Pollution Control Agency

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

The rules proposed and published at State Register, Volume 41, Number 25, pages 659-762, December 19, 2016 (41 SR 659), are adopted with the following modifications:

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

~~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.

S. "Lotic water" means a flowing or moving water body such as a stream, river, or ditch.

~~S.~~ T. "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.

~~T.~~ U. "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.

~~U.~~ V. "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.

~~V.~~ W. "Normal aquatic biota" and "normally present" mean a healthy aquatic 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.

~~W.~~ X. "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.

~~X.~~ Y. "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.

~~Y.~~ Z. "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.

~~Z.~~ AA. "Reference water body" means a water body minimally or least impacted by point or nonpoint sources of pollution that is representative of water bodies 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 geographic region.

~~AA.~~ BB. "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.

~~BB.~~ CC. "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.

~~CC.~~ DD. "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.

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

~~EE.~~ FF. "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."

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

~~GG.~~ HH. "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.

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

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

~~JJ.~~ KK. "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.

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

~~LL.~~ MM. "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).

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

~~NN.~~ OO. "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.

7050.0155 PROTECTION OF DOWNSTREAM USES.

All waters must maintain a level of water quality that provides for the attainment and maintenance of the water quality standards of downstream waters, including the waters of another state.

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 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 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 aquatic life and habitat and wetlands: Classes 2B, 2Be, 2Bg, 2Bm, or 2D; 3A, 3B, 3C, or 3D; 4A and 4B or 4C; and 5 (subpart 5a); and

Subp. 3a. **Cold water 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. The water quality standards in part 7050.0222, subpart 2, that apply to Class 2A also apply to Classes 2Ae and 2Ag. In addition to the water quality standards in part 7050.0222, subpart 2, the biological criteria defined in part 7050.0222, subpart 2d, apply to Classes 2Ae and 2Ag.

Subp. 4a. **Cool and warm water 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. The water quality standards in part 7050.0222, subpart 3, that apply to Class 2Bd also apply to Classes 2Bde, 2Bdg, and 2Bdm. In addition to the water quality standards in part 7050.0222, subpart 3,

the biological criteria defined in part 7050.0222, subpart 3d, apply to Classes 2Bde, 2Bdg, and 2Bdm.

Subp. 5a. **Cool and warm water aquatic life and habitat and associated use classes.** Water quality standards applicable to use Classes 2B, 2Be, 2Bg, 2Bm, 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. The water quality standards in part 7050.0222, subpart 4, that apply to Class 2B also apply to Classes 2Be, 2Bg, and 2Bm. In addition to the water quality standards in part 7050.0222, subpart 4, the biological criteria defined in part 7050.0222, subpart 4d, apply to Classes 2Be, 2Bg, and 2Bm.

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

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

A. Subitems (1) to ~~(4)~~ (5) apply to the beneficial uses in items B and C:

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

(a) the ~~fish-based~~ fish IBI as defined in ~~Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Fish Data Collection Protocols for Lotic Waters in Minnesota (2017); 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)~~ Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota (2017).

(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/regulations/minnesota-rulemaking;

(b) ~~Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Fish Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's Web site at www.pca.state.mn.us/regulations/minnesota-rulemaking;

(c) ~~Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's Web site at www.pca.state.mn.us/regulations/minnesota-rulemaking; 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/regulations/minnesota-rulemaking.

(5) The beneficial use subclass designators "e" and "g" are added to the Class 2A designator as specific additional designators. The additional subclass designators do not replace the Class 2A designator. All requirements for Class 2A cold water stream and river habitats in parts 7050.0222 and 7052.0100 continue to apply in addition to requirements for Class 2Ae or Class 2Ag cold water stream and river habitats in part 7050.0222. These subclass designators are applied to lotic waters only.

Subp. 2d. **Biological criteria for lotic cold water ~~stream and river~~ aquatic life and 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

The biological criteria for lotic cold water aquatic life and habitats (Class 2A) are applicable to perennial and intermittent waters that allow for colonization of fish or macroinvertebrates.

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

A. Subitems (1) to ~~(4)~~ (5) apply to the beneficial uses in items B to D:

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

(a) the ~~fish-based~~ fish IBI as defined in ~~Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Fish Data Collection Protocols for Lotic Waters in Minnesota (2017); 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)~~ Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota (2017).

(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/regulations/minnesota-rulemaking;

(b) ~~Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Fish Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's Web site at www.pca.state.mn.us/regulations/minnesota-rulemaking;

(c) ~~Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's Web site at www.pca.state.mn.us/regulations/minnesota-rulemaking; 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/regulations/minnesota-rulemaking.

