn.us.

B. "Exceptional cool and warm water aquatic life and habitat" or "Class 2Be" is a beneficial use that means waters capable of supporting and maintaining an exceptional and balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the 75th percentile of biological condition gradient level 3 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

C. "General cool and warm water aquatic life and habitat" or "Class 2Bg" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 4 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

D. "Modified cool and warm water aquatic life and habitat" or "Class 2Bm" is a beneficial use that means waters capable of supporting and maintaining a balanced, integrated, adaptive community of warm or cool water aquatic organisms having a species composition, diversity, and functional organization comparable to the median of biological condition gradient level 5 as established in Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012).

(1) To meet the definition in this item, waters must have been the subject of a use attainability analysis and must have been found to be incapable of supporting and maintaining the Class 2Bg beneficial use because of human-induced modifications of the physical habitat that preclude the potential for recovery of the fauna. These modifications

must be the result of direct alteration to the channel, such as drainageway maintenance, bank stabilization, and impoundments.

(2) Examples of Class 2Bm waters are the stream channel modification activities regulated under:

(a) sections 401 and 404 of the Clean Water Act; or

(b) Minnesota Statutes, chapter 103E.

Subp. 4d. **Biological criteria for warm or cool water stream and river habitats (Class 2B).**

Water Body Type	Tier	Class	Assemblage	Biocriterion
Southern rivers	Exceptional	2Be	Fish	71
	General	2Bg	Fish	49
Southern streams	Exceptional	2Be	Fish	66
	General	2Bg	Fish	50
	Modified	2Bm	Fish	35
Southern headwaters	Exceptional	2Be	Fish	74
	General	2Bg	Fish	55
	Modified	2Bm	Fish	33
Northern rivers	Exceptional	2Be	Fish	67
	General	2Bg	Fish	38
Northern streams	Exceptional	2Be	Fish	61
	General	2Bg	Fish	47
	Modified	2Bm	Fish	35
Northern headwaters	Exceptional	2Be	Fish	68
	General	2Bg	Fish	42
	Modified	2Bm	Fish	23
Low gradient	Exceptional	2Be	Fish	70
	General	2Bg	Fish	42

		Modified	2Bm	Fish	15
Northern forest rivers		Exceptional	2Be	Macroinvertebrates	77
		General	2Bg	Macroinvertebrates	49
Prairie and southern forest rivers		Exceptional	2Be	Macroinvertebrates	63
		General	2Bg	Macroinvertebrates	31
High-gradient northern forest streams		Exceptional	2Be	Macroinvertebrates	82
		General	2Bg	Macroinvertebrates	53
Low-gradient northern forest streams		Exceptional	2Be	Macroinvertebrates	76
		General	2Bg	Macroinvertebrates	51
		Modified	2Bm	Macroinvertebrates	37
High-gradient southern streams		Exceptional	2Be	Macroinvertebrates	62
		General	2Bg	Macroinvertebrates	37
		Modified	2Bm	Macroinvertebrates	24
Low-gradient southern forest streams		Exceptional	2Be	Macroinvertebrates	66
		General	2Bg	Macroinvertebrates	43
		Modified	2Bm	Macroinvertebrates	30
Low-gradient prairie streams		Exceptional	2Be	Macroinvertebrates	69
		General	2Bg	Macroinvertebrates	41
		Modified	2Bm	Macroinvertebrates	22

Subp. 5. [See repealer.]

[For text of subps 6 to 9, see M.R.]

7050.0227 SPECIFIC WATER QUALITY STANDARDS FOR CLASS 7 WATERS OF THE STATE; LIMITED RESOURCE VALUE WATERS.

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

Subp. 2. **Class 7 waters; limited resource value waters.** The quality of Class 7 waters of the state shall be such as to protect aesthetic qualities, secondary body contact use, and groundwater for use as a potable water supply. Standards for substances, characteristics, or pollutants given below shall not be exceeded in the waters:

Substance, Characteristic, or Pollutant	Class 7 Standard
Escherichia (E.) coli	Not to exceed 630 organisms per 100 milliliters as a geometric mean of not less than five samples representative of conditions within any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between May 1 and October 31.
Oxygen, dissolved	The level of dissolved oxygen must be maintained at concentrations: i. ~~which~~ that will avoid odors or putrid conditions in the receiving water; ~~or at concentrations~~ ii. at not less than 1 mg/L (daily average); and ~~provided that measurable concentrations are present~~ iii. above 0 mg/L at all times.
pH, minimum value	6.0
pH, maximum value	9.0
Toxic pollutants	Toxic pollutants shall not be allowed in such quantities or concentrations that will impair the specified uses.

7050.0430 UNLISTED WATERS.

Subpart 1. **Statewide surface waters.** Except as provided in subparts 2 and 3, all surface waters of the state that are not listed in part 7050.0470 and that are not wetlands as defined in part 7050.0186, subpart 1a, are hereby classified as Class ~~2B~~ 2Bg, 3C, 4A, 4B, 5, and 6 waters.

Subp. 2. **Boundary Waters Canoe Area Wilderness.**

A. All streams in the Boundary Waters Canoe Area Wilderness [11/5/84P] not listed in part 7050.0470 are classified as Class 1B, 2Bdg, 3B.

B. All lakes in the Boundary Waters Canoe Area Wilderness [11/5/84P] not listed in part 7050.0470 are classified as Class 1B, 2Bd, 3B.

C. All wetlands in the Boundary Waters Canoe Area Wilderness [11/5/84P] are classified as Class 2D.

Subp. 3. **Voyageurs National Park.**

A. All streams in Voyageurs National Park [11/5/84P] not listed in part 7050.0470 are classified as Class 2Bg, 3B.

B. All lakes in Voyageurs National Park [11/5/84P] not listed in part 7050.0470 are classified as Class 2B, 3B.

C. All wetlands in Voyageurs National Park [11/5/84P] are classified as Class 2D.

7050.0460 WATERS SPECIFICALLY CLASSIFIED; EXPLANATION OF LISTINGS IN PART 7050.0470.

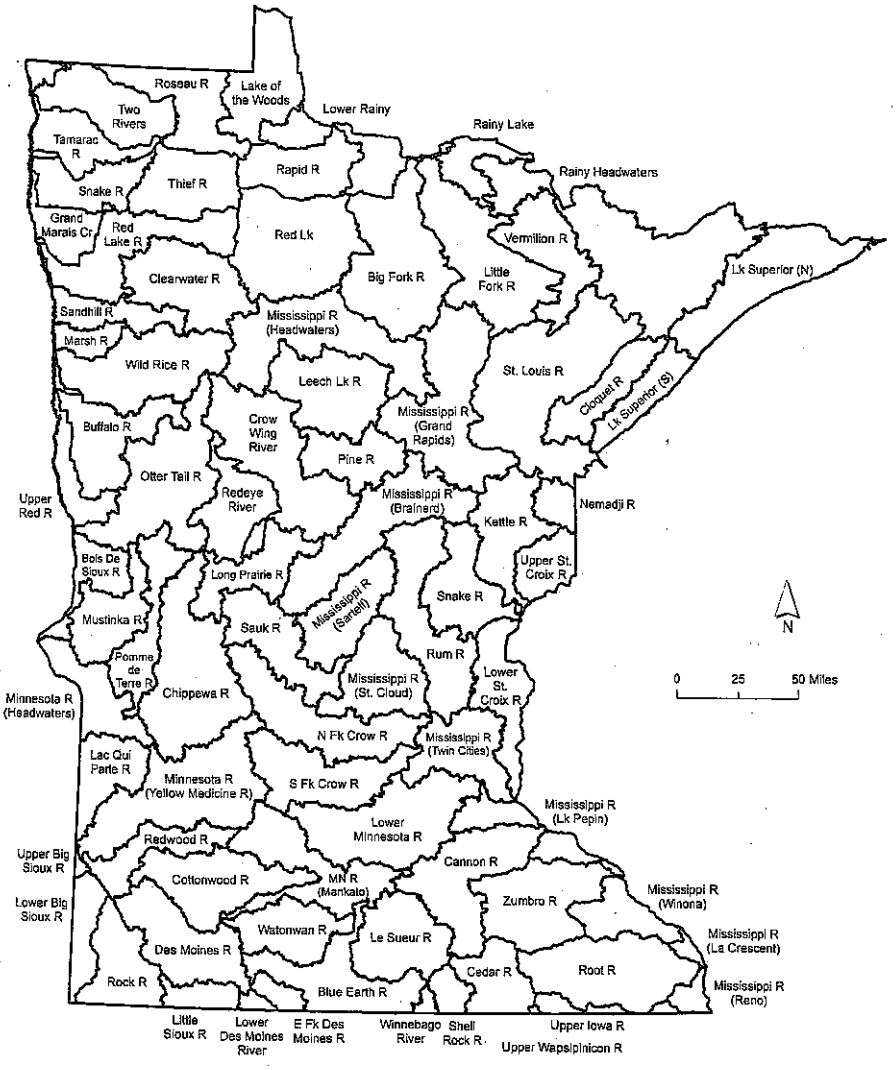
Subpart 1. **Explanation of listings.** The waters of the state listed in part 7050.0470 are classified as specified. The ~~specific stretch of watercourse or the~~ location of ~~a water body is~~ lakes, wetlands, calcareous fens, and scientific and natural areas are described by township, range, and section. Specific stream stretches are described by township, range, and section; stream confluence; geographic coordinates; road crossing; some other recognizable landmark; or a combination of these descriptors. Streams and rivers are listed by the eight-digit hydrologic unit code (HUC) of the major watersheds in part 7050.0469 in which the streams and rivers are located. The tables that specify the applicable beneficial uses for the stream and river reaches are incorporated by reference in part 7050.0470. Any community listed in part 7050.0470 is the community nearest the water classified, and is included solely to assist in identifying the water. Most waters of

the state are not specifically listed in part 7050.0470. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed.

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

7050.0469 MAP: MINNESOTA'S MAJOR WATERSHEDS.

Major Watersheds in Minnesota



7050.0470 CLASSIFICATIONS FOR SURFACE WATERS IN MAJOR DRAINAGE BASINS.

Subpart 1. **Lake Superior Basin.** The water use classifications for the stream reaches within each of the major watersheds in the Lake Superior Basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Lake Superior Basin are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 04010101 Lake Superior - North (August 9, 2016);

(2) 04010102 Lake Superior - South (August 9, 2016);

(3) 04010201 St. Louis River (August 9, 2016);

(4) 04010202 Cloquet River (August 9, 2016); and

(5) 04010301 Nemadji River (August 9, 2016).

~~(1) Ahlenius Creek, (T.53, R.14, S.9, 10): 1B, 2A, 3B;~~

~~(2) Amenda Creek, (T.59, R.5, S.19, 20, 29, 30, 31; T.59, R.6, S.36): 1B, 2A, 3B;~~

~~(3) Amity Creek, (T.50, R.13, S.5, 6; T.50, R.14, S.1; T.51, R.13, S.31, 32; T.51, R.14, S.26, 27, 28, 35, 36): 1B, 2A, 3B;~~

~~(4) Amity Creek, East Branch (T.51, R.13, S.30, 31; T.51, R.14, S.13, 14, 15, 22, 24, 25, 36): 1B, 2A, 3B;~~

~~(5) Anderson Creek, Carlton County, (T.46, R.17, S.11, 14, 15, 22, 26, 27): 1B, 2A, 3B;~~

~~(6) Anderson Creek, St. Louis County, (T.49, R.15, S.16, 17, 18; T.49, R.16, S.12, 13): 1B, 2A, 3B;~~

~~(7) Artichoke Creek, (T.52, R.17, S.7, 17, 18): 1B, 2A, 3B;~~

~~(8) Assinika Creek, (T.63, R.1E, S.1; T.63, R.2E, S.7, 8, 16, 17, 21; T.64, R.1E, S.36; T.64, R.2E, S.31): 1B, 2A, 3B;~~

~~(9) Bally Creek, (T.61, R.1W, S.3, 4, 5, 6, 7, 8, 9, 10, 11; T.61, R.2W, S.12): 1B, 2A, 3B;~~

~~(10) Baptism River, East Branch, (T.57, R.6, S.6; T.57, R.7, S.1, 2, 3, 9, 10, 11, 12, 16, 17, 20; T.58, R.6, S.30, 31; T.58, R.7, S.13, 17, 19, 20, 21, 22, 23, 24, 25, 26, 29, 30, 36; T.58, R.8, S.22, 23, 24, 25, 26): 1B, 2A, 3B;~~

~~(11) Baptism River, Main Branch, (T.56, R.7, S.3, 4, 5, 9, 10, 14, 15; T.57, R.7, S.20, 27, 28, 29, 33, 34): 1B, 2A, 3B;~~

~~(12) Baptism River, West Branch, (T.57, R.7, S.7, 17, 18, 20; T.57, R.8, S.1, 2, 12; T.58, R.8, S.2, 3, 4, 9, 10, 11, 15, 16, 20, 21, 22, 28, 33, 34, 35, 36; T.59, R.8, S. 34, 35): 1B, 2A, 3B;~~

~~(13) Barber Creek (East Swan River) (Chisholm Creek) Chisholm, (T.58, R.20, S.21, 22, 26, 27, 34, 35): 7;~~

~~(14) Barker Creek, (T. 60, R.3W, S.5, 6, 7, 8; T.60, R.4W, S.3, 9, 10, 11, 12; T.61, R.4W, S.34, 35): 1B, 2A, 3B;~~

~~(15) Barrs Creek, (T.53, R.13, S.20, 27, 28, 29): 1B, 2A, 3B;~~

~~(16) Bear Trap Creek (Beartrap Creek), (T.51, R.16, S.30; T.51, R.17, S.16, 21, 22, 23, 25, 26, 27, 28): 1B, 2A, 3B;~~

~~(17) Beaver Dam Creek (Beaverdam Creek), (T.63, R.3E, S.2, 3, 4, 5; T.64, R.3E, S.32, 33, 34, 35): 1B, 2A, 3B;~~

~~(18) Beaver River (includes Kit Creek), (T.55, R.8, S.2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17; T.55, R.9, S.1, 2; T.56, R.8, S.31; T.56, R.9, S.4, 5, 6, 8, 9, 16, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 32, 33, 34, 35, 36; T.57, R.9, S.28, 32, 33): 1B, 2A, 3B;~~

~~(19) Beaver River, East Branch (includes Hen Creek), (T.55, R.8, S.2; T.56, R.8, S.4, 5, 6, 8, 9, 15, 16, 21, 22, 25, 26, 27, 35, 36; T.57, R.8, S.7, 18, 19, 30, 31, 32; T.57, R.9, S.2, 3, 11, 12, 13, 14, 15, 23, 24, 25, 26, 36): 1B, 2A, 3B;~~

~~(20) Beaver River, West Branch, (T.55, R.8, S.7, 17, 18; T.55, R.9, S.2, 3, 4, 10, 11, 12, 13, 14): 1B, 2A, 3B;~~

~~(21) Berry Creek (Breda), (T.55, R.12, S.6, 7; T.55, R.13, S.12, 13; T.56, R.11, S.6; T.56, R.12, S.1, 11, 12, 14, 15, 16, 21, 28, 29, 31, 32; T.57, R.11, S.10, 15, 16, 21, 28, 29, 31, 32): 1B, 2A, 3B;~~

~~(22) Blackhoof River, (T. 47, R.16, S.29, 30; T.47, R.17, S.6, 7, 9, 10, 14, 15, 16, 17, 18, 19, 20, 22, 25, 26, 27, 28; T.48, R.17, S.30, 31): 1B, 2A, 3B;~~

~~(23) Blesner Creek, (T.58, R.6, S.20, 29, 30, 31): 1B, 2A, 3B;~~

~~(24) Blind Temperance Creek, (T.60, R.4W, S.19, 29, 30, 32; T.60, R.5W, S.24, 25, 36): 1B, 2A, 3B;~~

~~(25) Bluff Creek, (T.63, R.1W, S.13, 23, 24, 25): 1B, 2A, 3B;~~

~~(26) Boulder Creek, (T.53, 54, R.14): 2C;~~

~~(27) Breda Creek (see Berry Creek);~~

~~(28) Brule River, (T.62, R.2E, S.1, 2; T.62, R.3E, S.4, 5, 6, 9, 10, 15, 16, 22, 27, 34; T.63, R.2E, S.21, 22, 23, 25, 26, 27, 28, 33, 35, 36; T.63, R.3E, S.30, 31, 32): 1B, 2A, 3B;~~

~~(29) Brule River (excluding trout waters and waters within Boundary Waters Canoe Area Wilderness), (T.63, 64, R.1W, 1E, 2E): 1B, 2Bd, 3C;~~

~~(30) Brule River, Little, (T.62, R.3E, S.19, 20, 29, 32, 33): 1B, 2A, 3B;~~

~~(31) Budd Creek (Bud Creek), (T.55, R.9, S.7, 17, 18, 20, 21): 1B, 2A, 3B;~~

~~(32) Buhl Creek, Buhl, (T.58, R.19, S.20, 29): 7;~~

~~(33) *Burnt Creek, [11/5/84P] (T.62, R.4W, S.8, 9): 1B, 2A, 3B;~~

~~(34) Burnt Creek, (T.62, R.4W, S.16, 17, 20): 1B, 2A, 3B;~~

~~(35) Cabin Creek, (T.59, R.6W, S.19, 20; T.59, R.7, S.24): 1B, 2A, 3B;~~

~~(36) Captain Jacobson Creek, (T.52, R.12, S.1, 2, 3; T.53, R.12, S.33, 34, 35): 1B, 2A, 3B;~~

~~(37) Carey Creek, (T.53, R.14, S.28, 33): 1B, 2A, 3B;~~

~~(38) Caribou Creek, (T.60, R.3W, S.2, 3, 10): 1B, 2A, 3B;~~

~~(39) Caribou River, (T.58, R.6, S.1, 2, 11, 13, 14, 15, 22, 23, 24, 25, 26, 36; T.59, R.6, S.23, 24, 25, 26, 35, 36): 1B, 2A, 3B;~~

~~(40) Carlson Creek, (T.52, R.12, S.19; R.13, S.14, 15, 23, 24): 1B, 2A, 3B;~~

~~(41) Carlson Creek (Stony Brook), (T.62, R.4E, S.3, 4, 9, 10; T.63, R.4E, S.31, 32, 33, 34): 1B, 2A, 3B;~~

~~(42) Cascade River, (T.60, R.2W, S.1; T.61, R.1W, S.19, 20, 21, 30, 31; T.61, R.2W, S.1, 12, 13, 14, 24, 25, 26, 35, 36; T.62, R.2W, S.10, 11, 14, 15, 16, 22, 23, 24, 25, 36): 1B, 2A, 3B;~~

~~(43) *Cascade River, North Branch [11/5/84P] (T.62, R.2W, S.3, 10): 1B, 2A, 3B;~~

~~(44) Cascade River, North Branch (those waters outside the Boundary Waters Canoe Area Wilderness), (T.62, R.2W, S.10): 1B, 2A, 3B;~~

~~(45) Castle Danger Creek (Campers), (T.54, R.9, S.30, 31, 32): 1B, 2A, 3B;~~

~~(46) Cedar Creek, Lake County, (T.56, R.8, S.13, 14, 23, 24, 26): 1B, 2A, 3B;~~

~~(47) Cedar Creek, Cook County, (T.59, R.5W, S.2; T.60, R.5W, S.14, 22, 23, 25, 26, 35, 36): 1B, 2A, 3B;~~

~~(48) Cemetery Creek, (T.51, R.17, S.4, 5, 9): 1B, 2A, 3B;~~

~~(49) Chellberg Creek (Chalberg Creek), (T.51, R.16, S.7; T.51, R.17, S.1, 2, 3, 10, 12): 1B, 2A, 3B;~~

~~(50) Chester Creek, (T.50, R.14, S.7, 8, 9, 14, 15, 16, 23): 1B, 2A, 3B;~~

~~(51) Chester Creek, East Branch, (T.50, R.14, S.4, 5, 9, 15, 16): 1B, 2A, 3B;~~

~~(52) Chicken Creek, (T.52, R.16, S.5, 7, 8, 18, 19; T.52, R.17, S.13, 24, 25; T.53, R.16, S.32): 1B, 2A, 3B;~~

~~(53) Clear Creek, Carlton County, (T.46, R.17, S.9, 10, 11, 12, 16, 17, 20, 29): 1B, 2A, 3B;~~

~~(54) Clear Creek, Carlton County, (T.47, R.15, S.7; T.47, R.16, S.1, 2, 3, 4, 12; T.48, R.16, S.33): 1B, 2A, 3B;~~

~~(55) Cliff Creek, (T.61, R. 2E, S.3, 4, 5, 9, 10; T.62, R.2E, S.29, 30, 31, 32): 1B, 2A, 3B;~~

~~(56) Cloudy Spring Creek, (T.57, R.9, S.5, 6, 7, 18; T.57, R.10, S.12, 13, 24): 1B, 2A, 3B;~~

~~(57) Colville Creek, East, (T.61, R.3E, S.5; T.62, R.2E, S.25; T.62, R.3E, S.30, 31, 32): 1B, 2A, 3B;~~

~~(58) Coolidge Creek, (T.55, R.14, S.19, 29, 30; T.55, R.15, S.25, 26, 35, 36): 1B, 2A, 3B;~~

~~(59) Cranberry Creek, (T.58, R.13): 2C;~~

~~(60) Cross River, (T.58, R.4W, S.6; T.58, R.5W, S.1; T.59, R.4W, S.31; T.59, R.5W, S.4, 5, 8, 9, 15, 16, 21, 22, 23, 25, 26, 35, 36; T.60, R.5W, S.30, 31, 32; T.60, R.6, S.13, 24, 25, 36): 1B, 2A, 3B;~~

~~(61) Crow Creek, (T.53, R.10, S.1, 2; T.54, R.10, S.15, 22, 23, 26, 35): 1B, 2A, 3B;~~

~~(62) Crown Creek, (T.57, R.8, S.2, 3, 4, 5, 9, 10, 11; T.58, R.8, S.5, 6, 7, 18, 19, 20, 29, 30, 31, 32, 33; T.58, R.9, S.1, 12, 13, 14, 24, 36; T.59, R.8, S.32): 1B, 2A, 3B;~~

~~(63) Crystal Creek, (T.48, R.16, S.6; T.48, R.17, S.1): 1B, 2A, 3B;~~

~~(64) Cutface Creek (Good Harbor Creek), (T.61, R.1W, S.27, 28, 29, 34): 1B, 2A, 3B;~~

~~(65) Dago Creek, (T.54, R.9, S.18, 19; T.54, R.10, S.2, 11, 12, 13; T.55, R.10, S.27, 34, 35): 1B, 2A, 3B;~~

~~(66) Deer Creek, (T.47, R.16, S.19, 20, 28, 29; T.47, R.17, S.11, 12, 13, 24): 1B, 2A, 3B;~~

~~(67) Deer Yard Creek (Spruce Creek), (T.60, R.2W, S.4, 5, 6, 7, 8, 9, 10, 15, 16, 17; T.61, R.2W, S.32): 1B, 2A, 3B;~~

~~(68) Devil Track River, (T.61, R.1E, S.2, 3, 10, 11, 12, 13; T.62, R.1E, S.26, 31, 32, 33, 34, 35): 1B, 2A, 3B;~~

~~(69) Devil Track River, Little, (T.61, R.1E, S.4, 5, 6, 7, 8, 9, 10; T.61, R.1W, S.1, 2, 11, 12): 1B, 2A, 3B;~~

~~(70) Dragon Creek, (T.57, R.6, S.8, 9, 16, 17, 21): 1B, 2A, 3B;~~

~~(71) Durfee Creek, (T.61, R.2E, S.5, 6, 8; T.62, R.1E, S.25, 36; T.62, R.2E, S.31): 1B, 2A, 3B;~~

~~(72) Dutchess Slough Creek (Dutch Slough), (T.50, R.17, S.4, 9, 10, 13, 14, 15, 24): 1B, 2A, 3B;~~

~~(73) Egge Creek, (T.57, R.7, S.2, 3, 4, 11): 1B, 2A, 3B;~~

~~(74) Elbow Creek, Cook County, (T.62, R.1E, S.3, 4, 9, 10, 15, 22, 27, 34; T.63, R.1E, S.33, 34): 1B, 2A, 3B;~~

~~(75) Elbow Creek, Eveleth, (T.57, R.17, S.6; T.57, R.18, S.1): 7;~~

~~(76) Elm Creek, (T.49, R.16, S.1, 2; T.50, R.16, S.35): 1B, 2A, 3B;~~

~~(77) Encampment River, (T.53, R.10, S.3, 10, 11; T.54, R.10, S.8, 16, 17, 21, 27, 28, 34): 1B, 2A, 3B;~~

