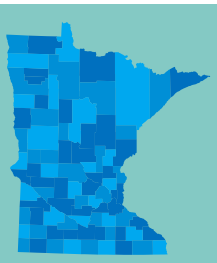
Use Designations

June 2019

Amendments to Aquatic Life (Class 2) Use Designations

MINNESOTA POLLUTION CONTROL AGENCY



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Acronyms or Abbreviations

2Ae	Aquatic Life and Recreation - Exceptional Cold Water Aquatic Life and Habitat
2Ag	Aquatic Life and Recreation - General Cold Water Aquatic Life and Habitat
2Bde	Aquatic Life and Recreation also protected as a source of drinking water - Exceptional Warm Water Habitat
2Bdg	Aquatic Life and Recreation also protected as a source of drinking water - General Warm Water Habitat
2Bdm	Aquatic Life and Recreation also protected as a source of drinking water - Modified Warm Water Habitat
2Be	Aquatic Life and Recreation - Exceptional Cool and Warm Water Aquatic Life and Habitat
2Bg	Aquatic Life and Recreation - General Cool and Warm Water Aquatic Life and Habitat
2Bm	Aquatic Life and Recreation - Modified Cool and Warm Water Aquatic Life and Habitat
APA	Minnesota Administrative Procedures Act (Minn. Stat. ch. 14)
AUID	Assessment Unit Identification
BCG	Biological Condition Gradient
CFR	Code of Federal Regulations
ch.	Chapter
CWA	Clean Water Act (33 U.S.C. § 1251 et seq.)
DNR	Minnesota Department of Natural Resources
EPA	U.S. Environmental Protection Agency
HUC 8	8-digit Hydrological Unit Code
IBI	Index of Biological (Biotic) Integrity
IWM	Intensive Watershed Monitoring
M&A	Monitoring and Assessment
mg/L	Milligrams per Liter
Minn. R.	Minnesota Rules
Minn. Stat.	Minnesota Statutes
MN	Minnesota
MPCA or Agency	Minnesota Pollution Control Agency
MSHA	Minnesota Stream Habitat Assessment
NPDES/SDS	National Pollutant Discharge Elimination System/State Disposal System
ORVW	Outstanding Resource Value Waters
PLS	Public Land Survey
SID	Stressor Identification
TALU	Tiered Aquatic Life Uses
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
UAA	Use Attainability Analysis
U.S.C.	United States Code
WQS	Water Quality Standards
WRAPS	Watershed Restoration and Protection Strategy

Definitions

The following definitions of terms used in this document are based on standard use and are provided for the convenience of the reader. Unless otherwise specified, these definitions are specific to this document.

Aquatic Biota: 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. See Minn. R. 7050.0150, subp. 4.

Aquatic Life Use: A designated use that protects aquatic biota including fish, insects, mollusks, crustaceans, plants, microscopic organisms and all other aquatic-dependent organisms. Attainment of aquatic life uses are measured directly in Minnesota using Indices of Biological Integrity (IBIs) and biological criteria. Chemical and physical standards are also used to protect aquatic life uses.

Aquatic Life Use Goals: A goal for the condition of aquatic biota; required by the Clean Water Act (CWA). Minimum aquatic life use goals are established using the CWA interim goal ("…water quality which provides for the protection and propagation of fish, shellfish, and wildlife…"). A Tiered Aquatic Life Uses (TALU) framework establishes multiple aquatic life use goals or tiers to protect attainable biological conditions. The objectives for these goals are established in Minnesota Rule using narrative standards, numeric standards, or both. Attainment of these goals is directly measured in Minnesota using IBIs and associated "Biological Criteria" or "Biocriteria."

Assemblage: A taxonomic subset of a biological community such as fish in a stream community. See Minn. R. 7050.0150, subp. 4.

Beneficial Use: A designated use described under Minn. R. 7050.0140 and listed under Minn. R. 7050.0400 to Minn. R. 7050.0470 for each surface water or segment thereof, whether or not the use is being attained. (The term "designated use" may be used interchangeably.) See also "Existing Use."

Biological Assessment: An evaluation of the biological condition of a water body using surveys of the structure and function of an assemblage of resident biota. It also includes the interdisciplinary process of determining condition and relating that condition to chemical, physical, and biological factors that are measured along with the biological sampling. Guidance for performing biological assessments in Minnesota is described in MPCA (2018a; https://www.pca.state.mn.us/sites/default/files/wq-iw1-04j.pdf). (The term "bioassessment" may be used interchangeably.)

Biological Condition Gradient (BCG): A concept describing how aquatic communities change in response to increasing levels of stressors. In application, the BCG is an empirical, descriptive model that rates biological communities on a scale from natural to highly degraded. See Minn. R. 7050.0150, subp. 4.

Biological Criteria,[1] Narrative or Biocriteria, Narrative: 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. See Minn. R. 7050.0150, subp. 4.

[1] The term "biological criteria" can be used interchangeably with "biological standard." Minnesota rule uses the term "standard" to mean "*a number or numbers established for a pollutant or water quality characteristic to protect a specified beneficial use*" (Minn. R. 7050.0218, subp. 3). The EPA's use of the term "criteria" is similar to Minnesota's use of "standard." "Biological criteria" and "biocriteria" are the terms most commonly used in the United States to refer to numerical values, which represent the biological condition or health necessary to protect designated uses. Using Minnesota rule terminology, these values would be called "biological criteria" or

Biological Criteria,[1] **Numeric or Biocriteria, Numeric:** 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. See proposed definition in Minn. R. 7050.0150, subp. 4.

Biological Integrity: The ability of an aquatic ecosystem to support and maintain an assemblage of organisms having a species composition, diversity, and functional organization comparable to that of natural habitats within a region.

Biological Monitoring: The measurement of a biological entity (taxon, species, assemblage) as an indicator of environmental conditions. Ambient biological surveys and toxicity tests are common biological monitoring methods. (The term "biomonitoring" may be used interchangeably.)

Clean Water Act (CWA): An act passed by the U.S. Congress to control water pollution (formally referred to as the Federal Water Pollution Control Act of 1972). 33 U.S.C. § 1251 et seq.

Criteria: Narrative descriptions or numerical values which describe the chemical, physical, or biological conditions in a water body necessary to protect designated uses. See also the definitions for "biological criteria/biocriteria" and "standard".

Designated Use: See "beneficial use."

Existing Use: Those uses actually attained in the surface water on or after November 28, 1975. See proposed definition in Minn. R. 7050.0130, subp. 4.

Hydrological Unit Code (HUC): Watersheds in the United States are divided in to a series of hierarchical units. Each watershed at each level is designated by a hydrological unit code. At the highest level (Level 1), watersheds are divided into regions and are assigned a two-digit code. For example, the Upper Mississippi watershed is assigned the two-digit code "07" (see below). The region is subdivided in to subregions and an additional two digits are added to the code for each of the subregions creating a unique four-digit code for each. Each subsequent level is subdivided and assigned a unique, hierarchical code down to level six. The seventh level is part of the Minnesota Department of Natural Resources (DNR) watershed system. The minor watersheds are a further division of the 12-digit HUCs and are similar to 14-digit HUCs. These watersheds are used to organize water quality monitoring, assessment, and management activities.

Level	Name	Digits	Example Code (HUC)	Example Name
1	Region	2	07	Upper Mississippi
2	Subregion	4	0701	Mississippi Headwaters
3	Basin	6	070102	Upper Mississippi-Crow-Rum
4	Subbasin	8	07010206	Mississippi River - Twin Cities
5	Watershed	10	0701020606	Minnehaha Creek
6	Subwatershed	12	070102060601	Sixmile Creek
7	Minor watershed	NA	20053	Sixmile Creek

Index of Biological Integrity or Index of Biotic Integrity (IBI): 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. See MPCA 2017a, b.

"biocriteria" before promulgation and "biological standards" following promulgation in rule. However, to be consistent with the terminology used by federal agencies and by other states and tribes, the terms "biological criteria" and "biocriteria" are used in this document and in rule to refer to both the promulgated and unpromulgated values.

Standard: Regulatory limits on a particular pollutant, or a description of the condition of a water body, presumed to support or protect the beneficial use or uses. Standards may be narrative or numeric and are commonly expressed as a chemical concentration, a physical parameter, or a biological assemblage endpoint. See also the definitions for "biological criteria/biocriteria" and "criteria".

Stressors: Physical, chemical, and biological factors that can adversely affect aquatic organisms. The effect of stressors is apparent in biological responses because stressor conditions are outside the conditions for which an organism is adapted. This leads to changes in the fitness of organisms and changes in the composition of organisms found in aquatic communities. Under the effect of stressors, the normal functioning of organisms is disturbed (e.g., increased metabolism, interruption of behavior) which results in negative impacts such as decreased fitness, reduced growth, increased disease prevalence, interruption of reproductive behavior, increased emigration, and increased mortality. Examples of stressors in aquatic systems are low levels of dissolved oxygen, suspended sediments, toxic pollutants, habitat alteration, altered hydrology, and reduced connectivity.

Use Attainability Analysis (UAA): A structured scientific assessment of the physical, chemical, biological, and economic factors affecting attainment of the uses of water bodies. A UAA is required to remove a designated use specified in section 101(a)(2) of the CWA that is not an existing use. The allowable reasons for removing a designated use are described in 40 CFR § 131.10 (g). See proposed definition in Minn. R. 7050.0150, subp. 4.

Tiered Aquatic Life Use (TALU) Framework: A TALU framework is the structure of designated aquatic life uses that incorporates a hierarchy of use subclasses. The TALUs in a TALU framework are based on representative ecological attributes reflected in the narrative description of each TALU tier and embodied in the measurements that extend to expressions of that narrative through numeric biological criteria and, by extension, to chemical and physical indicators, and standards.

Tiered Aquatic Life Uses: TALUs are designated uses assigned to water bodies based on their ecological potential and the ability to protect or restore a water body to that attainable level. This means that the assignment of a TALU tier to a specific water body is done based on reasonable restoration or protection expectations and attainability. Knowledge of the current condition of a water body and an accompanying and adequate assessment of stressors affecting that water body are needed to make these assignments.

Total Maximum Daily Load (TMDL): The maximum amount of a pollutant that a body of water can receive while still meeting WQS. Alternatively, a TMDL is an allocation of a water pollutant deemed acceptable to still attain the beneficial use assigned to the water body. See 40 CFR § 130.7.

Water Quality Standards (WQS): A law or regulation that consists of the beneficial use or uses of a water body, the narrative or numerical WQS that are necessary to protect the use or uses of that particular water body, and antidegradation.

A. Overview

The Minnesota Pollution Control Agency (MPCA) routinely reviews use designations to ensure that assigned beneficial uses are protective and attainable as defined by the Clean Water Act (CWA) and Minnesota Rule. As a result of routine monitoring and stakeholder requests, the MPCA has identified water bodies where the currently designated beneficial use does not accurately reflect an attainable use. The draft designations in this document only affect Classes 2 and 7. The draft amendments to Minn. R. 7050.0470 described herein serve as the technical documentation for these designations. This document includes several sections including an overview of the use review process, a list of reaches proposed to be designated, and a technical justification for each use designation. This information is provided before the initiation of a formal rulemaking effort to provide stakeholders with ample time to review these designations and to engage with the MPCA staff regarding concerns with these draft designations.

The use designations in this document were initiated through several pathways including routine monitoring, rulemaking by the Minnesota Department of Natural Resources (DNR), and requests by the public. The most important reason to make these amendments is that the designated use for each waterbody needs to be correct and appropriate because the designated use affects many of the water quality protection and restoration efforts at the MPCA (e.g., assessment, stressor identification, National Pollutant Discharge Elimination System [NPDES] permitting, Total Maximum Daily Loads [TMDLs]). Fundamentally, assigning the correct beneficial uses to Minnesota's waters also serves to accurately document the types and condition of Minnesota's aquatic resources.

The use designations in this document can be placed into two groups: 1) Tiered Aquatic Life Use (TALU) reviews and 2) cold water/warm water reviews (Classes 2A and 2B/2Bd) (Table 1). Some of the cold water/warm water reviews include the designation of Class 7 waters to Class 2Ag. Most use designations are the result of routine use reviews that are performed as part of the Intensive Watershed Monitoring (IWM) effort. Of these, most reviews are TALU reviews in watersheds that were monitored in 2014 and 2015. In addition, to TALU reviews, cold water (Class 2A) and cool/warm water (Classes 2B and 2Bd) uses are reviewed using IWM data largely from IWM efforts in 2008, 2009, 2010, and 2011. The intention of Class 2A and 2B/2Bd reviews is to assign the correct designation to these waters before these watersheds are sampled again in IWM Cycle II. Finally, there are additional draft designations that are outside of MPCA's IWM cycle. These recommended designations arose from a variety of sources including reaches in watersheds that were part of the 2017 TALU rulemaking (State of Minnesota 2016), but that required additional analysis or data collection to confirm the appropriate designated use. In addition, a number of Class 2A and 2B/2Bd designations were triggered by DNR amendments to Minn. R. 6264.0050, which the MPCA agreed were appropriate to amend in Minn. R. 7050.0470.

There are reaches where the new use designation has more or less stringent water quality standards (WQS). In cases where designation results in less stringent WQS, this cannot be considered a downgrading or the removal of an existing use. In all cases, these waters had not been reviewed previously because the use designation was assigned by default or data/tools were not available previously. For example, with Class 2A and 2B/2Bd designations, the use designation was based on the DNR trout waters list (Minn. R. 6264.0050). Because the MPCA and DNR have different management goals and are accountable to different state and federal rules, the MPCA's Class 2A and the DNR's trout waters list should not be necessarily aligned although there is a high degree of overlap. Overall, the draft use designations in this document represent a more accurate beneficial use assignment for these waters that are aligned with Minnesota and Federal water quality rules.

In total, the draft use designations in this document include designations for 187 stream assessment units (AUIDs; 837.9 miles) and 4 lakes (34.7 acres) (Table 1). The list of draft use designations are in Table 2. In this table and throughout this document, use designations are organized hierarchically by

major watershed and then by 8-digit hydrological unit code (HUC8). Within HUCs, waterbodies are sorted by AUID number. Following the use designation table, there is a description of the use designation process for both TALU and cold water reviews. In addition, as part of the cold water reviews there is a description of draft amendments to Minn. R. 7050.0420 that are needed to modernize the MPCA's process for designating cold and warm/cool water habitats. The final section, and the bulk of this document, are descriptions of the evidence supporting the draft use designation for each waterbody.

Table 1: Summary of use designation proposals for streams and lakes *(* indicates that the current use is assigned a default use through Minn. R. 7050.0430; indicates that the current designated use justified using process/results other than an MPCA biological survey; (2Ag) = the parentheses indicate the reach was designated as a 2A as a trout protection water and was not managed for trout).*

Streams					Lakes			
Current Use	**Proposed Use**	**# of AUIDs**	**River Miles**	**First Biological Use Review**	**Current Use**	**Proposed Use**	**# of Lakes**	**Acres**
2Ag^{o}	2Ae	7	38.5	Yes				
2Ag^{o}	2Bdg	31	135.5	Yes	2A^{o}	2Bd*	2	32.3
(2Ag)	2Ag/2Ag^{o}	3	4.0	Yes				
2Bg*	2Be	11	93.6	Yes				
2Bg*	2Bm	101	454.5	Yes				
2Bg*	2Ae	1	14.0	Yes				
2Bdg*	2Ae	1	12.6	Yes				
2Bg*	2Ag/2Ag^{o}	30	77.2	Yes	2B*	2A^{o}	2	2.4
7^{o}	2Ag	2	8.0	Yes				

Table 2: List of draft use designations

(Abbreviations: 2Bg = "General Use" cool and warm water aquatic life and habitat; 2Bdg = "General Use" cool and warm water aquatic life and habitat also protected as a source of drinking water; 2Be = Exceptional Use cool and warm water aquatic life and habitat; 2Bm = Modified Use cool and warm water aquatic life and habitat; 2Ag = "General Use" cold water aquatic life and habitat; 2Ae = Exceptional Use cold water aquatic life and habitat; DNR = Minnesota Department of Natural Resources; TALU = Tiered Aquatic Life Use review; CWR = Cold Water Review; (2Ag) = the parentheses indicate the reach was designated 2A as a trout protection water and was not managed for trout; * indicates the stream has not undergone a Use Attainability Analysis and is currently designated General Use by default; º aquatic life designation justified using results other than an MPCA biological survey).

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
Minn. R. 7050.0470, subp. 1. Lake Superior Basin						
1.A.(1) Lake Superior - North Watershed (04010101)						
04010101-615	Spruce Creek (Deer Yard Creek)	2Ag^{o}	2Ae	3.21	Cook	TALU
04010101-D23	Manitou River (North Branch Manitou River)	2Bg*	2Ag^{o}	0.33	Lake	DNR
04010101-D30	Brule River	2Bdg*	2Ae	12.58	Cook	TALU/CWR
04010101-D87	Sugarloaf Creek	2Bg*	2Ag^{o}	(0.70)[2]	Cook	DNR
1.A.(2) Lake Superior – South Watershed (04010102)						
04010102-518	Pete's Creek	2Bg*	2Ag^{o}	0.95	Lake	DNR
04010102-C16	Knife River, West Branch	2Ag^{o}	2Bdg*	4.01	St. Louis, Lake	CWR
04010102-C39	Unnamed creek (French River Tributary)	2Bg*	2Ag^{o}	1.87	St. Louis	DNR
04010102-C40	Unnamed creek (Palmer Creek)	2Bg*	2Ag^{o}	1.47	St. Louis	DNR
1.A.(3) St. Louis River Watershed (04010201)						
04010201-557	Swan River	2Ag^{o}	2Bdg	5.12	St. Louis	CWR
04010201-558	East Swan River	2Ag^{o}	2Bdg	19.13	St. Louis	CWR
04010201-569	Barber Creek (East Swan River)	2Ag^{o}	2Bdg	6.53	St. Louis	CWR
04010201-985	Knowlton Creek	2Bg*	2Ag^{o}	1.86	St. Louis	DNR
04010201-987	Unnamed creek (Merritt Creek)	2Bg*	2Ag^{o}	1.16	St. Louis	DNR
04010201-A80	Unnamed creek (Merritt Creek tributary)	2Bg*	2Ag^{o}	1.35	St. Louis	DNR
04010201-A81	Unnamed creek (Merritt Creek)	2Bg*	2Ag^{o}	1.24	St. Louis	DNR
04010201-A82	Unnamed creek (Coffee Creek)	2Bg*	2Ag^{o}	2.27	St. Louis	DNR

[2] The portion of this AUID that was designated from Class 2B to Class 2A was merged with an existing Class 2A reach. These stream miles represent only the portion added.