(5) The beneficial use subclass designators "e," "g," and "m" are added to the Class 2Bd designator as specific additional designators. The additional subclass designators do not replace the Class 2Bd designator. All requirements for Class 2Bd warm or cool water stream and river habitats in parts 7050.0222 and 7052.0100 continue to apply in addition to requirements for Class 2Bde, Class 2Bdg, or Class 2Bdm warm or cool water

stream and river habitats in part 7050.0222. These subclass designators are applied to lotic waters only.

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~~ where it is determined that attainment of the Class 2Bdg beneficial use is not feasible 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.

Subp. 3d. **Biological criteria for lotic warm or cool water ~~stream and river~~ aquatic life and 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

The biological criteria for lotic warm or cool water aquatic life and habitats (Class 2Bd) are applicable to perennial and intermittent waters that allow for colonization of fish or macroinvertebrates.

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

A. Subitems (1) to ~~(4)~~ (5) apply to the beneficial uses in items B to D:

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

(a) the ~~fish-based~~ fish IBI as defined in ~~Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Fish Data Collection Protocols for Lotic Waters in Minnesota (2017); 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)~~ Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota (2017).

(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/regulations/minnesota-rulemaking;

(b) ~~Development of a Fish-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Fish Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's Web site at www.pca.state.mn.us/regulations/minnesota-rulemaking;

(c) ~~Development of a Macroinvertebrate-based Index of Biological Integrity for Minnesota's Rivers and Streams, Minnesota Pollution Control Agency (2014)~~ Macroinvertebrate Data Collection Protocols for Lotic Waters in Minnesota, Minnesota Pollution Control Agency (2017). The document is available on the agency's Web site at www.pca.state.mn.us/regulations/minnesota-rulemaking; 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/regulations/minnesota-rulemaking.

(5) The beneficial use subclass designators "e," "g," and "m" are added to the Class 2B designator as specific additional designators. The additional subclass designators do not replace the Class 2B designator. All requirements for Class 2B warm or cool water stream and river habitats in parts 7050.0222 and 7052.0100 continue to apply in addition to requirements for Class 2Be, Class 2Bg, or Class 2Bm warm or cool water stream and river habitats in part 7050.0222. These subclass designators are applied to lotic waters only.

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~~ where it is determined that attainment of the Class 2Bg beneficial use is not feasible 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.

Subp. 4d. **Biological criteria for lotic warm or cool water ~~stream and river~~ aquatic life and 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

16.1		General	2Bg	Fish	42
16.2		Modified	2Bm	Fish	23
16.3	Low gradient	Exceptional	2Be	Fish	70
16.4		General	2Bg	Fish	42
16.5		Modified	2Bm	Fish	15
16.6	Northern forest rivers	Exceptional	2Be	Macroinvertebrates	77
16.7		General	2Bg	Macroinvertebrates	49
16.8 16.9	Prairie and southern forest rivers	Exceptional	2Be	Macroinvertebrates	63
16.10		General	2Bg	Macroinvertebrates	31
16.11 16.12	High-gradient northern forest streams	Exceptional	2Be	Macroinvertebrates	82
16.13		General	2Bg	Macroinvertebrates	53
16.14 16.15	Low-gradient northern forest streams	Exceptional	2Be	Macroinvertebrates	76
16.16		General	2Bg	Macroinvertebrates	51
16.17		Modified	2Bm	Macroinvertebrates	37
16.18 16.19	High-gradient southern streams	Exceptional	2Be	Macroinvertebrates	62
16.20		General	2Bg	Macroinvertebrates	37
16.21		Modified	2Bm	Macroinvertebrates	24
16.22 16.23	Low-gradient southern forest streams	Exceptional	2Be	Macroinvertebrates	66
16.24		General	2Bg	Macroinvertebrates	43
16.25		Modified	2Bm	Macroinvertebrates	30
16.26 16.27	Low-gradient prairie streams	Exceptional	2Be	Macroinvertebrates	69
16.28		General	2Bg	Macroinvertebrates	41
16.29		Modified	2Bm	Macroinvertebrates	22

The biological criteria for lotic warm or cool water aquatic life and habitats (Class 2B) are applicable to perennial and intermittent waters that allow for colonization of fish or macroinvertebrates.

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 ~~2Bg~~ 2B, 3C, 4A, 4B, 5, and 6 waters. Unlisted lotic waters are also assigned the beneficial use subclass designator "g" to the Class 2B designator.

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).

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/regulations/minnesota-rulemaking. 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 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).