~~(78) Farquhar Creek, (T.62, R.4E, S.2, 11; T.63, R.4E, S.34, 35): 1B, 2A, 3B;~~

~~(79) *Fiddle Creek, [11/5/84P] (T.64, R.1W, S.34): 1B, 2A, 3B;~~

~~(80) Fiddle Creek, (T.63, R.1W, S.2, 3, 10, 15; T.64, R.1W, S.35): 1B, 2A, 3B;~~

~~(81) Flute Reed River, (T.62, R.3E, S.1, 2, 3, 10, 11, 12, 13, 14, 15; T.62, R.4E, S.17, 18, 20; T.63, R.3E, S.26, 34, 35, 36): 1B, 2A, 3B;~~

~~(82) Fond du Lac Creek (Squaw), (T.49, R.17, S.9, 16, 17, 18, 19, 20, 21): 1B, 2A, 3B;~~

~~(83) Fox Farm Creek, (T.62, R.1E, S.19, 30): 1B, 2A, 3B;~~

~~(84) French River, (T.51, R.12, S.7, 17, 18; T.51, R.13, S.1, 2, 3, 12; T.52, R.13, S.8, 9, 16, 17, 20, 21, 23, 26, 27, 28, 29, 34, 35): 1B, 2A, 3B;~~

~~(85) Fry Creek, (T.62, R.2W, S.25; T.62, 1W, S.30, 31): 1B, 2A, 3B;~~

~~(86) Gauthier Creek, (T.62, R.3E, S.16, 20, 21, 22, 27): 1B, 2A, 3B;~~

~~(87) Gill Creek, (T.48, R.16, S.2): 1B, 2A, 3B;~~

~~(88) Gooseberry River, (T.54, R.9, S.18, 19, 20, 21, 22, 27; T.54, R.10, S.4, 5, 6, 8, 9, 10, 11, 12, 13; T.55, R.10, S.4, 9, 16, 17, 20, 29, 30, 31, 32; T.56, R.10, S.33): 1B, 2A, 3B;~~

~~(89) Gooseberry River, Little, (T.54, R,10, S.6; T.54, R.11, S.1; T.55, R.10, S.31; T.55, R.11, S.34, 35, 36): 1B, 2A, 3B;~~

~~(90) Grand Portage Creek, (T.63, R.5E, S.1; T.63, R.6E, S.4, 5, 6; T.64,; R.6E, S.31, 32, 33): 1B, 2A, 3B;~~

~~(91) Greenwood River, (T.63, R.2E, S.1, 2, 3, 10, 11, 12, 13, 14, 15, 22, 23, 24; T.63, R.3E, S.6; T.64, R.2E, S.34; T.64, R.3E, S.31): 1B, 2A, 3B;~~

~~(92) Hay Creek, (T.49, R.16, S.3, 4, 9, 10, 15; T.50, R.16, S.20, 21, 28, 29, 32, 33): 1B, 2A, 3B;~~

~~(93) Heartbreak Creek, (T.59, R.4W, S.18, 19; T.59, R.5W, S.2, 11, 12, 13; T.60, R.5W, S.27, 28, 33, 34, 35): 1B, 2A, 3B;~~

~~(94) Hellwig Creek, (T.52, R.17, S.3, 10, 14, 15, 23, 26; T.53, R.16, S.16, 18, 19, 20, 30; T.53, R.17, S.13, 14, 23, 24, 25, 26, 34, 35): 1B, 2A, 3B;~~

~~(95) Hockamin Creek, (T.57, R.7, S.17, 18, 19; T.57, R.8, S.13, 16, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33): 1B, 2A, 3B;~~

~~(96) Hollow Rock Creek, (T.63, R.5E, S.9, 10, 11, 14, 15, 16, 23, 24, 25): 1B, 2A, 3B;~~

~~(97) Honeymoon Creek (Spring Creek), (T.61, R.4W, S.28, 31, 32, 33): 1B, 2A, 3B;~~

~~(98) Hornby Junction Creek (Whiteface River, South Branch), (T.55, R.13, S.5,6, 7; T.56, R.13, S.28, 32, 33): 1B, 2A, 3B;~~

~~(99) Horn Creek, (T.62, R.4W): 1B, 2Bd, 3C;~~

~~(100) Houghtaling Creek, (T.59, R.6, S.2, 3, 4, 5, 6; T.60, R.6, S.25, 32, 33, 35, 36): 1B, 2A, 3B;~~

~~(101) Humphrey Creek, (T.54, R.14, S.23, 26, 27, 33, 34): 1B, 2A, 3B;~~

~~(102) Hunter Creek (Hunters Creek), (T.46, R.18, S.2, 11, 12, 13; T.47, R.18, S.34, 35): 1B, 2A, 3B;~~

~~(103) Indian Camp Creek, (T.60, R.2W, S.3, 10, 11; T.61, R2W, S.34): 1B, 2A, 3B;~~

~~(104) Indian Creek, (T.55, R.12, S.3; T.56, R.12, S.14, 22, 23, 27, 34): 1B, 2A, 3B;~~

~~(105) Irish Creek, (T.63, R.3E, S.8, 9, 10, 13, 14, 15, 23, 24, 25, 26; T.63, R.4E, S.17, 18, 19): 1B, 2A, 3B;~~

~~(106) Joe Martin Creek (Martin Branch), (T.50, R.18, S.3, 4, 5, 7, 8; T.50, R.19, S.12): 1B, 2A, 3B;~~

~~(107) Johnson Creek, (T.50, R.17, S.3, 10, 11, 14; T.51, R.17, S.34): 1B, 2A, 3B;~~

~~(108) Johnson Creek, (T.55, R.12, S.35, 36): 1B, 2A, 3B;~~

~~(109) Jonvick Creek, (T.60, R.2W, S.7, 19; T.60, R.3W, S.12, 13, 14, 24): 1B, 2A, 3B;~~

~~(110) Junco Creek, (T.62, R.1W, S.1, 2, 9, 10, 11, 12, 13, 14, 15, 16, 21, 28; T.62, R.1E, S.6, 7; T.63, R.1E, S.20, 29, 30, 31; T.63, R.1W, S.24, 25, 35): 1B, 2A, 3B;~~

~~(111) Kadunce Creek (Kadunce River), (T.61, R.2E, S.2; T.62, R.2E, S.9, 10, 12, 13, 14, 15, 16, 22, 23, 24, 26, 35): 1B, 2A, 3B;~~

~~(112) Keene Creek, (T.49, R.14, S.18; T.49, R.15, S.1, 12, 13; T.50, R.15, S.24, 25, 36): 1B, 2A, 3B;~~

~~(113) Kehtel Creek, (T.51, R.15, S.8, 17, 18, 19, 20): 1B, 2A, 3B;~~

~~(114) Kimball Creek, (T.61, R.2E, S.3, 4, 10; T.62, R.2E, S.7, 16, 17, 18, 19, 20, 21, 28, 29, 33, 34): 1B, 2A, 3B;~~

~~(115) Kingsbury Creek, (T.49, R.15, S.4, 9, 10, 11, 13, 14; T.50, R.15, S.33, 34): 1B, 2A, 3B;~~

~~(116) Kinney Creek, (T.57, R.10, S.15, 21, 22, 28, 33): 1B, 2A, 3B;~~

~~(117) Knife River, (T.52, R.11, S.4, 5, 8, 9, 17, 18, 19, 31; T.53, R.11, S.4, 5, 7, 8, 17, 18, 20, 29, 32, 33; T.54, R.11, S.20, 29, 32; T.52, R.12, S.24, 25, 36): 1B, 2A, 3B;~~

~~(118) Knife River, Little, (T.52, R.12, S.16, 17, 21, 22, 23, 26, 27, 28, 35, 36): 1B, 2A, 3B;~~

~~(119) Knife River, Little, East Branch, (T.53, R.11, S.17, 20, 21, 22, 27, 33, 34): 1B, 2A, 3B;~~

~~(120) Knife River, Little, West Branch, (T.52, R.11, S.6; T.53, R.11, S.31; T.53, R.12, S.13, 14, 23, 24, 25, 26, 36): 1B, 2A, 3B;~~

~~(121) Knife River, West Branch, (T.52, R.11, S.5, 6, 8; T.52, R.12, S.1; T.53, R.12, S.2, 3, 10, 15, 16, 22, 23, 27, 28, 34, 35, 36; T.54, R.12, S.35, 36): 1B, 2A, 3B;~~

~~(122) Koski Creek, (T.61, R.4W, S.5, 8; T.62, R.4W, S.31, 32): 1B, 2A, 3B;~~

~~(123) Lavi Creek, (T.52, R.15, S.21, 28): 1B, 2A, 3B;~~

~~(124) Leskinen Creek, (T.57, R.7, S.15, 21, 22, 28): 1B, 2A, 3B;~~

~~(125) Lester River, (T.50, R.13, S.4, 5, 8; T.51, R.13, S.5, 6, 7, 8, 16, 17, 18, 19, 20, 21, 28, 32, 33; T.51, R.14, S.1, 2, 10, 11, 12, 13, 15, 16, 24; T.52, R.13, S.31, 32; T.52, R.14, S.21, 22, 23, 27, 28, 34, 35): 1B, 2A, 3B;~~

~~(126) Lindstrom Creek, (T.56, R.7, S.4; T.57, R.7, S.19, 30, 31, 32, 33; T.57, R.8, S.25): 1B, 2A, 3B;~~

~~(127) Lullaby Creek, (T.63, R.1E, S.4, 5, 8, 9): 1B, 2A, 3B;~~

~~(128) Manganika Creek, Virginia, (T.58, R.17, S.19; T.58, R.18, S.24): 7;~~

~~(129) Manitou River (Moose Creek), (T.57, R.6, S.3, 4, 10, 11; T.58, R.6, S.4, 5, 6, 7, 8, 16, 17, 18, 20, 21, 28, 29, 32, 33, 34): 1B, 2A, 3B;~~

~~(130) Manitou River, Little, (T.57, R.6, S.2; T.58, R.6, S.34, 35): 1B, 2A, 3B;~~

~~(131) Manitou River, North Branch (Balsam Creek), (T.58, R.6, S.6; T.58, R.7, S.1, 2; T.59, R.6, S.31; T.59, R.7, S.15, 16, 18, 19, 20, 21, 22, 25, 26, 27, 28, 33, 34, 35, 36; T.59, R.8, S.1, 2, 12, 13, 24, 25, 26): 1B, 2A, 3B;~~

~~(132) Manitou River, South Branch (Junction Creek), (T.58, R.6, S.6; T.58, R.7, S.1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17, 18; T.58, R.8, S.1; T.59, R.7, S.29, 30, 31, 32, 33): 1B, 2A, 3B;~~

~~(133) Marais River, Little, (T.57, R.6, S.5, 8, 16, 17, 21): 1B, 2A, 3B;~~

~~(134) Mark Creek, (T.61, R.2W, S.1, 2, 3, 4, 5, 6, 9): 1B, 2A, 3B;~~

~~(135) Marshall Creek, (T.52, R.15, S.10, 15): 1B, 2A, 3B;~~

~~(136) Martin Creek, (T.58, R.6, S.2, 3, 11): 1B, 2A, 3B;~~

~~(137) McCarthy Creek, (T.53, R.11, S.18; T.53, R.12, S.12, 13): 1B, 2A, 3B;~~

~~(138) Midway River (Rock Run), (T.49, R.15, S.5, 6; T.49, R.16, S.1, 12, 13, 14, 15, 21, 22; T.50, R.15, S.7, 8, 14, 15, 16, 17, 20, 21, 22, 23, 28, 29, 32, 33): 1B, 2A, 3B;~~

~~(139) Mile Post Forty-Three Creek (Fortythree Creek, East and West Branch), (T.56, R.8, S.2, 3, 10, 11, 13, 14, 15): 1B, 2A, 3B;~~

~~(140) Miller Creek, (T.49, R.14, S.4; T.50, R.14, S.6, 18, 19, 29, 30, 32, 33; T.50, R.15, S.12, 13; T.51, R.14, S.31, 32): 1B, 2A, 3B;~~

~~(141) Mink Creek, (T.54, R.9, S.4, 5, 9; T.55, R.9, S.30, 31, 32; T.55, R.10, S.25, 26, 36): 1B, 2A, 3B;~~

~~(142) Mission Creek, (T.48, R.15, S.5, 6; T.49, R.15, S.31; T.49, R.16, S.25, 26, 36): 1B, 2A, 3B;~~

~~(143) Mississippi Creek, (T.61, R.2W, S.1, 2, 3; T.61, R.3W, S.1; T.62, R.2W, S.31, 32, 33, 34, 35, 36; T.62, R.3W, S.24, 25, 35, 36): 1B, 2A, 3B;~~

~~(144) Mississippi Creek, Little, (T.62, R.2W, S.20, 21, 26, 29, 32, 33, 34, 35): 1B, 2A, 3B;~~

~~(145) Mistletoe Creek, (T.60, R.3W, S.3, 4; T.61, R.2W, S.7, 18; T.61, R.3W, S.11, 13, 14, 15, 23, 24, 25, 26, 34, 35): 1B, 2A, 3B;~~

~~(146) Monker Creek, (T.61, R.1E, S.6, 7; T.62, R.1E, S.31; T.62, R.1W, S.36): 1B, 2A, 3B;~~

~~(147) Mons Creek, (T.62, R.3E, S.4; T.63, R.3E, S.28, 29, 33): 1B, 2A, 3B;~~

~~(148) Moose Creek, (T.59, R.6, S.31, 32, 33, 34): 1B, 2A, 3B;~~

~~(149) Mud Creek, Carlton County, (T.47, R.15, S.18; T.47, R.16, S.5, 6, 8, 9, 10, 11, 13, 14, 15, 16): 1B, 2A, 3B;~~

~~(150) Mud Creek, St. Louis County, (T.54, R.12, S.20, 21, 22, 29, 30): 1B, 2A, 3B;~~

~~(151) Mud Creek, Cook County, (T.62, R.1E, S.8, 9, 16, 17, 21, 22): 1B, 2A, 3B;~~

~~(152) Mud Creek, Little, (T.57, R.11, S.11, 12, 14, 22, 23): 1B, 2A, 3B;~~

~~(153) Murmur Creek, (T.61, R.2W, S.15, 20, 21, 22, 29, 30): 1B, 2A, 3B;~~

~~(154) Murphy Creek (Maki Creek), (T.56, R.11, S.4, 5, 8, 17, 18, 19; T.57, R.10, S.4, 7, 8, 9, 18; T.57, R.11, S.13, 21, 22, 23, 24, 26, 27, 28, 33, 34): 1B, 2A, 3B;~~

~~(155) Myhr Creek, (T.62, R.3E, S.23, 24, 26): 1B, 2A, 3B;~~

~~(156) Nemadji Creek, (T.46, R.17, S.7, 8, 9, 18; T.46, R.18, S.13, 14, 15, 16, 22): 1B, 2A, 3B;~~

~~(157) Nemadji River, North Fork (Nemadji River), (T.46, R.17, S.1, 2, 3, 8, 9, 10, 17, 18, 19, 31, 32, 33; T.46, R.18, S.24, 25, 36; T.47, R.15, S.19, 30; T.47, R.16, S.23, 24, 25, 26, 27, 28, 29, 31, 32; T.47, R.17, S.35, 36): 1B, 2A, 3B;~~

~~(158) Nemadji River, South Fork, (T.46, R.16, S.4, 5, 6, 7; T.46, R.17, S.1, 11, 12; T.47, R.15, S.30; T.47, R.16, S.25, 33, 34, 35, 36): 1B, 2A, 3B;~~

~~(159) Nestor Creek (Nester Creek), (T.61, R.1W, S.4, 5, 6; T.61, R.2W, S.1; T.62, R.1W, S.31, 32, 33): 1B, 2A, 3B;~~

~~(160) Net River, (T.45, R.16, S.6; T.45, R.17, S.1; T.46, R.16, S.3, 4, 8, 9, 17, 20, 21, 29, 31, 32, 33; T.47, R.16, S.34;): 1B, 2A, 3B;~~

~~(161) Net River, Little, (T.46, R.16, S.3, 10, 15, 22, 26, 27, 34): 1B, 2A, 3B;~~

~~(162) Nicadoo Creek (Nicado Creek), (T.56, R.7, S.7; T.56, R.8, S.1, 12; T.57, R.8, S.27, 35, 36): 1B, 2A, 3B;~~

~~(163) Nine Mile Creek (Ninemile Creek), (T.58, R.6, S.3, 4, 9, 16, 17; T.59, R.6, S.27, 28, 33, 34): 1B, 2A, 3B;~~

~~(164) Oliver Creek (Silver), (T.57, R.7, S.5, 6; T.57, R.8, S.1; T.58, R.7, S.31, 32): 1B, 2A, 3B;~~

~~(165) Onion Creek (Onion River and West Branch Onion River), (T.59, R.4W, S.1, 2, 3, 4, 12; T.60, R.4W, S.24, 25, 26, 35, 36): 1B, 2A, 3B;~~

~~(166) Otter Creek, Big (Otter Creek), (T.48, R.16, S.7; T.48, R.17, S.3, 10, 11, 12; T.49, R.17, S.19, 20, 26, 27, 28, 29, 30, 32, 33, 34, 35; T.49, R.18, S.25, 26): 1B, 2A, 3B;~~

~~(167) Otter Creek, Little, (T.48, R.17, S.7, 10, 15, 16, 17, 18; T.48, R.18, S.11, 12, 13, 14): 1B, 2A, 3B;~~

~~(168) Palisade Creek, (T.56, R.7, S.16, 17, 18, 19, 20, 21, 22; T.56, R.8, S.24): 1B, 2A, 3B;~~

~~(169) Pancake Creek, (T.54, R.22, S.20, 28, 29, 33): 1B, 2A, 3B;~~

~~(170) Pancake Creek, (T.60, R.4W, S.17, 18; T.60, R.5W, S.11, 13, 14): 1B, 2A, 3B;~~

~~(171) Pecore Creek, (T.61, R.4W, S.19, 20, 21): 1B, 2A, 3B;~~

~~(172) Peters Creek, (T.54, R.22, S.22, 23, 27, 28): 1B, 2A, 3B;~~

~~(173) Pigeon River (South Fowl Lake outlet to Pigeon Bay of Lake Superior): 1B, 2Bd, 3A;~~

~~(174) Pike Lake Creek, (T.61, R.2W, S.10, 11, 15): 1B, 2A, 3B;~~

~~(175) Pine Mountain Creek (Falls Creek), (T.63, R.1E, S.23, 26, 27, 28, 33): 1B, 2A, 3B;~~

~~(176) Pine River (White Pine River), (T.50, R.16, S.4, 8, 9, 15, 16, 17, 18, 19, 20, 21, 29, 30, 32; T.50, R.17, S.23, 24, 26): 1B, 2A, 3B;~~

~~(177) Plouff Creek, (T.61, R.4W, S.17, 18; T.61, R.5W, S.2, 3, 11, 13, 14, 15, 23; T.62, R.5W, S.26, 34, 35): 1B, 2A, 3B;~~

~~(178) *Plouff Creek [11/5/84P] (T.62, R.5W, S.23): 1B, 2A, 3B;~~

~~(179) Poplar River (Missouri Creek), (T.60, R.3W, S.3, 4, 5, 6, 9, 10, 15, 16, 17, 19, 20, 21, 28, 33; T.61, R.3W, S.30, 31; T.61, R.4W, S.10, 13, 14, 15, 22, 23, 25, 26, 36): 1B, 2A, 3B;~~

~~(180) Portage Brook, (T.64, R.3E, S.24, 25, 26, 27, 28, 29, 32, 33, 34; T.64, R.4E, S.19, 20): 1B, 2A, 3B;~~

~~(181) Railroad Creek, (T.50, R.17, S.1, 11, 12, 14): 1B, 2A, 3B;~~

~~(182) Red River, (T.48, R.15, S.30; T.48, R.16, S.25, 26): 1B, 2A, 3B;~~

~~(183) Red Rock Creek, (T.63, R.5E, S.21, 22, 26, 27, 28, 35): 1B, 2A, 3B;~~

~~(184) Reservation River, (T.62, R.5E, S.6; T.63, R.4E, S.23, 25, 26, 36; T.63, R.5E, S.16, 17, 18, 19, 20, 21, 29, 30, 31): 1B, 2A, 3B;~~

~~(185) Rock Creek, (T.47, R.16, S.7, 17, 18, 20, 21, 22, 23, 24; T.47, R.17, S.12): 1B, 2A, 3B;~~

~~(186) Rock Cut Creek, (T.58, R.6, S.18, 19, 20; T.58, R.7, S.13): 1B, 2A, 3B;~~

~~(187) Rocky Run Creek, (T.49, R.15, S.6; T.50, R.15, S.30, 31; T.50, R.16, S.11, 12, 13, 24, 25): 1B, 2A, 3B;~~

~~(188) Rollins Creek, (T.59, R.3W, S.6; T.60, R.3W, S.29, 30, 31; T.60, R.4W, S.36): 1B, 2A, 3B;~~

~~(189) Rosebush Creek (Fall River), (T.61, R.1W, S.13, 23, 24, 25; T.61, R.1E, S.18): 1B, 2A, 3B;~~

~~(190) Ross Creek, (T.52, R.13, S.1, 2, 3, 4, 5; T.53, R.13, S.33): 1B, 2A, 3B;~~

~~(191) Ryan Creek, (T.55, R.14, S.14, 15, 22): 1B, 2A, 3B;~~

~~(192) St. Louis River, [WR] (T.58, R.12, S.21, 22, 27, 28, 31, 32, 33; T.58, R.13, S.36): 2B, 3B;~~

~~(193) Sargent Creek, (T.48, R.15, S.4, 5, 9, 10; T.49, R.15, S.28, 29, 32): 1B, 2A, 3B;~~

~~(194) Sawbill Creek, (T.62, R.4W, S.7, 18, 19, 20, 28, 29, 30; T.62, R.5W, S.25): 1B, 2A, 3B;~~

~~(195) Sawmill Creek, (T.57, R.6, S.18; T.57, R.7, S.12, 13, 22, 23, 24, 26, 27, 34): 1B, 2A, 3B;~~

~~(196) Seanlon Creek, (T.49, R.16, S.30; T.49, R.17, S.25): 1B, 2A, 3B;~~

~~(197) Schmidt Creek, (T.51, R.12, S.17): 1B, 2A, 3B;~~

~~(198) Schoolhouse Creek, (T.58, R.7, S.35, 36): 1B, 2A, 3B;~~

~~(199) Section 16 Creek, (T.58, R.5W, S.16): 1B, 2A, 3B;~~

~~(200) Section 36 Creek, (T.46, R.16, S.1, 2, 11, 12, 13; T.47, R.16, S.36): 1B, 2A, 3B;~~

~~(201) Silver Creek, Carlton County, (T.48, R.16, S.15, 16, 17, 21, 28): 1B, 2A, 3B;~~

~~(202) Silver Creek, Lake County, (T.53, R.10, S.6, 7, 16, 17, 18, 21; T.53, R.11, S.1; T.54, R.10, S.18, 19, 30; T.54, R.11, S.11, 12, 13, 25, 36): 1B, 2A, 3B;~~

~~(203) Silver Creek, Big (Silver Creek), Carlton County, (T.46, R.17, S.14, 23, 24, 25, 36): 1B, 2A, 3B;~~

~~(204) Silver Creek, East Branch, (T.53, R.10, S.5, 8, 9, 16, 21): 1B, 2A, 3B;~~

~~(205) Sixmile Creek, (T.60, R.4W, S.13, 14, 15, 22, 23, 27, 28, 33): 1B, 2A, 3B;~~

~~(206) Skunk Creek, Lake County, (T.54, R.9, S.4, 9, 16, 17, 20; T.55, R.9, S.19, 29, 30, 32, 33; T.55, R.10, S.13, 14, 24): 1B, 2A, 3B;~~

~~(207) Skunk Creek, Carlton County, (T.46, R.17, S.4, 5, 6; T.47, R.17, S.31, 33, 34, 35, 36; T.47, R.18, S.36): 1B, 2A, 3B;~~

~~(208) Spider Creek, (T.52, R.18, S.19, 20, 21, 22, 27, 28, 29, 30; T.52, R.19, S.9, 10, 13, 14, 15, 24): 1B, 2A, 3B;~~

~~(209) Split Rock River, (T.54, R.8, S.6, 7; T.54, R.9, S.1, 2, 12; T.55, R.9, S.26, 28, 34, 35, 36): 1B, 2A, 3B;~~