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
04010201-B02	Buckingham Creek	2Bg*	2Ag^{o}	1.35	St. Louis	DNR
69-0431-00	Cedar Lake	2A	2Bd	31.79	St. Louis	DNR
69-0967-00	Lower Twin Lake	2B	2A	0.56	St. Louis	DNR
69-0967-01	Upper Twin Lake	2B	2A	1.81	St. Louis	DNR
69-1345-00	Golf Course Pond	2A	2Bd	0.52	St. Louis	DNR
1.A.(4) Cloquet River - Headwaters Watershed (04010202)						
04010202-520	Beartrap Creek	2Bg*	2Ag^{o}	0.28	St. Louis	DNR
04010202-526	Berry Creek	2Bg*	2Ag^{o}	0.01	St. Louis	DNR
04010202-530	Humphrey Creek	2Ag^{o}	2Ae	3.67	St. Louis	TALU
04010202-584	Coyote Creek	2Bg*	2Be	1.00	St. Louis	TALU
04010202-669	Cloquet River	2Bg*	2Ae	13.95	Lake	TALU/CWR
04010202-670	Cloquet River	2Bg*	2Be	26.44	St. Louis; Lake	TALU
04010202-671	Cloquet River	2Bg*	2Be	28.82	St. Louis	TALU
1.A.(5) Nemadji River Watershed (04010301)						
04010301-519	Blackhoof River	2Ag^{o}	2Bdg*	5.00	Carlton	CWR
04010301-523	Unnamed creek (Blackhoof River Tributary)	(2Ag^{o})	2Ag^{o}	2.28	Carlton	DNR
04010301-524	Unnamed creek (Blackhoof River Tributary)	2Bg*	2Ag^{o}	0.44	Carlton	DNR
04010301-525	Unnamed creek (Blackhoof River Tributary)	(2Ag^{o})	2Ag^{o}	1.2	Carlton	DNR
04010301-757	Nemadji River	2Ag^{o}	2Bdg*	18.28	Carlton	CWR
04010301-761	Blackhoof River	2Ag^{o}	2Bdg*	3.71	Carlton	CWR
Minn. R. 7050.0470, subp. 2. Lake of the Woods Basin						
2.A.(1) Rainy River - Headwaters Watershed (09030001)						
09030001-530	Little Isabella River	2Ag^{o}	2Ae	11.05	Lake	TALU
09030001-542	Snake River	2Ag^{o}	2Ae	1.71	Lake	TALU
09030001-564	Jack Pine Creek	2Ag^{o}[3]	2Ae	7.25	Lake	TALU/DNR
09030001-568	Mitawan Creek	2Ag^{o}	2Ae	8.18	Lake	TALU
09030001-627	Denley Creek	2Bg*	2Be	3.13	Lake	TALU

[3] The reach of Jack Pine Creek in the PLS System section T60 R8W S17 was inadvertently left off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated. This short reach was designated by default Class 2Bg and will be designated Class 2Ae based on its affiliation with 09030001-564.

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
09030001-802	Trappers Creek	2Bg*	2Ag^{o}	0.01	Lake	DNR
09030001-966	Cross River	2Bg*	2Be	3.79	Cook	TALU
09030001-975	Bezhik Creek	2Bg*	2Be	0.90	St. Louis	TALU
2.A.(4) Little Fork River Watershed (09030005)						
09030005-562	Unnamed creek (Valley River Tributary)	2Ag^{o}	2Bdg*	3.16	Koochiching	CWR
09030005-568	Venning Creek	2Ag^{o}	2Bdg*	0.79	Itasca	CWR
09030005-570	Venning Creek	2Ag^{o}	2Bdg*	4.54	Itasca	CWR
09030005-679	Johnson Creek	2Ag^{o}	2Bdg*	1.49	Saint Louis	CWR
Minn. R. 7050.0470, subp. 3. Red River of the North Basin						
3.A.(6) Red River of the North - Marsh River Watershed (09020107)						
09020107-516	County Ditch 66	2Bg*	2Bm	5.54	Norman	TALU
09020107-517	County Ditch 11	2Bg*	2Bm	10.37	Norman	TALU
09020107-518	Judicial Ditch 51	2Bg*	2Bm	3.24	Norman	TALU
3.A.(7) Wild Rice River Watershed (09020108)						
09020108-519	Marsh Creek	2Bg*	2Bm	8.30	Mahnomen	TALU
09020108-541	Unnamed creek	2Bg*	2Bm	3.15	Norman	TALU
09020108-553	County Ditch 45	2Bg*	2Bm	2.85	Clay	TALU
09020108-565	Tulaby Creek	2Bg*	2Be	5.08	Mahnomen; Becker	TALU
09020108-598	Unnamed creek	2Bg*	2Bm	2.46	Mahnomen	TALU
09020108-647	Spring Creek	2Bg*	2Bm	7.86	Mahnomen	TALU
09020108-651	Marsh Creek	2Bg*	2Bm	11.82	Mahnomen	TALU
09020108-657	Mosquito Creek	2Bg*	2Bm	2.84	Clearwater	TALU
09020108-661	Wild Rice River, South Branch	2Bg*	2Bm	5.03	Becker	TALU
3.A.(12) Clearwater River Watershed (09020305)						
09020305-523	County Ditch 14	2Bg*	2Bm	6.67	Polk	TALU
09020305-550	Judicial Ditch 73	2Bg*	2Bm	1.70	Polk	TALU
09020305-561	Unnamed creek	2Bg*	2Bm	2.35	Polk	TALU
Minn. R. 7050.0470, subp. 4. Upper Mississippi River Basin						
4.A.(3) Mississippi River – Grand Rapids Watershed (07010103)						
07010103-518	Minnewawa Creek	2Bg*	2Bm	3.82	Aitkin	TALU
07010103-571	Prairie River, West Fork	2Bg*	2Be	2.31	Itasca	TALU
07010103-572	Unnamed ditch	2Bg*	2Bm	4.26	Aitkin	TALU

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
07010103-716	Willow River Ditch	2Bg*	2Be	3.30	Aitkin	TALU
07010103-758	Tamarack River	2Bg*	2Be	7.52	Aitkin	TALU
07010103-759	Prairie River	2Bg*	2Be	11.31	Itasca	TALU
4.A.(6) Crow Wing River Watershed (07010106)						
07010106-588	Martin Creek (Poplar Brook)	2Ag^{o}	2Bdg*	5.44	Cass	CWR
07010106-699	Stoney Brook	2Ag^{o}	2Bdg*	12.85	Cass	CWR
07010106-700	Cory Brook	2Ag^{o}	2Bdg*	2.89	Cass	CWR
4.A.(7) Redeye River Watershed (07010107)						
07010107-525	Willow Creek	2Ag^{o}	2Bdg*	5.86	Otter Tail	DNR
4.A.(8) Long Prairie River Watershed (07010108)						
07010108-512	Spruce Creek	2Ag^{o}	2Bdg*	7.40	Otter Tail, Douglas	CWR
4.A.(11) Mississippi River - St. Cloud Watershed (07010203)						
07010203-538	Briggs Creek	2Ag^{o}	2Bdg*	5.83	Sherburne	CWR
07010203-724	Unnamed creek (Robinson Hill Creek)	2Ag^{o}	2Bdg*	4.40	Stearns	CWR
Minn. R. 7050.0470, subp. 5. Minnesota River Basin						
5.A.(1) Minnesota River – Headwaters Watershed (07020001)						
07020001-560	Unnamed creek	2Bg*	2Bm	2.77	Big Stone	TALU
07020001-562	County Ditch 2	2Bg*	2Bm	1.64	Big Stone	TALU
07020001-569	Unnamed creek	2Bg*	2Bm	16.03	Lac Qui Parle	TALU
07020001-571	Fish Creek	2Bg*	2Bm	8.36	Big Stone	TALU
5.A.(3) Lac Qui Parle River Watershed (07020003)						
07020003-526	County Ditch 34	2Bg*	2Bm	5.07	Lac Qui Parle	TALU
07020003-560	Judicial Ditch 1	2Bg*	2Bm	2.12	Lac Qui Parle; Yellow Medicine	TALU
07020003-570	Unnamed ditch	2Bg*	2Bm	1.19	Yellow Medicine; Lac Qui Parle	TALU
07020003-571	Unnamed ditch	2Bg*	2Bm	1.20	Lac Qui Parle	TALU
07020003-575	Unnamed ditch	2Bg*	2Bm	4.07	Lac Qui Parle	TALU
07020003-577	Tenmile Creek	2Bg*	2Bm	24.96	Lac Qui Parle; Yellow Medicine	TALU
07020003-583	Cobb Creek	2Bg*	2Bm	3.43	Lac Qui Parle	TALU
07020003-586	Canby Creek	2Bg*	2Bm	4.41	Yellow Medicine	TALU
5.A.(5) Chippewa River Watershed (07020005)						
07020005-728	Cottonwood Creek	2Ag^{o}	2Bdg*	1.57	Swift; Chippewa	CWR
07020005-729	Cottonwood Creek	2Ag^{o}	2Bdg*	3.89	Swift; Chippewa	CWR

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
5.A.(7) Minnesota River - Mankato Watershed (07020007)						
07020007-578	Unnamed creek	2Bg*	2Ag^{o}	0.23	Blue Earth	DNR
5.A.(12) Minnesota River – Lower Watershed (07020012)						
07020012-551	County Ditch 42	2Bg*	2Bm	6.02	Sibley	TALU
07020012-555	Rush River, North Branch (Judicial Ditch 18)	2Bg*	2Bm	14.81	Sibley; McLeod	TALU
07020012-556	Rush River, North Branch (County Ditch 55)	2Bg*	2Bm	3.81	Sibley	TALU
07020012-573	Judicial Ditch 1 (Judicial Ditch 6)	2Bg*	2Bm	4.16	Sibley	TALU
07020012-574	Judicial Ditch 6	2Bg*	2Bm	3.2	Sibley; Nicollet	TALU
07020012-586	Rush River, Middle Branch (County Ditch 23 and 24)	2Bg*	2Bm	7.18	Sibley	TALU
07020012-588	High Island Ditch 2	2Bg*	2Bm	1.85	Sibley	TALU
07020012-590	Judicial Ditch 11	2Bg*	2Bm	13.82	Renville; Sibley	TALU
07020012-591	Judicial Ditch 24	2Bg*	2Bm	6.68	McLeod; Sibley	TALU
07020012-593	Judicial Ditch 11	2Bg*	2Bm	3.86	Sibley; McLeod	TALU
07020012-604	Unnamed creek (County Ditch 13)	2Bg*	2Bm	2.77	Scott	TALU
07020012-610	Unnamed ditch (County Ditch 55)	2Bg*	2Bm	2.85	Sibley	TALU
07020012-621	Unnamed creek	2Bg*	2Bm	1.84	Carver	TALU
07020012-622	Unnamed creek	2Bg*	2Bm	1.18	Carver	TALU
07020012-628	County Ditch 10	2Bg*	2Bm	2.10	Scott	TALU
07020012-636	County Ditch 13	2Bg*	2Bm	2.50	Sibley	TALU
07020012-653	High Island Creek	2Bg*	2Bm	7.10	McLeod	TALU
07020012-674	County Ditch 11	2Bg*	2Bm	4.02	Sibley	TALU
07020012-675	County Ditch 22	2Bg*	2Bm	2.61	Sibley	TALU
07020012-677	County Ditch 49	2Bg*	2Bm	1.27	Sibley	TALU
07020012-682	Judicial Ditch 15	2Bg*	2Bm	3.07	McLeod; Sibley	TALU
07020012-683	County Ditch 39	2Bg*	2Bm	2.87	McLeod	TALU
07020012-684	Unnamed creek	2Bg*	2Bm	2.03	Scott	TALU
07020012-766	County Ditch 8/53	2Bg*	2Bm	3.77	Le Sueur	TALU
07020012-767	Judicial Ditch 4	2Bg*	2Bm	0.77	Le Sueur	TALU
07020012-772	County Ditch 42	2Bg*	2Bm	2.34	Le Sueur	TALU
07020012-783	County Ditch 32A	2Bg*	2Bm	3.38	Nicollet	TALU
07020012-784	County Ditch 9	2Bg*	2Bm	2.66	Nicollet	TALU
07020012-785	Judicial Ditch 1	2Bg*	2Bm	1.07	Sibley	TALU

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
07020012-786	County Ditch 44	2Bg*	2Bm	5.74	Sibley	TALU
07020012-788	Unnamed ditch	2Bg*	2Bm	1.59	Sibley	TALU
07020012-790	County Ditch 56	2Bg*	2Bm	4.66	Sibley	TALU
07020012-791	County Ditch 18	2Bg*	2Bm	13.48	Sibley	TALU
07020012-792	County Ditch 47A	2Bg*	2Bm	0.43	Nicollet	TALU
07020012-793	County Ditch 75	2Bg*	2Bm	2.33	Nicollet	TALU
07020012-794	Judicial Ditch 12	2Bg*	2Bm	4.31	Sibley	TALU
07020012-801	County Ditch 30A	2Bg*	2Bm	2.19	Nicollet	TALU
07020012-808	Ninemile Creek	2Bg*	2Bm	4.94	Hennepin	TALU
07020012-819	Raven Stream, East Branch	2Bg*	2Bm	2.77	Scott	TALU
07020012-823	Le Sueur Creek	2Bg*	2Bm	3.67	Le Sueur	TALU
07020012-825	Rush River, South Branch	2Bg*	2Bm	23.14	Sibley; Nicollet	TALU
07020012-831	Buffalo Creek (County Ditch 59)	2Bg*	2Bm	4.50	Sibley	TALU
07020012-835	Unnamed creek	2Bg*	2Bm	2.16	Carver	TALU
07020012-839	Sand Creek	2Bg*	2Bm	3.12	Le Sueur	TALU
07020012-843	Bevens Creek	2Bg*	2Bm	4.12	Sibley; Carver	TALU
07020012-845	Bevens Creek	2Bg*	2Bm	1.01	Carver	TALU
07020012-849	Unnamed creek	2Bg*	2Bm	1.13	Scott	TALU
Minn. R. 7050.0470, subp. 6. Saint Croix River Basin						
6.A.(4) Lower St. Croix River Watershed (07030005)						
07030005-568	Trout Brook	2Bg*	2Ag*	3.90	Washington	CWR
07030005-587	Browns Creek	$2Ag^{o}$	2Bdg*	2.39	Washington	CWR
07030005-593	Unnamed ditch	($2Ag^{o}$)	2Bdg*	2.26	Chisago	CWR
07030005-766	Unnamed creek	($2Ag^{o}$)	2Bdg*	0.17	Washington	CWR
07030005-767	Unnamed creek	($2Ag^{o}$)	2Bdg*	0.68	Washington	CWR
07030005-778	Unnamed creek (Zavoral's Creek)	2Bg*	$2Ag^{o}$	0.37	Washington	DNR
Minn. R. 7050.0470, subp. 7. Lower Mississippi River Basin						
7.A.(1) Mississippi River - Lake Pepin Watershed (07040001)						
07040001-700	Unnamed creek	2Bg*	2Ag*	1.47	Goodhue	CWR
07040001-707	Vermillion River, South Branch	2Bg*	2Ag*	5.99	Dakota	DNR
07040001-708	Wells Creek	2Bg*	2Ag*	24.30	Goodhue	CWR
07040001-720	Unnamed creek (Vermillion River Tributary)	($2Ag^{o}$)	2Bdg*	0.92	Dakota	CWR

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
07040001-721	Unnamed creek (Vermillion River Tributary)	(2Ag^o)	2Ag*	0.49	Dakota	CWR
7.A.(2) Cannon River Watershed (07040002)						
07040002-639	Unnamed creek (Little Cannon River Tributary)	(2Ag^o)	2Bdg*	0.57	Goodhue	CWR
07040002-670	Unnamed creek (Little Cannon River Tributary)	(2Ag^o)	2Bdg*	0.38	Goodhue	CWR
07040002-738	Unnamed creek (Trail Run Creek)	2Bg*	2Ag^o	0.41	Goodhue	DNR
07040002-740	Belle Creek	2Bg*	2Ag*	8.24	Goodhue	CWR
7.A.(3) Mississippi River - Winona Watershed (07040003)						
07040003-524	Whitewater River, North Fork	7	2Ag*	5.84	Wabasha	DNR
07040003-609	Unnamed creek	2Bg*	2Ag*	2.16	Winona	CWR
07040003-625	Unnamed creek (Latsch Creek)	2Bg*	2Ag^o	1.26	Winona	DNR
07040003-F17	Whitewater River, South Fork	2Bg*	2Ag*	0.88	Winona	CWR
07040003-F18	Whitewater River, Middle Fork	(2Ag^o)	2Bdg*	1.56	Olmsted	CWR
07040003-F31	Logan Branch	2Bg*	2Ag*	3.48	Olmsted	DNR
7.A.(6) Root River Watershed (07040008)						
07040008-545	Root River, Middle Branch (Deer Creek)	2Ag^o	2Bdg*	1.25	Fillmore	CWR
07040008-624	Unnamed creek (Camp Hayward Creek)	2Bg*	2Ag^o	0.12	Fillmore	DNR
07040008-B95	Root River, Middle Branch	2Ag^o	2Bdg*	0.20	Fillmore	CWR
07040008-G86	Sugar Creek	2Ag^o	2Bdg*	3.23	Fillmore	CWR
07040008-G90	Curtis Creek	7	2Ag*	2.16	Fillmore	CWR
07040008-G92	Bridge Creek	2Bg*	2Ag*	5.75	Houston; Fillmore	CWR
07040008-H02	Unnamed creek	2Bg*	2Ag^o	3.36	Houston	DNR
7.A.(8) Upper Iowa River Watershed (07060002)						
07060002-515	Bee Creek (Waterloo Creek)	2Ag^o	2Ae	3.45	Houston	TALU
Minn. R. 7050.0470, subp. 8. Cedar-Des Moines Rivers Basin						
8.A.(4) Winnebago River Watershed (07080203)						
07080203-501	Lime Creek	2Bg*	2Bm	4.42	Freeborn	TALU
07080203-504	Steward Creek (County Ditch 23)	2Bg*	2Bm	10.42	Freeborn	TALU
07080203-509	Unnamed creek	2Bg*	2Bm	0.70	Freeborn	TALU
07080203-515	Judicial Ditch 25	2Bg*	2Bm	2.15	Freeborn	TALU
8.A.(5) Des Moines River - Headwaters Watershed (07100001)						
07100001-504	County Ditch 20	2Bg*	2Bm	10.20	Murray	TALU
07100001-515	Judicial Ditch 76	2Bg*	2Bm	6.67	Jackson; Nobles	TALU

AUID	Water-body Name	Current Use Class	Draft Use Class	Miles/ Acres	County	Use Review Type
07100001-518	Unnamed creek	2Bg*	2Bm	3.11	Jackson	TALU
07100001-523	Judicial Ditch 26	2Bg*	2Bm	6.45	Nobles; Murray	TALU
07100001-544	Perkins Creek	2Bg*	2Bm	2.45	Cottonwood	TALU
07100001-589	Judicial Ditch 14	2Bg*	2Bm	1.49	Murray	TALU
07100001-594	Unnamed ditch	2Bg*	2Bm	0.61	Murray	TALU
07100001-608	Unnamed creek	2Bg*	2Bm	1.18	Jackson	TALU
07100001-614	Unnamed creek	2Bg*	2Bm	3.78	Jackson	TALU
07100001-615	Unnamed creek	2Bg*	2Bm	2.00	Nobles	TALU
07100001-621	Unnamed creek	2Bg*	2Bm	2.28	Jackson	TALU
07100001-624	Unnamed creek	2Bg*	2Bm	4.56	Murray	TALU
07100001-642	Lake Shetek Inlet	2Bg*	2Bm	2.88	Lyon	TALU
07100001-649	Jack Creek, North Branch	2Bg*	2Bm	3.79	Nobles	TALU
07100001-658	Jack Creek	2Bg*	2Bm	3.73	Jackson	TALU
07100001-664	Beaver Creek	2Bg*	2Bm	1.79	Murray	TALU
07100001-665	Judicial Ditch 12	2Bg*	2Bm	2.04	Nobles	TALU
07100001-667	County Ditch 4	2Bg*	2Bm	3.44	Murray	TALU
8.A.(6) Des Moines River – Lower Watershed (07100002)						
07100002-502	Brown Creek (Judicial Ditch 10)	2Bg*	2Bm	5.17	Martin	TALU
07100002-513	Judicial Ditch 6	2Bg*	2Bm	2.45	Jackson	TALU
8.A.(7) Des Moines River – East Fork Watershed (07100003)						
07100003-506	County Ditch 53	2Bg*	2Bm	4.00	Martin	TALU
07100003-515	County Ditch 1/Judicial Ditch 50	2Bg*	2Bm	4.36	Martin	TALU