~~(210) Split Rock River, East Branch, (T.55, R.9, S.4, 5, 6, 9, 10, 14, 15, 22, 23, 24, 25, 26; T.56, R.9, S.30, 31, 32; T.56, R.10, S.1, 11, 12, 13, 14, 24, 25): 1B, 2A, 3B;~~

~~(211) Split Rock River, West Branch, (T.55, R.9, S.6, 7, 8, 16, 17, 21, 22, 26, 27, 28; T.55, R.10, S.1; T.56, R.10, S.22, 26, 27, 33, 34, 35, 36): 1B, 2A, 3B;~~

~~(212) Spring Creek, Carlton County, (T.46, R.17, S.3, 4, 5, 6): 1B, 2A, 3B;~~

~~(213) Spring Creek, St. Louis County, (T.54, R.12, S.1, 2): 1B, 2A, 3B;~~

~~(214) Stanley Creek, (T.52, R.11, S.18, 19; T.52, R.12, S.4, 5, 8, 9, 10, 11, 12, 13): 1B, 2A, 3B;~~

~~(215) State Line Creek, (T.46, R.15, S.6, 7, 18, 19, 30, 31; T.46, R.16, S.12, 13, 24, 25, 36; T.47, R.15, S.30, 31): 1B, 2A, 3B;~~

~~(216) Stewart Creek, (T.49, R.15, S.21, 22, 26, 27): 1B, 2A, 3B;~~

~~(217) Stewart River, (T.53, R.10, S.18, 19, 20, 29; T.53, R.11, S.2, 3, 10, 11, 13, 14, 15; T.54, R.11, S.3, 4, 10, 15, 22, 26, 27, 34, 35): 1B, 2A, 3B;~~

~~(218) Stewart River, (T.55, R.11, S.7; T.55, R.12, S.12, 13): 1B, 2A, 3B;~~

~~(219) Stewart River, Little, (T.53, R.10, S.19, 20, 29; T.53, R.11, S.9, 15, 16, 22, 23, 24): 1B, 2A, 3B;~~

~~(220) Stickle Creek, (T.63, R.1W, S.1, 2, 11, 12, 14): 1B, 2A, 3B;~~

~~(221) Stone Creek, (T.61, R.2E, S.2, 3; T.62, R.2E, S.21, 22, 27, 34, 35): 1B, 2A, 3B;~~

~~(222) Stoney Creek (Stony Creek or Rock Creek), Lake County, (T.55, R.9, S.30; T.55, R.10, S.20, 23, 24, 25, 27): 1B, 2A, 3B;~~

~~(223) Stony Brook, Carlton County, (T.46, R.17, S.10, 11, 15, 16, 21): 1B, 2A, 3B;~~

~~(224) Stony Creek, Little, Cook County, (T.63, R.2E, S.4, 5, 9; T.64, R.2E, S.31, 32, 33): 1B, 2A, 3B;~~

~~(225) Stream Number 30, (T.54, R.8, S.5, 6; T.55, R.8, S.19, 30, 31): 1B, 2A, 3B;~~

~~(226) Stumble Creek, (T.59, R.5W, S.16, 21, 22, 26, 27, 28): 1B, 2A, 3B;~~

~~(227) Stump River (Lower Stump River), (T.64 R.4E, S.18; T.64, R.3E, S.8, 9, 13, 14, 15, 16, 17, 21, 22, 23, 24): 1B, 2A, 3B;~~

~~(228) Sucker River (Big Sucker Creek), (T.51, R.12, S.3, 4, 10; T.52, R.12, S.18, 19, 29, 30, 31, 32, 33; T.52, R.13, S.1, 12, 13, 24, 25; T.53, R.12, S.19, 20, 30, 31; T.53, R.13, S.24, 25, 36): 1B, 2A, 3B;~~

~~(229) Sucker River, Little, (T.51, R.12, S.2, 3): 1B, 2A, 3B;~~

~~(230) Sugar Loaf Creek, (T.58, R.5W, S.17, 19, 20, 29): 1B, 2A, 3B;~~

~~(231) Sullivan Creek, (T.56, R.11, S.1, 2, 10, 11, 15; T.57, R.10, S.19, 30; T.57, R.11, S.24, 25, 36): 1B, 2A, 3B;~~

~~(232) Sundling Creek, (T.61, R.1W, S.10, 11, 14, 15, 16, 17, 18; T.61, R.2W, S.13): 1B, 2A, 3B;~~

~~(233) Swamp River, (T.63, R.3E, S.25, 26, 36; T.63, R.4E, S.20, 29, 30; T.64, R.4E, S.21, 27, 28): 1B, 2A, 3B;~~

~~(234) Swamper Creek, (T.64, R.1E, S.20, 29, 32): 1B, 2A, 3B;~~

~~(235) Swan Creek, East, (T.56, R.20, S.3, 4, 5, 10, 11): 1B, 2A, 3B;~~

~~(236) Swan Creek, Little, (T.56, R.19, S.17, 19, 20, 30; T.56, R.20, S.25, 26, 35): 1B, 2A, 3B;~~

~~(237) Swan River, East (Barber Creek), (T.55, R.19, S.18, 19, 30, 31; T.55, R.20, S.1, 2, 12, 13; T.56, R.20, S.2, 3, 11, 14, 23, 26, 27, 35; T.57, R.20, S.28, 33, 34): 1B, 2A, 3B;~~

~~(238) Swan River, West (excluding trout waters), (T.55, 56, R.20, 21): 2C;~~

~~(239) Swanson Creek, (T.61, R.4W, S.6, 7, 8; T.61, R.5W, S.1): 1B, 2A, 3B;~~

~~(240) Tait River, (T.60, R.3W, S.4; T.61, R.3W, S.28, 33): 1B, 2A, 3B;~~

~~(241) Talmadge Creek (Talmadge River), (T.51, R.12, S.19; T.51, R.13, S.9, 10, 13, 14, 15, 24): 1B, 2A, 3B;~~

~~(242) Temperance River, (T.59, R.4W, S.5, 6, 7, 8, 18, 19, 30, 31, 32; T.60, R.4W, S.5, 6, 7, 8, 17, 20, 28, 29, 32, 33; T.61, R.4W, S.4, 8, 9, 16, 17, 19, 20, 30, 31): 1B, 2A, 3B;~~

~~(243) Temperance River (excluding trout waters), (T.62, R.4W): 1B, 2Bd, 3C;~~

~~(244) Thirty-nine Creek, Big, (T.56, R.8, S.19, 30, 31; T.56, R.9, S.1, 2, 3, 11, 12, 13, 14, 15, 22, 23, 24, 25; T.57, R.9, S.22, 26, 27, 35, 36): 1B, 2A, 3B;~~

~~(245) Thirty-nine Creek, Little, (T.56, R.8, S.6, 7, 8, 17, 18, 19, 20, 29, 30; T.56, R.9, S.1, 12): 1B, 2A, 3B;~~

~~(246) Thompson Creek, (T.62, R.1W, S.17, 19, 20; T.62, R.2W, S.24): 1B, 2A, 3B;~~

~~(247) Tikkanen Creek, (T.57, R.7, S.5, 6, 8, 16, 17): 1B, 2A, 3B;~~

~~(248) Timber Creek, (T.62, R.1E, S.1; T.63, R.1E, S.25, 36; T.63, R.2E, S.31): 1B, 2A, 3B;~~

~~(249) Tischer Creek (Congdon Creek/Hartley), (T.50, R.14, S.2, 3, 4, 10, 11, 13, 14; T.51, R.14, S.29, 33, 34): 1B, 2A, 3B;~~

~~(250) Torgenson Creek, (T.61, R.4W, S.30; T.61, R.5W, S.24, 25): 1B, 2A, 3B;~~

~~(251) Tower Creek, St. Louis County, (T.55, R.14, S.8, 9, 17, 18, 19; T.55, R.15, S.24, 25, 26): 1B, 2A, 3B;~~

~~(252) Tower Creek, Lake County, (T.57, R.7, S.9): 1B, 2A, 3B;~~

~~(253) Trappers Creek, (T.56, R.11, S.2, 3, 9, 10, 16, 17, 19, 20; T.57, R.11, S.35): 1B, 2A, 3B;~~

~~(254) Trout Brook, (T.54, R.22, S.1): 1B, 2A, 3B;~~

~~(255) Twin Points Creek, (T.54, R.9, S.10, 11, 13, 14): 1B, 2A, 3B;~~

~~(256) Two Island River, (T.58, R.5W, S.2, 3, 4, 11; T.59, R.5W, S.7, 8, 17, 18, 20, 21, 27, 28, 29, 31, 32, 33, 34; T.59, R.6, S.11, 12): 1B, 2A, 3B;~~

~~(257) Ugstad Creek, (T.51, R.15, S.21, 22, 26, 27, 28): 1B, 2A, 3B;~~

~~(258) Unnamed (Deer) Creek, (T.47, R.16, S.19, 29, 30; T.47, R.17, S.13, 14, 24): 1B, 2A, 3B;~~

~~(259) Unnamed Creek, Carlton County, (T.47, R.17, S.28, 29, 33, 34, 35): 1B, 2A, 3B;~~

~~(260) Unnamed Creek, Carlton County, (T.47, R.17, S.31, 32, 33, 34): 1B, 2A, 3B;~~

~~(261) Unnamed Creek, (T.55, R.8, S.20, 21, 29, 32, 33): 1B, 2A, 3B;~~

~~(262) Unnamed Creek, Meadowlands, (T.53, R.19, S.22, 23): 7;~~

~~(263) Unnamed Creek, (S-17-6), (T.53, R.11, S.30, 31, 32; T.53, R.12, S.25): 1B, 2A, 3B;~~

~~(264) Unnamed Creek, (S-17-9), (T.53, R.11, S.5; T.54, R.11, S.20, 29, 30, 32): 1B, 2A, 3B;~~

~~(265) Unnamed Ditch, Gilbert, (T.58, R.17, S.23, 24, 25, 36): 7;~~

~~(266) Us-kab-wan-ka (Rush), (T.52, R.16, S.2, 11, 14, 23; T.53, R.15, S.5, 6; T.53, R.16, S.1, 11, 12, 14, 15, 22, 23, 27, 34, 35; T.54, R.15, S.23, 24, 26, 27, 32, 33, 34): 1B, 2A, 3B;~~

~~(267) Wanless Creek, (T.60, R.6, S.27, 33, 34, 35, 36): 1B, 2A, 3B;~~

~~(268) Whiteface River, South Branch, (see Hornby Junction Creek);~~

~~(269) Whyte Creek, (T.57, R.10, S.1, 2, 11, 14, 23, 26, 27, 34): 1B, 2A, 3B;~~

~~(270) Woods Creek, (T.61, R.1E, S.1, 12, 13; T.62, R.1E, S.35, 36): 1B, 2A, 3B;~~

~~(271) Wyman Creek, (T.58, R.14, S.3, 4; T.59, R.14, S.11, 13, 14, 23, 24, 26, 27, 34, 35): 1B, 2A, 3B; and~~

~~(272) *All other streams in the Boundary Waters Canoe Area Wilderness [11/5/84P]: 1B, 2Bd, 3B.~~

B. Lakes:

[For text of subitems (1) to (151), see M.R.]

(152) White Pine Lake, 16-0369-00, [WR] (T.61, R.3W, S.19, 20, 29, 30): 2B, 3B; and

(153) *Winchell Lake, 16-0354-00, [11/5/84P] (T.64, R.2, 3): 1B, 2A, 3B;.

~~(154) *All other lakes in the Boundary Waters Canoe Area Wilderness [11/5/84P]: 1B, 2Bd, 3B; and~~

~~(155) *All wetlands in the Boundary Waters Canoe Area Wilderness [11/5/84P]: 2D.~~

[For text of items C and D, see M.R.]

Subp. 2. **Lake of the Woods Basin.** The water use classifications for the stream reaches within each of the major watersheds in the Lake of the Woods Basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Lake of the Woods Basin are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 09030001 Rainy River - Headwaters (August 9, 2016);

(2) 09030002 Vermilion River (August 9, 2016);

(3) 09030003 Rainy River - Rainy Lake (August 9, 2016);

(4) 09030005 Little Fork River (August 9, 2016);

(5) 09030006 Big Fork River (August 9, 2016);

(6) 09030007 Rapid River (August 9, 2016);

(7) 09030008 Rainy River - Lower (August 9, 2016); and

(8) 09030009 Lake of the Woods (August 9, 2016).

~~(1) Angora Creek, (T.61, R.18, S.9, 10, 15, 16, 21, 22): 1B, 2A, 3B;~~

~~(2) Arrowhead Creek (Trapper Creek), (T.60, R.8, S.3, 10, 11, 13, 14, 15, 22, 23, 26, 27, 28, 34; T.61, R.8, S.14, 15, 21, 22, 27, 28, 34): 1B, 2A, 3B;~~

~~(3) Ash River (Camp Ninety Creek), (T.66, R.20, S.4, 5, 9; T.67, R.20, S.5, 6, 8, 16, 17, 18, 19, 20, 29, 30, 31, 32; T.67, R.21, S.36; T.68, R.20, S.13, 14, 20, 21, 22, 23, 24, 28, 29, 31, 33; T.68, R.19, S.17, 18; T.68, R.21, S.36): 1B, 2A, 3B;~~

~~(4) Beaver Creek, (T.62, 63, R.20): 2C;~~

~~(5) Beauty Creek, (T.67, R.21, S.23, 24, 25, 26): 1B, 2A, 3B;~~

~~(6) Blackduck River (Black Duck River), (T.66, R.19, S.5, 6, 7, 8, 17; T.66, R.20, S.1; T.67, R.19, S.29, 31, 32; T.67, R.20, S.2, 3, 4, 10, 14, 15, 23, 24, 25, 26, 36; T.68, R.20, S.26, 27, 28, 33, 34): 1B, 2A, 3B;~~

~~(7) Camp Creek, (T.60, R.8, S.3, 4, 9, 10; T.61, R.8, S.27, 28, 33, 34): 1B, 2A, 3B;~~

~~(8) Camp Creek, West, (T.60, R.8, S.4, 5, 7, 8, 16, 17, 20, 21; T.61, R.8, S.33): 1B, 2A, 3B;~~

~~(9) Camp E Creek, (T.60, R.9, S.7, 18; T.60, R.10, S.11, 12): 1B, 2A, 3B;~~

~~(10) Dark River, (T.60, R.19, S.19, 20, 30; T.60, R.20, 10, 11, 12, 13, 24): 1B, 2A, 3B;~~

~~(11) Dinner Creek, (T.153, R.26, S.4, 9, 10, 12, 13, 14, 15, 23, 24; T.154, R.26, S.7, 18, 19, 29, 30, 32, 33; T.154, R.27, S.1, 12; T.155, R.26, S.30, 31; T.155, R.27, S.25, 35, 36): 1B, 2A, 3B;~~

~~(12) Dumbbell River, (T.60, R.7, S.3, 4, 5, 7, 8, 9, 10, 16, 18, 19, 20, 28, 29, 31, 32; T.61, R.7, S.34): 1B, 2A, 3B;~~

~~(13) Fawn Creek, (T.66, R.20, S.1, 2, 3, 4, 12; T.67, R.20, S.15, 22, 23, 26, 34, 35): 1B, 2A, 3B;~~

~~(14) Folly Creek, (T.60, R.7, S.2, 3, 10, 11, 14, 15, 22, 23, 24, 27): 1B, 2A, 3B;~~

~~(15) Gardner Brook, (T.63, 64, R.23, 24): 2C;~~

~~(16) Grassy Creek, (T.61, R.13, S.6; T.61, R.14, S.1): 1B, 2A, 3B;~~

~~(17) Harrigan Creek, (T.62, R.23, S.10): 1B, 2A, 3B;~~

~~(18) Harris Lake Creek (Harris Creek), (T.60, R.10, S.6; T.61, R.10, S.19, 30, 31): 1B, 2A, 3B;~~

~~(19) Hay Creek, (T.153, R.26, S.4, 8, 9, 17, 20): 1B, 2A, 3B;~~

~~(20) Hill Creek, (T.60, R.8, S.19, 30; T.60, R.9, S.24, 25): 1B, 2A, 3B;~~

~~(21) Indian Sioux River, Little, (T.65, R.15): 1B, 2Bd, 3B;~~

~~(22) Inga Creek, (T.60, R.9, S.2, 3; T.61, R.9, S.14, 22, 23, 27, 34, 35): 1B, 2A, 3B;~~

~~(23) *Inga Creek [11/5/84P] (T.61, R.9, S.11, 12): 1B, 2A, 3B;~~

~~(24) Isabella River, Little, (T.59, R.8, S.3, 4, 5, 6, 9, 10, 15, 16, 22; T.60, R.8, S.31, 32; T.60, R.9, S.5, 6, 8, 9, 10, 15, 16, 22, 25, 26, 27, 36; T.61, R.9, S.9, 16, 17, 20, 21, 29, 32): 1B, 2A, 3B;~~

~~(25) *Isabella River, Little, [11/5/84P] (T.61, R.9, S.3, 4, 9, 10; T.62, R.9, S.34): 1B, 2A, 3B;~~

~~(26) Island River, (T.61, R.7, 8): 1B, 2Bd, 3C;~~

~~(27) Jack Pine Creek, (T.60, R.8, S.5, 6, 7, 8, 18; T.61, R.8, S.19, 20, 29, 30, 31, 32): 1B, 2A, 3B;~~

~~(28) Johnson Creek, (T.60, R.18, S.6, 7, 8, 17, 20): 1B, 2A, 3B;~~

~~(29) Kawishiwi River, outside Boundary Waters Canoe Area Wilderness, (Source to Fall Lake): 1B, 2Bd, 3C;~~

~~(30) Kinmount Creek, (T.67, R.20, S.19; T.67, R.21, S.13, 14, 15, 20, 21, 22, 23, 24): 1B, 2A, 3B;~~

~~(31) Longstorff Creek, (T.62, R.12, S.6, 7; T.63, R.12, S.31): 1B, 2A, 3B;~~

~~(32) Lost River, (T.65, R.19, S.6; T.65, R.20, S.1, 2, 3, 4, 5, 6, 7, 8, 12; T.65, R.21, S.1; T.66, R.20, S.20, 25, 27, 29, 31, 32, 33, 34, 35, 36): 1B, 2A, 3B;~~

~~(33) Mary Ann Creek, (T.58, R.10, S.16, 21): 1B, 2A, 3B;~~

~~(34) Mike Kelly Creek (Kelly Creek), (T.60, R.11, S.14, 15, 23): 1B, 2A, 3B;~~

~~(35) Mitawan Creek, (T.60, R.9, S.1, 12; T.61, R.8, S.18, 19, 31; T.61, R.9, S.12, 13, 24, 25, 36): 1B, 2A, 3B;~~

~~(36) *Mitawan Creek, [11/5/84P] (T.61, R.8, S.5, 6, 7; T.61, R.9, S.1, 2, 12; T.62, R.9, S.35): 1B, 2A, 3B;~~

~~(37) Moose River, St. Louis County, (T.68, R.18, 19): 1B, 2Bd, 3C;~~

~~(38) Moose River, outside Boundary Waters Canoe Area Wilderness, (T.65, R.14): 1B, 2Bd, 3C;~~

~~(39) Nine Mile Creek (Ninemile Creek), (T.66, R.19, S.4; T.67, R.19, S.7, 8, 18, 19, 20, 21, 27, 28, 29, 33; T.67, R.20, S.12, 13, 14, 23): 1B, 2A, 3B;~~

~~(40) Nip Creek, (T.59, R.11, S.3, 4; T.60, R.11, S.21, 22, 27, 28, 34): 1B, 2A, 3B;~~

~~(41) Nira Creek, (T.61, R.11, S.22, 23, 27): 1B, 2A, 3B;~~

~~(42) Pitt Creek, (T.159, R.32, S.4, 9, 16; T.160, R.32, S.21, 28, 33): 1B, 2A, 3B;~~

~~(43) Portage Creek, (T.65, R.21): 2C;~~

~~(44) Portage River, (T.65, R.14, S.24; T.65, R.13, S.19, 20, 28, 29): 1B, 2Bd, 3C;~~

~~(45) Rainy River, (Outlet of Rainy Lake to Dam in International Falls): 1B, 2Bd, 3A;~~

~~(46) Rainy River, (Dam in International Falls to Railroad Bridge in Baudette): 1C, 2Bd, 3A;~~

~~(47) Rainy River, (Railroad Bridge in Baudette to Lake of the Woods): 2B, 3A;~~

~~(48) Sand Creek, (T.60, R.21, S.3, 4, 5, 10, 11, 14; T.61, R.20, S.19; T.61, R.21, S.3, 10, 11, 14, 15, 23, 24, 25, 26, 27, 33, 34, 35; T.62, R.21, S.34): 1B, 2A, 3B;~~

~~(49) Scott Creek, (T.59, R.7, S.4; T.60, R.7, S.9, 10, 15, 16, 21, 22, 27, 33, 34, 35): 1B, 2A, 3B;~~

~~(50) Section 30 Creek, (T.63, R.11, S.30; T.63, R.12, S.24, 25): 1B, 2A, 3B;~~

~~(51) Sea Gull River, (T.66N, R.4W, S.30, 31): 1C, 2Bd, 3C;~~

~~(52) Shine Brook (Swine Creek), (T.62, R.25, S.11, 14, 15, 16): 1B, 2A, 3B;~~

~~(53) Snake Creek, (T.60, R.10, S.1; T.61, R.9, S.19, 30, 31; T.61, R.10, S.24, 25, 36): 1B, 2A, 3B;~~

~~(54) Snake River, (T.60, R.10, S.3; T.61, R.9, S.18, 19; T.61, R.10, S.23, 24, 26, 27, 34): 1B, 2A, 3B;~~

~~(55) *Snake River, [11/5/84P] (T.61, R.9, S.7; T.61, R.10, S.12): 1B, 2A, 3B;~~

~~(56) Sphagnum Creek, (T.60, R.9, S.4; T.61, R.9, S.28, 29, 33): 1B, 2A, 3B;~~

~~(57) Stoney Brook (Stony Brook), (T.60, R.22, S.3, 4; T.61, R.22, S.13, 24, 25, 35, 36; T.61, R.21, S.7, 18): 1B, 2A, 3B;~~

~~(58) Tomato Creek, (T.161, R.34, S.3, 9, 10; T.162, R.34, S.35): 1B, 2A, 3B;~~

~~(59) Tomlinson Creek, (T.60, R.7, S.18, 19, 31; T.60, R.8, S.24, 25, 36): 1B, 2A, 3B;~~

~~(60) Trout Brook, (T.66, R.26, S.19, 30; T.66, R.27, S.24, 25): 1B, 2A, 3B;~~

~~(61) Two Rivers, East, (T.61, R.14, S.7, 8; T.61, R.15, S.1, 2, 3, 4, 12; T.62, R.14, S.29, 30, 31, 32; T.62, R.15, S.32, 33, 34, 35, 36): 1B, 2A, 3B;~~

~~(62) Two Rivers, West, (T.61, R.15, S.6, 7, 8, 9, 14, 15, 16, 17): 1B, 2A, 3B;~~

~~(63) Unnamed Creek, (T.65, R.19, S.4, 5; T.66, R.19, S.33): 1B, 2A, 3B;~~

~~(64) Valley River, (T.62, R.23, S.1, 2, 3, 4, 10, 11, 12, 13, 14, 24; T.63, R.22, S.6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30; T.63, R.23, S.24, 25, 26, 35): 1B, 2A, 3B;~~

~~(65) Venning Creek, (T.60, R.23, S.1, 2, 11, 12, 13, 14; T.61, R.23, S.35): 1B, 2A, 3B;~~

~~(66) Victor Creek, (T.60, R.9, S.12, 13): 1B, 2A, 3B;~~

~~(67) Weiss Creek, (T.59, R.9, S.2, 3, 11; T.60, R.9, S.27, 34): 1B, 2A, 3B;~~

~~(68) Wenho Creek, (T.58, R.10, S.17, 20, 21, 27, 28, 34): 1B, 2A, 3B;~~

~~(69) Zippel Creek, West Branch, (T.162, R.33, 34): 2C;~~

~~(70) *All other streams in the Boundary Waters Canoe Area Wilderness [11/5/84P]: 1B, 2Bd, 3B; and~~

~~(71) *All other streams in the Voyageurs National Park [11/5/84P]: 2B, 3B.~~

B. Lakes:

[For text of subitems (1) to (182), see M.R.]

(183) *Wisini Lake, 38-0361-00, [11/5/84P] (T.64, R.7): 1B, 2A, 3B; and

(184) Woods, Lake of the, 39-0002-00, (see Lake of the Woods);.

~~(185) *All other lakes in the Boundary Waters Canoe Area Wilderness [11/5/84P]: 1B, 2Bd, 3B;~~

~~(186) *All wetlands in the Boundary Waters Canoe Area Wilderness [11/5/84P]: 2D;~~

~~(187) *All other lakes in the Voyageurs National Park [11/5/84P]: 2B, 3B; and~~

~~(188) *All other wetlands in the Voyageurs National Park [11/5/84P]: 2D.~~

[For text of items C and D, see M.R.]

Subp. 3. **Red River of the North Basin.** The water use classifications for the stream reaches within each of the major watersheds in the Red River of the North Basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the

Red River of the North Basin are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 09020101 Bois de Sioux River (August 9, 2016);

(2) 09020102 Mustinka River (August 9, 2016);

(3) 09020103 Otter Tail River (August 9, 2016);

(4) 09020104 Upper Red River of the North (August 9, 2016);

(5) 09020106 Buffalo River (August 9, 2016);

(6) 09020107 Red River of the North - Marsh River (August 9, 2016);

(7) 09020108 Wild Rice River (August 9, 2016);

(8) 09020301 Red River of the North - Sandhill River (August 9, 2016);

(9) 09020302 Upper/Lower Red Lake (August 9, 2016);

(10) 09020303 Red Lake River (August 9, 2016);

(11) 09020304 Thief River (August 9, 2016);

(12) 09020305 Clearwater River (August 9, 2016);

(13) 09020306 Red River of the North - Grand Marais Creek (August 9, 2016);

(14) 09020309 Snake River (August 9, 2016);

(15) 09020311 Red River of the North - Tamarac River (August 9, 2016);

(16) 09020312 Two Rivers (August 9, 2016); and

(17) 09020314 Roseau River (August 9, 2016).

~~(1) Auganash Creek, (T.144, R.38, S.5; T.145, R.38, S.27, 28, 31, 32, 33): 1B, 2A, 3B;~~

~~(2) Bad Boy Creek, (T.144, R.39, S.13, 14, 22, 23, 27, 28, 34): 1B, 2A, 3B;~~

~~(3) Badger Creek (Lower Badger Creek or County Ditch No. 11), (T.149, 150, 151, R.42, 43, 44): 2C;~~

~~(4) Barnums Creek (Burnham Creek or County Ditch No. 72), (T.148, 149, 150, R.44, 45, 46, 47, 48): 2C;~~

~~(5) Battle River, South Branch, (T.151, R.30, S.2, 3, 4, 11): 1B, 2A, 3B;~~

~~(6) Bemis Hill Creek (County Ditch No. 9), (T.161, R.37, S.17, 20, 29): 1B, 2A, 3B;~~

~~(7) Bois de Sioux River, (Mud Lake outlet to Otter Tail River in Breckenridge): 2C;~~

~~(8) Brandberg Creek (Brandborg Creek), (T.133, R.38, S.20, 21, 28, 29, 30): 1B, 2A, 3B;~~

~~(9) Buckboard Creek, (T.144, R.37, S.19, 30, 31; T.144, R.38, S.11, 12, 13, 24): 1B, 2A, 3B;~~

~~(10) Clearwater River, (T.148, R.35, S.5, 6, 8, 17, 20, 29, 31, 32; T.149, R.35, S.20, 29, 31, 32): 1B, 2A, 3B;~~

~~(11) County Ditch No. 6A-2, Rothsay, (T.135, R.45, S.21, 28, 33): 7 (see subitem (68));~~

~~(12) County Ditch No. 32, Sabin, (T.138, R.48, S.13, 14, 15, 16, 17, 18): 7;~~

~~(13) County Ditch No. 65, New York Mills, (T.135, R.37, S.18; T.135, R.38, S.13): 7;~~

~~(14) Dead Horse Creek, (T.138, R.38, S.3, 4, 7, 8, 9, 16): 1B, 2A, 3B;~~

~~(15) Deerhorn Creek, (T.136, R.44, 45, 46): 2C;~~

~~(16) Doran Slough, (T.131, 132, R.46, 47): 2C;~~

~~(17) Eighteen Mile Creek, (T.127, R.46, 47): 2C;~~

~~(18) Elbow Lake Creek (Solid Bottom Creek), (T.142, R.38, S.6; T.143, R.38, S.31, 32): 1B, 2A, 3B;~~

~~(19) Felton Creek, (T.141, R.44, S.7, 8, 17; T.141, R.45, S.7, 8, 12, 13, 14, 15, 16, 17, 18, 22; T.141, R.46, S.12, 13, 14): 1B, 2A, 3B;~~

~~(20) Five Mile Creek, (T.127, 128, R.45): 2C;~~

~~(21) Gentilly River, (T.149, 150, R.45): 2C;~~

~~(22) Hay Creek, (T.137, 138, R.44, 45, 46): 2C;~~

~~(23) Hay Creek (County Ditch No. 7 or County Ditch No. 9), (T.161, 162, R.37, 38, 39): 2C;~~

~~(24) Hill River, (T.148, 149, 150, R.39, 40, 41, 42): 2C;~~

~~(25) Holmstad Creek, (T.136, R.37, S.7; T.136, R.38, S.12, 13, 14): 1B, 2A, 3B;~~

~~(26) Hoover Creek, (T.152, 153, 154, R.29, 30): 2C;~~

~~(27) Joe River, (T.162, 163, 164, R.49, 50): 2C;~~

~~(28) Joe River, Little, (T.163, R.47, 48): 2C;~~

~~(29) Judicial Ditch No. 13, Goodridge, (T.154, R.40, S.16, 17, 18): 7;~~

~~(30) Judicial Ditch No. 18, Goodridge, (T.154, R.40, S.18, 19, 27, 28, 29, 30; T.154, R.41, S.13, 14, 15, 16, 17, 18; T.154, R.42, S.7, 8, 13, 14, 15, 16; T.154, R.43, S.9, 10, 11, 12, 16): 7;~~

~~(31) Lawndale Creek, (T.135, R.45, S.5, 6; T.135, R.46, S.1, 2): 1B, 2A, 3B;~~

~~(32) Lengby Creek, (T.147, R.39, S.33, 34): 1B, 2A, 3B;~~

~~(33) Long Branch Creek, (T.134, R.42, S.7): 1B, 2A, 3B;~~

~~(34) Lost River, (T.148, R.38, S.20, 21, 22, 27, 28): 1B, 2A, 3B;~~

~~(35) Maple Creek, (T.147, 148, R.44, 45, 46): 2C;~~

~~(36) Marsh Creek (Judicial Ditch No. 91), (T.144, 145, 146, R.41, 42, 43): 2C;~~

~~(37) Meadow Creek, (T.151, R.30, S.6; T.151, R.31, S.1, 2): 1B, 2A, 3B;~~

~~(38) Mud Creek, (T.144, R.37, S.13, 14, 22, 23, 24): 1B, 2A, 3B;~~

~~(39) Mud River, (T.150, R.33, S.21, 28): 1B, 2A, 3B;~~

~~(40) Mustinka River, (Old Channel), (T.127, 128, R.45, 46, 47): 2C;~~

~~(41) Mustinka River, West Branch, (see Twelve Mile Creek, West Branch);~~

~~(42) Mustinka River Ditch, (T.128, R.45, S.19; T.128, R.46, S. 13, 14, 23, 24): 2C;~~

~~(43) Nassett Creek, (T.148, R.38, S.20, 28, 29): 1B, 2A, 3B;~~

~~(44) O'Brien Creek, (T.149, R.32, S.2; T.150, R.32, S.23, 24, 26, 35): 1B, 2A, 3B;~~

~~(45) Otter Tail River, (Height of Land Lake to mouth): 1C, 2Bd, 3C;~~

~~(46) Otter Tail River Diversion, (T.133, R.42, S.19, 30; T.133, R.43, S.25): 1C, 2Bd, 3C;~~

~~(47) Rabbit River, (T.130, 131, R.45, 46, 47): 2C;~~

~~(48) Rabbit River, South Fork, (T.130, R.45, 46): 2C;~~

~~(49) Red Lake River, (Outlet of Lower Red Lake to mouth): 1C, 2Bd, 3C;~~

~~(50) Red River of the North, (T.132, R.47, S.8 in Breckenridge to Canadian border): 1C, 2Bd, 3C;~~

~~(51) Roy Creek (Roy Lake Creek), (T.145, 146, R.39): 2C;~~

~~(52) Rush Lake Creek, (T.135, R.38, S.23, 26, 27, 28): 1B, 2A, 3B;~~

~~(53) Schermerhorn Creek (Shimmelhorn Creek), (T.144, R.39, S.6; T.145, R.39, S.31; T.145, R.40, S.25, 26, 36): 1B, 2A, 3B;~~

~~(54) Spring Creek (State Ditch No. 68), (T.145, 146, R.45, 46, 47): 2C;~~

~~(55) Spring Creek, (T.142, R.41, 42): 2C;~~

~~(56) Spring Creek, (T.149, R.30, S.4, 5, 9, 10): 1B, 2A, 3B;~~

~~(57) Spring Lake Creek, (T.148, R.35, S.34, 35): 1B, 2A, 3B;~~

~~(58) Stony Creek, (T.137, 138, R.45, 46): 2C;~~

~~(59) Sucker Creek, (T.138, R.40, S.18; T.138, R.41, S.13): 1B, 2A, 3B;~~

~~(60) Sucker Creek, (T.160, 161, R.39): 2C;~~

~~(61) Tamarac River (Source to the dam in S.5, T.157, R.48 at Stephen), (T.157, 158, R.45, 46, 47, 48): 1C, 2Bd, 3C;~~

~~(62) Toad River, (T.138, R.38, S.6, 7, 18, 19, 30; T.139, R.38, S.30, 31; T.139, R.39, S.25, 36; T.138, R.39, S.25, 36): 1B, 2A, 3B;~~

~~(63) Twelve Mile Creek (excluding Class 7 segment), (T.126, 127, R.45): 2C;~~

~~(64) Twelve Mile Creek (County Ditch No. 1), Donnelly, (T.126, R.43, S.16, 17, 18, 19, 21, 22, 25, 26, 27; T.126, R.44, S.23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33; T.126, R.45, S.25, 26, 27, 28, 36): 7;~~

~~(65) Twelve Mile Creek, East Fork, (T.125, 126, R.44, 45): 2C;~~

~~(66) Twelve Mile Creek, West Branch (West Branch Twelvemile Creek), (T.125, 126, 127, 128, R.45, 46): 2C;~~

~~(67) Twelve Mile Creek, West Fork, (T.125, 126, R.45): 2C;~~

~~(68) Twin Lake Creek, (T.144, 145, R.40): 2C;~~

~~(69) Two Rivers, Middle Branch, (Source to Hallock): 1C, 2Bd, 3C;~~

~~(70) Two Rivers, South Branch, (T.160, 161, R.41-49): 1C, 2Bd, 3C;~~

~~(71) Unnamed Creek, Rothsay, (T.135, R.45, S.21, 22, 23, 25, 26): 7 (see subitem (11));~~

~~(72) Unnamed Creek, Shevlin, (T.147, R.36, S.17, 18; T.147, R.37, S.11, 12, 13, 14): 7;~~

~~(73) Unnamed Ditch, Audubon, (T.139, R.42, S.4, 9): 7;~~

~~(74) Unnamed Ditch, Lake Park, (T.139, R.43, S.4; T.140, R.43, S.33): 7;~~

~~(75) Unnamed Ditch, Glyndon, (T.139, R.47, S.1, 2, 12; T.140, R.47, S.35): 7;~~

~~(76) Unnamed Ditch, Callaway, (T.140, R.41, S.6; T.140, R.42, S.1, 2, 10, 11): 7;~~

~~(77) Unnamed Ditch, Gary, (T.145, R.44, S.22, 27, 34): 7;~~

~~(78) Unnamed Ditch, Erskine, (T.149, R.42, S.34, 35): 7;~~

~~(79) Unnamed Ditch, Thief River Falls, (T.154, R.43, S.31, 32, 33): 7;~~

~~(80) Unnamed Ditch, Warroad, (T.163, R.37, S.19, 20, 21, 22, 23; T.163, R.38, S.19, 20, 21, 22, 23, 24, 30; T.163, R.39, S.25, 31, 32, 33, 34, 35, 36): 7;~~

~~(81) Whisky Creek, (T.136, 137, R.44, 45, 46): 2C;~~

~~(82) Whisky Creek, (T.133, 134, R.46, 47, 48): 2C;~~

~~(83) White Earth River, (T.142, 143, 144, R.40, 41, 42): 2C;~~

~~(84) Willow Creek, New York Mills, (T.135, R.38, S.13, 14, 15, 16, 17, 18): 7; and~~

~~(85) Wolverton Creek, (T.135, 136, 137, R.48): 2C.~~

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

Subp. 4. **Upper Mississippi River Basin (headwaters to the confluence with the St. Croix River).** The water use classifications for the stream reaches within each of the major watersheds in the Upper Mississippi River Basin from the headwaters to the confluence with the St. Croix River listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Upper Mississippi River Basin from the headwaters to the confluence with the St. Croix River are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 07010101 Mississippi River - Headwaters (August 9, 2016);

(2) 07010102 Leech Lake River (August 9, 2016);

(3) 07010103 Mississippi River - Grand Rapids (August 9, 2016);

(4) 07010104 Mississippi River - Brainerd (August 9, 2016);

(5) 07010105 Pine River (August 9, 2016);

(6) 07010106 Crow Wing River (August 9, 2016);

(7) 07010107 Redeye River (August 9, 2016);

(8) 07010108 Long Prairie River (August 9, 2016);

(9) 07010201 Mississippi River - Sartell (August 9, 2016);

(10) 07010202 Sauk River (August 9, 2016);

(11) 07010203 Mississippi River - St. Cloud (August 9, 2016);

(12) 07010204 North Fork Crow River (August 9, 2016);

(13) 07010205 South Fork Crow River (August 9, 2016);

(14) 07010206 Mississippi River - Twin Cities (August 9, 2016); and

(15) 07010207 Rum River (August 9, 2016).

~~(1) Alcohol Creek, (T.143, 144, R.34): 2C;~~

~~(2) Arramba Creek, (T.40, R.30): 2C;~~

~~(3) Barbour Creek, (T.44, R.28, S.28): 1B, 2A, 3B;~~

~~(4) Basswood Creek, (T.141, 142, R.36, 37): 2C;~~

~~(5) Battle Brook, (T.35, R.26, 27): 2C;~~

~~(6) Battle Creek, (T.120, R.31): 2C;~~

~~(7) Bear Brook, (T.144, 145, R.27): 2C;~~

~~(8) Bear Creek, (T.145, R.36): 2C;~~

~~(9) Beautiful Creek, (T.127, R.31): 2C;~~

~~(10) Beaver Creek, (T.136, 137, R.32, 33): 2C;~~

~~(11) Belle Creek (Judicial Ditch No. 18), (T.117, 118, R.32): 2C;~~

~~(12) Black Bear Brook, (T.44, R.28, S.7, 8): 1B, 2A, 3B;~~

~~(13) Birch Brook (Birch Branch), (T.141, R.25): 2C;~~

~~(14) Black Brook, Mille Lacs County, (T.41, R.26): 2C;~~

~~(15) Black Brook, (T.42, 43, R.30): 2C;~~

~~(16) Blackhoof Creek, (T.46, R.29, S.16): 1B, 2A, 3B;~~

~~(17) Blackwater Creek, (T.55, R.26, S.4): 2C;~~

~~(18) Blueberry River, (T.138, 139, R.35, 36): 2C;~~

~~(19) Bluff Creek, (T.135, 136, R.36, 37): 2C;~~

~~(20) Bogus Brook (excluding Class 7 segment), (T.37, 38, R.25, 26): 2C;~~

~~(21) Bogus Brook, Bock, (T.38, R.26, S.13, 14): 7;~~

~~(22) Borden Creek, (T.44, R.28, S.8, 9, 17, 20): 1B, 2A, 3B;~~

~~(23) Branch No. 3, Lateral 2, East Bethel/Ham Lake, (T.33, R.23, S.29, 32, along the west side of Minnesota Highway 65): 7;~~

~~(24) Briggs Creek, (T.35, R.29, S.2, 11, 12, 14, 15, 22): 1B, 2A, 3B;~~

~~(25) Bruce Creek, (T.53, R.22, S.6, 7; T.53, R.23, S.26; T.54, R.22, S.18, 19, 30, 31; T.54, R.23, S.25): 1B, 2A, 3B;~~

~~(26) Buckman Creek (excluding Class 7 segment), (T.39, 40, R.30, 31): 2C;~~

~~(27) Buckman Creek, Buckman, Buckman Coop Cry., (T.39, R.30, S.4, 5, 6, 9; T.39, R.31, S.1, 2, 10, 11; T.40, R.30, S.31; T.40, R.31, S.36): 7;~~

~~(28) Bungo Creek, (T.137, R.30, S.6; T.137, R.31, S.1, 11, 12, 14, 21, 22, 23; T.138, R.30, S.31): 1B, 2A, 3B;~~

~~(29) Bungoshine Creek (Bungashing Creek), (T.145, R.32, S.28, 29, 30; T.145, R.33, S.25, 26, 34, 35): 1B, 2A, 3B;~~

~~(30) Bunker Hill Brook (Bunker Hill Creek), (T.38, R.30, S.6; T.38, R.31, S.1, 2, 10, 11): 1B, 2A, 3B;~~

~~(31) Camp Creek, (T.43, R.28, S.4, 5): 1B, 2A, 3B;~~

~~(32) Camp Ripley Brook, (T.132, R.29, S.18, 19; T.132, R.30, S.12, 13): 1B, 2A, 3B;~~

~~(33) Cat River (Cat Creek), (T.137, R.35, S.4, 9, 10, 11, 12, 13): 1B, 2A, 3B;~~

~~(34) Cat River (excluding trout waters), (T.136, 137, R.33, 34): 2C;~~

~~(35) Cedar Creek, (T.138, R.31, S.23, 26, 27, 28): 1B, 2A, 3B;~~

~~(36) Chase Brook, (T.38, 39, R.27): 2C;~~

~~(37) Clearwater Creek, (T.56, 57, R.25): 2C;~~

~~(38) Cold Creek, (T.145, R.33, S.19): 1B, 2A, 3B;~~

~~(39) Cold Spring Creek, (T.123, R.30, S.14, 15): 1B, 2A, 3B;~~

~~(40) Coon Creek, (T.43, R.29, 30): 2C;~~

~~(41) Corey Brook (Cory Brook), (T.135, R.30, S.9, 15, 16, 21, 22, 27): 1B, 2A, 3B;~~

~~(42) County Ditch No. 15 (Bear Creek), Bertha, (T.132, R.35, S.2; T.133, R.34, S.7; T.133, R.35, S.12, 13, 24, 25, 26, 35): 7;~~

~~(43) County Ditch No. 17, St. Cloud, Bel Clare Estates, (T.124, R.29, S.13, 24, 25): 7;~~

~~(44) County Ditch No. 23, Garfield, (T.129, R.38, S.26, 27): 7;~~

~~(45) County Ditch No. 23A, Willmar, (T.119, R.34, S.29, 30, 32; T.119, R.35, S.23, 25, 26): 7;~~

~~(46) County Ditch No. 28, East Bethel/Ham Lake, (T.32, R.23, S.4, 5, 6; T.33, R.23, S.29, 32 along the east side of Minnesota Highway 65): 7;~~

~~(47) County Ditch No. 42, McGregor, (T.47, R.23, S.6; T.47, R.24, S.1; T.48, R.23, S.29, 31, 32): 7;~~

~~(48) County Ditch No. 63, Near Hutchinson, West Lynn Coop Cry., (T.116, R.30, S.19, 20, 21, 28, 33): 7;~~

~~(49) County Ditch No. 132, Lakeside, Lakeside Coop Cry., (T.116, R.31, S.16, 21): 7;~~

~~(50) Crane Creek (Judicial Ditch No. 1), (excluding Class 7 segment), (T.116, 117, R.26, 27): 2C;~~

~~(51) Crane Creek, Winsted, (T.117, R.27, S.14, 20, 21, 22, 23, 24, 25): 7;~~

~~(52) *Crow River, North Fork, [11/5/84R] (From the Lake Koronis outlet to the Meeker - Wright County line): 2B, 3C;~~

~~(53) Cullen Brook, (T.136, R.28, S.18, 19, 30; T.136, R.29, S.13): 1B, 2A, 3B;~~

~~(54) Dabill Brook, (T.137, R.31, S.1, 2, 10, 11; T.138, R.31, S.35, 36): 1B, 2A, 3B;~~

~~(55) Daggett Brook, (T.43, R.29, 30): 2C;~~

~~(56) Duel Creek, (T.129, R.32, S.20): 1B, 2A, 3B;~~

~~(57) Eagle Creek, (T.120, R.29): 2C;~~

~~(58) Elk River, Little, (T.130, 131, R.30, 31): 2C;~~

~~(59) Elk River, South Branch, Little, (T.130, R.30, 31, 32): 2C;~~

~~(60) Estes Brook, (T.36, 37, 38, R.27, 28): 2C;~~

~~(61) Everton Creek, (T.149, R.30): 2C;~~

~~(62) Fairhaven Creek, (T.121, R.28, S.5; T.122, R.28, S.29, 31, 32): 1B, 2A, 3B;~~

~~(63) Farley Creek, (T.147, R.28): 2C;~~

~~(64) Farnham Creek, (T.135, R.32, S.5, 6, 7; T.136, R.32, S.2, 3, 9, 10, 16, 19, 20, 21, 29, 30, 31, 32): 1B, 2A, 3B;~~

~~(65) Fawn Creek, (T.134, R.33, S.22, 27, 33, 34): 1B, 2A, 3B;~~

~~(66) Finn Creek, (T.135, R.37, S.27, 34): 1B, 2A, 3B;~~

~~(67) Fish Creek, (T.28, R.22): 2C;~~

~~(68) Fletcher Creek, (T.42, R.31): 2C;~~

~~(69) Foley Brook, (T.141, R.25): 2C;~~

~~(70) Frederick Creek, (T.119, R.25, 26): 2C;~~

~~(71) Frontenac Creek, (T.144, 145, R.34): 2C;~~

~~(72) Gould Creek (Sucker Creek), (T.144, R.36, S.32): 1B, 2A, 3B;~~

~~(73) Gould Creek (Sucker Creek), (T.143, R.36): 2C;~~

~~(74) Hanson Brook, (T.40, R.27): 2C;~~

~~(75) Hanson Brook (Threemile), (T.122, R.28, S.21, 22, 25, 26, 27, 36): 1B, 2A, 3B;~~

~~(76) Hasty Brook, (T.49, R.19, S.18; T.49, R.20, S.4, 5, 9, 10, 13, 14, 15, 23; T.50, R.20, S.28, 29, 32, 33): 1B, 2A, 3B;~~

~~(77) Hay Creek, Crow Wing County, (T.43, 44, R.30, 31): 2C;~~

~~(78) Hay Creek, Wadena County, (T.134, R.33, S.7, 8, 9, 10, 11, 17, 18): 1B, 2A, 3B;~~

~~(79) Hay Creek (Mosquito Creek), (T.135, R.31, S.8, 9, 16, 17): 1B, 2A, 3B;~~

~~(80) Hazel Creek, (T.127, R.29, 30): 2C;~~

~~(81) Hellcamp Creek (Hellkamp Creek), (T.140, R.33, S.19; T.140, R.34, S.24): 1B, 2A, 3B;~~

~~(82) Hennepin Creek, (T.144, R.35, S.3, 10, 15, 16, 21; T.145, R.35, S.34): 1B, 2A, 3B;~~

~~(83) Hennepin Creek (excluding trout waters), (T.144, 145, 146, R.34, 35): 2C;~~

~~(84) Hoblin Creek, (T.137, R.30, S.17, 18, 19): 1B, 2A, 3B;~~

~~(85) Indian Creek, (T.141, 142, R.36, 37): 2C;~~

~~(86) Irish Creek, (T.129, R.31): 2C;~~

~~(87) Iron Creek, (T.134, 135, R.31, 32): 2C;~~

~~(88) Jewett Creek (Jewitts Creek or County Ditch No. 17), (T.119, 120, R.30, 31): 2C;~~

~~(89) Johnson Creek, (T.137, R.25): 2C;~~

~~(90) Judicial Ditch No. 1, Lakeside, Lakeside Coop Cry., (T.116, R.31, S.28, 33): 7;~~