B. Use Designation Reviews

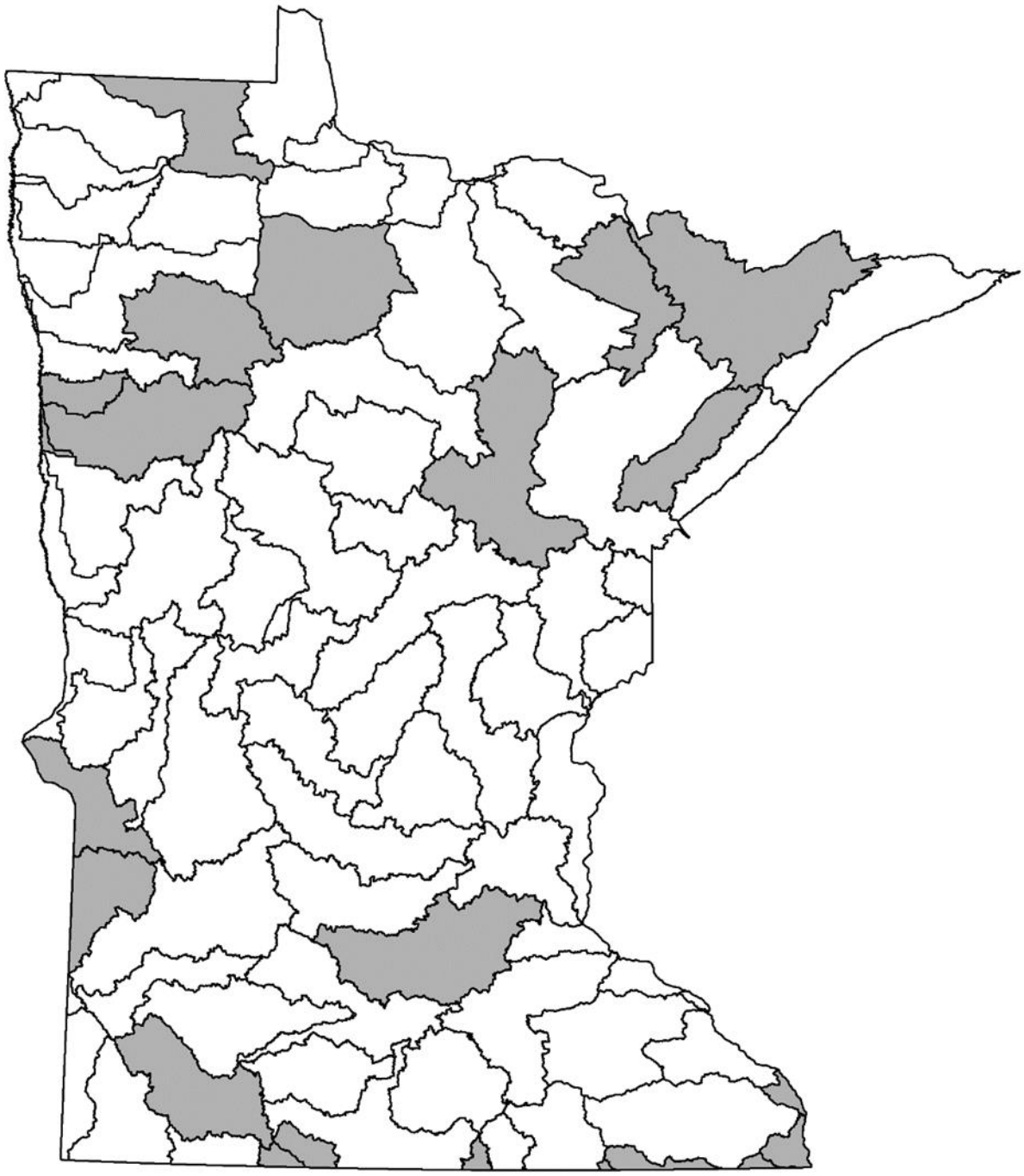
The draft use designations in this document can be grouped into two types: 1) tiered aquatic life uses and 2) cold water/warm water reviews. A small number of waterbodies fall into both types. A summary of each use designation type and an overview of the process for reviewing each follows.

i. Tiered Aquatic Life Uses

The majority of the TALU designations in this document are the result of routine monitoring during the 2014-15 IWM efforts (Figure 1). Determination of the proposed uses were made through a review to determine the attainable aquatic life use goal for each stream reach. This process is detailed in the "Technical guidance for designating aquatic life uses in Minnesota streams and rivers" (MPCA 2015). This review is called a Use Attainability Analysis (UAA). A UAA is a detailed approach that considers several lines of evidence including biological condition, habitat limitation, the nature of any habitat alterations, and restorability of the habitat (see Figure 3 MPCA 2015). The UAA begins with a review of the biological condition (fish and macroinvertebrate assemblages). If both assemblages meet the Exceptional Use biocriteria, then the reach is eligible for designation as an Exceptional Use. If both assemblages meet the General Use biocriteria, the reach will be designated General Use. If one or both assemblages do not meet the General Use, then the process proceeds to a review of the habitat. This step involves a review of habitat attributes to determine if habitat is limiting attainment of the General Use. This step uses a habitat tool and logistic regression models to predict if habitat is limiting the biology (MPCA 2015). If habitat is not limiting either assemblage, then the reach would be designated General Use. However, if habitat is limiting, then it would need to be determined if this condition is the result of legal alterations to the water body (e.g., ditching). If the alterations were done so illegally, which would suggest that they could be reversed, the reach would be designated General Use. If the water body was legally altered, then the reach would be reviewed to determine if it is restorable or if it is likely to recover on its own in the next five years. If either is true, then the reach would be designated General Use. However, if it is not restorable or not likely to recover on its own, available data would be reviewed to determine if the General Use was attained on or after November 28, 1975 (i.e., existing use). If there is evidence that the General Use was attained, then the reach would be designated General Use. Otherwise the reach would be eligible for the Modified Use. Through this process, available data are considered including the condition of fish and macroinvertebrate assemblages, multiple habitat measures, and chemistry data. For example, a biological model called the Biological Condition Gradient (Gerritsen et al. 2013; Figure 2) is often used as a line of evidence when considering biological scores falling within confidence limits around the biocriteria. In this process, all available data are reviewed with data collected on or after November 28, 1975 most relevant to the establishment of existing use (40 CFR § 131.3(e)).

For each TALU use designation, supporting evidence is documented in the "Descriptions of proposed use designations" section. This includes documenting the UAA steps relevant to the specific use designation. For each TALU designation, the assessment and stressor identification results are summarized. For some watersheds, the stressor identification report has not been completed yet, but this information will be updated when it becomes available.

Figure 1:Map of watersheds sampled during 2014-15 Intensive Watershed Monitoring.



In addition to providing a narrative description of the TALU use designation reviews in the "Descriptions of proposed use designations" section, detailed habitat and biological information is tabulated. For each AUID, the IBI scores (MPCA a, b) are summarized for the biological stations on that stream reach. These results are color coded (Table 3) in relation to the tiered biocriteria (Table 4; MPCA 2014a). Habitat scores are also provided in these summary tables for each AUID. The habitat scores include the number of good habitat attributes, the number of poor habitat attributes, the ratio of good to poor habitat attributes, and the MPCA Stream Habitat Assessment (MSHA) score (MPCA 2014b). The habitat scores are color coded (Table 3) based on predictions of the probability that the respective biological assemblage will attain the General Use biocriterion for that station. Table 5 provides the habitat

assessment thresholds used for determining habitat limitation. This table includes the 25% and 50% biological criteria attainment probabilities for each stream class, biological assemblage, and habitat metric. These thresholds were used as part of an MPCA assessment to determine if habitat was limiting the attainment of the biological criteria as required in the UAA (MPCA 2015). Three habitat tool outputs are considered jointly and the MSHA output is considered separately (Table 6). For example, if any one of the habitat tool metric models and the MSHA model predict less than a 25% probability of attaining the General Use biocriterion, the biological assemblage in the reach is considered to be limited by physical habitat structure. When probabilities are between 25% and 50% and/or the results are mixed between the metrics, additional information will need to be considered in this analysis. This information includes biological performance (e.g., proximity of IBI score to biocriterion), performance of the other assemblage, chemical data, and the stream's physical characteristics (i.e., recovery status, atypical features). See MPCA (2015) for a detailed description of this analysis.

Figure 2. BCG illustrating the location of biocriteria for protection of Minnesota's tiered aquatic life use goals.

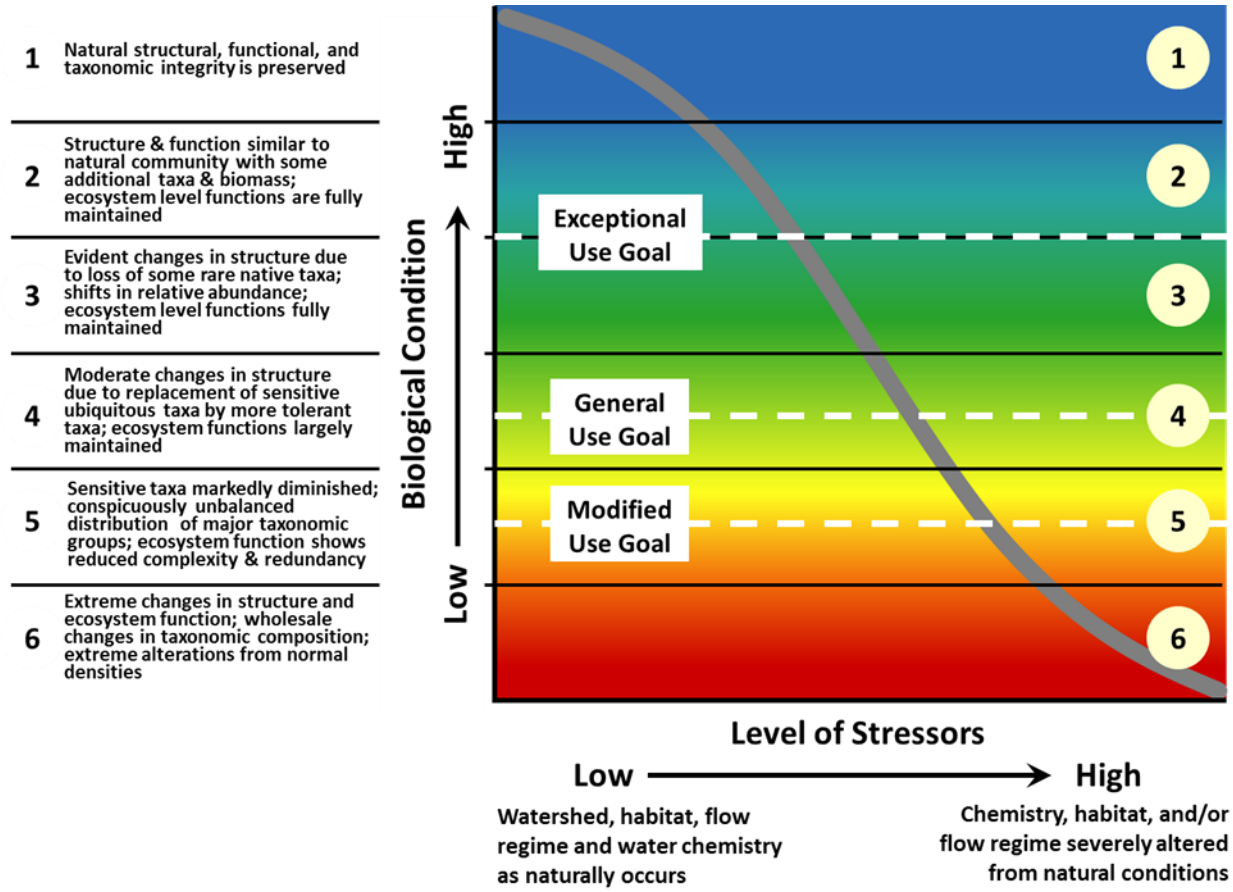


Table 3: Color coding for biological and habitat metric scores used in the summary tables for each proposed use designation.
The numeric thresholds for Index of Biological Integrity scores are provided in Table 4 and the habitat metrics are provided in Table 5. Abbreviations: Good = number of good habitat attributes, Poor = number of poor habitat attributes, P/G = ratio of Poor+1 and Good+1 habitat attributes, MSHA = Minnesota Stream Habitat Assessment

Biological Score	**Score in Relation to Tiered Biological Criteria**			
Index of Biological Integrity Score	Above Exceptional Use	Between General and Exceptional Use	Between Modified and General Use	Below Modified Use
Habitat Metric	**Probability of Meeting General Use**			
Good	>75%	50-75%	25-50%	<25%
Poor	>75%	50-75%	25-50%	<25%
P/G	>75%	50-75%	25-50%	<25%
MSHA	>75%	50-75%	25-50%	<25%

Table 4. Biological criteria for Exceptional, General, and Modified Uses (MPCA 2014a; Abbreviations: RR = high gradient, GP = low gradient).

Class #	Class Name	Exceptional Use	General Use	Modified Use
Fish				
1	Southern Rivers	71	49	NA
2	Southern Streams	66	50	35
3	Southern Headwaters	74	55	33
4	Northern Rivers	67	38	NA
5	Northern Streams	61	47	35
6	Northern Headwaters	68	42	23
7	Low Gradient Streams	70	42	15
10	Southern Coldwater	82	50	NA
11	Northern Coldwater	60	35	NA
Macroinvertebrates				
1	Northern Forest Rivers	77	49	NA
2	Prairie Forest Rivers	63	31	NA
3	Northern Forest Streams RR	82	53	NA
4	Northern Forest Streams GP	76	51	37
5	Southern Streams RR	62	37	24
6	Southern Forest Streams GP	66	43	30
7	Prairie Streams GP	69	41	22
8	Northern Coldwater	52	32	NA
9	Southern Coldwater	72	43	NA

Table 5: Physical habitat structure assessment thresholds based on logistic regression models
(see MPCA [2015]). "<25%" and "<50%" are model predictions for habitat metrics where there is a <25% or <50% probability of attaining the General Use biocriterion. For example, the logistic regression models for the southern streams predict less than a 25% probability that the fish General Use biocriterion is attained when there are seven or fewer good habitat attributes. Description of habitat metrics: Good = number of positive habitat attributes; Poor = number of negative habitat attributes; P/G = the ratio of Poor and Good habitat attributes; MSHA = MPCA Stream Habitat Assessment.

Assemblage	Type	Habitat Metric	<25%	<50%
Fish	Southern Streams	Good	**≤7**	**≤15**
Fish	Southern Streams	Poor	**≥10.5**	**≥4.5**
Fish	Southern Streams	P/G	**≥1.57**	**≥0.32**
Fish	Southern Streams	MSHA	**≤45**	**≤64**
Fish	Southern Headwaters	Good	**≤3.5**	**≤9**
Fish	Southern Headwaters	Poor	**≥6.5**	**≥2**
Fish	Southern Headwaters	P/G	**≥1.68**	**≥0.25**
Fish	Southern Headwaters	MSHA	**≤38**	**≤62**
Fish	Northern Streams	Good	**≤2.5**	**≤8.5**
Fish	Northern Streams	Poor	**≥16.5**	**≥10**
Fish	Northern Streams	P/G	**≥3.48**	**≥1.07**
Fish	Northern Streams	MSHA	**≤29**	**≤53**
Fish	Northern Headwaters	Good	**≤5.5**	**≤11.5**
Fish	Northern Headwaters	Poor	**≥13**	**≥8.5**
Fish	Northern Headwaters	P/G	**≥2.02**	**≥0.71**
Fish	Northern Headwaters	MSHA	**≤45**	**≤61**
Fish	Low Gradient Streams	Good	**≤3.5**	**≤7**
Fish	Low Gradient Streams	Poor	**≥10**	**≥5**
Fish	Low Gradient Streams	P/G	**≥2.65**	**≥0.74**
Fish	Low Gradient Streams	MSHA	**≤41**	**≤55**
Macroinvertebrates	High Gradient Northern Forest Streams	Good	-	**≤4**
Macroinvertebrates	High Gradient Northern Forest Streams	Poor	**≥11.5**	**≥7.5**
Macroinvertebrates	High Gradient Northern Forest Streams	P/G	**≥4.81**	**≥1.56**
Macroinvertebrates	High Gradient Northern Forest Streams	MSHA	**≤35**	**≤53**
Macroinvertebrates	High Gradient Southern Streams	Good	**≤5**	**≤9**
Macroinvertebrates	High Gradient Southern Streams	Poor	**≥6**	**≥2.5**
Macroinvertebrates	High Gradient Southern Streams	P/G	**≥1.12**	**≥0.28**
Macroinvertebrates	High Gradient Southern Streams	MSHA	**≤45**	**≤72**
Macroinvertebrates	Low Gradient Southern Forest Streams	Good	**≤4.5**	**≤9**
Macroinvertebrates	Low Gradient Southern Forest Streams	Poor	**≥7.5**	**≥2.5**
Macroinvertebrates	Low Gradient Southern Forest Streams	P/G	**≥1.25**	**≥0.36**
Macroinvertebrates	Low Gradient Southern Forest Streams	MSHA	**≤41**	**≤60**
Macroinvertebrates	Low Gradient Prairie Streams	Good	**≤12**	**≤17.5**
Macroinvertebrates	Low Gradient Prairie Streams	Poor	**≥10**	**≥5**
Macroinvertebrates	Low Gradient Prairie Streams	P/G	**≥0.88**	**≥0.32**
Macroinvertebrates	Low Gradient Prairie Streams	MSHA	**≤54**	**≤72**

Table 6: Decision matrix for determining habitat limitation based on probabilities of attaining the General Use. ***This assessment only occurs when the General Use is not attained.***

		MSHA		
	Attainment Probability	**<25%**	**25-50%**	**>50%**
Habitat Tool Metrics	<25%	Yes	Probable	Possible
	25-50%	Probable	Possible	Unlikely
	>50%	Possible	Unlikely	No

ii. Cold water and warm water reviews

The MPCA will be proposing to update the language in Minn. R. 7050.0420 and amend water use classifications in Minn. R. 7050.0470 based on new information and improvements to the process for reviewing the thermal regime and biological assemblages in these waterbodies. Class 2A[4] designation of cold water communities has in the past relied almost solely on the DNR list of designated trout waters in Minn. R. 6264.0050. With the development and use of improved tools to assess the condition of Minnesota's waters (e.g., indices of biotic integrity, biological criteria) some differences in management goals between the MPCA and DNR in designating cold water systems need to be addressed. A small number of waters in Minn. R. 6264.0050 are not appropriate for the MPCA to manage as cold water and there are some waters not included on the DNR trout waters list that the MPCA should manage as cold water habitat. The MPCA's designation of cold water habitats is focused on identifying and protecting existing aquatic life uses which often aligns with the DNR's trout waters list. Some differences in goals for streams between the MPCA and DNR are a result of DNR's designation process, which can be impacted by property owner requests, fishing regulation considerations, and the designation of trout protection waters, which may or may not reflect the type of community that can be naturally supported in these systems. In addition, certain stream reaches may not have been previously assessed by DNR and given the default Class 2B[5] designation and new data indicates that the waterbody supports a cold water community. In some cases, the DNR may remove trout water from their list due to a change in management goals for that water. However, if it is demonstrated that the waterbody is an existing use (i.e., it supported cold water habitat on or after November 28, 1975), the MPCA is required to retain that designation (Minn. R. 7050.0255). Revisions to the use designation process itself as well as specific use designations will result in setting beneficial uses that are in alignment with the CWA and Minn. R. ch. 7050 and will result in appropriate management of these systems.