~~(91) Judicial Ditch No. 15, Buffalo Lake, Iowa Pork Industries, Hector, (T.115, R.31, S.15, 16, 20, 21, 29, 30; T.115, R.32, S.22, 25, 26, 27, 28, 32, 33): 7;~~

~~(92) Kabekona River, (T.143, R.32, S.6, 7, 18, 19; T.143, R.33, S.2, 3, 4, 9, 11, 12, 24; T.144, R.33, S.29, 30, 32, 33; T.144, R.34, S.24, 25, 36): 1B, 2A, 3B;~~

~~(93) Kawishiwash Creek, (T.142, R.32, S.12): 1B, 2A, 3B;~~

~~(94) Kettle Creek (Kettle River), (T.138, R.35, 36, 37): 2C;~~

~~(95) Kinzer Creek, (T.123, R.30, S.27, 34): 1B, 2A, 3B;~~

~~(96) Kitchi Creek, (T.146, 147, R.29, 30): 2C;~~

~~(97) Kitten Creek, (T.137, R.34, 35): 2C;~~

~~(98) Larson Creek, (T.128, R.32, S.6): 1B, 2A, 3B;~~

~~(99) LaSalle Creek (excluding trout waters), (T.143, R.35): 2C;~~

~~(100) LaSalle Creek, (T.143, R.35, S.6; T.144, R.35, S.19, 30, 31): 1B, 2A, 3B;~~

~~(101) LaSalle River, (T.144, 145, R.35): 2C;~~

~~(102) Laura Brook, (T.141, R.26): 2C;~~

~~(103) Libby Brook, (T.50, R.23, S.5, 6; T.50, R.24, S.1, 2): 1B, 2A, 3B;~~

~~(104) Long Brook, Lower South, (T.44, R.30, S.12, 13): 1B, 2A, 3B;~~

~~(105) Long Brook, Upper South, (T.44, R.29, S.6, 7): 1B, 2A, 3B;~~

~~(106) Long Lake Creek, (T.46, R.25, S.10, 15): 1B, 2A, 3B;~~

~~(107) Luxemburg Creek, (T.123, R.28, S.16, 17, 18, 19, 20, 21, 22, 30): 1B, 2A, 3B;~~

~~(108) Matuska's Creek, (T.54, R.26, S.35, 36): 1B, 2A, 3B;~~

~~(109) Meadow Creek, (T.128, R.30): 2C;~~

~~(110) Meyers Creek (Johnson Creek), (T.122, R.28, S.4; T.123, R.28, S.22, 27, 33, 34): 1B, 2A, 3B;~~

~~(111) Michaud Brook, (T.140, R.25, S.7, 17, 18): 1B, 2A, 3B;~~

~~(112) Mike Drew Brook, (T.38, 39, R.26, 27): 2C;~~

~~(113) Mink Creek, Big, (T.41, 42, R.29, 30): 2C;~~

~~(114) Mink Creek, Little, (T.40, 41, R.29, 30, 31): 2C;~~

~~(115) *Mississippi River, [11/5/84R] (From Lake Itasca to Fort Ripley, at the common boundary of Crow Wing and Morrison Counties): 2B, 3C;~~

~~(116) *Mississippi River, [11/5/84R] (From Fort Ripley, at the common boundary of Crow Wing and Morrison Counties, to the southerly boundary of Morrison County): 1C, 2Bd, 3C;~~

~~(117) Mississippi River, (From the southerly boundary of Morrison County to Stearns County State-Aid Highway 7 bridge in Saint Cloud in S.13, T.124, R.28): 1C, 2Bd, 3C;~~

~~(118) *Mississippi River, [11/5/84R] (Stearns County State-Aid Highway 7 bridge in Saint Cloud in S.13, T.124, R.28 to the northwestern city limits of Anoka, river mile 873.5): 1C, 2Bd, 3C;~~

~~(119) Mississippi River, (From the northwestern city limits of Anoka, river mile 873.5, to the Upper Lock and Dam at Saint Anthony Falls in Minneapolis): 1C, 2Bd, 3C;~~

~~(120) Mississippi River, (Outlet of Metro Wastewater Treatment Works in Saint Paul, river mile 835.3, to river mile 830, Rock Island RR Bridge): 2C, 3C;~~

~~(121) Morrison Brook, (T.52, R.26, S.4, 9, 10, 14, 15; T.53, R.26, S.7, 8, 18, 19, 29, 30, 32, 33): 1B, 2A, 3B;~~

~~(122) Muckey Creek (Wallingford Creek), (T.139, R.33, S.1, 2, 10, 11, 12): 1B, 2A, 3B;~~

~~(123) Necktie River (T.145, R.32, S.6, 7, 8, 9, 16; T.145, R.33, S.1): 1B, 2A, 3B;~~

~~(124) Nelson Hay Creek, (T.130, R.31, S.1, 2): 1B, 2A, 3B;~~

~~(125) Northby Creek, (T.140, R.27): 2C;~~

~~(126) Norway Brook, (T.139, R.30): 2C;~~

~~(127) O'Brien Creek, (T.56, 57, R.22): 2C;~~

~~(128) O'Neill Brook, (T.38, R.26): 2C;~~

~~(129) Oak Ridge Creek (Oak Creek), (T.133, 134, R.36): 2C;~~

~~(130) Olson Brook, (T.136, R.30, S.12, 13, 14): 1B, 2A, 3B;~~

~~(131) Peterson Creek, (T.134, R.30, S.29 32): 1B, 2A, 3B;~~

~~(132) Pickerel Creek, (T.56, R.22, S.7, 18; T.56, R.23, S.13): 1B, 2A, 3B;~~

~~(133) Pigeon River, (T.147, R.27): 2C;~~

~~(134) Pike Creek (excluding Class 7 segment), (T.129, R.30): 2C;~~

~~(135) Pike Creek, Flensburg, (T.129, R.30, S.17, 18, 19, 20): 7;~~

~~(136) Pillager Creek, (T.133, 134, R.30): 2C;~~

~~(137) Pine River, South Fork, (T.138, R.31, S.14, 23): 1B, 2A, 3B;~~

~~(138) Pioneer Creek, (T.118, R.24): 2C;~~

~~(139) Pokegama Creek, (T.54, R.26, S.26, 27, 28): 1B, 2A, 3B;~~

~~(140) Pokegama Creek, Little, (T.54, R.26, S.26, 27, 34, 35): 1B, 2A, 3B;~~

~~(141) Pokety (Pickedee Creek), (T.144, R.32, S.29, 30; T.144, R.33, S.24, 25): 1B, 2A, 3B;~~

~~(142) Poplar Brook (Martin Creek), (T.135, R.32, S.5, 6; T.136, R.32, S.22, 27, 28, 32, 33): 1B, 2A, 3B;~~

~~(143) Prairie Brook, (T.36, R.27): 2C;~~

~~(144) Rat Creek, (T.144, 145, R.34): 2C;~~

~~(145) Rice Creek, (T.30, 31, 32, R.22, 23, 24): 1C, 2Bd, 3C;~~

~~(146) Rice Creek, Sherburne County, (T.35, R.29): 2C;~~

~~(147) Robinson Hill Creek, (T.123, R.28, S.4, 9, 10, 15; T.124, R.28, S.31, 32, 33): 1B, 2A, 3B;~~

~~(148) Rock Creek, Little, (T.38, R.31, S.3, 4, 10, 15, 21, 22, 28; T.39, R.30, S.17, 18, 20, 21, 22; T.39, R.31, S.13, 14, 22, 23, 27, 33, 34): 1B, 2A, 3B;~~

~~(149) Rogers Brook, (T.134, R.30, S.29, 32): 1B, 2A, 3B;~~

~~(150) Rosholt Creek, (T.55, R.23, S.22, 23, 24): 1B, 2A, 3B;~~

~~(151) Round Creek, (T.43, R.31, S.14, 15): 1B, 2A, 3B;~~

~~(152) Round Prairie Creek (Trout Creek), (T.127, R.33, S.4; T.128, R.33, S.20, 29, 32, 33): 1B, 2A, 3B;~~

~~(153) *Rum River, [11/5/84P] (From the Ogechie Lake spillway to the northernmost confluence with Lake Onamia): 2B, 3B;~~

~~(154) *Rum River, [11/5/84R] (From the State Highway 27 bridge in Onamia to Madison and Rice Streets in Anoka): 2B, 3C;~~

~~(155) Sand Creek, Crow Wing County, (T.45, R.30, S.2, 3, 11, 13, 14; T.46, R.30, S.34): 1B, 2A, 3B;~~

~~(156) Sand Creek, (T.55, R.23, S.15, 22, 27, 28, 29, 32, 33): 1B, 2A, 3B;~~

~~(157) Sauk Creek, Little, (T.127, R.34, S.1; T.128, R.34, S.36): 1B, 2A, 3B;~~

~~(158) Schoolcraft Creek, (T.142, R.34, S.5, 7, 8, 17): 1B, 2A, 3B;~~

~~(159) Seven Mile Creek, (T.133, 134, R.30, 31): 2C;~~

~~(160) Sisseebakwet Creek, (T.54, R.26, S.19, 29, 30): 1B, 2A, 3B;~~

~~(161) Six Mile Brook, (T.144, R.26, 27): 2C;~~

~~(162) Skimmerhorn Creek (Skimerhorn Creek), (T.149, R.30): 2C;~~

~~(163) Skunk Creek, (T.144, 145, R.34): 2C;~~

~~(164) Skunk River (Co. Dt. No. 37) (Co. Dt. No. 29), Brooten, (T.123, R.35, S.4, 5, 9; T.123, R.35, S.9, 10, 11, 12; T.123, R.34, S.3, 4, 5, 6, 7, 8): 7;~~

~~(165) Smart's Creek, (T.126, R.28, S.17, 18, 20): 1B, 2A, 3B;~~

~~(166) Smith Creek, (T.53, R.26, S.1, 9, 10, 11, 12, 13, 14, 15; T.54, R.26, S.35, 36): 1B, 2A, 3B;~~

~~(167) Smith Creek, Unnamed Tributary, (T.53, R.26, S.11, 12): 1B, 2A, 3B;~~

~~(168) Smith Creek, Unnamed Tributary, (T.54, R.26, S.35, 36): 1B, 2A, 3B;~~

~~(169) Snake River, (T.33, R.28, S.1; T.34, R.28, S.2, 11, 14, 23, 26, 35, 36; T.35, R.28, S.20, 28, 29, 33, 34, 35): 1B, 2A, 3B;~~

~~(170) Snowball Creek, (T.56, R.23): 2C;~~

~~(171) Split Hand Creek, (T.53, R.24, 25): 2C;~~

~~(172) Spring Brook, Stearns County, (T.121, R.28, S.7; T.121, R.29, S.12): 1B, 2A, 3B;~~

~~(173) Spring Brook, Crow Wing County, (T.138, R.28, S.27, 34): 1B, 2A, 3B;~~

~~(174) Spring Brook (Spring Branch), Cass County, (T.139, R.26, S.3, 10, 11, 14): 1B, 2A, 3B;~~

~~(175) Spring Brook, Lower, (T.57, R.25, S.6; T.58, R.25, S.31): 1B, 2A, 3B;~~

~~(176) Spring Creek, (T.55, R.23, S.25, 26, 27): 1B, 2A, 3B;~~

~~(177) Spruce Creek, (T.130, R.36, S.3, 4, 9, 10; T.131, R.36, S.28, 29, 31, 32, 33, 34): 1B, 2A, 3B;~~

~~(178) Stag Brook, (T.121, 122, R.31): 2C;~~

~~(179) Stall Creek, (T.143, R.33, S.12, 13, 14): 1B, 2A, 3B;~~

~~(180) Stanchfield Branch, Lower, Braham, (T.37, R.23, S.3, 10, 15, 22): 7;~~

~~(181) Stocking Creek, (T.138, R.34, 35): 2C;~~

~~(182) Stoney Brook (Stony Brook), Cass County, (T.135, R.29, S.5, 8, 9; T.136, R.29, S.30, 31, 32; T.136, R.30, S.20, 21, 22, 25, 26, 27, 29, 30; T.136, R.31, S.24, 25, 26): 1B, 2A, 3B;~~

~~(183) Stony Brook (Stoney Brook), Foley, (T.36, R.29, S.2, 9, 10, 11, 16; T.37, R.29, S.35, 36): 7;~~

~~(184) Stony Creek (Wabedo Creek), (T.140, R.28): 2C;~~

~~(185) Stony Point Brook, (T.147, R.28, S.22, 27, 34): 2C;~~

~~(186) Straight Creek, Upper, (Straight River), (T.140, R.36, S.6; T.141, R.36, S.30, 31; T.141, R.37, S.24, 25): 1B, 2A, 3B;~~

~~(187) Straight Lake Creek, (T.140, R.36, S.6; T.140, R.37, S.1, 2): 1B, 2A, 3B;~~

~~(188) Straight River, (T.139, R.34, S.7; T.139, R.35, S.4, 5, 6, 9, 10, 11, 12; T.139, R.36, S.1; T.140, R.36, S.28, 29, 33, 34, 35, 36): 1B, 2A, 3B;~~

~~(189) Sucker Creek (Gould Creek), (T.144, R.36, S.27, 28, 29, 30, 32, 33): 1B, 2A, 3B;~~

~~(190) Sucker Creek, Meeker County, (T.118, R.30, S.4, 5, 6, 7): 1B, 2A, 3B;~~

~~(191) Swamp Creek, Big, (T.137, 138, 139, R.32, 33): 2C;~~

~~(192) Swamp Creek, Little, (T.136, 137, R.33): 2C;~~

~~(193) Swan Creek, (T.134, 135, R.32): 2C;~~

~~(194) Swan Creek, Little, (T.135, R.32): 2C;~~

~~(195) Swift River, (T.142, R.27): 2C;~~

~~(196) Taylor Creek, (T.128, R.31): 2C;~~

~~(197) Ted Brook Creek, (T.130, R.31): 2C;~~

~~(198) Thiel Creek (Teal), (T.121, R.28, S.5, 6, 8): 1B, 2A, 3B;~~

~~(199) Tibbits Brook, (T.33, 34, R.26, 27): 2C;~~

~~(200) Tibbetts Creek (Tibbetts Brook), (T.39, 40, R.27, 28): 2C;~~

~~(201) Trout Brook, St. Paul, (T.29, R.22, S.18, 19): 7;~~

~~(202) Tower Creek, (T.135, R.32): 2C;~~

~~(203) Two Rivers, South Branch, Albany, (T.125, R.31, S.21, 22, 23): 7;~~

~~(204) Two Rivers Springs, (T.51, R.23, S.19; T.51, R.24, S.24, 25, 26): 1B, 2A, 3B;~~

~~(205) Union Creek, (T.134, R.35, S.4, 5, 7, 8, 18, 19, 30, 31; T.135, R.35, S.27, 28, 33, 34): 1B, 2A, 3B;~~

~~(206) Unnamed Creek, Cass County, (T.137, R.31, S.4, 5): 1B, 2A, 3B;~~

~~(207) Unnamed Creek, Cass County, (T.139, R.26, S.3, 10): 1B, 2A, 3B;~~

~~(208) Unnamed Creek, Calumet, (T.56, R.23, S.21): 7;~~

~~(209) Unnamed Creek, Montrose, Hiller Mobile Home Court, (T.119, R.26, S.22, 26, 27, 35): 7;~~

~~(210) Unnamed Creek, Rogers, (T.120, R.23, S.15, 16, 22, 23): 7;~~

~~(211) Unnamed Creek, Grove City, (T.120, R.32, S.34, 35, 36): 7;~~

~~(212) Unnamed Creek, Albertville, (T.121, R.23, S.30; T.121, R.24, S.25, 36): 7;~~

~~(213) Unnamed Creek, Eden Valley, Ruhland Feeds, (T.121, R.31, S.2; T.122, R.31, S.35): 7;~~

~~(214) Unnamed Creek; Lake Henry, (T.123, R.33, S.11, 14): 7;~~

~~(215) Unnamed Creek, Miltona, (T.129, R.36, S.6; T.130, R.36, S.30, 31): 7;~~

~~(216) Unnamed Ditch, Braham, (T.37, R.23, S.2, 3): 7;~~

~~(217) Unnamed Ditch, Ramey; Ramey Farmers Coop Cry., (T.38, R.28, S.4, 5; T.39, R.28, S.29, 30, 32; T.39, R.29, S.25, 26, 27, 28): 7;~~

~~(218) Unnamed Ditch, McGregor, (T.48, R.23, S.31, 32): 7;~~

~~(219) Unnamed Ditch, Nashwauk, (T.56, R.22, S.4, 5; T.57, R.22, S.32): 7;~~

~~(220) Unnamed Ditch, Taconite, (T.56, R.24, S.22 SW1/4): 7;~~

~~(221) Unnamed Ditch, Glencoe, Green Giant, (T.115, R.28, S.21, 22, 27, 28): 7;~~

~~(222) Unnamed Ditch, Glencoe, Green Giant, (T.115, R.28, S.14, 23): 7;~~

~~(223) Unnamed Ditch, Winsted, Green Giant, (T.117, R.27, S.10, 11): 7;~~

~~(224) Unnamed Ditch, Montrose, Hiller Mobile Home Court, (T.119, R.26, S.34, 35): 7;~~

~~(225) Unnamed Ditch, Kandiyohi, (T.119, R.34, S.10, 15, 21, 22, 28, 29): 7;~~

~~(226) Unnamed Ditch, Rogers, (T.120, R.23, S.15): 7;~~

~~(227) Unnamed Ditch, Belgrade, (T.123, R.34, S.19, 30): 7;~~

~~(228) Unnamed Ditch, Flensburg, (T.129, R.30, S.30; T.129, R.31, S.25): 7;~~

~~(229) Unnamed Ditch, Miltona, (T.130, R.36, S.30; T.130, R.37, S.25, 36): 7;~~

~~(230) Unnamed Stream, Winsted, (T.117, R.27, S.11, 12): 7;~~

~~(231) Unnamed Stream, Flensburg, (T.129, R.30, S.19, 30): 7;~~

~~(232) Vandell Brook (Vondell Brook), (T.37, 38, R.26): 2C;~~

~~(233) Van Sickle Brook, (T.138, R.26, S.14, 15, 23, 24): 1B, 2A, 3B;~~

~~(234) Wallingford Brook (Wallingford Creek), (T.139, R.33, S.1, 2, 11; T.140, R.33, S.25, 36): 1B, 2A, 3B;~~

~~(235) Warba Creek, (T.54, R.23, S.13, 14, 15, 21, 22, 23, 24): 1B, 2A, 3B;~~

~~(236) Welcome Creek, (T.56, 57, R.22): 2C;~~

~~(237) Whitley's Creek (Whiteley Creek), (T.45, R.30, S.16, 17, 20, 21): 1B, 2A, 3B;~~

~~(238) Whitney Brook, (T.39, R.26, 27): 2C;~~

~~(239) Willow Creek, Otter Tail County, (T.133, R.38, S.2, 11; T.134, R.38, S.26, 35): 1B, 2A, 3B;~~

~~(240) Willow Creek, Stearns and Meeker Counties, (T.121, R.29, S.10, 11, 14, 23): 1B, 2A, 3B;~~

~~(241) Willow River, North Fork, (T.142, R.25): 2C;~~

~~(242) Willow River, South Fork, (T.142, R.25): 2C;~~

~~(243) Wilson Creek, (T.137, R.30): 2C; and~~

~~(244) Wolf Creek, (T.42, R.30): 2C.~~

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

Subp. 5. **Minnesota River Basin.** The water use classifications for the stream reaches within each of the major watersheds in the Minnesota River Basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at

www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Minnesota River Basin are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 07020001 Minnesota River - Headwaters (August 9, 2016);

(2) 07020002 Pomme de Terre River (August 9, 2016);

(3) 07020003 Lac qui Parle River (August 9, 2016);

(4) 07020004 Minnesota River - Yellow Medicine River (August 9, 2016);

(5) 07020005 Chippewa River (August 9, 2016);

(6) 07020006 Redwood River (August 9, 2016);

(7) 07020007 Minnesota River - Mankato (August 9, 2016);

(8) 07020008 Cottonwood River (August 9, 2016);

(9) 07020009 Blue Earth River (August 9, 2016);

(10) 07020010 Watonwan River (August 9, 2016);

(11) 07020011 Le Sueur River (August 9, 2016); and

(12) 07020012 Lower Minnesota River (August 9, 2016).

~~(1) Altermatts Creek (County Ditch No. 39), Comfrey, (T.108, R.33, S.17, 19, 20, 30; T.108, R.34, S.24, 25, 35, 36); 7;~~

~~(2) Assumption Creek, (T.115, R.23, S.2; T.116, R.23, S.34, 35): 1B, 2A, 3B;~~

~~(3) Badger Creek, (T.101, 102, R.28): 2C;~~

~~(4) Beaver Creek, East Fork (County Ditch No. 63), Olivia, Olivia Canning Company, (T.115, R.34, S.1, 2, 3, 4, 5, 6; T.115, R.35, S.1, 12, 13, 14, 23, 24, 25, 26; T.116, R.34, S.16, 20, 21, 28, 29, 30, 32, 33, 34, 35): 7;~~

~~(5) Blue Earth River, East Fork, (Brush Creek to mouth): 2C, 3C;~~

~~(6) Blue Earth River, West Fork, (Iowa border to mouth): 2C, 3C;~~

~~(7) Boiling Spring Creek (excluding Class 7 segment), (T.113, 114, R.37, 38): 2C;~~

~~(8) Boiling Springs Creek (County Ditch No. 1B), Echo, (T.113, R.38, S.5, 8; T.114, R.37, S.19, 30; T.114, R.38, S.25, 26, 27, 32, 33, 34): 7;~~

~~(9) Boot Creek (excluding Class 7 segment), (T.105, 106, R.22, 23): 2C;~~

~~(10) Boot Creek, New Richland, (T.105, R.22, S.6, 7; T.105, R.23, S.12, 13, 24): 7;~~

~~(11) Brafees Creek, (T.116, 117, R.40): 2C;~~

~~(12) Brush Creek, (Iowa border to mouth): 2C, 3C;~~

~~(13) Bull Run Creek, Little, (T.106, R.24, 25): 2C;~~

~~(14) Butterfield Creek, (T.106, 107, R.31, 32, 33): 2C;~~

~~(15) Canby Creek, (T.114, R.45, S.17, 18; T.114, R.46, S.13, 14, 21, 22, 23): 1B, 2A, 3B;~~

~~(16) Canby Creek (excluding trout waters), (South Dakota border to mouth): 2C, 3C;~~

~~(17) Cedar Run Creek, (T.103, 104, R.32, 33): 2C;~~

~~(18) Cherry Creek, Cleveland, (T.110, R.25, S.7, 8, 16, 17; T.110, R.26, S.12): 7;~~

~~(19) Chetomba Creek (excluding Class 7 segment), (T.116, 117, R.36, 37, 38): 2C;~~

~~(20) Chetomba Creek, Prinsburg, (T.116, R.36, S.6, 7, 18, 19; T.116, R.37, S.8, 9, 14, 15, 16, 23, 24; T.117, R.36, S.8, 9, 16, 17, 21, 28, 29, 30, 31, 32): 7;~~

~~(21) Chippewa River (see also County Ditch No. 60);~~

~~(22) Cobb Creek, Freeborn, (T.104, R.23, S.7, 8, 17; T.104, R.24, S.11, 12): 7;~~

~~(23) Cobb Creek Ditch, Freeborn, (T.103, R.23, S.2; T.104, R.23, S.14, 15, 16, 23, 26, 35): 7;~~

~~(24) Cobb River (Cobb River, Big), (T.103, 104, 105, 106, 107, R.23, 24, 25, 26, 27): 2C;~~

~~(25) Cobb River, Little (County Ditch No. 8), (T.105, 106, R.23, 24, 25, 26): 2C;~~

~~(26) Cottonwood Creek (excluding trout waters), (T.120, 121, 122, R.41, 42): 2C;~~

~~(27) Cottonwood Creek, (T.119, R.41, S.4; T.120, R.41, S.21, 28, 33): 1B, 2A, 3B;~~

~~(28) County Ditch No. 1, Echo, (T.113, R.38, S.8, 9): 7;~~

~~(29) County Ditch No. 4, Arco, (T.110, R.44, S.5; T.111, R.44, S.32, 33): 7;~~

~~(30) County Ditch No. 4, Norwood, (T.115, R.25, S.30; T.115, R.26, S.13, 14, 24, 25): 7;~~

~~(31) County Ditch No. 5, Marietta, (T.117, R.45, S.6, 7, 18; T.117, R.46, S.1; T.118, R.46, S.23, 25, 26, 36): 7;~~

~~(32) County Ditch No. 6 (Judicial Ditch No. 11), Janesville, (T.107, R.24, S.4, 8, 9, 17, 18; T.107, R.25, S.13): 7;~~

~~(33) County Ditch No. 7, Lowry, (T.126, R.39, S.25, 26): 7;~~

~~(34) County Ditch No. 8 (see Cobb River, Little);~~

~~(35) County Ditch No. 9 (see Hazel Creek);~~

~~(36) County Ditch No. 12 (County Ditch No. 45), Waseca, (T.107, R.23, S.22, 23): 7;~~

~~(37) County Ditch No. 12 (Rice Creek), Belview, (T.113, R.36, S.7, 8, 18, 19; T.113, R.37, S.15, 21, 22, 23, 24): 7;~~

~~(38) County Ditch No. 14, Tyler, (T.109, R.43, S.18; T.109, R.44, S.2, 3, 11, 13, 14; T.110, R.44, S.33, 34): 7;~~

~~(39) County Ditch No. 15 (see Unnamed Ditch, Madison);~~

~~(40) County Ditch No. 22, Montgomery, Green Giant Company, (T.111, R.23, S.4, 9, 10; T.112, R.23, S.33): 7;~~

~~(41) County Ditch No. 27, Madison, (T.117, R.43, S.3, 4, 5, 6; T.117, R.44, S.1; T.118, R.43, S.34; T.118, R.44, S.35, 36): 7;~~

~~(42) County Ditch No. 28, Marietta, (T.118, R.46, S.22, 23, 26): 7;~~

~~(43) County Ditch No. 38, Storden, (T.107, R.37, S.28, 29): 7;~~

~~(44) County Ditch No. 40A, Lafayette, (T.111, R.29, S.8, 14, 15, 16, 17, 23, 24): 7;~~

~~(45) County Ditch No. 42, Winthrop, (T.112, R.29, S.6, 7): 7;~~

~~(46) County Ditch No. 44, Bricelyn, Owatonna Canning Company, (T.101, R.25, S.7, 8, 16, 17; T.101, R.26, S.1, 12; T.102, R.26, S.36): 7;~~

~~(47) County Ditch No. 45, Renville, Southern Minnesota Beet Sugar Coop, (T.114, R.36, S.5, 6; T.115, R.36, S.7, 8, 9, 10, 17, 18, 19, 29, 30, 32): 7;~~

~~(48) County Ditch No. 45, Branch Lateral 3, Renville, Golden Oval Eggs, (T.115, R.36, S.4, 5, 8): 7;~~

~~(49) County Ditch No. 46, Willmar, (T.119, R.35, S.19, 20, 29): 7;~~

~~(50) County Ditch No. 51, Le Center, (T.110, R.24, S.5, 6; T.111, R.24, S.31, 32; T.111, R.25, S.26, 35, 36): 7;~~

~~(51) County Ditch No. 54, Montgomery, (T.112, R.23, S.26, 33, 34, 35): 7;~~

~~(52) County Ditch No. 55 (see Rush River, North Branch);~~

~~(53) County Ditch No. 60 (Chippewa River), Millerville, Millerville Coop Cry., (T.130, R.39, S.14, 22, 23, 27, 28, 32, 33): 7;~~

~~(54) County Ditch No. 61, Kerkhoven, (T.120, R.37, S.21, 22): 7;~~

~~(55) County Ditch No. 63, Hanska, (T.108, R.30, S.11, 12, 14, 17, 18, 19, 20, 21, 22, 23, 27, 28): 7;~~

~~(56) County Ditch No. 66, Bird Island, (T.115, R.34, S.15, 16, 17, 18, 22, 23): 7;~~

~~(57) County Ditch No. 87, Wells, (T.103, R.24, S.6; T.104, R.24, S.31; T.104, R.25, S.36): 7;~~

~~(58) County Ditch No. 104, Sacred Heart, (T.114, R.38, S.1, 2; T.115, R.37, S.7, 18; T.115, R.38, S.13, 24, 25, 26, 35, 36): 7;~~

~~(59) County Ditch No. 109, Morgan, (T.111, R.34, S.4, 5, 8, 17; T.112, R.34, S.22, 23, 27, 28, 33): 7;~~

~~(60) Crow Creek, (T.112, R.35): 2C;~~

~~(61) Dry Creek, (T.108, 109, R.36): 2C;~~

~~(62) Dry Weather Creek, (T.117, 118, R.39, 40, 41): 2C;~~

~~(63) Dry Wood Creek, (T.122, 123, R.42, 43): 2C;~~

~~(64) Eagle Creek, East Branch, (T.115, R.21, S.18): 1B, 2A, 3B;~~

~~(65) Eagle Creek, Main Branch, (T.115, R.21, S.7, 18; T.115, R.22, S.13): 1B, 2A, 3B;~~

~~(66) Echo Creek, (T.114, R.37): 2C;~~

~~(67) Eight Mile Creek (Judicial Ditch No. 7 or Eightmile Creek), (T.111, 112, 113, R.31): 2C;~~

~~(68) Elm Creek, North Fork, (T.104, R.34): 2C;~~

~~(69) Elm Creek, South Fork, (T.103, R.34): 2C;~~

~~(70) Emily Creek, (T.118, 119, R.43): 2C;~~

~~(71) Fish Creek, (T.123, 124, R.47, 48, 49): 2C;~~

~~(72) Five Mile Creek, (T.120, R.44): 2C;~~

~~(73) Florida Creek, (South Dakota border to mouth): 2C, 3C;~~

~~(74) Foster Creek (County Ditch No. 1) (excluding Class 7 segment), (T.102, 103, R.24): 2C;~~

~~(75) Foster Creek (County Ditch No. 1), Alden, (T.102, R.23, S.4, 5; T.103, R.23, S.31, 32; T.103, R.24, S.25, 36): 7;~~

~~(76) Hassel Creek, (T.122, 123, R.38, 39): 2C;~~

~~(77) Hawk Creek (County Ditch No. 10), Willmar/Pennock, (T.118, R.36, S.2, 3, 8, 10, 15, 16, 17, 18, 19; T.118, R.37, S.5, 6, 7, 8, 9, 14, 15, 16, 18, 19, 23, 24, 30, 31; T.119, R.35, S.19; T.119, R.36, S.24, 25, 26, 35): 7;~~

~~(78) Hazel Creek (County Ditch No. 9), (T.115, R.39, 40, 41, 42): 2C;~~

~~(79) High Island Ditch No. 5, Arlington, (T.113, R.27, S.16, 17, 21, 22, 27): 7;~~

~~(80) Hindeman Creek (Spring Creek), (T.111, R.32, S.19, 20; T.111, R.33, S.24): 1B, 2A, 3B;~~

~~(81) Iosco Creek, (T.108, R.23): 2C;~~

~~(82) John's Creek, (T.110, R.32, S.1; T.111, R.31, S.31; T.111, R.32, S.36): 1B, 2A, 3B;~~

~~(83) Judicial Ditch No. 1, Delavan, (T.104, R.27, S.23, 25, 26, 36): 7;~~

~~(84) Judicial Ditch No. 1A, Lafayette, (T.111, R.27, S.5, 6, 7; T.111, R.28, S.10, 11, 12, 15, 16, 17, 18, 19; T.111, R.29, S.24): 7;~~

~~(85) Judicial Ditch No. 4, Dawson, Lac qui Parle Oil Coop, (T.117, R.43, S.7, 17, 18, 20, 21 NW1/4; T.117, R.44, S.12): 7;~~

~~(86) Judicial Ditch No. 5, Murdock, (T.120, R.38, S.4, 5, 6, 9, 10, 11; T.120, R.39, S.1, 4, 9, 10, 11, 12): 7;~~

~~(87) Judicial Ditch No. 6, Hanska, (T.107, R.30, S.4; T.108, R.30, S.28, 33): 7;~~

~~(88) Judicial Ditch No. 7 (see Eight Mile Creek);~~

~~(89) Judicial Ditch No. 10, (see Wood Lake Creek);~~

~~(90) Judicial Ditch No. 10 (Morgan Creek), Hanska, (T.108, R.30, S.1; T.109, R.30, S.35 SE1/4, 36 SW1/4): 7;~~

~~(91) Judicial Ditch No. 12, Tyler, (T.109, R.43, S.9, 15, 16, 17, 18): 7;~~

~~(92) Judicial Ditch No. 29, Areo, (T.111, R.44, S.21, 28, 33): 7;~~

~~(93) Judicial Ditch No. 29 (Spring Creek), Evan, (T.110, R.33, S.6; T.111, R.33, S.21, 22, 28, 31, 32, 33): 7;~~

~~(94) Judicial Ditch No. 29, Branch Lateral, Evan, (T.110, R.33, S.6, 7, 18): 7;~~

~~(95) Judicial Ditch No. 30, Sleepy Eye, Del Monte Corporation, (T.109, R.32, S.4, 5, 6; T.110, R.32, S.31): 7;~~

~~(96) Judicial Ditch No. 49 (Providence Creek), Amboy, (T.105, R.27, S.18, 19; T.105, R.28, S.13): 7;~~

~~(97) Kennaley's Creek, (T.27, R.23, S.18): 1B, 2A, 3B;~~

~~(98) Lac qui Parle River, (Lake Hendricks outlet to Minnesota River): 2C, 3C;~~

~~(99) Lac qui Parle River, West Fork, (South Dakota border to mouth): 2C, 3C;~~

~~(100) Lateral Ditch C of County Ditch No. 55, Gaylord, (T.112, R.28, S.2, 3; T.113, R.28, S.32, 33, 34): 7;~~

~~(101) Lazarus Creek, (South Dakota border to Canby Creek): 2C, 3C;~~

~~(102) Lazarus Creek (Canby Creek), (T.115, R.45, S.14 to mouth): 2B, 3C;~~

~~(103) Le Sueur River, Little, (T.106, R.22): 2C;~~

~~(104) Lone Tree Creek, Tracy, (T.109, R.39, S.2, 3, 4, 7, 8, 9; T.110, R.38, S.19, 20, 30; T.110, R.39, S.25, 34, 35, 36): 7;~~

~~(105) Long Lake Creek, (T.132, R.41, S.9): 1B, 2A, 3B;~~

~~(106) Middle Creek (County Ditch No. 92), (T.113, 114, R.36): 2C;~~

~~(107) Mink Creek (Judicial Ditch No. 60), (T.104, R.30, 31): 2C;~~

~~(108) Minneopa Creek, Lake Crystal, (T.108, R.28, S.26, 27, 32, 33, 34): 7;~~

~~(109) Minnesota River, (Big Stone Lake outlet to the Lac qui Parle dam): 1C, 2Bd, 3C;~~

~~(110) *Minnesota River, [11/5/84R] (Lac qui Parle dam to the dam in Granite Falls S.34, T.116, R.39): 1C, 2Bd, 3C;~~

~~(111) *Minnesota River, [11/5/84R] (from the dam in Granite Falls S.34, T.116, R.39 to Redwood County State-Aid Highway 11 bridge): 2B, 3C;~~

~~(112) Minnesota River, (River Mile 22 to mouth): 2C, 3C;~~

~~(113) Minnesota River, Little, (South Dakota border crossing to Big Stone Lake): 2C, 3C;~~

~~(114) Morgan Creek (Judicial Ditch No. 10) (excluding Class 7 segment), (T.109, R.29, 30): 2C;~~

~~(115) Mud Creek, (T.114, R.43, 44, 45): 2C;~~

~~(116) Mud Creek, (T.123, R.36, S.28, 29): 1B, 2A, 3B;~~

~~(117) Mud Creek (Judicial Ditch No. 19), DeGraff/Murdock, (T.121, R.37, S.31; T.121, R.38, S.18, 19, 20, 28, 29, 33, 34, 35, 36; T.121, R.39, S.11, 12, 13): 7;~~

~~(118) Muddy Creek (Mud Creek) (County Ditch No. 2) (County Ditch No. 4), Chokio, (T.124, R.42, S.6, 7, 15, 16, 17, 18, 21, 22, 23; T.124, R.43, S.1, 4, 5, 6, 7, 8; T.124, R.44, S.1, 2, 3, 12; T.125, R.43, S.34, 35, 36): 7;~~

~~(119) Palmer Creek (County Ditch No. 68), (T.116, 117, 118, R.39): 2C;~~

~~(120) Paul's Creek, (T.110, R.26, S.14, 15): 1B, 2A, 3B;~~

~~(121) Pelican Creek, (T.130, R.41, 42): 2C;~~

~~(122) Pell Creek, Walnut Grove, (T.109, R.38, S.25, 26, 27, 28): 7;~~

~~(123) Perch Creek, (T.104, 105, 106, R.29, 30): 2C;~~

~~(124) Ramsey Creek, (T.112, R.36, S.1; T.113, R.36, S.35, 36): 1B, 2A, 3B;~~

~~(125) Redwood River, (T.110, R.42, S.5, 8, 17; T.111, R.42, S.32): 1B, 2A, 3B;~~

~~(126) Rice Creek, See County Ditch No. 12;~~

~~(127) Rush River, Middle Branch (County Ditch No. 23, County Ditch No. 42B, or County Ditch No. 54), Winthrop, (T.112, R.27, S.16, 19, 20, 21, 30; T.112, R.28, S.18, 19, 20, 21, 22, 25, 26, 27; T.112, R.29, S.7, 8, 9, 13, 14, 15, 16, 17, 18): 7;~~

~~(128) Rush River, North Branch, (County Ditch No. 55), Gaylord (T.112, R.27, S.7, 8, 17; T.112, R.28, S.1, 2, 12): 7;~~

~~(129) Saint James Creek (excluding Class 7 segment), (T.105, 106, R.31, 32, 33): 2C;~~

~~(130) Saint James Creek, Saint James, (T.106, R.31, S.5, 7, 8, 18; T.107, R.31, S.21, 22, 28, 32, 33): 7;~~

~~(131) Seven Mile Creek, (T.109, R.27, S.2, 3, 4, 10, 11, 12): 1B, 2A, 3B;~~

~~(132) Shakopee Creek, (T.119, 120, R.36, 37, 38, 39, 40): 2C;~~

~~(133) Silver Creek (County Ditch No. 3), (T.108, R.23, 24): 2C;~~

~~(134) Smith Creek, (T.113, R.35, 36): 2C;~~

~~(135) South Creek, (T.102, 103, R.28, 29, 30): 2C, 3C;~~

~~(136) Spring Branch Creek, (T.106, R.29, 30): 2C;~~

~~(137) Spring Creek (Judicial Ditch No. 29) (excluding trout waters) (see also Hindeman Creek and Judicial Ditch No. 29), (T.110, 111, R.33, 34): 2C;~~

~~(138) Spring Creek (County Ditch No. 10A), (T.117, 118, R.39, 40): 2C;~~

~~(139) Stony Run, (T.121, 122, R.45, 46): 2C;~~

~~(140) Stony Run Creek (Judicial Ditch No. 21), (T.116, R.40): 2C;~~

~~(141) Three Mile Creek (Threemile Creek), (T.112, R.33): 2C;~~

~~(142) Timms Creek (County Ditch No. 35A), (T.114, 115, R.36): 2C;~~

~~(143) Unnamed #1, (T.27, R.23, S.18; T.27, R.24, S.13): 1B, 2A, 3B;~~

~~(144) Unnamed #4, (T.27, R.24, S.24): 1B, 2A, 3B;~~

~~(145) Unnamed #7, (T.27, R.24, S.26): 1B, 2A, 3B;~~

~~(146) Unnamed Creek, (T.108, R.28, S.1, 2): 1B, 2A, 3B;~~

~~(147) Unnamed Creek, (T.108, R.28, S.5): 1B, 2A, 3B;~~

~~(148) Unnamed Creek, (T.110, R.26, S.10, 11): 1B, 2A, 3B;~~

~~(149) Unnamed Creek, (T.108, R.28, S.6; T.109, R.29, S.25, 36): 1B, 2A, 3B;~~

~~(150) Unnamed Creek, Green Isle, (T.114, R.26, S.2, 3, 4, 8, 9, 17): 7;~~

~~(151) Unnamed Creek, Lake Town Township, (T.115, R.24, S.3, 10, 11; T.116, R.24, S.27, 34): 7;~~

~~(152) Unnamed Creek, Pennock, (T.118, R.37, S.2, 3, 4, 5; T.119, R.36, S.4, 5, 6, 7, 18, 19; T.119, R.37, S.24, 25, 26, 35): 7;~~

~~(153) Unnamed Creek, Murdock, (T.120, R.38, S.1, 2; T.121, R.38, S.35): 7;~~

~~(154) Unnamed Ditch, Burnsville Freeway Sanitary Landfill, (T.27, R.24, S.28, 33): 7;~~

~~(155) Unnamed Ditch, Briceelyn, Owatonna Canning Company, (T.101, R.25, S.10): 7;~~

~~(156) Unnamed Ditch, Truman, (T.104, R.30, S.2, 11; T.105, R.30, S.25, 26, 35): 7;~~

~~(157) Unnamed Ditch (County Ditch No. 47), New Richland, (T.105, R.22, S.17, 18, 19; T.105, R.23, S.24): 7;~~

~~(158) Unnamed Ditch, Lewisville, (T.105, R.30, S.3; T.106, R.30, S.14, 23, 26, 34, 35): 7;~~

~~(159) Unnamed Ditch, Waldorf, (T.106, R.24, S.34): 7;~~

~~(160) Unnamed Ditch (County Ditch No. 45), Waseca, (T.107, R.23, S.14, 23): 7;~~

~~(161) Unnamed Ditch, Jeffers, (T.107, R.36, S.21): 7;~~

~~(162) Unnamed Ditch, Storden, (T.107, R.37, S.19, 30): 7;~~

~~(163) Unnamed Ditch, Eagle Lake, (T.108, R.25, S.18, 19; T.108, R.26, S.13): 7;~~

~~(164) Unnamed Ditch, Walnut Grove, (T.109, R.38, S.28): 7;~~

~~(165) Unnamed Ditch, Tracy, (T.109, R.39, S. 7, 18; T.109, R.40, S.13): 7;~~

~~(166) Unnamed Ditch, Wabasso, (T.110, R.36, S.3; T.111, R.36, S.18, 19, 20, 28, 29, 33, 34; T.111, R.37, S.13): 7;~~

~~(167) Unnamed Ditch, Lafayette, (T.111, R.29, S.6, 7, 8; T.111, R.30, S.12): 7;~~

~~(168) Unnamed Ditch, Wabasso, (T.111, R.37, S.13, 24): 7;~~

~~(169) Unnamed Ditch, Montgomery, (T.112, R.23, S.33): 7;~~

~~(170) Unnamed Ditch, Winthrop, (T.112, R.29, S.4, 5, 6): 7;~~

~~(171) Unnamed Ditch, Arlington, (T.113, R.27, S.21): 7;~~

~~(172) Unnamed Ditch, Near Fernando, Round Grove Coop Cry., (T.113, R.30, S.5; T.114, R.29, S.19, 20, 30; T.114, R.30, S.25, 26, 27, 28, 29, 32): 7;~~

~~(173) Unnamed Ditch, Green Isle, (T.114, R.26, S. 19; T.114, R.27, S.11, 12, 13, 14, 24): 7;~~

~~(174) Unnamed Ditch, New Auburn, (T.114, R.28, S.20): 7;~~

~~(175) Unnamed Ditch, Porter, (T.114, R.44, S.21, 28): 7;~~

~~(176) Unnamed Ditch, Bongards, Bongards Creameries, (T.115, R.25, S.9, 16): 7;~~

~~(177) Unnamed Ditch, Clarkfield, (T.115, R.41, S.16): 7;~~

~~(178) Unnamed Ditch, Clarkfield, (T.115, R.41, S.16, 21): 7;~~

~~(179) Unnamed Ditch (County Ditch No. 15), Madison, (T.118, R.44, S.27, 28, 34, 35): 7;~~

~~(180) Unnamed Ditch, Pennock, (T.119, R.36, S.2, 3, 4, 9, 10): 7;~~

~~(181) Unnamed Ditch, DeGraff, (T.121, R.38, S.19, 29, 30): 7;~~

~~(182) Unnamed Ditch, Hancock, (T.122, R.40, S.6; T.122, R.41, S.1, 12; T.123, R.40, S.18, 19, 30, 31; T.123, R.41, S.11, 12): 7;~~

~~(183) Unnamed Ditch, Alberta, (T.124, R.43, S.3, 4): 7;~~

~~(184) Unnamed Ditch, Farwell, Farwell Coop Cry. Assn., (T.126, R.39, S.6): 7;~~

~~(185) Unnamed Ditch, Lowry, (T.126, R.39, S.26, 35): 7;~~

~~(186) Unnamed Ditch, Brandon, (T.129, R.39, S.21, 22): 7;~~

~~(187) Unnamed Ditch, Evansville, (T.129, R.40, S.10, 11): 7;~~

~~(188) Unnamed Dry Run, Near Minneopa, Blue Earth - Nicollet Electric, (T.108, R.27, S.16): 7;~~

~~(189) Unnamed Dry Run, Mankato, Southview Heights Coop Association, (T.108, R.26, S.19, 30; T.108, R.27, S.24): 7;~~

~~(190) Unnamed Stream, Mankato, Midwest Electric Products, (T.109, R.26, S.20, 21, 28): 7;~~

~~(191) Unnamed Stream, Savage, (T.115, R.21, S.8, 9): 7;~~

~~(192) Wabasha Creek, (T.112, R.34): 2C;~~

~~(193) Whetstone River, (South Dakota border to mouth): 2C, 3C;~~

~~(194) Old Whetstone River Channel, Ortonville, Big Stone Canning Company, (T.121, R.46, S.16, 21): 7;~~

~~(195) Willow Creek, (T.104, 105, R.31, 32): 2C;~~

~~(196) Wood Lake Creek, (Judicial Ditch No. 10), (T.113, 114, 115, R.38, 39): 2C;~~

~~(197) Yellow Bank River, North Fork, (South Dakota border to mouth): 2C, 3C;~~

~~(198) Yellow Bank River, South Fork, (South Dakota border to mouth): 2C, 3C; and~~

~~(199) Yellow Medicine River, North Fork, (South Dakota border to mouth): 2C, 3C.~~

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

Subp. 6. **Saint Croix River Basin.** The water use classifications for the stream reaches within each of the major watersheds in the Saint Croix River Basin listed

in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Saint Croix River Basin are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 07030001 Upper St. Croix River (August 9, 2016);

(2) 07030003 Kettle River (August 9, 2016);

(3) 07030004 Snake River (August 9, 2016); and

(4) 07030005 Lower St. Croix River (August 9, 2016).