The majority of the 2A and 2B/2Bd designation proposals in this document are the result of either 1) MPCA biological monitoring from 2008-2011 IWM efforts or 2) amendments to DNR's trout waters list (State of Minnesota 2008a, 2008b, 2018). The first group is the result of aquatic life use reviews that took place as part of MPCA's 2010 through 2013 surface-water assessments. These recommended designations are independent of Minn. R. 6264.0050 and represent needed designations to align these reaches with MPCA's beneficial use framework. The latter group of designations largely follows the MPCA's historical practice of using Minn. R. 6264.0050 to update Minn. R. 7050.0470. However, the use designations listed in this document have gone through a use review by the MPCA to ensure that the designation complies with Minnesota rule and the CWA. In addition, there are a number of rule corrections made by the DNR that the MPCA is also proposing to make which did not undergo additional

[4] In this section, "Class 2A" broadly refers to all cold water habitats including Classes 2A, 2Ae, and 2Ag.
[5] In this section, "Class 2B" broadly refers to all cold water habitats including Classes 2Bd, 2Bde, 2Bdg, 2Bdm, 2B, 2Be, 2Bg, and 2Bm.

review since they are corrections to the current designations and in most cases, they are short reaches without additional data. In many cases, these two use designation types overlap as they are triggered by both MPCA IWM efforts and amendments to the DNR trout waters list.

Designation from cold water (Class 2A) to cool or warm water (Class 2B/2Bd)[6] or vice versa, requires a comprehensive review of biological, chemical, and physical measures as well as other data are used to determine the natural and existing use of a waterbody. Biological data are the primary source of information used to demonstrate if a cold water use is an existing use. Reviews of fish and macroinvertebrate data focus on the presence or absence and the proportion of cold water species (e.g., trout, sculpin, the amphipod *Gammarus*, and the small minnow mayfly *Baetis tricaudatus*). These reviews include assessments of contemporary and historical data. Of particular importance for use designation is the demonstration that these waters currently support or have supported sustained trout reproduction and/or that they have good year-to-year carry over (e.g., stocked trout survive over the winter). Some streams that do not support trout due to barriers, stream size constraints, or poor fish habitat should also be designated Class 2A based on the presence of a cold water macroinvertebrate community. Temperature data are also important when reviewing a water for 2A designation. Temperature logger data (i.e., measurements recorded continuously every 15-30 min) are especially useful as they provide a more comprehensive estimate of summer conditions and can be used to estimate the percent of the time temperatures are suitable for supporting and maintaining cold water biota. Other physical and chemical characteristics (e.g., habitat, flow, dissolved oxygen, presence of beaver dams, migration barriers) of the waterbody are also used as part of the review to determine the existing use. In all cases, the use review is held to determine whether or not a designated use is an existing use. This holds that uses attained in a surface water on or after November 28, 1975 must be protected (see Minn. R. 7050.0255, subp. 15). Cold water reviews are also done with consultation from DNR staff in order to compile all available information, consider DNR's management goals for the water, and to align class 2A waters with DNR's trout waters list when feasible.

In cases where MPCA monitoring data triggered the use review, it was the result of an initial screening of fish, macroinvertebrate, and temperature data that indicated the current use designation may not be appropriate. The review then followed the process outlined above. In most cases, both DNR and MPCA data were available for these review, but less commonly only MPCA data were available. For use designations triggered by DNR rule amendments, all available data were reviewed as described. This may have included a review of DNR data alone or both DNR and MPCA data. In cases where only DNR was available, a determination to retain the current use was sometimes made because sufficient data were not available to determine the existing use. For these reaches, additional data would need to be collected for the MPCA to propose a use designation in a future rulemaking.

The outcomes of the review process include: 1) retain the current designated use, 2) designate a different use for the entire reach, or 3) designate a different use for part of the reach. In cases where the evidence is insufficient to support changing the designated use, no change is proposed. In these cases, a recommendation to collect additional data may occur in order to determine the appropriate use designation. In general, it will be the MPCA's responsibility to build the case for a use designation. Overall, the use designations in this document are only a portion of the waterbodies that have been

[6] The Class 2A, 2Ag, and 2Ae designations also carry Classes 1B and 3B (see Minn. R. 7050.0420). As a result the addition of a Class 2A, 2Ag, or 2Ae designation results in the addition of 1B and 3B designations. However, the linkage between Classes 2A, 2Ag, and 2Ae and Class 1B is currently under review. As a result, draft designations from cold water habitat to cool/warm water habitat in this document will at this time retain the Class 1B designation and be designated cool/warm water habitat also protected as a source of drinking water (Class 2Bd or 2Bdg).

scrutinized for use designations, but the outcome of many of these reviews is to retain the current use designation.

C. Rule Language Changes

As part of this rule, some minor amendments to Minn. R. ch. 7050 are needed. The most obvious amendment will be an update to the documents incorporated by reference in Minn. R. 7050.0470, which list the specific use designations. In addition, to update the list of waters designated as Class 2A, 2Ag, and 2Ae, the MPCA will also need to revise Minn. R. 7050.0420. This revised rule language will align the waters designated as Class 2A, 2Ag, and 2Ae in Minn. R. 7050.0470 to regulatory goals in Minnesota rand Federal regulations for the protection of cold water aquatic life and habitat. This requires that the rule language in Minn. R. 7050.0420, which explicitly links Class 2A, 2Ag, and 2Ae waters to the DNR trout waters list in Minn. R. 6264.0050 be modified. The waters listed as Class 2A, 2Ag, and 2Ae in Minn. R. 7050.0420 will continue to be largely equivalent to the DNR trout waters list, but a relatively small number of waters will differ due to differences in regulatory activities and management goals between the agencies. The following draft rule language modifications will satisfy these needs.

7050.0420 COLD WATER HABITAT ~~TROUT~~ WATERS.

A. ~~Trout lakes identified in part 6264.0050, subpart 2, as amended through June 14, 2004, are classified as trout waters and~~ Cold water habitats are listed under part 7050.0470. ~~Trout streams and their tributaries within the sections specified that are identified in part 6264.0050, subpart 4, as amended through June 14, 2004, are classified as trout waters. Trout streams are listed in part 7050.0470. Other lakes that are classified as trout waters are listed in part 7050.0470.~~

B. Cold water habitat waters identified as class 2A, 2Ae, or 2Ag in part 7050.0470 must reflect an existing beneficial use that permits the propagation and maintenance of a healthy community of cold water aquatic biota and their habitats.

C. The commissioner must propose changes to part 7050.0470 when reliable scientific evidence supports the addition or removal of a water listed as class 2A, 2Ae, or 2Ag. Revisions must be supported by data relevant to the biological community, habitat, thermal regime, or other features of a 2A, 2Ae, or 2Ag habitat.

D. ~~All waters~~ Unless otherwise listed in part 7050.0470~~as~~, all class ~~1B,~~ 2A, 2Ae, or 2Ag ~~and 3B~~waters listed in part 7050.0470 are also classified as class 1B, 3B, 4A, 4B, 5, and 6 waters.

D. Descriptions of proposed use designations

The following documentation of the proposed use designations correspond to the list of waterbodies in Table 2. The streams and lakes are identified by AUID (i.e., waterbody assessment ID) code, which identifies the HUC8 watershed where the streams are located and assigns a unique 3-digit code to the reach. As with Table 2, the AUIDs are organized by major watershed, HUC8, and then by AUID number within the HUC8. At the beginning of each HUC8 watershed, links to available reports are provided. Maps of each HUC8 and each AUID are provided in the Appendices A through H. These maps are organized by major watershed:

Appendix A: Lake Superior

Appendix B: Lake of the Woods

Appendix C: Red River of the North

Appendix D: Upper Mississippi River

Appendix E/F: Minnesota River

Appendix F: St. Croix

Appendix G: Lower Mississippi

Appendix H: Cedar-Des Moines

The abbreviations and symbols used in the TALU designation description tables are as follows:

Type = stream type code (see Table 4)

IBI = Index of Biological Integrity score

ND = No data because fish or macroinvertebrates were not sampled or the sample was not assessable

Good = number of good habitat attributes

Poor = number of poor habitat attributes

P/G = ratio of Poor+1 and Good+1 habitat attributes

MSHA = Minnesota Stream Habitat Assessment

1. Lake Superior Basin

a. Lake Superior – North Watershed (04010101)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Spruce Creek (Deer Yard Creek) (04010101-615): The reach of the Spruce Creek (Deer Yard Creek) from an unnamed creek (Ward Lake outlet) to Lake Superior is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2013 and 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 70-93). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - North Watershed (04010101) to acknowledge the Exceptional Use condition of this stream reach.

Spruce Creek (Deer Yard Creek) (04010101-615) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
13LS012	2013	Fish	11	69	17	12	0.7	70
13LS012	2015	Fish	11	86	22	9	0.4	93
13LS012	2015	Macroinvertebrates	8	52	20	5	0.3	70
13LS012	2016	Macroinvertebrates	8	68	25	1.5	0.1	77

Spruce Creek (Deer Yard Creek) (04010101-615) photos: 13LS012

Manitou River (North Branch Manitou River) (04010101-D23): The loops of the Manitou River (North Branch Manitou River) along the south line of Public Land Survey (PLS) System[7] section T59 R7W S7 are proposed to be designated as a General Use cold water aquatic life and habitat. The DNR inadvertently left the reach of this river in the PLS System section T59 R7W S7 off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Lake Superior - North Watershed (04010101) incorporated by reference in Minn. R. 7050.0470. There is no assessable[8] MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.33 mi), and it is between two Class 2Ag reaches (04010101-D22 and 04010101-D21), it is reasonable to assign this reach to General Use cold waters (Class 2Ag). The MPCA proposes to assign this reach as General Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - North Watershed (04010101). Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

Brule River (04010101-D30): The reach of the Brule River from the Boundary Waters Canoe Area boundary to the South Brule River is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 1998, 2013, 2014, and 2015 from three stations demonstrated that this reach meets the aquatic life use goals for Exceptional Use. Two of the 8-macroinvertebrate samples were below the Exceptional Use biocriterion (2 and 8 points). These samples were close to the threshold (within confidence limits) and both scored BCG Level 3 indicating that the Exceptional Use is and can be attained in this reach. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 74-86). Considering this information, it is reasonable to remove the Class 2Bdg classification assigned to cool and warm water aquatic life and habitat also protected as a source of drinking water and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - North Watershed (04010101) to acknowledge the Exceptional Use condition of this stream reach.

[7] The convention for identifying land units is the Public Land Survey or PLS System established by the U.S. Department of the Interior.

[8] Assessable biological data are data that are collected following MPCA standard protocols from habitats that are appropriate for the data collection method and for the biological assessment tool (i.e., IBIs).

Brule River (04010101-D30) fish, macroinvertebrate, and habitat data

		Biology				Habitat		
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15LS053	2015	Fish	11	84	24	7	0.3	86
98LS034	1998	Fish	11	72	25	2.5	0.1	77
98LS034	2013	Fish	11	90	24	4	0.2	78
98LS034	2015	Fish	11	80	25.5	4	0.2	82
13LS007	2013	Fish	11	79	25	5	0.2	82
13LS007	2014	Fish	11	73	24.5	5	0.2	79
13LS007	2015	Fish	11	85	25	8	0.3	78
15LS053	2015	Macroinvertebrates	8	50	27.5	0.5	0.1	84
98LS034	2014	Macroinvertebrates	8	44	20.5	4.5	0.3	74
98LS034	1998	Macroinvertebrates	8	62	27.5	0.5	0.1	77
98LS034	2013	Macroinvertebrates	8	59	25.5	1.5	0.1	78
98LS034	2015	Macroinvertebrates	8	56	27.5	0.5	0.1	78
13LS007	2013	Macroinvertebrates	8	70	28	0.5	0.1	82
13LS007	2014	Macroinvertebrates	8	64	27	0.5	0.1	79
13LS007	2015	Macroinvertebrates	8	67	27.5	0.5	0.1	84

Brule River (04010101-D30) photos: 15LS053 (upper left), 98LS034 (upper right), 13LS007 (lower left)

Sugarloaf Creek (04010101-D87[9]): The reach of Sugarloaf Creek from the east line of PLS System section T58 R5W S18 to the west line of T58 R5W S20 is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR inadvertently left the reach of this river in the PLS System sections T58 R5W S18 and T58 R5W S19 off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Lake Superior - North Watershed (04010101) incorporated by reference in Minn. R. 7050.0470. There is no assessable MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.70 mi), and it is an extension of an existing Class 2Ag reach (04010101-B62), it is reasonable to assign this reach to General Use cold waters (Class 2Ag). The MPCA proposes to assign this reach as General Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - North Watershed (04010101). Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

b. Lake Superior – South Watershed (04010102)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Pete's Creek (04010102-518): The reach of Pete's Creek from its headwaters to Lake Superior is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR amended its trout stream list (Minn. R. 6264.0050, subp. 4) in 2018 to include this stream reach (State of Minnesota 2018). No MPCA data are available from this reach but the DNR performed a survey in 2010. During this survey, the DNR survey collected young-of-year and age-1 rainbow trout. Although habitat is poor for trout, the DNR indicates that stream is used for spawning by anadromous steelhead. Temperature logger data also indicated that temperatures were suitable for brook trout (100% of hours were within the range of growth for brook trout). Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - South Watershed (04010102) to acknowledge the cold water status of this stream reach. Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

Knife River, West Branch (04010102-C16): The reach of the West Branch of the Knife River from east line of PLS System section T54 R12W S36 to the geographic coordinates (decimal degrees NAD83) -91.8365, 47.1011 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR currently manages a reach from PLS System section T54 R11W S30 to the confluence with the Knife River as both wild trout and semi-wild trout waters. Although stocking of brook and rainbow trout have occurred in the West Branch Knife River from 1977-2010, no stocking has occurred upstream of Hill Rd (stream mile 5.2). Multiple fish surveys throughout that time period showed no evidence that natural reproduction of trout occurred in the upper reaches of the West Branch Knife River. In addition, all other fish collected during this period are considered warmwater species. Fish community data collected by the MPCA in 2011 revealed that this stream remains dominated by warmwater fish species. Although the lower reaches of the West Branch Knife River still supports natural reproduction of brook, brown and rainbow trout, the thermal regime of the upper reach limits any natural reproduction in these waters. Temperature data from two

[9] The new AUID includes both the existing 2Ag reach and the new segment added through this proposal.

stations and five summers (2010-2012) demonstrated that the thermal regime is not supportive of a brook trout fishery; with thermal stress for brook trout recorded 53% of the time and the lethal threshold reached 7% of the time between June 1 and September 30 of 2010-2011. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - South Watershed (04010102) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach or an adjacent reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Lake Superior - South Watershed (04010102): 04010102-882, 04010102-883, 04010102-884, 04010102-B73, 04010102-B74, and 04010102-B75.

Knife River, West Branch (04010102-C16) photos: 11LS010

Unnamed creek (French River Tributary) (04010102-C39): The reach of an unnamed creek[10] from its headwaters to the French River is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR amended its trout stream list (Minn. R. 6264.0050 subp. 4) in 2018 to include this stream reach (State of Minnesota 2018). No MPCA data are available from this reach but the DNR performed a survey in 2009. During this survey, the DNR survey collected brook trout although there is no record of stocking for this reach. This indicates that there is a self-sustaining population of brook trout in this reach. Temperature logger data also indicated that temperatures in this reach were suitable for brook trout. Upstream of mile 0.5 there is limited habitat for gamefish, but temperatures indicated that it could support other cold water aquatic life. Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and

[10] This creek is called “French River Tributary 13” by the DNR.

habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - South Watershed (04010102) to acknowledge the cold water status of this stream reach. Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

Unnamed creek (Palmer Creek) (04010102-C40): The reach of an unnamed creek[11] from the west line of the PLS System section T51 R12W S9 to Lake Superior is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR amended its trout stream list (Minn. R. 6264.0050, subp. 4) in 2018 to include this stream reach (State of Minnesota 2018). No MPCA data are available from this reach but the DNR performed a survey in 2010. During this survey, the DNR collected 2 age-1 brown trout indicating that anadromous fall-run brown trout are likely using the stream. The mouth of the creek was blocked by gravel which if removed could make the creek suitable for spawning of both spring and fall anadromous species. Temperature logger data from 2010-2012 indicated that temperatures were suitable for brook trout (100% of hours in the range of growth for brook trout). Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lake Superior - South Watershed (04010102) to acknowledge the cold water status of this stream reach. Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

c. St. Louis River Watershed (04010201)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Swan River (04010201-557)[12]: The reach of Swan River from the confluence of the East and West Swan Rivers to the St Louis River is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR has no records of trout stocking or management in the reach of the East Swan River from the confluence with West Swan River to the St. Louis River. This reach is managed for warm water fish species by DNR. Fish community data collected by the MPCA in 1997 and 2009, and macroinvertebrate data collected in 2009 do not indicate biological communities typical of cold water streams. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the St. Louis River Watershed (04010201): 04010201-900, 04010201-901, and 04010201-902.

[11] This creek is called “Palmer Creek” by the DNR.

[12] This reach is named “Swan River, E.” in Minn. R. 6264.0050.

Swan River (04010201-557) photos: 09LS061 (left), 97LS021 (right)

East Swan River (04010201-558): The reach of Swan River from Barber Creek to the Swan River is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR classifies the section from Barber Creek to confluence with the West Swan River as a marginal trout water, which typically lacks suitable habitat and thermal regime for reproduction and year round survival of trout. It was stocked with brook trout in the mid-1960s but this effort was unsuccessful in establishing a population. Brown trout were stocked in East Swan River annually between 1981 and 1983, but subsequent population assessments failed to detect any survival or reproduction of stocked fish. The few assessments that were carried out during this time period recorded very little or no survival of these stocked fish. Trout are no longer stocked in any streams of the East Swan River watershed because trout survival is poor. Fish community data collected by DNR in 1989 and fish and macroinvertebrate data collected by the MPCA in 1997 do not indicate biological communities typical of cold water streams. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the St. Louis River Watershed (04010201): 04010201-605, 04010201-897, 04010201-898, 04010201-899, 04010201-903, 04010201-904, 04010201-905, 04010201-906, 04010201-907, 04010201-908, 04010201-909, 04010201-910, 04010201-911, 04010201-912, 04010201-914, 04010201-915, 04010201-916, 04010201-917, 04010201-918, 04010201-919, 04010201-920, 04010201-921, 04010201-922, 04010201-923, 04010201-924, 04010201-925, 04010201-926, 04010201-927, and 04010201-937.

East Swan River (04010201-558) photos: 97LS023 (left), 15EM085 (right)

Barber Creek (East Swan River) (04010201-569): The reach of Barber Creek (East Swan River) from the east line of the PLS System section T57 R20W S28 to Dempsey Creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR has no records of trout stocking or trout management associated with this stream, nor have trout been recorded from fish surveys. Fish community data collected by DNR in 1989 and fish and macroinvertebrate data collected by the MPCA in 2009 do not indicate biological communities typical of cold water streams. Trout were absent in both surveys and few cold water macroinvertebrate taxa were observed in the single sample collected in 2009. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the St. Louis River Watershed (04010201): 04010201-928, 04010201-929, 04010201-930, 04010201-931, 04010201-932, 04010201-933, 04010201-934, and 04010201-936.

Barber Creek (East Swan River) (04010201-569) photos: 89LS026

Knowlton Creek (04010201-985): The reach of Knowlton Creek from its headwaters to the St. Louis River is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR designated Knowlton Creek as a trout stream in 2008 (State of Minnesota 2008b) for two main reasons: (1) multiple years (2003-2006) of temperature logger data indicate that the stream is able to support a cold water fish assemblage; and (2) trout were once common in this stream and there are plans to restore this condition through stocking. Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cold water status of this stream reach.

Unnamed creek (Merritt Creek) (04010201-987): The reach of unnamed creek (Merritt Creek) from an unnamed creek to the St Louis River is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR designated this unnamed creek (Merritt Creek) as a trout stream in 2008 (State of Minnesota 2008b) for two main reasons: (1) multiple years (2003-2006) of temperature logger data indicate that the stream is able to support a cold water fish assemblage; and (2) the presence of naturally reproducing trout communities. Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cold water status of this stream reach.

Unnamed creek (Merritt Creek tributary) (04010201-A80): The reach of an unnamed creek (Merritt Creek tributary) from its headwaters to an unnamed creek (Merritt Creek) is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR designated this unnamed creek (tributary to Merritt Creek) as a trout stream in 2008 (State of Minnesota 2008b) for two main reasons: (1) multiple years (2003-2006) of temperature logger data indicate that the stream is able to support a cold water fish assemblage; and (2) the presence of naturally reproducing trout communities. The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cool and warm water status of this stream reach.

Unnamed creek (Merritt Creek) (04010201-A81): The reach of unnamed creek (Merritt Creek) from its headwaters to an unnamed creek is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR designated this unnamed creek (Merritt Creek) as a trout stream in 2008 (State of Minnesota 2008b) for two main reasons: (1) multiple years (2003-2006) of temperature logger data indicate that the stream is able to support a cold water fish assemblage; and (2) the presence of naturally reproducing trout communities. The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cool and warm water status of this stream reach.

Unnamed creek (Coffee Creek) (04010201-A82): The reach of unnamed creek (Coffee Creek) from its headwaters to Piedmont Avenue is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR designated Coffee Creek as a trout stream in 2008 (State of Minnesota 2008b) for two main reasons: (1) multiple years (2003-2006) of temperature logger data indicate that the stream is able to support a cold water fish assemblage; and (2) the presence of naturally reproducing trout communities. Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cold water status of this stream reach. The DNR includes PLS System sections T50, R14,

S33 and S32 in Minn. R. 6264.0050, however, the reach of Coffee Creek in PLS sections T50, R14, S33 and part of S32 is currently underground. Therefore, the section from Piedmont Avenue to St. Louis Bay is not included in Minn. R. 7050.0470.

Buckingham Creek (04010201-B02): The reach of Buckingham Creek from its headwaters to Twin Ponds is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR designated Buckingham Creek as a trout stream in 2008 (State of Minnesota 2008b) for two main reasons: (1) multiple years (2003-2006) of temperature logger data indicate that the stream is able to support a cold water fish assemblage; and (2) the presence of naturally reproducing trout communities. Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the St. Louis River Watershed (04010201) to acknowledge the cold water status of this stream reach. The DNR includes PLS System sections T50, R14, S34 and S33 in Minn. R. 6264.0050, however, the reach of Buckingham Creek in PLS sections T50, R14, S34 and part of S33 is underground. Therefore, the section from West 1st Street to the Duluth Harbor is not included in Minn. R. 7050.0470.

Cedar Lake (69-0431-00): Cedar Lake is proposed to be designated as a cool and warm water aquatic life and habitat also protected as a source of drinking water (Class 2Bd). The DNR delisted Cedar Lake as a trout lake in 2018 (State of Minnesota 2018) because this lake is no longer managed for trout due to the presence of species of fish (bluegills and northern pike) that compete or prey upon trout. Repeated lake treatments to remove non-trout species have been ineffective and the DNR ceased trout stocking on 2007. Considering this information, it is reasonable to remove the Class 2A classification assigned to cold water aquatic life and habitat and replace it with the use assigned to cool and warm waters also protected as a source of drinking water (Class 2Bd). The MPCA will propose to make this change in Minn. R. 7050.0470, subp. 1, Item B to acknowledge the cool or warm water aquatic life and habitat use for this lake.

Lower Twin Lake[13] (69-0967-00): Lower Twin Lake is proposed to be designated as a cold water aquatic life and habitat (Class 2A). A barrier was removed that separated this lake from Upper Twin Lake and prevented movement of trout in to Lower Twin Lake. Since the removal of the barrier, the DNR manages Lower Twin Lake for stream trout. Considering this information, it is reasonable to remove the Class 2B classification assigned to cool and warm water aquatic life and habitat and replace it with the use assigned to cold waters (Class 2A). The MPCA will propose to make this change in Minn. R. 7050.0470, subp. 1, Item B to acknowledge the cold water aquatic life and habitat use for this lake.

Upper Twin Lake[13] (69-0967-01): Upper Twin Lake is proposed to be designated as a cold water aquatic life and habitat (Class 2A). This lake should have originally been designated as Class 2A, but instead Golf Course Pond (69-1345-00) was erroneously designated. Considering this information, it is reasonable to remove the Class 2B classification assigned to cool and warm water aquatic life and habitat and replace it with the use assigned to cold waters (Class 2A). The MPCA will propose to make this change in Minn. R. 7050.0470, subp. 1, Item B to acknowledge the cold water aquatic life and habitat use for this lake.

Golf Course Pond (69-1345-00): Golf Course Pond is proposed to be designated as a cool and warm water aquatic life and habitat also protected as a source of drinking water (Class 2Bd). Upper Twin Lake (69-0967-01) should have originally been designated as Class 2A, but instead Golf Course Pond was erroneously designated. Considering this information, it is reasonable to remove the Class 2A

[13] Lower and Upper Twin Lakes are referred to jointly as "Twin Lake" in Minn. R. 6264.0050.

classification assigned to cold water aquatic life and habitat and replace it with the use assigned to cool and warm waters also protected as a source of drinking water (Class 2Bd). The MPCA will propose to make this change in Minn. R. 7050.0470, subp. 1, Item B to acknowledge the cold water aquatic life and habitat use for this lake.

d. Cloquet River Watershed (04010202)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

Beartrap Creek (04010202-520): The reach of Beartrap Creek from the north line of the PLS System section T51 R16W S31 to the north line of the PLS System section T51 R17W S36 is proposed to be designated as a General Use cold water aquatic life and habitat The DNR inadvertently left the reach of this river in the PLS System section T59 R7W S7 off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Cloquet River Watershed (04010202) incorporated by reference in Minn. R. 7050.0470. There is no assessable MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.28 mi), and it is between two Class 2Ag reaches (04010202-521 and 04010202-519), it is reasonable to assign this reach to General Use cold waters (Class 2Ag). The MPCA proposes to assign this reach as General Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Cloquet River Watershed (04010202). Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

Berry Creek (04010202-526): The reach of Berry Creek in the PLS System section T55 R13W S1 is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR inadvertently left this reach off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Cloquet River Watershed (04010202) incorporated by reference in Minn. R. 7050.0470. There is no assessable MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.01 mi), and it is between two existing Class 2Ag reaches (04010202-527 and 04010202-515), it is reasonable to assign this reach to General Use cold waters (Class 2Ag). The MPCA proposes to assign this reach as General Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Cloquet River Watershed (04010202). Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

Humphrey Creek (04010202-530): The reach of the Humphrey Creek from its headwaters to Boulder Creek is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2015 and 2016 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair to good habitat (MSHA = 45-68). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cloquet River Watershed (04010202) to acknowledge the Exceptional Use condition of this stream reach.

Humphrey Creek (04010202-530) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15LS025	2015	Fish	11	69	14	11	0.80	68
15LS025	2015	Fish	11	66	8.5	14.5	1.63	63
15LS025	2015	Macroinvertebrates	8	ND	9	13	1.40	45
15LS025	2016	Macroinvertebrates	8	71	9	15	1.60	49

Humphrey Creek (04010202-530) photos: 15LS025

Coyote Creek (04010202-584): The reach of the Coyote Creek from unnamed creek to Pequaywan Lake is proposed to be designated as an Exceptional Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 67-76). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cool and warm waters (Class 2Be). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cloquet River Watershed (04010202) to acknowledge the Exceptional Use condition of this stream reach.

Coyote Creek (04010202-584) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15LS016	2015	Fish	6	90	13.5	7	0.55	67
15LS016	2016	Macroinvertebrates	3	82	13.5	0	0.07	76

Coyote Creek (04010202-584) photos: 15LS016

Cloquet River (04010202-669): The reach of the Cloquet River from its headwaters (Katherine Lk 38-0538-00) to the south line of the PLS System section T57 R10 S32 is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. This reach was reviewed due to fish, macroinvertebrate, and temperature logger data which indicated coldwater potential. Brook trout were sampled along with coldwater macroinvertebrate taxa such as Glossosoma nigrior, Ephemerella, and some coldwater midges. Biological data from both macroinvertebrates and fish collected in 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 80-81). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cloquet River Watershed (04010202) to acknowledge the Exceptional Use condition of this stream reach.

Cloquet River (04010202-669) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15LS006	2015	Fish	11	69	24	6	0.28	80
15LS006	2015	Macroinvertebrates	8	66	26	2.5	0.13	81

Cloquet River (04010202-669) photos: 15LS006

Cloquet River (04010202-670): The reach of the Cloquet River from the north line of the PLS System section T56 R10 S5 to the West Branch of the Cloquet River is proposed to be designated as an Exceptional Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 1997, 2004, 2014, 2015, and 2016 from four stations demonstrated that this reach meets the aquatic life use goals for Exceptional Use. Two of the 5-macroinvertebrate visits were below the Exceptional Use biocriterion, but these were 1-3 points below this threshold and the overall condition of the macroinvertebrates indicated that the Exceptional Use is attainable. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair to good habitat (MSHA = 57-91). Considering this information, it is reasonable to remove

the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cool and warm waters (Class 2Be). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cloquet River Watershed (04010202) to acknowledge the Exceptional Use condition of this stream reach.

Cloquet River (04010202-670) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
97LS016	1997	Fish	5	82	20.5	4	0.23	83
97LS016	2014	Fish	5	93	15.5	8.5	0.58	77
97LS016	2015	Fish	5	88	21	4	0.23	81
97LS016	2016	Fish	5	85	21.5	4	0.22	91
15LS011	2015	Fish	5	73	11.5	11.5	1.00	57
15LS005	2015	Fish	5	76	12	8	0.69	65
14LS007	2014	Macroinvertebrates	3	79	10	5	0.55	75
97LS016	2004	Macroinvertebrates	3	81	15.5	0	0.06	83
97LS016	1997	Macroinvertebrates	3	89	15.5	0	0.06	83
97LS016	2015	Macroinvertebrates	3	94	12.5	3	0.30	78
15LS011	2015	Macroinvertebrates	3	91	7.5	5	0.71	75

Cloquet River (04010202-670) photos: 97LS016 (upper left), 15LS011 (upper right), 15LS005 (lower left), 14LS007 (lower right)




Cloquet River (04010202-671): The reach of the Cloquet River from the West Branch of the Cloquet River to Island Lake Reservoir is proposed to be designated as an Exceptional Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 1997, 1998, and 2015 from three stations demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair to good habitat (MSHA = 47-71). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cool and warm waters (Class 2Be). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cloquet River Watershed (04010202) to acknowledge the Exceptional Use condition of this stream reach.

Cloquet River (04010202-671) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
98LS044	1998	Fish	5	78	4.5	12.5	2.45	47
98LS044	2015	Fish	5	82	15	6	0.44	62
98LS044	2015	Fish	5	83	13	8	0.64	71
97LS014	1997	Fish	5	72	-	-	-	-
15LS017	2015	Fish	5	75	9	8	0.90	65
98LS044	1998	Macroinvertebrates	4	85	6.5	6	0.93	47
97LS014	1997	Macroinvertebrates	4	92	-	-	-	-

Cloquet River (04010202-671) photos: 98LS044 (upper left), 97LS014 (upper right), 15LS017 (lower left)

e. Nemadji River Watershed (04010301)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Blackhoof River (04010301-519): The Blackhoof River from an unnamed creek to Ellstrom Lake is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR currently classifies the section from PLS T48 R17W S30 to the confluence with the Nemadji River as a wild trout waters. The DNR began stocking brook, brown, and rainbow trout in 1955 but that effort ceased in 1981. All stocking of trout occurred at or below Country Road 104. Multiple fish surveys throughout that time period showed no evidence that natural reproduction of trout occurred in the upper reach of the Blackhoof River. In addition, fish community data collected by DNR and MPCA in 1990, 1998, and 2011 revealed that this stream remains dominated by warmwater fish species. Although the lower reaches of the Blackhoof River still supports natural reproduction of brook, brown, and rainbow trout, the thermal regime in the upper reach limits any natural reproduction. Temperature data from mile 21.1 shows that the thermal regime is not supportive of a brook trout fishery, with thermal stress recorded 27.8% of the time and lethal threshold reached 3.6% of the summer in 2001-2003. In addition, temperature data from mile 15.1 shows that thermal stress was recorded 25% of the time and lethal threshold reached 1% of the time between June 1 and September 30 of 2001-2005. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Nemadji River Watershed (04010301) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Nemadji River Watershed (04010301): 04010301-520, 04010301-521, 04010301-583, 04010301-584, 04010301-671, and 04010301-672.

Blackhoof River (04010301-519) photos: 90LS031

Unnamed creek (Blackhoof River Tributary) (04010301-524): The south line loop of the PLS System T47 R17W S21 for an unnamed creek (Blackhoof River Tributary) is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR amended its trout stream list in Minn. R. 6264.0050, subp. 4 to include this stream reach (State of Minnesota 2018). No MPCA data are available from this reach but the DNR performed a survey in 2009. The DNR survey collected both brook trout and rainbow trout, including young-of-year and age-1 trout, indicating natural reproduction of both species. Temperature (93-98% of hours were within the range of growth for brook trout), dissolved oxygen, and habitat indicated that this reach is suitable for brook trout. Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Nemadji River Watershed (04010301) to acknowledge the cold water status of this stream reach. Two other sections of this creek, 04010301-523 and 04010301-525, are currently designated a 2Ag (as trout protection waters) due to their PLS Survey section affiliation with other cold water streams. The 2Ag designation will be retained in these two reaches although they are now considered trout waters. Due to the lack of assessable biological data, all three reaches will remain unconfirmed General Uses in the beneficial use table.

Nemadji River (04010301-757): The Nemadji River, from the south line of the PLS T46 R17W S33 to an unnamed creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR currently classifies the section from the south line of T46 R17W section 33 to the Minnesota/Wisconsin border as a wild trout water. Stocking of the Nemadji River system reportedly began in 1908, primarily with brook and brown trout, though occasionally rainbow trout as well. The only records of trout stocking within the upper reaches of the Nemadji River were rainbow trout fry, which were stocked in 1985, 1987, and 1991. Multiple fish surveys throughout the time period showed no evidence that natural reproduction of trout occurred in the upper reaches of the Nemadji River. In addition, fish community data collected by the MPCA in 2011 revealed that this stream remains dominated by warmwater fish species. Although the lower reaches of the Nemadji River still support natural reproduction of brook, brown, and rainbow trout, the thermal regime in the upper reaches limits any natural reproduction. Temperature data from mile 17.5, 24.9 and 32.6 shows that the thermal regime is not supportive of a brook trout fishery, with thermal stress recorded 29-31% of the time and lethal threshold reached 0-1% of the time in the summers of 2009-2011. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Nemadji River Watershed (04010301) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Nemadji River Watershed (04010301): 04010301-551, 04010301-552, 04010301-553, 04010301-554, 04010301-636, 04010301-637, 04010301-638, 04010301-694, and 04010301-695.

Nemadji River (04010301-757) photos: 11LS061, 97LS087

Blackhoof River (04010301-761): The Blackhoof River, from Ellstrom Lake to Country Road 105 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. See Blackhoof River (04010301-519) for a complete description of the use designation proposal. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Nemadji River Watershed (04010301) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Nemadji River Watershed (04010301): 04010301-585, 04010301-586, 04010301-673, 04010301-674, and 04010301-675.

Blackhoof River (04010301-761) photos: 98LS006

2. Lake of the Woods Basin

a. Rainy River - Headwaters Watershed (09030001)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report (in progress), WRAPS Report (in progress)

Little Isabella River (09030001-530): The reach of the Little Isabella River from its headwaters to Flat Horn Lake is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2014, from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 85-86). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001) to acknowledge the Exceptional Use condition of this stream reach.

Little Isabella River (09030001-530) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14RN079	2014	Fish	11	73	25.5	7	0.30	85
14RN079	2014	Macroinvertebrates	8	52	27	0.5	0.05	86

Little Isabella River (09030001-530) photos: 14RN079

Snake River (09030001-542): The reach of the Snake River from south line of the PLS System section T61 R9W S7 to north line of the PLS System section T61 R10W S12 is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2014 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 73-80). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001) to acknowledge the Exceptional Use condition of this stream reach.

Snake River (09030001-542) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14RN064	2014	Fish	11	84	22	4.5	0.24	80
14RN064	2014	Macroinvertebrates	8	70	27.5	0.5	0.05	73

Snake River (09030001-542) photos: 14RN064

Jack Pine Creek (09030001-564): The reach of the Jack Pine Creek from its headwaters to Mitawan Creek is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2014 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair habitat (MSHA = 55-65). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). In addition, the reach of Jack Pine Creek in the PLS System section T60 R8W S17 is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. The DNR inadvertently left the reach of this river in the PLS System section T60 R8W S17 off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Rainy River - Headwaters Watershed (09030001) incorporated by reference in Minn. R. 7050.0470. There is no assessable MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.85 miles) and it is adjacent to a downstream cold water habitat, it is reasonable to assign this reach to General Use cold waters (Class 2Ae). The MPCA proposes to assign this reach as Exceptional Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001).

Jack Pine Creek (09030001-564) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14RN081	2014	Fish	11	60	13.5	12.5	0.93	65
14RN081	2014	Macroinvertebrates	8	60	12	12.5	1.04	55

Jack Pine Creek (09030001-564) photos: 14RN081 (left), brook trout (right)

Mitawan Creek (09030001-568): The reach of the Mitawan Creek from Kitigan Lake to the north line of the PLS System section T61 R9W S13 is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2005, 2006, 2009, 2013, 2015 from three stations demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 69-90). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001) to acknowledge the Exceptional Use condition of this stream reach.

Mitawan Creek (09030001-568) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
05RN073	2005	Fish	11	71	18	12	0.68	90
05RN073	2013	Fish	11	61	14.5	13	0.90	79
05RN073	2015	Fish	11	69	13.5	12	0.90	73
06RN014	2006	Fish	11	70	-	-	-	-
06RN014	2013	Fish	11	72	-	-	-	-
06RN014	2009	Fish	11	77	-	-	-	-
05RN190	2015	Fish	11	81	16	9	0.59	79
05RN073	2005	Macroinvertebrates	8	54	19	9	0.50	90
05RN073	2013	Macroinvertebrates	8	64	16	8	0.53	79
05RN073	2015	Macroinvertebrates	8	64	13.5	10	0.76	69

Mitawan Creek (09030001-568) photos: 05RN073 (left), 05RN190 (right)

Denley Creek (09030001-627): The reach of the Denley Creek from Nira Creek to Stony River is proposed to be designated as an Exceptional Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2014 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair to good habitat (MSHA = 62-74). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cool and warm waters (Class 2Be). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001) to acknowledge the Exceptional Use condition of this stream reach.