~~(1) Bang's Brook, (T.41, R.17, S.15, 20, 21, 22, 29): 1B, 2A, 3B;~~

~~(2) Barnes Spring, (T.41, R.18, S.1, 12): 1B, 2A, 3B;~~

~~(3) Bear Creek, (T.43, R.23, 24): 2C;~~

~~(4) Beaver Creek, (T.35, R.20, S.7, 8, 17; T.35, R.21, S.3, 4, 10, 12, 13, 14, 15; T.36, R.21, S.33, 34): 1B, 2A, 3B;~~

~~(5) Bergman Brook, (T.42, 43, R.23, 24): 2C;~~

~~(6) Bjork Creek, (T.42, R.16, S.2, 9, 10, 11): 1B, 2A, 3B;~~

~~(7) Brown's Creek, (T.30, R.20, S.18, 19, 20, 21; T.30, R.21, S.12, 13): 1B, 2A, 3B;~~

~~(8) Cons Creek, (T.41, R.17, S.15, 16, 22): 1B, 2A, 3B;~~

~~(9) Crooked Creek (East Fork Crooked Creek), (T.41, R.17, S.6, 7, 18, 19, 20, 29, 30; T.41, R.18, S.11, 12, 13; T.42, R.17, S.31): 1B, 2A, 3B;~~

~~(10) Crooked Creek, West Fork, (T.41, R.18, S.11, 12; T.42, R.18, S.3, 4, 9, 10, 16; T.43, R.18, S.27, 34): 1B, 2A, 3B;~~

~~(11) Crystal Creek, (T.41, R.16, S.9, 10, 15): 1B, 2A, 3B;~~

~~(12) Grindstone River, (T.42, R.21, S.20, 21, 28, 29): 1B, 2A, 3B;~~

~~(13) Groundhouse River, West Fork, (T.39, 40, R.26): 2C;~~

~~(14) Hay Creek, (T.40, R.18, S.6, 7, 8, 18, 19; T.41, R.18, S.10, 15, 20, 21, 22, 29, 32, 33): 1B, 2A, 3B;~~

~~(15) Hay Creek, (T.42, 43, 44, R.15, 16): 1B, 2Bd, 3C;~~

~~(16) Hay Creek, Little, (T.40, R.18, S.8, 9): 1B, 2A, 3B;~~

~~(17) *Kettle River, [11/5/84R] (From the north Pine County line to the site of the former dam at Sandstone, at quarter section line between the NW 1/4 and SW 1/4, S.22, T.42, R.20): 2B, 3C;~~

~~(18) *Kettle River, [11/5/84P] (From the site of the former dam at Sandstone, at quarter section line between the NW 1/4 and SW 1/4, S.22, T.42, R.20 to its confluence with the Saint Croix River): 2B, 3B;~~

~~(19) King Creek, (T.47, R.18, S.18, 19; T.47, R.19, S.1, 12, 13): 1B, 2A, 3B;~~

~~(20) Larson Creek, (T.44, R.17, S.5; T.45, R.17, S.29, 32): 1B, 2A, 3B;~~

~~(21) Lawrence Creek, (T.33, R.19, S.2, 3, 10): 1B, 2A, 3B;~~

~~(22) Lost Creek, (T.40, R.19, S.9, 10, 15): 1B, 2A, 3B;~~

~~(23) McCullen Creek (Albrechts Creek or Meekers Creek), (T.42, R.16, S.28, 33): 1B, 2A, 3B;~~

~~(24) Mission Creek, (T.40, R.21, S.1, 2; T.41, R.20, S.31; T.41, R.21, S.36): 1B, 2A, 3B;~~

~~(25) Mission Creek (excluding trout waters), (T.39, 40, 41, R.20, 21): 1B, 2Bd, 3C;~~

~~(26) Mooschorn River (Moose River), (T.48, R.18, S.3, 9, 10, 14, 15, 16, 23, 26, 34, 35): 1B, 2A, 3B;~~

~~(27) Old Mill Stream, (T.31, R.19, S.6; T.31, R.20, S.1; T.32, R.20, S.36): 1B, 2A, 3B;~~

~~(28) Pelkey Creek, (T.41, R.20, S.33, 34, 35): 1B, 2A, 3B;~~

~~(29) Rock Creek, (T.37, 38, R.20, 21): 1B, 2Bd, 3C;~~

~~(30) Rush Creek, (T.37, R.20, 21): 1B, 2Bd, 3C;~~

~~(31) *Saint Croix River, [11/5/84R] (Wisconsin border crossing to Taylors Falls): 1B, 2Bd, 3C;~~

~~(32) *Saint Croix River, [11/5/84R] (Taylors Falls to mouth): 1C, 2Bd, 3C;~~

~~(33) Sand River (Sand Creek), (T.43, R.18, S.4, 5, 7, 8, 18, 19; T.43, R.19, S.24; T.44, R.18, S.33, 34): 1B, 2A, 3B;~~

~~(34) Spring Brook (Spring Creek), (T.41, R.20, S.16, 17, 18, 21): 1B, 2A, 3B;~~

~~(35) Sunrise River, West Branch (County Ditch No. 13), (T.34, R.21, 22): 1B, 2Bd, 3C;~~

~~(36) Tamarack River, Lower, (Hay Creek to mouth): 1B, 2Bd, 3C;~~

~~(37) Tamarack River, Upper (Spruce River), (T.41, 42, R.15, 16): 1B, 2Bd, 3C;~~

~~(38) Unnamed Creek, (T.33, R.19, S.16, 21, 22): 1B, 2A, 3B;~~

~~(39) Unnamed Creek, (T.33, R.19, S.31, 32): 1B, 2A, 3B;~~

~~(40) Unnamed Creek, (T.43, R.18, S.2, 3; T.44, R.18, S.35): 1B, 2A, 3B;~~

~~(41) Unnamed Ditch, Chisago City, (T.34, R.20, S.19, 29, 30, 32): 7;~~

~~(42) Unnamed Ditch, Almelund, Almelund Coop Cry., (T.35, R.20, S.25): 7;~~

~~(43) Unnamed Ditch, Moose Lake, (T.46, R.19, S.30): 7;~~

~~(44) Unnamed Dry Run, Wahkon, (T.41, R.25, S.3; T.42, R.25, S.29, 32, 33, 34): 7;~~

~~(45) Unnamed Stream (Falls Creek), (T.32, R.19, S.6, 7; T.32, R.20, S.1, 12): 1B, 2A, 3B;~~

~~(46) Unnamed Stream (Gilbertson), (T.32, R.19, S.19): 1B, 2A, 3B;~~

~~(47) Unnamed Stream, Shafer, (T.34, R.19, S.32, 33, 34): 7;~~

~~(48) Unnamed Stream (Willow Brook), (T.31, R.19, S.19): 1B, 2A, 3B;~~

~~(49) Valley Creek (Valley Branch), (T.28, R.20, S.9, 10, 14, 15, 16, 17): 1B, 2A, 3B;~~

~~(50) Wilbur Brook, (T.41, R.17, S.29, 30; T.41, R.18, S.23, 25, 26): 1B, 2A, 3B; and~~

~~(51) Wolf Creek, (T.42, R.18, S.4, 9, 16; T.43, R.18, S.32, 33): 1B, 2A, 3B.~~

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

Subp. 7. **Lower Mississippi River Basin (from the confluence with the St. Croix River to the Iowa border).** The water use classifications for the stream reaches within each of the major watersheds in the Lower Mississippi River Basin from the confluence with the Saint Croix River to the Iowa border listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated

by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Lower Mississippi River Basin from the confluence with the St. Croix River to the Iowa border are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 07040001 Mississippi River - Lake Pepin (August 9, 2016);

(2) 07040002 Cannon River (August 9, 2016);

(3) 07040003 Mississippi River - Winona (August 9, 2016);

(4) 07040004 Zumbro River (August 9, 2016);

(5) 07040006 Mississippi River - La Crescent (August 9, 2016);

(6) 07040008 Root River (August 9, 2016);

(7) 07060001 Mississippi River - Reno (August 9, 2016); and

(8) 07060002 Upper Iowa River (August 9, 2016).

~~(1) Ahrensfeld Creek, (T.105, R.8, S.8, 9, 16, 17, 19, 20): 1B, 2A, 3B;~~

~~(2) Albany Creek, West (excluding trout waters), (T.110, 111, R.12, 13): 2C;~~

~~(3) Albany Creek, West, (T.110, R.12, S.28, 29, 30; T.110, R.13, S.23, 24, 25, 26): 1B, 2A, 3B;~~

~~(4) Badger Creek, (T.103, R.6, S.9, 16, 21, 22, 27, 28, 34): 1B, 2A, 3B;~~

~~(5) Ballpark Creek, (T.102, R.4, S.19, 30; T.102, R.5, S.24): 1B, 2A, 3B;~~

~~(6) Bear Creek, (T.107, R.9, S.13, 14, 15, 16, 22): 1B, 2A, 3B;~~

~~(7) Bear Creek, North, Spring Grove (T.101, R.7, S.26, 27, 35): 7;~~

~~(8) Bear Creek (excluding trout waters), (T.107, R.9, S.17, 20): 2C;~~

~~(9) Bear Creek (North Bear Creek) (excluding Class 7 segment), (source to Iowa border): 2C;~~

~~(10) Beaver Creek, (T.102, R.6, S.5; T.103, R.6, S.18, 19, 29, 30, 31, 32): 1B, 2A, 3B;~~

~~(11) Beaver Creek, East, (T.102, R.6, S.5, 6, 8, 17): 1B, 2A, 3B;~~

~~(12) Beaver Creek, West, (T.102, R.6, S.5, 6, 7, 18, 19, 30; T.102, R.7, S.12, 13, 24, 25, 26): 1B, 2A, 3B;~~

~~(13) Beaver Creek, (T.108, R.10, S.15, 16, 19, 20, 21; T.108, R.11, S.24): 1B, 2A, 3B;~~

~~(14) Beaver Creek, (T.101, 102, R.13, 14): 2C, 3C;~~

~~(15) Bee Creek, (T.101, R.6, S.29, 32, 33): 1B, 2A, 3B;~~

~~(16) Big Springs Creek, (T.104, R.9, S.21, 22, 26, 27): 1B, 2A, 3B;~~

~~(17) Borson Spring, (T.105, R.8, R.29, 32, 33): 1B, 2A, 3B;~~

~~(18) Brush Valley Creek (excluding trout waters), (T.104, R.5): 2C;~~

~~(19) Brush Valley Creek, (T.104, R.5, S.23, 24, 26): 1B, 2A, 3B;~~

~~(20) Bullard Creek, (T.112, R.14, S.1, 2, 3, 10; T.113, R.14, S.36): 1B, 2A, 3B;~~

~~(21) Burns Valley Creek, East Branch, (T.106, R.7, S.3, 10, 15): 1B, 2A, 3B;~~

~~(22) Burns Valley Creek, West Branch, (T.106, R.7, S.3, 4, 9, 16; T.107, R.7, S.34): 1B, 2A, 3B;~~

~~(23) Burns Valley Creek, Main Branch, (T.106, R.7, S.2; T.107, R.7, S.35): 1B, 2A, 3B;~~

~~(24) Butterfield Creek, (T.103, R.4, S.6, 7, 8, 18): 1B, 2A, 3B;~~

~~(25) Camp Creek, (T.101, R.10, S.5, 8, 9; T.102, R.10, S.5, 8, 16, 17, 20, 29, 32): 1B, 2A, 3B;~~

~~(26) Camp Hayward Creek, (T.104, R.8, S.31, 32): 1B, 2A, 3B;~~

~~(27) Campbell Creek, (T.104, R.6, S.5, 7, 8, 18; T.105, R.6, S.21, 28, 29, 32): 1B, 2A, 3B;~~

~~(28) Canfield Creek (see South Branch Creek);~~

~~(29) *Cannon River, [11/5/84R] (from the northern city limits of Faribault at the common border of the SE1/4 and the NE1/4 of S.19, T.110, R.20 to its confluence with the Mississippi River): 2B, 3C;~~

~~(30) Cannon River, Little, (T.110, R.18, S.1, 10, 11, 12, 15; T.111, R.18, S.13, 24, 25, 36): 1B, 2A, 3B;~~

~~(31) Carters Creek (Curtis Creek), Wykoff, (T.103, R.12, S.4, 9, 15, 16, 22): 7;~~

~~(32) Cedar Valley Creek (Cedar Creek), (T.105, R.6, S.6; T.106, R.6, S.1, 11, 12, 14, 15, 21, 22, 28, 29, 31, 32): 1B, 2A, 3B;~~

~~(33) Chickentown Creek (M-9-10-10-2), (T.102, R.8, S.32, 33): 1B, 2A, 3B;~~

~~(34) Chub Creek, North Branch, (T.112, 113, R.19): 2C;~~

~~(35) Clear Creek, (T.111, R.14, S.3, 10, 15): 1B, 2A, 3B;~~

~~(36) Clear Creek, (T.102, R.4): 2C;~~

~~(37) Cold Creek (Cold Spring Brook) (excluding trout waters), (T.110, 111, R.14): 2C;~~

~~(38) Cold Spring Brook (Cold Creek), (T.110, R.13, S.30, 31; T.110, R.14, S.25, 36): 1B, 2A, 3B;~~

~~(39) Coolridge Creek, (T.105, R.9, S.23, 26): 1B, 2A, 3B;~~

~~(40) Corey Creek, (T.105, R.6, S.18, 19; T.105, R.7, S.24, 25, 26, 27, 34): 1B, 2A, 3B;~~

~~(41) County Ditch No. 15, Kilkenny, (T.110, R.23, S.22, 23): 7;~~

~~(42) Crane Creek, (T.107, 108, R.20, 21, 22): 2C;~~

~~(43) Crooked Creek, Main Branch, (T.102, R.4, S.18, 19, 20, 28, 29, 30; T.102, R.5, S.25, 26, 36): 1B, 2A, 3B;~~

~~(44) Crooked Creek, North Fork, (T.102, R.5, S.17, 20, 21, 22, 23, 26): 1B, 2A, 3B;~~

~~(45) Crooked Creek, South Fork, (T.102, R.5, S.26, 28): 1B, 2A, 3B;~~

~~(46) Crystal Creek, (T.102, R.11, S.35, 36): 1B, 2A, 3B;~~

~~(47) Crystal Creek, (T.103, R.5, S.6, 7, 18, 19; T.103, R.6, S.1, 12): 1B, 2A, 3B;~~

~~(48) Dakota Creek (excluding trout waters), (T.105, R.5): 2C;~~

~~(49) Dakota Creek, (T.105, R.4, S.7; T.105, R.5, S.1, 2, 3, 11, 12): 1B, 2A, 3B;~~

~~(50) Daley Creek, (T.103, R.7, S.4, 5, 8; T.104, R.7, S.33): 1B, 2A, 3B;~~

~~(51) Diamond Creek, (T.103, R.8, S.18, 19; T.103, R.9, S.10, 11, 13, 14, 24): 1B, 2A, 3B;~~

~~(52) Dry Creek, (T.108, R.12, 13): 2C;~~

~~(53) Duschee Creek, (T.102, R.10, S.1; T.103, R.10, S.23, 24, 25, 26, 36): 1B, 2A, 3B;~~

~~(54) Dutch Creek, (T.112, R.20, 21): 2C;~~

~~(55) Eitzen Creek, (T.101, R.5, S.22, 23): 1B, 2A, 3B;~~

~~(56) Etna Creek, (T.102, R.13, S.25, 36): 1B, 2A, 3B;~~

~~(57) Ferguson Creek, (T.105, R.8, S.18; T.105, R.9, S.12, 13): 1B, 2A, 3B;~~

~~(58) Ferndale Creek, (T.104, R.7, S.29, 30, 31): 1B, 2A, 3B;~~

~~(59) Forestville Creek (see North Branch Creek);~~

~~(60) Frego Creek, (T.101, R.9, S.14, 15, 22, 23): 1B, 2A, 3B;~~

~~(61) Garvin Brook, (T.106, R.8, S.4, 5, 8, 17; T.107, R.8, S.10, 11, 14, 15, 23, 26, 27, 33, 34, 35): 1B, 2A, 3B;~~

~~(62) Gilbert Creek, (T.111, R.12, S.6; T.111, R.13, S.1, 2, 3, 4, 10, 11, 12; T.112, R.12, S.31): 1B, 2A, 3B;~~

~~(63) Gilmore Creek, (T.106, R.7, S.6; T.107, R.7, S.20, 29, 30, 31, 32): 1B, 2A, 3B;~~

~~(64) Girl Scout Camp Creek, (T.103, R.7, S.29, 30): 1B, 2A, 3B;~~

~~(65) Gorman Creek, (T.109, R.11, S.1; T.110, R.10, S.29, 30, 31; T.110, R.11, S.36): 1B, 2A, 3B;~~

~~(66) Gribben Creek, (T.103, R.9, S.9, 16, 21, 27, 28): 1B, 2A, 3B;~~

~~(67) Hallum Creek, (T.103, R.7, S.31; T.103, R.8, S.36): 1B, 2A, 3B;~~

~~(68) Hamilton Creek, (T.103, R.13, NW 1/4 S.6; T.103, R.14, NE 1/4 S.1): 1B, 2A, 3B;~~

~~(69) Hammond Creek, (T.109, R.13, S.28, 29): 1B, 2A, 3B;~~

~~(70) Harkcom Creek, (T.108, R.15, 16): 2C;~~

~~(71) Hay Creek, (T.111, R.15, S.4; T.112, R.14, S.19; T.112, R.15, S.1, 12, 13, 23, 24, 26, 27, 33, 34; T.113, R.15, S.24, 25, 36): 1B, 2A, 3B;~~

~~(72) Hemmingway Creek (Hemingway Creek), (T.105, R.9, S.26, 28, 33, 34, 35): 1B, 2A, 3B;~~

~~(73) Homer Creek, (T.106, 107, R.6): 2C;~~

~~(74) Indian Creek, East, (T.109, R.9, S.19; T.109, R.10, S.21, 22, 23, 24, 26, 27, 28, 29, 31, 32; T.109, R.11, S.36): 1B, 2A, 3B;~~

~~(75) Indian Creek, West, (T.109, R.11, S.6, 7, 8, 16, 17, 21): 1B, 2A, 3B;~~

~~(76) Indian Spring Creek, (T.103, R.5): 2C;~~

~~(77) Iowa River, Little, (T.101, 102, R.14): 2C;~~

~~(78) Jordan Creek, Little (Carson Creek), (T.104, R.12, S.21, 22, 26, 27, 28): 1B, 2A, 3B;~~

~~(79) Judicial Ditch No. 1, Hayfield, (T.105, R.17, S.4, 5; T.106, R.17, S.31, 32; T.106, R.18, S.25, 26, 27, 36): 7;~~

~~(80) Kedron Creek, (T.104, R.13, S.36): 1B, 2A, 3B;~~

~~(81) King Creek, (T.111, R.11, 12): 2C;~~

~~(82) Kinney Creek, (T.105, R.13, S.1, 12, 13; T.106, R.13, S.36): 1B, 2A, 3B;~~

~~(83) Lanesboro Park Pond, (T.103, R.10, S.13): 1B, 2A, 3B;~~

~~(84) LeRoy Trout Pond, (T.101, R.14, S.36): 1B, 2A, 3B;~~

~~(85) Logan Creek (Logan Branch), (T.107, R.11, S.3): 1B, 2A, 3B;~~

~~(86) Long Creek (excluding trout waters), (T.108, 109, R.12): 2C;~~

~~(87) Long Creek, (T.109, R.12, S.3, 10, 15, 22, 27, 28): 1B, 2A, 3B;~~

~~(88) Lost Creek (Bear Creek), (T.104, R.11, S.18; T.104, R.12, S.8, 9, 10, 15, 16): 1B, 2A, 3B;~~

~~(89) Lynch Creek, (T.104, R.11, S.2, 11, 14): 1B, 2A, 3B;~~

~~(90) MacKenzie Creek, (T.108, 109, R.21): 2C;~~

~~(91) Mahoney Creek, (T.103, R.10): 2C;~~

~~(92) Mahoods Creek, (T.103, R.12, S.20): 1B, 2A, 3B;~~

~~(93) Maple Creek, (T.102, R.8, S.3, 4; T.103, R.8, S.27, 28, 33, 34): 1B, 2A, 3B;~~

~~(94) Mazeppa Creek (Trout Brook), (T.109, R.14, S.4, 5, 9; T.110, R.14, S.19, 29, 30, 32; T.110, R.15, S.24, 25): 1B, 2A, 3B;~~

~~(95) Middle Creek, (T.109, R.11, S.18; T.109, R.12, S.2, 3, 11, 13, 14): 1B, 2A, 3B;~~

~~(96) Mill Creek, (T.104, R.11, S.5, 6; T.105, R.11, S.31; T.105, R.12, S.14, 23, 25, 26, 36): 1B, 2A, 3B;~~

~~(97) Miller Creek, (T.111, R.12, S.7, 8, 9, 18; T.111, R.13, S.13, 24): 1B, 2A, 3B;~~

~~(98) Money Creek, (T.105, R.7, S.3, 4, 6, 7, 8, 9, 16, 17): 1B, 2A, 3B;~~

~~(99) Mound Prairie Creek, (T.104, R.5): 2C;~~

~~(100) Mud Creek (Judicial Ditch No. 6), (T.108, 109, R.20, 21): 2C;~~

~~(101) Nepstad Creek (Shattuck Creek), (T.102, R.8, S.4, 5, 7, 8, 9; T.102, R.9, S.1, 2, 12): 1B, 2A, 3B;~~

~~(102) Newburg Creek (M-9-10-10-1), (T.101, R.8, S.5, 8): 1B, 2A, 3B;~~

~~(103) New Hartford Creek (see Pine Creek);~~

~~(104) New Yorker Hollow Creek, (T.101, R.5, S.25, 26): 1B, 2A, 3B;~~

~~(105) North Branch Creek (Forestville Creek), (T.102, R.12, S.13, 14, 15): 1B, 2A, 3B;~~

~~(106) Partridge Creek, (T.101, R.10, S.4; T.102, R.10, S.33): 1B, 2A, 3B;~~

~~(107) Peterson Creek, (T.106, R.8, S.7, 8): 1B, 2A, 3B;~~

~~(108) Pickwick Creek (Big Trout Creek), (T.106, R.5, S.7, 18; T.106, R.6, S.13, 23, 24, 26, 34, 35): 1B, 2A, 3B;~~

~~(109) Pickwick Creek, Little (Little Trout Creek), (T.106, R.5, S.18, 19, 29, 30, 32; T.106, R.6, S.13): 1B, 2A, 3B;~~

~~(110) Pine Creek (excluding Class 7 segment), (T.101, R.10): 2C, 3C;~~

~~(111) Pine Creek (New Hartford Creek), (T.105, R.5, S.18, 19, 20, 29, 30, 31, 32; T.105, R.6, S.13, 36): 1B, 2A, 3B;~~

~~(112) Pine Creek, Harmony, (T.101, R.9, S.31; T.101, R.10, S.24, 25, 36): 7;~~

~~(113) Pine Creek, South Fork, (T.105, R.5, S.19; T.105, R.6, S.24): 1B, 2A, 3B;~~

~~(114) Pine Creek, Fillmore and Winona Counties, (T.104, R.9, S.2, 3, 4; T.105, R.9, S.25, 26, 33, 34, 35; T.105, R.8, S.30, 31, 32, 33): 1B, 2A, 3B;~~

~~(115) Pine Creek, Dakota County, (excluding trout waters), (T.113, R.18): 2C;~~

~~(116) Pine Creek, Dakota and Goodhue Counties, (T.112, R.17, S.5, 6, 8, 9; T.113, R.17, S.31; T.113, R.18, S.25, 26, 35, 36): 1B, 2A, 3B;~~

~~(117) Pleasant Valley Creek (excluding trout waters), (T.106, 107, R.6, 7): 2C;~~

~~(118) Pleasant Valley Creek, (T.106, R.6, S.7, 18, 19; T.106, R.7, S.1, 12, 13, 24, 25): 1B, 2A, 3B;~~

~~(119) Plum Creek, (T.108, R.15): 2C;~~

~~(120) Prairie Creek, (T.110, 111, 112, R.18, 19, 20): 2C;~~

~~(121) Rice Creek (Sugar Creek), (T.103, R.11, S.3, 4, 5, 7, 8, 9; T.104, R.11, S.14, 23, 28, 33): 1B, 2A, 3B;~~

~~(122) Riceford Creek, (T.101, R.7, S.6, 7, 18, 19; T.101, R.8, S.1, 12, 13, 24; T.102, R.7, S.29, 30, 31, 32): 1B, 2A, 3B;~~

~~(123) Riceford Creek, Mabel, (T.101, R.8, S.24, 25, 26): 7;~~

~~(124) Rollingstone Creek, (T.107, R.8, S.2, 3, 4, 5, 6, 7, 9, 10, 11; T.107, R.9, S.12, 13): 1B, 2A, 3B;~~

~~(125) Rollingstone Creek, Middle Branch, (T.107, R.8, S.9, 16): 1B, 2A, 3B;~~

~~(126) Root River, Middle Branch, (T.103, R.12, S.8, 9): 1B, 2A, 3B;~~

~~(127) Root River, South Branch, (T.102, R.10, S.5, 6; T.102, R.11, S.1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 18; T.102, R.12, S.13, 21, 22, 23, 24, 26, 27; T.103, R.9, S.7, 18; T.103, R.10, S.13, 14, 15, 16, 21, 22, 23, 24, 28, 29, 32, 33; T.103, R.11, S.36): 1B, 2A, 3B;~~

~~(128) Root River, South Fork, (T.102, R.8, S.2, 3, 4, 8, 9, 10, 11, 17, 18, 19; T.102, R.9, S.24, 25, 26): 1B, 2A, 3B;~~

~~(129) Rose Valley Creek, (T.105, R.5, S.22, 27, 34, 35): 1B, 2A, 3B;~~

~~(130) Rupprecht Creek (Rollingstone Creek), (T.107, R.9, S.13, 24, 25, 26, 35): 1B, 2A, 3B;~~

~~(131) Rush Creek, (T.104, R.8, S.2, 3, 4, 10, 11, 13, 14; T.105, R.8, S.6, 7, 18, 19, 20, 29, 32, 33; T.105, R.9, S.1, 2, 12; T.106, R.9, S.26, 34, 35, 36): 1B, 2A, 3B;~~