Denley Creek (09030001-627) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14RN067	2014	Fish	7	75	11	2	0.25	62
14RN067	2014	Macroinvertebrates	4	84	7	3	0.50	74

Denley Creek (09030001-627) photos: 14RN067

Trappers Creek (09030001-802): The reach of Trappers Creek in the PLS System section T60 R8W S21 is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR inadvertently left the reach of this river in the PLS System section T60 R8W S21 off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Rainy River - Headwaters Watershed (09030001) incorporated by reference in Minn. R. 7050.0470. There is no assessable MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.01 miles), and it is between two Class 2Ag reaches (09030001-550 and 09030001-802), it is reasonable to assign this reach to General Use cold waters (Class 2Ag). The MPCA proposes to assign this reach as General Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001). Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

Cross River (09030001-966): The reach of the Cross River from Ham Lake Outlet to Gunflint Lake is proposed to be designated as an Exceptional Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2014 and 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The macroinvertebrates score was 2 points below the Exceptional Use biocriterion, but BCG scores were Level 3 for this assemblage indicating the Exceptional Use is attainable. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 73-80). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cool and warm waters (Class 2Be). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001) to acknowledge the Exceptional Use condition of this stream reach.

Cross River (09030001-966) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14RN011	2015	Fish	5	63	15	5	0.38	73
14RN011	2014	Macroinvertebrates	3	80	12.5	1	0.15	80

Cross River (09030001-966) photos: 14RN011

Bezhik Creek (09030001-975): The reach of the Bezhik Creek from Boundary Waters Canoe Area (BWCA) boundary to Moose River is proposed to be designated as an Exceptional Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2014 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair habitat (MSHA = 57-58). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cool and warm waters (Class 2Be). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Rainy River - Headwaters Watershed (09030001) to acknowledge the Exceptional Use condition of this stream reach.

Bezhik Creek (09030001-975) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14RN036	2014	Fish	7	73	9	1	0.20	58
14RN036	2014	Macroinvertebrates	4	84	2	7.5	2.83	57

Bezhik Creek (09030001-975) photos: 14RN036

b. Little Fork River Watershed (09030005)

Watershed information: MPCA webpage, M&A Report, WRAPS Report

Unnamed creek (Valley River Tributary) (09030005-562): The reach of an unnamed creek (Valley River Tributary) from the south line of the PLS System section T63 R22W S28 to an unnamed creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. During the 2008 MPCA IWM process, biological samples were obtained from one monitoring station located on the lower third of this reach. Fish were sampled twice – once in June and again in July. No cold water species were present in either sample. The macroinvertebrate sample did not contain any cold water obligate taxa and the community was indicative of a warm water low gradient stream. A temperature logger was deployed in 2008 and in 2017. The July average water temperature for 2008 and 2017 was 19.0 and 19.8, respectively. The summer average water temperature for 2017 was 18.2 degrees Celsius; the average temperature for 2008 was not valid due to partial recording. In 2017, water temperatures were in the stress range 22.6% of the summer and in the lethal range 1.3% of the summer for brook trout. Biological and temperature data are indicative of a cool or warm water habitat. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Little Fork River Watershed (09030005) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a tributary was designated Class 2Ag as a trout protection water due to it is PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reach will be changed to Class 2Bdg in the beneficial use table for the Little Fork River Watershed (09030005): 09030005-903.

Unnamed creek (Valley River Tributary) (09030005-562) photos: 08RN041

Venning Creek (09030005-568): The reach of Venning Creek from the east line of the PLS System section T61 R23W S35 to the Bear River is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. Venning Creek was managed for brook trout from 1942 to 1976 and within this time period, brook trout were stocked for 28 years. No trout were sampled during a 1979 population assessment. Notes from that assessment indicate that a lack of habitat and extensive beaver activity were factors limiting the establishment of trout. A second population assessment was conducted in 1981 and the results were similar to the 1979 assessment. During the 2008 MPCA IWM process, biological samples were obtained from one station located on the upper portion of this reach. The fish sample consisted of 14 species. Mottled sculpin were the only cold water fish species captured; four of them were present in the sample. The macroinvertebrate sample did not contain any cold water obligate taxa. A temperature logger was deployed in 2008; however, the resulting data is incomplete due to sedimentation of the logger. Only partial recording times were available for July and August. The DNR amended its trout stream list (Minn. R. 6264.0050 subp. 4) in 2018 and removed this stream reach (State of Minnesota 2018). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Little Fork River Watershed (09030005) to acknowledge the cool and warm water status of this stream reach.

Venning Creek (09030005-568) photos: 08RN021

Venning Creek (09030005-570): The reach of Venning Creek from the south line of the PLS System section T60 R23W S13 to the north line of the PLS System section T60 R23W S2 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. See Venning Creek (09030005-568) for a complete description of the use designation proposal. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Little Fork River Watershed (09030005) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a tributary were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reach will be changed to Class 2Bdg in the beneficial use table for the Little Fork River Watershed (09030005): 09030005-571, 09030005-572, 09030005-573, 09030005-905, 09030005-906, 09030005-907, 09030005-908, 09030005-909, 09030005-910, 09030005-911, and 09030005-912.

Johnson Creek (09030005-679): The reach of Johnson Creek in the PLS System section T60 R18W S6 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. Johnson Creek was initially stocked with brook trout in 1948 and other records indicate annual stocking occurred from 1968 – 1996. After 1996 regional managers decided to discontinue stocking smaller streams that could not sustain a population supported by natural reproduction. During a 1981 DNR survey, seven brook trout ranging in length from <2-8.5" were captured. The presence of fish under 2" in length was evidence of natural reproduction since yearling fish were stocked in 1980 and 1981. Most of the brook trout were captured within the 1.5 mile stretch of stream located immediately downstream of Highway 53. Other notes from the 1981 survey indicate extensive beaver activity was causing sedimentation to occur at many locations. In 1994 a well-known local angler captured 10 – 11" brook trout on the stretch of Johnson Creek just below Highway 53. Another angler captured several trout within this reach during the year 2000. During 2003, the USFS and DNR conducted electrofishing surveys and did not capture any trout. During conversation DNR staff indicated that all of the communities sampled during the 2003 survey were indicative of a warm water, low gradient system. The DNR also monitored water temperature at five locations from 2002-2005 and found water temperatures in the middle to high 70's and low 80's at all locations. The MPCA biomonitoring station 08RN011 was located at the very downstream end of original cold water reach. Both fish and macroinvertebrates were sampled in 2008 and no cold water taxa were present in either sample. Three temperature loggers were deployed on Johnson Creek in 2017. The average July temperature was > 20 degrees Celsius at all locations. The most upstream logger, located immediately downstream of Highway 53, recorded temperature considered lethal for brook trout during 4.1% of the deployment time. DNR staff have indicated that Johnson Creek is currently too warm to support trout. Extensive beaver activity has created numerous impoundments throughout the system and resulted in the sedimentation of coarse substrate. Professional judgement is that this stream was naturally marginal for the support of trout, but it did demonstrate the ability to support trout within the upper reaches of the stream. According to DNR staff, the best potential for trout production is well upstream of the biomonitoring station 08RN011 location. The lower portion of this stream near station 08RN011 likely never had the capacity to support trout and was probably always too warm. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Little Fork River Watershed (09030005) to acknowledge the cool and warm water status of this stream reach.

Johnson Creek (09030005-679

3. Red River of the North Basin

a. Red River of the North - Marsh River Watershed (09020107)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

County Ditch 66 (09020107-516): The reach of County Ditch 66 from County Ditch 38 to County Ditch 11 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from both fish and macroinvertebrates collected from one station in 2007 demonstrated that this reach does not meet the fish or macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017c). Water quality data were not sufficient for assessment of any other aquatic life WQS due to small sample sizes, but the available water quality measurements (dissolved oxygen, phosphorus, ammonia, TSS and pH) all met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Red River of the North - Marsh River Watershed (09020107) to acknowledge the Modified Use condition of this stream reach.

County Ditch 66 (09020107-516) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07RD008	2007	Fish	6	41	7	12.5	1.69	47
07RD008	2007	Macroinvertebrates	7	37	8	10	1.22	47

County Ditch 66 (09020107-516) photos: 07RD008

County Ditch 11 (09020107-517): The reach of County Ditch 11 from County Ditch 66 to Marsh River is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from both fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the fish or macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017c). Total phosphorus, ammonia, chloride, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. There were two dissolved oxygen measurements that did not meet the standard, but data were insufficient for assessment. Stressor identification determined that a lack of connectivity, flow regime instability, insufficient physical habitat were likely stressors with high suspended sediment and low dissolved oxygen as other possible stressors (MPCA 2018b). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Red River of the North - Marsh River Watershed (09020107) to acknowledge the Modified Use condition of this stream reach.

County Ditch 11 (09020107-517) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14RD060	2014	Fish	2	0	4.5	15.5	3.00	35
14RD060	2014	Fish	2	0	2	18	6.33	38
14RD060	2014	Macroinvertebrates	7	35	5	16	2.83	31

County Ditch 11 (09020107-517) photos: 14RD060

Judicial Ditch 51 (09020107-518): The reach of Judicial Ditch 51 from County Ditch 26 to unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2005 and 2006 demonstrated that this reach does not meet the macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold and included a sensitive species (Iowa darter). A channel connects this reach to the Wild Rice River and fish may be migrating into Judicial Ditch 51 thereby improving the fish assemblage despite poor habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as supporting Modified Use aquatic life use goals (MPCA 2017c). Macroinvertebrates were not assessed in this reach because the data were expired (i.e., more than 10 years old). Water quality data were not sufficient for assessment of any other aquatic life standards due to small sample sizes, but the available water quality measurements (dissolved oxygen, ammonia, TSS and pH) met standards. A single measurement of total phosphorus exceeded the standard, but no response variables were measured. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make

this change in Minn. R. 7050.0470 by updating the use table for the Red River of the North - Marsh River Watershed (09020107) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 51 (09020107-518) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
05RD055	2006	Fish	7	50	3.5	10.5	2.56	32
05RD055	2005	Macroinvertebrates	7	16	4	16.5	3.50	32

Judicial Ditch 51 (09020107-518) photos: 14RD022

b. Wild Rice River Watershed (09020108)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

Marsh Creek (09020108-519): The reach of March Creek from Blair Lake to Beaulieu Lake is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2015 indicated that this reach does not meet the fish aquatic life use goals for General Use warm and cool water aquatic life and habitat. Although a fish IBI score is above the General Use threshold, examination of the raw data indicated that this reach supports a poor fish community dominated by fathead minnows. The BCG further supports this determination with a BCG level of 6. The macroinvertebrates were not sampled in this reach due to insufficient flow at the time of sampling. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments predicted that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as supporting Modified Use aquatic life use goals (MPCA 2017d). Water quality data were not sufficient for assessment of any other aquatic life standards due to small sample sizes, but the limited water quality measurements (ammonia, TSS and pH) met standards. Dissolved oxygen was sampled twice during fish visits with one sample not meeting WQS. The dissolved oxygen sample not meeting the standard was

sampled during the non-reportable fish visit when flows were high and dissolved oxygen may have been impacted from discharges from wetlands in the watershed. The dissolved oxygen sample collected during the reportable fish visit met dissolved oxygen standards. An average of two measurements of a total phosphorus exceeded the standard, but no response variables were measured. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

Marsh Creek (09020108-519) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14RD020	2014	Fish	7	ND	2.5	13	4.00	33
14RD020	2015	Fish	7	53	3.5	11	2.67	41
14RD020	2014	Macroinvertebrates	7	ND	7	9.5	1.31	52

Marsh Creek (09020108-519) photos: 14RD020

Unnamed creek (09020108-541): The reach of unnamed creek from an unnamed ditch to the Wild Rice River is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage sample scored above the General Use threshold and included a sensitive species (rock bass). The biological station is approximately 1 mile from the Wild Rice River and fish may be migrating into thus unnamed creek thereby improving the fish assemblage despite poor habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017d). This reach met river eutrophication, ammonia, chloride, and pH standards. Water quality data were not sufficient for assessment of other aquatic life WQS due to small sample sizes, but the limited water quality measurements (dissolved oxygen and TSS) met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (09020108-541) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07RD011	2007	Fish	2	58	3	13.5	3.63	35
07RD011	2014	Macroinvertebrates	7	37	1	21	11.00	31

Unnamed creek (09020108-541) photos: 07RD011

County Ditch 45 (09020108-553): The reach of County Ditch 45 from an unnamed ditch to an unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold and included several sensitive and intolerant species. Despite the poor habitat, the presence of some large river species could indicate good base flow, which is mitigating the poor habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017d). This reach met river eutrophication, ammonia, chloride, TSS and pH standards. Water quality data were not sufficient for assessment of other aquatic life standards due to small sample sizes, but the available dissolved oxygen measurements did not exceed the standard. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

County Ditch 45 (09020108-553) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14RD051	2014	Fish	2	71	4	15.5	3.30	39
14RD051	2015	Fish	2	59	4	15.5	3.30	29
14RD051	2014	Macroinvertebrates	7	35	0	21	22.00	29

County Ditch 45 (09020108-553) photos: 14RD051

Tulaby Creek (09020108-565): The reach of Tulaby Creek from an unnamed ditch to an unnamed creek is proposed to be designated as an Exceptional Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2005 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The macroinvertebrates score was 1 point below the Exceptional Use biocriterion, but BCG scores were Level 3 for this assemblage indicating the Exceptional Use is attainable. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 75). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to Exceptional Use cool and warm waters (Class 2Be). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Wild Rice River Watershed (09020108) to acknowledge the Exceptional Use condition of this stream reach.

Tulaby Creek (09020108-565) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
05RD075	2005	Fish	6	72	16	6.5	0.44	75
05RD075	2005	Macroinvertebrates	4	75	7	2	0.38	75

Tulaby Creek (09020108-565) photos: 05RD075

Unnamed creek (09020108-598): The reach of unnamed creek from an unnamed ditch to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2007 demonstrated that this reach does not meet the fish or macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017d). The fish assemblage was below the Modified Use threshold but was within the confidence interval. Because of the proximity to the threshold, the decent fish community and the possible impact of a beaver dam within the reach, the fish assemblage was assessed as supporting aquatic life use goals. Water quality data were not sufficient for assessment of other aquatic life standards due to small sample sizes, but the limited water quality measurements (ammonia, dissolved oxygen and pH) met standards. Single measurements of TSS and phosphorus exceeded standards, but were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (09020108-598) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07RD001	2007	Fish	6	20	6.5	14.5	2.07	42
07RD001	2007	Macroinvertebrates	7	29	3	15.5	4.13	42

Unnamed creek (09020108-598) photos: 07RD001

Spring Creek (09020108-647): The reach of Spring Creek from its headwaters to 140th Avenue is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold and included two sensitive species (northern redbelly dace and pearl dace). Habitat was fair and habitat modeling predicted that habitat in Spring Creek is only possibly limiting the fish assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017d). Total phosphorus, ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Dissolved oxygen had one measurement below standards, but data were not sufficient for assessment. Stressor identification determined that poor habitat was a likely stressor with high suspended sediment and flow instability as other possible stressors (MPCA 2018c). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

Spring Creek (09020108-647) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14RD022	2014	Fish	6	63	10	14	1.36	48
14RD022	2014	Macroinvertebrates	7	15	6	15.5	2.36	33

Spring Creek (09020108-647) photos: 14RD022

Marsh Creek (09020108-651): The reach of Marsh Creek from Beaulieu Lake to the geographic coordinates (decimal degrees NAD83) -95.9973 west longitude, 47.4054 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2005 and 2007 demonstrated that this reach does not meet the fish or macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. One macroinvertebrate visit meets the General Use biocriterion, however the BCG indicates that this community scores as Level 5 and indicates the assemblage is not meeting aquatic life use goals. In addition, this community has a high proportion of tolerant and very tolerant invertebrates. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Both fish samples were above or within 1 point of the Modified Use threshold and were assessed as supporting Modified Use aquatic life use goals (MPCA 2017d). This reach met Secchi tube, chloride, pH, and ammonia standards. Water quality data were not sufficient for assessment of other aquatic life standards due to small sample sizes, but the available dissolved oxygen, TSS, and river eutrophication measurements met WQS. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

Marsh Creek (09020108-651) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07RD002	2005	Fish	5	35	4.5	11.5	2.27	42
05RD059	2007	Fish	5	34	4	11.5	2.50	36
07RD002	2005	Macroinvertebrates	7	45	5	16.5	2.92	42
05RD059	2007	Macroinvertebrates	7	36	2	16	5.67	36

Marsh Creek (09020108-651) photos: 07RD002 (left), 05RD059 (right)

Mosquito Creek (09020108-657): The reach of Mosquito Creek from an unnamed creek to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2005 demonstrated that this reach does not meet the fish or macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is likely limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrates were not assessed in this reach because data were expired (i.e., more than 10 years old). This reach met TSS, Secchi tube, chloride, pH, and ammonia standards. Dissolved oxygen data had two measurements below the standard, but data were not sufficient for assessment. Limited total phosphorus data were available, but response variables were not sampled to determine if river eutrophication standards are met in this reach. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

Mosquito Creek (09020108-657) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
05RD066	2005	Fish	6	29	7.5	14	1.76	52
05RD099	2005	Fish	7	37	4.5	8	1.64	49
05RD099	2005	Macroinvertebrates	4	27	0.5	9.5	7.00	49

Mosquito Creek (09020108-657) photos 05RD066 (left) 05RD099 (right)

Wild Rice River, South Branch (09020108-661): The reach of the South Branch of the Wild Rice River from the geographic coordinates (decimal degrees NAD83) -96.1406 west longitude, 47.0658 north latitude to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Fish assemblage data collected from two stations in 2005 demonstrated that this reach does not meet the fish aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Two of the three fish visits indicate habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to low flow conditions during all three visits. Using the habitat data collected during the fish visits predict that habitat would be limiting for two of the three visits. Although the habitat from a single fish visit indicated that habitat may not be limiting, the overall assessment of habitat and flow conditions for this stream reach are limiting the fish assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017d). No assessable data were available to assess the macroinvertebrate assemblage. Ammonia, dissolved oxygen, TSS, and pH were not assessable due to sample samples sizes, but all measurements met standards. Secchi tube data had one measurement exceeding the standard, but data were not sufficient for assessment. Limited total phosphorus data were available, but response variables were not sampled to determine if river eutrophication standards are met in this reach. Stressor identification determined that flow regime instability and poor habitat were likely stressors with high suspended sediment and dissolved oxygen as other possible stressors (MPCA 2018c).Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Wild Rice River Watershed (09020108) to acknowledge the Modified Use condition of this stream reach.

Wild Rice River, South Branch (09020108-661) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14RD081	2015	Fish	5	24	4	19.5	4.10	31
07RD028	2007	Fish	5	44	9.5	5.5	0.62	59
07RD028	2015	Fish	5	23	4	11	2.40	48
14RD081	2015	Macroinvertebrates	7	ND	3	19.5	5.13	31
07RD028	2007	Macroinvertebrates	7	ND	17	4	0.28	59
07RD028	2015	Macroinvertebrates	7	ND	3	14.5	3.88	43

Wild Rice River, South Branch (09020108-661) photos:

c. Clearwater River Watershed (09020305)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

County Ditch 14 (09020305-523): The reach of County Ditch 14 from its headwaters (Maple Lk 60-0305-00) to Lower Badger Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected from four stations in 2007, 2014, and 2015 demonstrated that this reach does not meet the macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use at two stations. Habitat was fair and habitat modeling specific to the fish assemblage predicted that habitat in this reach is not limiting to possibly limiting the fish assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage at two of three sites. 07RD005 had good habitat, but this reach appears to represent localized habitat conditions. Habitat data from two other sites, including a site within 0.1 mile of 07RD005, was limiting for macroinvertebrates. Therefore, the overall habitat conditions in this reach are limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017e). This reach met TSS, Secchi tube, pH, and ammonia standards. Four of 81 (3.7%) dissolved oxygen measurements exceeded WQS, but there were too few pre 9am samples to assess this reach as meeting the dissolved oxygen WQS. Total phosphorus measurements met standards, but response variables were not measured for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Clearwater River Watershed (09020305) to acknowledge the Modified Use condition of this stream reach.