~~(132) Salem Creek, (T.106, R.15, 16): 2C;~~

~~(133) Schueler Creek, (T.104, R.8, S.1, 2, 3): 1B, 2A, 3B;~~

~~(134) Second Creek (Handshaw Coulee), (T.111, R.12, S.15): 1B, 2A, 3B;~~

~~(135) Shady Creek, (T.104, R.11, S.19, 30): 1B, 2A, 3B;~~

~~(136) Shattuck Creek (See Nepstad Creek);~~

~~(137) Shingle Creek, (T.109, 110, R.17): 2C;~~

~~(138) Silver Creek (excluding trout waters), (T.104, 105, R.6): 2C;~~

~~(139) Silver Creek, (T.104, R.6, S.1, 2, 11, 12, 14; T.105, R.6, S.34, 35): 1B, 2A, 3B;~~

~~(140) Silver Spring Creek, (T.108, 109, R.13): 2C;~~

~~(141) Snake Creek (excluding trout waters), (T.109, R.10): 2C;~~

~~(142) Snake Creek, (T.109, R.10, S.10, 11, 14, 15, 16): 1B, 2A, 3B;~~

~~(143) South Branch Creek (Canfield Creek), (T.102, R.12, S.24, 25): 1B, 2A, 3B;~~

~~(144) Speltz Creek, (T.107, R.8, S.5, 6; T.108, R.8, S.31; T.108, R.9, S.36): 1B, 2A, 3B;~~

~~(145) Spring Brook, (T.111, R.20, S.2, 3, 4): 1B, 2A, 3B;~~

~~(146) Spring Creek, (T.110, R.12, S.7, 17, 18, 20, 21, 27, 28, 29): 1B, 2A, 3B;~~

~~(147) Spring Creek, (T.112, R.15, S.5, 6, 7, 18; T.113, R.15, S.29, 31, 32, 33, 34): 1B, 2A, 3B;~~

~~(148) Spring Valley Creek, (T.103, R.12, S.8, 17, 18, 19, 20, 30; T.103, R.13, S.23, 24, 25, 26, 27, 28, 29, 32, 33, 34): 1B, 2A, 3B;~~

~~(149) Stockton Valley Creek, (T.106, R.8, S.2, 3, 10, 11, 14, 23; T.107, R.8, S.34): 1B, 2A, 3B;~~

~~(150) Storer Creek, (T.104, R.5, S.17, 18, 19, 30): 1B, 2A, 3B;~~

~~(151) Straight Creek, (T.107, R.9, S.2, 11, 12): 1B, 2A, 3B;~~

~~(152) Sugar Creek (Sugarloaf Creek), (T.112, R.13): 2C;~~

~~(153) Sullivan Creek (excluding trout waters), (T.103, R.5): 2C;~~

~~(154) Sullivan Creek, (T.103, R.5, S.12, 13, 14, 23, 24, 25, 26): 1B, 2A, 3B;~~

~~(155) Swede Bottom Creek, (T.103, R.6, S.10): 1B, 2A, 3B;~~

~~(156) Thompson Creek (Indian Springs Creek), (T.103, R.4, S.5, 6, 7; T.103, R.5, S.12, 13, 14, 15, 21, 22, 28; T.104, R.4, S.32): 1B, 2A, 3B;~~

~~(157) Torkelson Creek, (T.104, R.10, S.25, 36): 1B, 2A, 3B;~~

~~(158) Trout Brook, Wabasha County, (T.110, R.11, S.5, 8): 1B, 2A, 3B;~~

~~(159) Trout Brook, Dakota County, (T.112, R.17, S.1; T.113, R.17, S.26, 27, 35, 36): 1B, 2A, 3B;~~

~~(160) Trout Brook (Hay Creek Tributary), (T.113, R.15, S.35, 36): 1B, 2A, 3B;~~

~~(161) Trout Brook (see also Mazeppa Creek);~~

~~(162) Trout Brook (Mazeppa Creek), Goodhue, (T.110, R.15, S.3, 4; T.111, R.15, S.28, 33, 34): 7;~~

~~(163) Trout Creek, Little (see Pickwick Creek, Little);~~

~~(164) Trout Creek, Big (see Pickwick Creek);~~

~~(165) Trout Run Creek (Trout Run), (T.104, R.10, S.4, 5, 8, 9, 16, 17, 20, 21; T.105, R.10, S.18, 19, 30, 31, 32): 1B, 2A, 3B;~~

~~(166) Trout Run Creek (Trout Run) (excluding trout waters), (T.105, R.10): 2C;~~

~~(167) Trout Run-Whitewater Park, (T.107, R.10, S.29): 1B, 2A, 3B;~~

~~(168) Trout Valley Creek (Trout Creek), Wabasha and Winona Counties, (T.108, R.9, S.5, 8, 17, 20; T.109, R.9, S.31): 1B, 2A, 3B;~~

~~(169) Unnamed Creek, Houston County, (T.101, R.4, S.21): 1B, 2A, 3B;~~

~~(170) Unnamed Creek, Spring Grove, (T.101, R.7, S.14, 22, 23, 27): 7;~~

~~(171) Unnamed Creek, Houston County, (T.102, R.4, S.18, 19, 20, 29, 30): 1B, 2A, 3B;~~

~~(172) Unnamed Creek, Canton, (T.101, R.9, S.20): 7;~~

~~(173) Unnamed Creek, Byron, (T.107, R.15, S.17, 20, 29): 7;~~

~~(174) Unnamed Creek (Helbig), (T.110, R.11, S.28, 33): 1B, 2A, 3B;~~

~~(175) Unnamed Creek (M-9-10-5-3), (T.101, R.7, S.6; T.101, R.8, S.1, 2): 1B, 2A, 3B;~~

~~(176) Unnamed Creek (Whitewater Tributary), (T.108, R.10, S.35, 36): 1B, 2A, 3B;~~

~~(177) Unnamed Creek, (T.105, R.7, S.19, 29, 30; T.105, R.8, S.24): 1B, 2A, 3B;~~

~~(178) Unnamed Creek (Miller Valley), (T.106, R.5, S.21, 22, 27, 28): 1B, 2A, 3B;~~

~~(179) Unnamed Creek (Deering Valley), (T.108, R.8, S.20, 28, 29): 1B, 2A, 3B;~~

~~(180) Unnamed Creek (M-9-10-5-4), (T.101, R.8, S.12, 13): 1B, 2A, 3B;~~

~~(181) Unnamed Creek (T.104, R.8, S.19, 30): 1B, 2A, 3B;~~

~~(182) Unnamed Creek, Plainview, (T.108, R.11, S.16, 17, 20, 21, 22, 27, 34): 7;~~

~~(183) Unnamed Creek, West Concord, (T.108, R.17, S.17, 20, 21): 7;~~

~~(184) Unnamed Creek, Hayfield, (T.105, R.17, S.3, 4): 7;~~

~~(185) Unnamed Creek (Wells Creek Trib. #9), (T.111, R.14, S.8, 17): 1B, 2A, 3B;~~

~~(186) Unnamed Ditch, Claremont, (T.107, R.18, S.27, 34): 7;~~

~~(187) Unnamed Ditch, Owatonna, (T.108, R.20, S.33): 7;~~

~~(188) Unnamed Ditch, Lonsdale, (T.112, R.22, S.25, 35, 36): 7;~~

~~(189) Unnamed Ditch, Hampton, (T.113, R.18, S.5, 6; T.114, R.18, S.31): 7;~~

~~(190) Unnamed Dry Run, Altura, (T.107, R.9, S.7, 18): 7;~~

~~(191) Unnamed Dry Run, Owatonna, Owatonna Canning Company, (T.107, R.20, S.6; T.107, R.21, S.1): 7;~~

~~(192) Unnamed Dry Run, Owatonna, Owatonna Canning Company, (T.107, R.20, S.6; T.107, R.21, S.1): 7;~~

~~(193) Unnamed Stream, Dodge Center, Owatonna Canning Company, (T.107, R.17, S.27, 34): 7;~~

~~(194) Vermillion River, (T.113, R.20, S.1, 2, 3, 4, 9; T.114, R.18, S.19, 20; T.114, R.19, S.21, 22, 23, 24, 28, 29, 30, 31; T.114, R.20, S.33, 34, 35, 36): 1B, 2A, 3B;~~

~~(195) Vesta Creek, (T.102, R.8, S.10, 11, 14, 15, 23): 1B, 2A, 3B;~~

~~(196) Wapsipinicon River, (T.101, R.15): 2C, 3C;~~

~~(197) Waterloo Creek, (T.101, R.6, 7): 1B, 2Bd, 3C;~~

~~(198) Watson Creek, (T.103, R.10, S.19, 20, 21, 29, 30; T.103, R.11, S.22, 23, 24, 25, 26, 27, 28, 29, 30): 1B, 2A, 3B;~~

~~(199) West Albany Creek (see Albany Creek, West);~~

~~(200) Whitewater River, Main Branch, (T.107, R.10, S.2, 3, 9, 10; T.108, R.10, S.1, 2, 10, 11, 14, 15, 22, 23, 26, 27, 35): 1B, 2A, 3B;~~

~~(201) Whitewater River, South Branch, (T.106, R.9, S.6; T.106, R.10, S.1; T.107, R.9, S.31; T.107, R.10, S.3, 10, 11, 13, 14, 24, 25, 36): 1B, 2A, 3B;~~

~~(202) Whitewater River, Middle Branch, (T.106, R.11, S.2, 3, 10; T.107, R.10, S.9, 10, 16, 17, 19, 20, 30; T.107, R.11, S.24, 25, 26, 35): 1B, 2A, 3B;~~

~~(203) Whitewater River, North Branch (Winona and Wabasha), (T.107, R.10, S.5, 6, 7, 8, 9; T.107, R.11, S.1, 2, 3; T.108, R.11, S.30, 31, 32, 33, 34): 1B, 2A, 3B;~~

~~(204) Whitewater River, North Fork, Elgin, (T.108, R.12, S.25, 26, 27): 7;~~

~~(205) Wildcat Creek (excluding trout waters), (T.103, R.4): 2C;~~

~~(206) Wildcat Creek, (T.103, R.4, S.26, 27, 28, 29, 32, 33, 34, 35): 1B, 2A, 3B;~~

~~(207) Willow Creek, (T.101, R.11, S.1, 12; T.102, R.11, S.1, 12, 13, 24, 25, 36): 1B, 2A, 3B;~~

~~(208) Winnebago Creek, (T.101, R.4, S.28, 29, 30; T.101, R.5, S.7, 8, 14, 15, 16, 17, 22, 23, 24, 25; T.101, R.6, S.12): 1B, 2A, 3B; and~~

~~(209) Wisel Creek, (T.101, R.8, S.5, 6, 8; T.102, R.8, S.19, 20, 29, 30, 31, 32): 1B, 2A, 3B.~~

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

Subp. 8. **Cedar-Des Moines Rivers Basin.** The water use classifications for the stream reaches within each of the major watersheds in the Cedar-Des Moines Rivers

Basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Cedar-Des Moines Rivers Basin are as identified in items ~~A~~ B to D. See parts 7050.0425 and 7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 07080102 Upper Wapsipinicon River (August 9, 2016);

(2) 07080201 Cedar River (August 9, 2016);

(3) 07080202 Shell Rock River (August 9, 2016);

(4) 07080203 Winnebago River (August 9, 2016);

(5) 07100001 Des Moines River - Headwaters (August 9, 2016);

(6) 07100002 Lower Des Moines River (August 9, 2016); and

(7) 07100003 East Fork Des Moines River (August 9, 2016).

~~(1) Bancroft Creek (County Ditch No. 63), (T.103, 104, R.21): 2C;~~

~~(2) Cedar River, Little, (Source to Iowa border): 2C, 3C;~~

~~(3) County Ditch No. 11, Sherburne, (T.101, R.32, S.4, 9, 10; T.102, R.32, S.7, 8, 16, 17, 21, 27, 28, 33, 34): 7;~~

~~(4) County Ditch No. 11, Manchester, (T.103, R.22, S.11, 14, 23, 25, 26): 7;~~

~~(5) County Ditch No. 48, Conger, (T.102, R.22, S.19, 20; T.102, R.23, S.24, 25, 26, 35): 7;~~

~~(6) County Ditch No. 53 (see Soldier Creek);~~

~~(7) Deer Creek (excluding Class 7 segment), (T.101, R.19, 20): 2C, 3C;~~

~~(8) Deer Creek (County Ditch No. 71), Myrtle, (T.101, R.19, S.18; T.101, R.20, S.13): 7;~~

~~(9) Dobbins Creek, (T.103, R.16, 17): 2C;~~

~~(10) Goose Creek, Twin Lakes, (T.101, R.20, S.31; T.101, R.21, S.16, 17, 18, 21, 22, 26, 27, 35, 36; T.101, R.22, S.12, 13): 7;~~

~~(11) Heron Lake Outlet, (T.104, 105, R.37): 2C;~~

~~(12) Jack Creek, Wilmont, (T.104, R.41, S.25, 26, 30, 31, 32, 33, 34, 35, 36): 7;~~

~~(13) Lime Creek, (T.101, R.22, 23): 2C, 3C;~~

~~(14) Murphy Creek, (T.103, R.18): 2C;~~

~~(15) Okabena Creek (excluding Class 7 segment), (T.102, 103, R.37, 38, 40): 2C;~~

~~(16) Okabena Creek, Worthington, Worthington Lagoons and Allied Mills, (T.102, R.38, S.6, 7; T.102, R.39, S.7, 8, 9, 10, 11, 12, 14, 15, 16, 18; T.102, R.40, S.13): 7;~~

~~(17) Orchard Creek, (T.102, R.18, 19): 2C;~~

~~(18) Roberts Creek, (T.103, 104, R.16, 17, 18): 2C;~~

~~(19) Rose Creek, (T.102, 103, R.16, 17, 18): 2C;~~

~~(20) Scheldorf Creek, (T.106, R.36, S.19, 30, 31; T.106, R.37, S.13, 24, 25): 1B, 2A, 3B;~~

~~(21) Soldier Creek (Unnamed Stream and County Ditch No. 53), (T.101, R.32, 33): 2C, 3C;~~

~~(22) Turtle Creek, (T.103, R.18, 19, 20): 2C;~~

~~(23) Unnamed Creek, Emmons, (T.101, R.22, S.31): 7;~~

~~(24) Unnamed Creek, Brownsdale, (T.103, R.17, S.4, 9): 7;~~

~~(25) Unnamed Creek, Blooming Prairie, (T.104, R.18, S.5, 8, 9, 16; T.105, R.18, S.31): 7;~~

~~(26) Unnamed Creek, Blooming Prairie, (T.105, R.19, S.25): 7;~~

~~(27) Unnamed Creek, Iona, (T.105, R.41, S.3, 4, 9; T.106, R.40, S.19, 29, 30, 32; T.106, R.41, S.24, 25, 26, 34, 35): 7;~~

~~(28) Unnamed Ditch, Myrtle, (T.101, R.20, S.12): 7;~~

~~(29) Unnamed Ditch, Myrtle, (T.101, R.20, S.12, 13): 7;~~

~~(30) Unnamed Ditch, Blooming Prairie, (T.105, R.19, S.25): 7;~~

~~(31) Unnamed Stream (see Soldier Creek);~~

~~(32) Wolf Creek, (T.103, R.16, 17, 18): 2C;~~

~~(33) Woodbury Creek, (T.101, 102, R.18, 19): 2C; and~~

~~(34) Woodson Creek, (T.102, R.18, S.14, 15): 1B, 2A, 3B.~~

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

Subp. 9. **Missouri River Basin.** The water use classifications for the stream reaches within each of the major watersheds in the Missouri River Basin listed in item A are found in tables entitled "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us. The tables are incorporated by reference and are not subject to frequent change. The date after each watershed listed in item A is the publication date of the applicable table. The water use classifications for the other listed waters in the Missouri River Basin are as identified in items ~~A~~ B to D. See parts 7050.0425 and

7050.0430 for the classifications of waters not listed. Designated use information for water bodies can also be accessed through the agency's Environmental Data Access (http://www.pca.state.mn.us/quick-links/eda-surface-water-data).

A. Streams (by eight-digit hydrologic unit code):

(1) 10170202 Upper Big Sioux River (August 9, 2016);

(2) 10170203 Lower Big Sioux River (August 9, 2016);

(3) 10170204 Rock River (August 9, 2016); and

(4) 10230003 Little Sioux River (August 9, 2016).

~~(1) Ash Creek, (T.101, R.45): 2C;~~

~~(2) Beaver Creek, (T.102, 103, 104, R.45, 46, 47): 2C, 3C;~~

~~(3) Flandreau Creek (excluding Class 7 segment), (T.107, 108, R.46, 47): 2C, 3C;~~

~~(4) Flandreau Creek, Lake Benton, (T.108, R.46, S.1, 2, 11; T.109, R.45, S.30, 31; T.109, R.46, S.36): 7;~~

~~(5) Judicial Ditch No. 13 (see Skunk Creek);~~

~~(6) Kanaranzi Creek, (Source to Iowa border): 2C, 3C;~~

~~(7) Medary Creek, (Source to South Dakota border): 2C, 3C;~~

~~(8) Mound Creek, (T.103, 104, R.45): 2C;~~

~~(9) Mud Creek, (T.101, 102, R.45, 46): 2C, 3C;~~

~~(10) Pipestone Creek, (Source to South Dakota border): 2C, 3C;~~

~~(11) Rock River (excluding Class 7 segment), (Source to Iowa border): 2C, 3C;~~

~~(12) Rock River, Holland, (T.107, R.44, S.18, 19, 20, 29; T.107, R.45, S.12, 13): 7;~~

~~(13) Rock River, Little, (source to Iowa border): 2C, 3C;~~

~~(14) Sater's Creek (Unnamed Creek), Luverne, Agri-Energy, (T.102, R.45, S.9, 14, 15, 16): 7;~~

~~(15) Sioux River, Little, (Source to Iowa border): 2C, 3C;~~

~~(16) Sioux River, West Fork Little, (Source to Iowa border): 2C, 3C;~~

~~(17) Skunk Creek (Judicial Ditch No. 13), (T.101, 102, R.37, 38, 39): 2C;~~

~~(18) Split Rock Creek, (Split Rock Lake outlet to South Dakota border): 2C, 3C;~~

~~(19) Unnamed Creek, Jasper, (T.104, R.46, S.6): 7;~~

~~(20) Unnamed Creek, Hatfield, (T.105, R.44, S.6, 7, 8; T.105, R.45, S.1; T.106, R.45, S.36): 7;~~

~~(21) Unnamed Creek, Hatfield, (T.106, R.45, S.34, 35, 36): 7;~~

~~(22) Unnamed Ditch, Luverne, Agri-Energy, (T.102, R.45, S.10, 15): 7;~~

~~(23) Unnamed Ditch, Steen, (T.101, R.45, S.31, 32): 7;~~

~~(24) Unnamed Ditch, Hills, (T.101, R.46, S.28, 33): 7; and~~

~~(25) Unnamed Ditch, Lake Benton, (T.109, R.45, S.17, 19, 20): 7.~~

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

7052.0100 WATER QUALITY STANDARDS.

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

Subp. 5. **Water quality standards applicable to Class 2B~~, 2C~~, and 2D waters.**

Substance	Units	Aquatic Life Chronic Standard	Aquatic Life Maximum Standard	Aquatic Life Final Acute Value	Human Health Chronic Standard	Wildlife Chronic Standard	Applicable Chronic Standard
Arsenic, total	ug/l	148	340	680	53†		53
Benzene	ug/l	114†	4487†	8974†	237		114
Cadmium, total (TH)	ug/l	subp 6	subp 6	subp 6			subp 6
Chlordane	pg/l				225		225
Chlorobenzene	ug/l	10†	423†	846†	2916		10
Chromium III, total (TH)	ug/l	subp 6	subp 6	subp 6			subp 6
Chromium VI, total	ug/l	11	16	32			11
Copper, total (TH)	ug/l	subp 6	subp 6	subp 6			subp 6
Cyanide, free	ug/l	5.2	22	44	30240		5.2
DDT	pg/l				142	11	11
Dieldrin	pg/l	56000	240000	480000	6.5		6.5
2,4-Dimethylphenol	ug/l	21	137	274	7182		21
2,4-Dinitrophenol	ug/l	71	379	758	1982		71
Endrin	ug/l	0.036	0.086	0.17	0.016†		0.016
Hexachlorobenzene	pg/l				419		419
Hexachloroethane	ug/l				6.2		6.2

169.1	Lindane	ug/l		0.95	1.9	0.46		0.46
169.2	Mercury, total	ug/l	0.91	1.7	3.4	0.00153	0.0013	0.0013
169.3	Methylene Chloride	ug/l	1561†	9600†	19200†	1994		1561
169.4	Nickel, total (TH)	ug/l	subp 6	subp 6	subp 6			subp 6
169.5	Parathion	ug/l	0.013	0.065	0.13			.013
169.6	PCBs (class)	pg/l				25.2	122	25.2
169.7 169.8	Pentachlorophenol (pH)	ug/l	subp 6	subp 6	subp 6	5.5†		subp 6
169.9	Selenium, total	ug/l	5.0	20†	40†			5.0
169.10	2,3,7,8-TCDD	pg/l				0.0080	0.0031	0.0031
169.11	Toluene	ug/l	253†	1352†	2703†	45679		253
169.12	Toxaphene	pg/l				62		62
169.13	Trichloroethylene	ug/l				330		330
169.14	Zinc, total (TH)	ug/l	subp 6	subp 6	subp 6			subp 6

169.15 †this standard or FAV was derived under chapter 7050.

169.16 Subp. 6. **Water quality standards that vary with water quality characteristics.**

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

169.18 C. Standards that vary with pH applicable to Class 2B~~, 2C~~, and 2D waters in the
169.19 Lake Superior Basin are listed in this subpart. Exp. is the base e exponential function.

169.20						Example standards at pH of:		
169.21	Pentachlorophenol	Formula, results in ug/l				6.5	7.0	7.5	8.0	8.5
169.22										

Chronic standard	exp.(1.005[pH]-5.134) not to exceed 5.5 ug/l	4.0	5.5	5.5	5.5	5.5
Maximum standard	exp.(1.005[pH]-4.869)	5.3	8.7	14	24	39
Final acute value	exp.(1.005[pH]-4.175)	11	17	29	48	79

7052.0110 METHODOLOGIES FOR DEVELOPMENT OF STANDARDS AND CRITERIA, AND BIOACCUMULATION FACTORS.

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

Subp. 3. **Bioaccumulation factors.** Bioaccumulation factors (BAFs) for calculating human health and wildlife standards were developed and BAFs for calculating criteria must be developed using the methodology provided by Code of Federal Regulations, title 40, part 132, Appendix B, entitled "Great Lakes Water Quality Methodology for Deriving Bioaccumulation Factors," as amended through March 12, 1997, which is adopted and incorporated by reference in part 7052.0015, item B, except that for human health standards and criteria, the baseline BAF is multiplied by the following lipid fractions which apply to fish in both trophic levels 3 (TL_3) and 4 (TL_4), except as noted in item C:

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

C. 0.015 for TL_4 and 0.020 for TL_3 for Class 2B, 2Bd, ~~2C,~~ and 2D waters.

[For text of subps 4 and 5, see M.R.]

REPEALER. Minnesota Rules, part 7050.0222, subpart 5, is repealed.

Exhibit C

Office of the Revisor of Statutes

Administrative Rules

TITLE: Proposed Permanent Rule Relating to Water Quality Standards and Tiered Aquatic Life Use

AGENCY: Pollution Control Agency

MINNESOTA RULES: Chapters 7050 and 7052

INCORPORATIONS BY REFERENCE: [See attached]

The attached rules are approved for publication in the State Register

Cindy K. Maxwell

Cindy K. Maxwell
Senior Assistant Revisor

INCORPORATIONS BY REFERENCE:

Part 7050.0150, subpart 3a: Guidance Manual for Assessing the Quality of Minnesota Surface Waters for Determination of Impairment: 305(b) Report and 303(d) List (2014 and as subsequently amended), available at http://www.pca.state.mn.us/lupg1125.

Part 7050.0222, subparts 2c, 3c, and 4c: Calibration of the Biological Condition Gradient for Streams of Minnesota, Gerritsen et al. (2012);

Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014);

Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014); and

Development of Biological Criteria for Tiered Aquatic Life Uses, Minnesota Pollution Control Agency (2016)

Available on the agency's Web site at www.pca.state.mn.us.

Part 7050.0470, subparts 1 through 9: "Beneficial Use Designations for Stream Reaches" published on the Web site of the Minnesota Pollution Control Agency at www.pca.state.mn.us.