County Ditch 14 (09020305-523) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15EM096	2015	Fish	5	43	9.5	7.5	0.81	47
14RD272	2014	Fish	5	56	6	13.5	2.07	54
07RD005	2007	Fish	5	49	10	10	1.00	73
14RD242	2014	Macroinvertebrates	7	38	3	13	3.50	43
14RD272	2014	Macroinvertebrates	7	20	8	17.5	2.06	40
07RD005	2007	Macroinvertebrates	5	27	6	5	0.86	73
07RD005	2007	Macroinvertebrates	5	34	6	5	0.86	73

County Ditch 14 (09020305-523) photos: 15EM096 (upper left), 14RD272 (upper right), 07RD005 (lower left), 14RD242 (lower right)

Judicial Ditch 73 (09020305-550): The reach of Judicial Ditch 73 from an unnamed ditch to Tamarack Lake is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from both fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the fish or macroinvertebrate aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that either the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting both the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017e). The macroinvertebrate IBI score was within 1 point of the Modified Use biocriterion. This reach met TSS, Secchi tube, chloride, pH, and ammonia standards. Dissolved oxygen was assessed as not meeting standards. River eutrophication data was determined to be insufficient for assessment, but total phosphorus was below the standard. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Clearwater River Watershed (09020305) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 73 (09020305-550) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14RD241	2014	Fish	7	37	1	14.5	7.75	27
14RD241	2014	Macroinvertebrates	7	21	1	20.5	10.75	29

Judicial Ditch 73 (09020305-550) photos: 14RD241

Unnamed creek (09020305-561): The reach of unnamed creek (Tributary to Poplar River Diversion Ditch) from Gerdin Lake to the Poplar River Diversion is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the fish aquatic life use goals for General Use warm and cool water aquatic life and habitat. Macroinvertebrates were not sampled due to lack of flow and choking vegetation at the time of the sampling visit. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage and based on the fish visit habitat data, the macroinvertebrate assemblages are likely also limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017e). Data were not sufficient to assess other parameters, but available data for total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Clearwater River Watershed (09020305) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (09020305-561) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14RD243	2014	Fish	6	0	5	13	2.33	29
14RD243	2014	Macroinvertebrates	7	ND	3	21	5.50	29

Unnamed creek (09020305-561) photos: 14RD243

4. Upper Mississippi River Basin

a. Mississippi River – Grand Rapids Watershed (07010103)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report (in progress), WRAPS Report (in progress)

Minnewawa Creek (07010103-518): The reach of Minnewawa Creek from an unnamed ditch to Lake Minnewawa Outlet Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Both the fish and macroinvertebrate assemblages scored below the Modified Use threshold and were assessed as not supporting aquatic life use goals (MPCA 2018d). This reach was assessed as meeting the ammonia WQS. Available TSS and pH samples met WQS, but data were not sufficient for assessment. Dissolved oxygen and Secchi tube each had one exceedance of WQS, but data were not sufficient for assessment. River eutrophication data were determined to be insufficient for assessment because only total phosphorus data were available. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Mississippi River – Grand Rapids Watershed (07010103) to acknowledge the Modified Use condition of this stream reach.

Minnewawa Creek (07010103-518) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15UM004	2016	Fish	6	17	6	18	2.71	34
15UM004	2015	Macroinvertebrates	4	35	0.5	11.5	8.33	40
15UM004	2016	Macroinvertebrates	4	18	1	9	5.00	44

Minnewawa Creek (07010103-518) photos: 15UM004

Prairie River, West Fork (07010103-571): The reach of the West Fork of the Prairie River from Hartley Lake to Prairie River is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. One fish visit from 2016 was below the Exceptional Use threshold, however this visit also scores BCG Level 3. The fish visit that scored below the Exceptional Use threshold was sampled in the middle of June during a year with a late spring. It was determined that the late spring limited fish colonization and impacted the fish scores. The reach was resampled in 2016 during a more normal year and the fish scored above the Exceptional Use threshold. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair habitat (MSHA = 51-59). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River – Grand Rapids Watershed (07010103) to acknowledge the Exceptional Use condition of this stream reach.

Prairie River, West Fork (07010103-571) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15UM050	2015	Fish	7	52	6.5	2.5	0.47	53
15UM050	2016	Fish	7	72	4	2	0.60	59
15UM050	2015	Macroinvertebrates	4	84	1.5	7	3.20	51

Prairie River, West Fork (07010103-571) photos: 15UM050

Unnamed Ditch (07010103-572): The reach of an unnamed ditch from an unnamed ditch to an unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 1999 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. One fish visit scored above the General Use threshold and included two sensitive species (northern redbelly dace and finescale dace). Habitat was poor, but good baseflows may be mitigating the effects of poor habitat on the fish assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Mississippi River – Grand Rapids Watershed (07010103) to acknowledge the Modified Use condition of this stream reach.

Unnamed Ditch (07010103-572) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
99UM051	1999	Fish	7	51	4	12	2.60	29
99UM051	1999	Fish	7	41	4	9	2.00	25
99UM051	1999	Macroinvertebrates	4	37	2	12.5	4.50	25
99UM051	1999	Macroinvertebrates	4	45	2	12.5	4.50	25

Unnamed Ditch (07010103-572) photos: 99UM051

Willow River Ditch (07010103-716): The reach of the Willow River Ditch from the Willow River Flowage to Moose River is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. One macroinvertebrates visit was 3 points below the Exceptional Use biocriterion, but the BCG score was Level 3 for this assemblage indicating the Exceptional Use is attainable. The channel in this reach is natural and habitat assessment demonstrated that this reach has poor to fair habitat (MSHA = 44-53). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River – Grand Rapids Watershed (07010103) to acknowledge the Exceptional Use condition of this stream reach.

Willow River Ditch (07010103-716) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15UM019	2015	Fish	5	69	9	10	1.10	53
15UM019	2015	Macroinvertebrates	4	84	1.5	5	2.40	44
15UM019	2015	Macroinvertebrates	4	73	1.5	5	2.40	44

Willow River Ditch (07010103-716) photos: 15UM019

Tamarack River (07010103-758): The reach of the Tamarack River from the Little Tamarack River to Prairie River is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2015 and 2016 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. One macroinvertebrates visit was 9 points below the Exceptional Use biocriterion, but the BCG score was Level 3 for this assemblage indicating the Exceptional Use is attainable. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair habitat (MSHA = 50-63). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River – Grand Rapids Watershed (07010103) to acknowledge the Exceptional Use condition of this stream reach.

Tamarack River (07010103-758) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15UM012	2015	Fish	5	80	8.5	6.5	0.79	50
15UM012	2016	Fish	5	76	5	13.5	2.42	55
15UM012	2015	Macroinvertebrates	4	67	2.5	2	0.86	55
15UM012	2016	Macroinvertebrates	4	80	3	2	0.75	63

Tamarack River (07010103-758) photos: 15UM012

Prairie River (07010103-759): The reach of the Prairie River from Day Brook to Balsam Creek is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has fair habitat (MSHA = 49-60). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River – Grand Rapids Watershed (07010103) to acknowledge the Exceptional Use condition of this stream reach.

Prairie River (07010103-759) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15UM053	2015	Fish	5	88	10.5	9.5	0.91	60
15UM053	2016	Macroinvertebrates	4	83	2.5	7	2.29	49

Prairie River (07010103-759) photos: 15UM053

b. Crow Wing River Watershed (07010106)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Martin Creek (Poplar Brook) (07010106-588): The reach of Martin Creek (Poplar Brook) from the east line of the PLS System section T136 R32W S22 to Farnham Creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR indicates that brown trout was stocked in this stream from 1954 until 1971. A DNR survey of this stream in 1975 yielded no trout, indicating that natural reproduction was not occurring. Fish community data collected by the MPCA in 2010 is not indicative of a cold water community. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Crow Wing River Watershed (07010106) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Crow Wing River Watershed (07010106): 07010106-663 and 07010106-664.

Martin Creek (Poplar Brook) (07010106-588) photos: 10UM079

Stoney Brook (07010106-699): The reach of Stoney Brook from the south line of the PLS System section T136 R31W S26 to the east line of T136 R29W S31 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. Fish and macroinvertebrate data collected by the MPCA in 2010 were not indicative of a cold water aquatic community. Water temperature data collected at 15 minute intervals during the summer of 2010 also indicate that conditions in this stream are not suitable to support a cold water assemblage (avg. July water temp = 21.2 °C). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Crow Wing River Watershed (07010106) to acknowledge the cool and warm water status of this stream reach. An unnamed tributary to Stoney Brook will retain its Class 2A designation. The MPCA will propose to make this change in Minn. R. 7050.0470, subp. 4, item A by adding a sub item to retain the Class 2A designation for this tributary. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Crow Wing River Watershed (07010106): 07010106-667, 07010106-668, 07010106-669, 07010106-670, 07010106-671, 07010106-672, and 07010106-708.

Stoney Brook (07010106-699) photos: 10UM098

Cory Brook (07010106-700): The reach of Cory Brook from the north line of the PLS System section T135 T30W S16 to Home Brook is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. A significant source of groundwater occurs upstream of this reach in T135 R30W S9; however, downstream of this source several large beaver impoundments decrease stream flow and increase the water temperature significantly. Currently the DNR manages a trout fishery in sections of the stream upstream of the beaver impoundments, but not downstream of this area. Fish community data collected by the MPCA in 2010 and macroinvertebrate data collected in 2009 from sections of Corey Brook below the impoundments are not indicative of a cold water assemblage. Water temperature data collected at 15 min intervals during the summer of 2010 also indicate that conditions in this stream are not favorable for supporting a cold water community (avg. July water temp = 21.9 °C). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Crow Wing River Watershed (07010106) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Crow Wing River Watershed (07010106): 07010106-599, 07010106-638, and 07010106-637.

Cory Brook (07010106-700) photos: 10UM096

c. Redeye River Watershed (07010107)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Willow Creek (07010107-525): The reach of Willow Creek from the south line of the PLS System section T133 R38W S11 to Leaf Lake is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The last trout stocking by the DNR occurred in 1973, which failed to establish a population of trout in this reach. The DNR surveyed the stream for fish in 1984 and there was no evidence of natural reproduction or carryover. Although one cold water (mottled sculpin) and one cool water species (burbot) were found in the stream, the fish community is dominated by warmwater species (12 species). In addition, water temperature data collected by the DNR in 1988 and by the MPCA in 2011 indicate water temperatures are unsuitable for trout survival. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Redeye River Watershed (07010107) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Redeye River Watershed (07010107): 07010107-537 and 07010107-538.

Willow Creek (07010107-525) photos: 11UM066

d. Long Prairie River Watershed (07010108)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Spruce Creek (07010108-512): The reach of Spruce Creek from the north line of the PLS System section T131 R36W S31 to an unnamed lake (21-0034-00) is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The last trout stocking by the DNR occurred in 1972, which failed to establish a population of trout in this reach. The DNR surveyed the stream for fish in 1978 and there was no evidence of natural reproduction or carryover. Two fish surveys by the MPCA in 2010 and 2011 indicate that the stream is not suitable to support cold water communities. In both 2010 and 2011, only one coldwater species was collected (mottled sculpin) and no coolwater species were present. The remaining fish species were warm water species. Water temperature measurements collected in 2010 and 2011 were not suitable for trout survival (21% of the time in the stress range for brook trout). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Long Prairie River Watershed (07010108) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Long Prairie River Watershed (07010108): 07010108-554, 07010108-555, 07010108-556, 07010108-557, 07010108-558, and 07010108-559.

Spruce Creek (07010108-512) photos: 09UM089

e. Mississippi River - St. Cloud Watershed (07010203)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Briggs Creek (07010203-538): The reach of Briggs Creek from the north line of the PLS System section T35 R29W S2 to Briggs Lk is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The cold water (Class 2A) sections of Briggs Creeks and its tributaries will be proposed to be designated as Class 2B waters. The DNR began managing this creek as a put-and-take brown trout fishery around 1949, but that effort ceased in 1980. Multiple fish surveys throughout that time period showed no evidence that natural reproduction of trout occurred although some carry-over of stocked trout was observed. In addition, all other fish species collected during this period are considered warm water species. Fish community data collected by the MPCA in 2000 and 2009 revealed that this stream remains dominated by warm water fish species. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - St. Cloud Watershed (07010203) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a tributary was designated Class 2Ag as trout protection waters due to it is PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reach will be changed to Class 2Bdg in the beneficial use table for the Mississippi River - St. Cloud Watershed (07010203): 07010203-617.

Briggs Creek (07010203-538) photos: 00UM043

Unnamed creek (Robinson Hill Creek) (07010203-724): The reach of unnamed creek (Robinson Hill Creek) from County Ditch 14 to CSAH 136 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. Downstream of County Road 136 to the confluence with Johnson Creek (Meyer Creek), Robinson Hill Creek will remain Class 2A. Fish community data collected by the MPCA in 2009 revealed that the upstream section of this stream did not have a community indicative of a cold water habitat. Surveys by the DNR captured small numbers of brown trout in the lower portion of this stream (downstream of CR 136). These trout were assumed to be migrants from nearby Luxemburg Creek as no reproduction appears to be occurring in this stream. The DNR does not disagree with a reclassification of the upper portion of this stream (upstream of CR 136) to Class 2B while maintaining the Class 2A use designation below CR 136. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - St. Cloud Watershed (07010203) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Mississippi River - St. Cloud Watershed (07010203): 07010203-643, 07010203-644, 07010203-645, and 07010203-647.

Unnamed creek (Robinson Hill Creek) (07010203-724) photos: 09UM042

5. Minnesota River Basin

a. Minnesota River – Headwaters Watershed (07020001)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report (in progress), WRAPS Report (in progress)

Unnamed creek (07020001-560): The reach of an unnamed creek from an unnamed creek to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2018e). Ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Total phosphorus and dissolved oxygen each had one sample that exceeded standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Headwaters Watershed (07020001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07020001-560) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15MN013	2015	Fish	3	0	5	9.5	1.75	35
15MN013	2015	Macroinvertebrates	7	23	1	18	9.50	39

Unnamed creek (07020001-560) photos: 15MN013

County Ditch 2 (07020001-562): The reach of County Ditch 2 from an unnamed creek to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Although macroinvertebrates were not sampled due to low flows at the time of sampling, the habitat data collected during the fish visit indicates that the macroinvertebrate assemblage is also likely limited. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as supporting the Modified Use aquatic life use goals (MPCA 2018e). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met WQS. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Headwaters Watershed (07020001) to acknowledge the Modified Use condition of this stream reach.

County Ditch 2 (07020001-562) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15MN018	2015	Fish	7	21	4	13	2.80	16
15MN018	2015	Macroinvertebrates	7	ND	1.5	20.5	8.60	16

County Ditch 2 (07020001-562) photos: 15MN018

Unnamed creek (07020001-569): The reach of an unnamed creek from its headwaters to CSAH 38 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2010 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2018e). Ammonia, TSS, and pH data were not sufficient for assessment, but all measurements met standards. Total phosphorus, dissolved oxygen, and Secchi tube each had one sample that exceeded standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Headwaters Watershed (07020001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07020001-569) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
10EM067	2010	Fish	3	49	4.5	9.5	1.91	34
10EM067	2015	Fish	3	38	3	8.5	2.38	35
15MN025	2015	Fish	2	0	2.5	15	4.57	17
10EM067	2010	Macroinvertebrates	7	29	4	15.5	3.30	34
10EM067	2010	Macroinvertebrates	7	35	4	15.5	3.30	34
10EM067	2015	Macroinvertebrates	7	23	4	10.5	2.30	33

Unnamed creek (07020001-569) photos: 10EM067 (left), 15MN025 (right)

Fish Creek (07020001-571): The reach of Fish Creek from its headwaters to CSAH 33 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2018e). Ammonia, chloride, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Total phosphorus, diel dissolved oxygen flux, and dissolved oxygen had some samples that exceeded standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Headwaters Watershed (07020001) to acknowledge the Modified Use condition of this stream reach.

Fish Creek (07020001-571) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15MN005	2015	Fish	2	0	5	16.5	2.92	22
15MN003	2015	Fish	2	0	10.5	10	0.96	41
15MN003	2015	Macroinvertebrates	7	21	3.5	12	2.89	31

Fish Creek (07020001-571) photos: 15MN005 (left), 15MN003 (right)

b. Lac Qui Parle River Watershed (07020003)

Watershed information: MPCA webpage, M&A Report Stressor ID Report (in progress), WRAPS Report (in progress)

County Ditch 34 (07020003-526): The reach of County Ditch 34 from an unnamed ditch to Tenmile Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold and included a sensitive species (hornyhead chub). Habitat was poor, but good baseflows and decent cover may be mitigating the effects of habitat on the fish assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting aquatic life use goals (MPCA 2018f). Assessment of Secchi tube measurements indicated that standards were met. Water chemistry data (river eutrophication, dissolved oxygen, TSS, and pH) were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

County Ditch 34 (07020003-526) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15MN077	2015	Fish	3	57	3	6.5	1.88	33
15MN077	2015	Macroinvertebrates	7	4	0	21.5	22.50	21

County Ditch 34 (07020003-526) photos:

Judicial Ditch 1 (Tributary to Lazarus Creek) (07020003-560): The reach of Judicial Ditch 1 (Tributary to Lazarus Creek) from an unnamed ditch to County Ditch 42 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Both fish and macroinvertebrate assemblages were assessed as supporting aquatic life use goals (MPCA 2018f). Water chemistry data were not sufficient for assessment, but all river eutrophication, ammonia, dissolved oxygen, TSS, Secchi tube, and pH measurements met WQS. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 1 (07020003-560) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15MN053	2015	Fish	7	27	1.5	10.5	4.60	25
15MN053	2015	Macroinvertebrates	7	37	1.5	15	6.40	25

Judicial Ditch 1 (07020003-560) photos: 15MN053

Unnamed ditch (Tributary to Tenmile Creek) (07020003-570): The reach of an unnamed ditch (Tributary to Tenmile Creek) from an unnamed ditch to Tenmile Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting aquatic life use goals (MPCA 2018f). Water chemistry data (river eutrophication, dissolved oxygen, TSS, Secchi tube, and pH) were not sufficient for assessment, but all measurements, with the exception of one dissolved oxygen measurement, met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

Unnamed ditch (07020003-570) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15MN050	2015	Fish	3	40	4.5	7.5	1.55	33
15MN050	2015	Macroinvertebrates	7	8	0	20.5	21.50	20
15MN050	2015	Macroinvertebrates	7	4	0	20.5	21.50	20

Unnamed ditch (07020003-570) photos: 15MN050

Unnamed ditch (Tributary to Tenmile Creek) (07020003-571): The reach of an unnamed ditch (Tributary to Tenmile Creek) from an unnamed ditch to Tenmile Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting aquatic life use goals (MPCA 2018f). Water chemistry data (river eutrophication, dissolved oxygen, TSS, Secchi tube, and pH) were not sufficient for assessment, but all measured parameters, with the exception of one dissolved oxygen measurement, met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

Unnamed ditch (Tributary to Tenmile Creek) (07020003-571) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15MN058	2015	Fish	7	24	2.5	12	3.71	34
15MN058	2015	Macroinvertebrates	7	5	0	20.5	21.50	27

Unnamed ditch (Tributary to Tenmile Creek) (07020003-571) photos: 15MN058

Unnamed ditch (07020003-575): The reach of an unnamed ditch from its headwaters to an unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting aquatic life use goals (MPCA 2018f). Water chemistry data (river eutrophication, dissolved oxygen, TSS, Secchi tube, and pH) were not sufficient for assessment, but measurements, with the exception of one total phosphorus and one dissolved oxygen measurement, met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

Unnamed ditch (07020003-575) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15MN093	2015	Fish	3	16	3.5	9.5	2.33	19
15MN093	2015	Macroinvertebrates	7	10	0	20	21.00	24

Unnamed ditch (07020003-575) photos: 15MN093

Tenmile Creek (07020003-577): The reach of Tenmile Creek from its headwaters to CSAH 18 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from five stations in 2001 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting aquatic life use goals for the Modified Use (MPCA 2018f). Dissolved oxygen, TSS, and Secchi tube standards were met for this reach. In addition, river eutrophication, ammonia, and pH were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

Tenmile Creek (07020003-577) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15MN054	2015	Fish	7	22	2.5	13	4.00	31
01MN037	2001	Fish	2	31	3.5	14.5	3.44	32
15MN056	2015	Fish	2	13	5	18	3.17	28
01MN061	2001	Fish	2	45	6.5	13.5	1.93	40
01MN061	2001	Fish	2	49	8.5	11	1.26	50
15MN075	2015	Fish	2	28	1.5	13.5	5.80	34
15MN054	2015	Macroinvertebrates	7	17	2	22.5	7.83	20
01MN037	2015	Macroinvertebrates	7	26	5	13	2.33	32
15MN056	2001	Macroinvertebrates	7	15	7	10	1.38	43
15MN056	2015	Macroinvertebrates	7	10	7	10	1.38	43
01MN061	2015	Macroinvertebrates	7	18	7	11.5	1.56	50
01MN061	2001	Macroinvertebrates	7	18	7	11.5	1.56	50
15MN075	2015	Macroinvertebrates	5	20	3.5	9	2.22	50

Tenmile Creek (07020003-577) photos: 15MN054 (upper left), 01MN037 (upper right), 15MN056 (middle left), 01MN061 (middle right), 15MN075 (lower left)





Cobb Creek (07020003-583): The reach of Cobb Creek from an unnamed creek to the geographic coordinates (decimal degrees NAD83) -96.3457 west longitude, 44.8724 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold and included two sensitive species (pearl dace and Iowa darter). Habitat was poor, but good baseflows and decent substrate may be mitigating the effects of habitat on the fish assemblage. In addition, many of the stream channels in the Cobb Creek watershed are natural which may serve as a source of fish individuals and taxa. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting aquatic life use goals for the Modified Use (MPCA 2018f). Water chemistry data were not sufficient for assessment, but all river eutrophication, dissolved oxygen, TSS, and Secchi tube measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

Cobb Creek (07020003-583) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15MN059	2015	Fish	3	63	4.5	6.5	1.36	35
15MN059	2015	Macroinvertebrates	7	16	1	18	9.50	33

Cobb Creek (07020003-583) photos: 15MN059

Canby Creek (07020003-586): The reach of Canby Creek from CSAH 3 to Lazarus Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting aquatic life use goals for the Modified Use (MPCA 2018f). Water chemistry data were not sufficient for assessment, but all river eutrophication, ammonia, dissolved oxygen, TSS, Secchi tube, and pH measurements met WQS. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Lac Qui Parle River Watershed (07020003) to acknowledge the Modified Use condition of this stream reach.

Canby Creek (07020003-586) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15MN044	2015	Fish	2	32	5	14	2.50	27
15MN044	2015	Fish	2	14	8	14.5	1.72	33
15MN044	2015	Macroinvertebrates	7	38	3	15	4.00	34

Canby Creek (07020003-586) photos: 15MN044

c. Chippewa River Watershed (07020005)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Cottonwood Creek (07020005-728): The reach of the Cottonwood Creek from the west line of the PLS System section T120 R41W S21 to an unnamed creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR has indicated that this reach along with 07020005-729 does not support a cold water fishery. Attempts to stock brown trout in this stream by DNR in the 1970s resulted in no evidence of carry over through the winter. Fish community sampling by the MPCA in 1990, 2001, and 2009 failed to detect any cold water species. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Chippewa River Watershed (07020005) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Chippewa River Watershed (07020005): 07020005-547, 07020005-644, 07020005-645, and 07020005-646.

Cottonwood Creek (07020005-528) photos: 90MN011

Cottonwood Creek (07020005-729): The reach of Cottonwood Creek from an unnamed creek to the Chippewa River is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. See 07020005-729 (Cottonwood Creek) for a complete description of the use designation proposal. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Chippewa River Watershed (07020005) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a number of tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a

result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Chippewa River Watershed (07020005): 07020005-647 and 07020005-648.

Cottonwood Creek (07020005-729) photos: 09MN008

d. Minnesota River - Mankato Watershed (07020007)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

Unnamed creek (07020007-578): The reach of an unnamed creek[14] in the PLS System section T109 R28W S31 is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR inadvertently left the reach of this river in the PLS System section T109 R28W S31 off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Minnesota River - Mankato Watershed (07020007) incorporated by reference in Minn. R. 7050.0470. There is no assessable MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.23 mi), and it is between two existing Class 2Ag reaches (07020007-577 and 07020007-579), it is reasonable to assign this reach to General Use cold waters (Class 2Ag). The MPCA proposes to assign this reach as General Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Minnesota River - Mankato Watershed (07020007). Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

e. Minnesota River – Lower Watershed (07020012)

Watershed information: MPCA Webpage, M&A Report, Stressor ID Report , WRAPS Report (in progress)

County Ditch 42 (07020012-551): The reach of County Ditch 42 from its headwaters to the south line of the PLS System section T113 R29W S31 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2001, 2002, and 2014 demonstrated that this reach does not meet the aquatic life use goals

[14] This creek is also called “Horseshoe Creek” by the DNR.

for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017f). Water chemistry data (river eutrophication, ammonia, dissolved oxygen, TSS, Secchi tube, and pH) were not sufficient for assessment, but measurements, with the exception of one total phosphorus and one TSS measurement, met standards. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, habitat, and flow alteration/connectivity were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 42 (07020012-551) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN220	2014	Fish	3	36	8	2	0.33	42
14MN220	2014	Fish	3	ND	9	2.5	0.35	50
01MN028	2001	Fish	3	37	10.5	3	0.35	45
14MN220	2014	Macroinvertebrates	5	10	3	8	2.25	53
01MN028	2002	Macroinvertebrates	5	31	4.5	7	1.45	45

County Ditch 42 (07020012-551) photos 14MN220 (left) 01MN028 (right)

Rush River, North Branch (Judicial Ditch 18) (07020012-555): The reach of the North Branch of the Rush River (Judicial Ditch 18) from its headwaters to Titlow Lake is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Secchi tube and pH standards were met for this reach. In addition, ammonia data were not sufficient for assessment, but measurements met standards. Some measurements of TSS and dissolved oxygen exceeded standards, but these data were not sufficient for assessment. Phosphorus was elevated, but no response variables were measured so it cannot be determined if river eutrophication standards are exceeded. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Rush River, North Branch (Judicial Ditch 18) (07020012-555) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN084	2014	Fish	3	20	11	2.5	0.29	47
14MN055	2014	Fish	2	8	4	14	3.00	34
14MN055	2014	Macroinvertebrates	7	14	3	12.5	3.38	31

Rush River, North Branch (Judicial Ditch 18) (07020012-555) photos: 14MN084 (left), 14MN055 (right)

Rush River, North Branch (County Ditch 55) (07020012-556): The reach of the North Branch of the Rush River (County Ditch 55) from Titlow Lake to south line of the PLS System section T113 R28W S35 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). The ammonia standard was met for this reach. In addition, Secchi tube data was not sufficient for assessment, but measurements met standards. Some measurements of TSS, pH, and dissolved oxygen exceeded standards, but these data were not sufficient for assessment. Phosphorus was elevated, but no response variables were measured so it cannot be determined if river eutrophication standards are exceeded. Stressor identification determined that eutrophication, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Rush River, North Branch (County Ditch 55) (07020012-556) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN052	2014	Fish	2	7	7	12.5	1.69	36
14MN052	2014	Fish	2	21	2	14	5.00	34
14MN052	2014	Macroinvertebrates	7	19	6	14.5	2.21	29

Rush River, North Branch (County Ditch 55) (07020012-556) photos: 14MN052

Judicial Ditch 1 (Judicial Ditch 6) (07020012-573): The reach of the North Branch of the Rush River (County Ditch 55) from an unnamed ditch to unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2001 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Only macroinvertebrate data were available from this reach, but the data was expired and was not used to assess aquatic life use goals. Secchi tube and pH data were not sufficient for assessment, but measurements met standards. One dissolved oxygen measurement exceeded standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 1 (Judicial Ditch 6) (07020012-573) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
01MN060	2001	Fish	2	ND	5.5	15.5	2.54	44
01MN060	2001	Macroinvertebrates	7	18	5	15.5	2.75	44

Judicial Ditch 1 (Judicial Ditch 6) (07020012-573) photos: 01MN060

Judicial Ditch 6 (07020012-574): The reach of the Judicial Ditch 6 from an unnamed ditch to the South Branch of the Rush River is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled from this reach because of a lack of macroinvertebrate habitat indicating that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 6 (07020012-574) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN056	2014	Fish	2	47	6.5	15.5	2.20	35
14MN056	2014	Macroinvertebrates	7	ND	5	15.5	2.75	35

Judicial Ditch 6 (07020012-574) photos: 14MN056

Rush River, Middle Branch (County Ditch 23 and 24) (07020012-586): The reach of the Middle Branch of the Rush River (County Ditch 23 and 24) from an unnamed ditch to the east line of the PLS System section T112 R30W S13 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). The Secchi tube standard was met for this reach. In addition, total phosphorus, ammonia, dissolved oxygen, TSS and pH data were not sufficient for assessment, but measurements met standards. Stressor identification determined that nitrates, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Rush River, Middle Branch (County Ditch 23 and 24) (07020012-586) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN085	2014	Fish	2	23	5.5	10.5	1.77	40
14MN085	2014	Macroinvertebrates	5	15	2	9	3.33	35

Rush River, Middle Branch (County Ditch 23 and 24) (07020012-586) photos: 14MN085

High Island Ditch 2 (07020012-588): The reach of the High Island Ditch 2 from an unnamed creek to High Island Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to low flow conditions during the sampling visit, however analysis of the habitat predicts that the macroinvertebrate community is limited by poor habitat conditions. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Only fish data were available from this reach and were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, TSS, and Secchi tube data were not sufficient for assessment, but measurements met standards. Total phosphorus, dissolved oxygen, and pH each had one exceedance of their respective standards, but data were not sufficient for assessment. This reach has an existing TSS impairment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

High Island Ditch 2 (07020012-588) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN045	2014	Fish	3	34	5.5	6	1.08	29
14MN045	2014	Macroinvertebrates	7	ND	6	14.5	2.21	29

High Island Ditch 2 (07020012-588) photos: 14MN045

Judicial Ditch 11 (07020012-590): The reach of Judicial Ditch 11 from County Ditch 103 to County Ditch 10 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014, 2015, and 2016 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to low flow conditions during the sampling visit; however, habitat analysis predicts that the macroinvertebrate community is limited. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Only fish data were available from this reach and were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia and Secchi tube data were not sufficient for assessment, but measurements met standards. Total phosphorus, dissolved oxygen, TSS, and pH each had one or more measurements that exceeded standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 11 (07020012-590) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN072	2014	Fish	7	0	2	14	5.00	22
14MN072	2015	Fish	7	8	1.5	15	6.40	19
14MN072	2016	Fish	7	17	2.5	14	4.29	26
14MN072	2014	Macroinvertebrates	7	ND	2	9	3.33	35

Judicial Ditch 11 (07020012-590) photos: 14MN072

Judicial Ditch 24 (07020012-591): The reach of Judicial Ditch 24 from its headwaters to Judicial 11 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to a lack of macroinvertebrate habitat in the sampling reach. Habitat analysis using the habitat data collected during the fish visit also predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. Only fish data were available from this reach and were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and dissolved oxygen each had one measurement exceeding WQS, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 24 (07020012-591) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN069	2014	Fish	7	18	1.5	14.5	6.20	25
14MN069	2014	Macroinvertebrates	7	ND	1	21.5	11.25	25

Judicial Ditch 24 (07020012-591) photos: 14MN069

Judicial Ditch 11 (07020012-593): The reach of Judicial Ditch 11 from County 10 to Judicial 24 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus had one measurement that exceeded the river eutrophication standard, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 11 (07020012-593) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN071	2014	Fish	2	0	5.5	12	2.00	35
14MN071	2014	Macroinvertebrates	7	6	4	8.5	1.90	44

Judicial Ditch 11 (07020012-593) photos: 14MN071

Unnamed creek (County Ditch 13) (07020012-604): The reach of an unnamed creek (County Ditch 13) from an unnamed ditch to Spring Lake (70-0054-00) is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. The macroinvertebrate assemblage scored 1 point above the General Use threshold and included good Ephemeroptera, Trichoptera, and Odonata richness. Unlike most ditches this reach had a wooded riparian which contributed woody debris to that channel. This woody debris could be providing habitat for some of the Ephemeroptera, Trichoptera, and Odonata and may be mitigating the effects of other poor habitat attributes on the macroinvertebrate assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus had one measurement that exceeded the river eutrophication standard, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (County Ditch 13) (07020012-604) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN099	2014	Fish	3	25	6.5	4.5	0.73	31
14MN099	2014	Macroinvertebrates	6	44	5.5	7	1.23	37

Unnamed creek (County Ditch 13) (07020012-604) photos: 14MN099

Unnamed ditch (County Ditch 55) (07020012-610): The reach of Judicial Ditch 24 from its headwaters (Altnow Lake 72-0039-00) to the North Branch of the Rush River is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to low flow conditions during the sampling visit; however, habitat analysis predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Secchi tube was assessed as meeting standards. Ammonia, TSS, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus had one measurement and dissolved oxygen had two measurements that exceeded standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed ditch (County Ditch 55) (07020012-610) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN050	2014	Fish	7	22	2.5	10.5	3.29	30
14MN050	2014	Macroinvertebrates	7	ND	3	16.5	4.38	30

Unnamed ditch (County Ditch 55) (07020012-610) photos: 14MN050

Unnamed creek (07020012-621): The reach of an unnamed creek from Reitz Lake to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, chlorophyll-a, and TSS had exceedances of the standards, but data were not sufficient for assessment. Elevated eutrophication parameters likely reflect an impact of Reitz Lake upstream, which is impaired for lake eutrophication standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07020012-621) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN041	2014	Fish	3	45	9	5	0.60	43
14MN041	2014	Macroinvertebrates	6	32	4.5	9	1.82	32

Unnamed creek (07020012-621) photos: 14MN041

Unnamed creek (07020012-622): The reach of an unnamed creek from an unnamed creek to Carver Creek (County Ditches 2 & 3) is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold. The sample did not include any sensitive species, but several lentic fish species were present. Despite the poor habitat, these species may be migrating into the stream from nearby lakes and elevating IBI scores. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07020012-621) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN040	2014	Fish	2	67	8	16.5	1.94	33
14MN040	2014	Macroinvertebrates	6	38	2.5	12	3.71	30

Unnamed creek (07020012-621) photos: 14MN040

County Ditch 10 (07020012-628): The reach of County Ditch 10 from County Ditch 3 to Raven Stream is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold. Habitat was fair and the habitat model indicated that habitat was only possibly limiting the fish community indicating that habitat may be sufficient to support a General Use fish assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). TSS, Secchi tube, chloride, ammonia, and pH were assessed as meeting standards. River eutrophication and dissolved oxygen data were not sufficient to assess standards. Stressor identification determined that nitrates and habitat were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 10 (07020012-628) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN134	2014	Fish	3	55	9.5	1.5	0.24	56
14MN134	2014	Macroinvertebrates	6	24	6.5	5	0.80	37

County Ditch 10 (07020012-628) photos: 14MN134

County Ditch 13 (07020012-636): The reach of County Ditch 13 from an unnamed ditch to Judicial Ditch 1 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, Secchi tube, and TSS had measurements above of the standards, but data were not sufficient for assessment. Stressor identification determined that eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 13 (07020012-636) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN088	2014	Fish	7	18	2	12	4.33	22
14MN088	2014	Macroinvertebrates	7	13	1	20.5	10.75	28

County Ditch 13 (07020012-636) photos: 14MN088

High Island Creek (07020012-653): The reach of High Island Creek from Judicial Ditch 15 to Bakers Lake is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2007, 2014, 2015, and 2016 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, and TSS data were not sufficient for assessment, but measurements met standards. Dissolved oxygen, Secchi tube, and pH had measurements above the standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

High Island Creek (07020012-653) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07MN083	2007	Fish	2	18	11	11	1.00	59
07MN083	2015	Fish	2	0	1	20.5	10.75	14
07MN083	2016	Fish	2	13	5	18	3.17	25
14MN067	2014	Fish	2	33	4	15.5	3.30	43
14MN067	2015	Fish	2	9	5	17	3.00	27
14MN067	2016	Fish	2	18	3	16.5	4.38	23
14MN067	2014	Macroinvertebrates	7	11	11	11.5	1.04	43

High Island Creek (07020012-653) photos: 14MN084 (left), 14MN055 (right)

County Ditch 11 (07020012-674): The reach of County Ditch 11 from an unnamed ditch to County Ditch 22 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is possibly limiting the fish assemblage. Macroinvertebrates were not sampled; however, habitat analysis predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 11 (07020012-674) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN075	2014	Fish	3	35	8	2.5	0.39	52
14MN075	2014	Fish	3	35	11	2.5	0.29	51
14MN075	2014	Macroinvertebrates	7	ND	7	9.5	1.31	52
14MN075	2014	Macroinvertebrates	7	ND	9	8.5	0.95	51

County Ditch 11 (07020012-674) photos: 14MN075

County Ditch 22 (07020012-675): The reach of County Ditch 22 from County Ditch 49 to County Ditch 11 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and dissolved oxygen each had measurements above standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 22 (07020012-675) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN087	2014	Fish	3	36	9.5	2	0.29	49
14MN087	2014	Macroinvertebrates	7	12	8.5	9	1.05	57
14MN087	2014	Macroinvertebrates	7	40	8.5	9	1.05	57

County Ditch 22 (07020012-675) photos: 14MN087

County Ditch 49 (07020012-677): The reach of County Ditch 49 from County Ditch 49 to County Ditch 11 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, habitat, flow alteration/connectivity, and chloride were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 49 (07020012-677) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN074	2014	Fish	7	0	1.5	11.5	5.00	31
14MN074	2014	Macroinvertebrates	7	16	3	15	4.00	39

County Ditch 49 (07020012-677) photos: 14MN074

Judicial Ditch 15 (07020012-682): The reach of Judicial Ditch 15 from County Ditch 31 to High Island Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and TSS each had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 15 (07020012-682) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN070	2014	Fish	7	0	2	11	4.00	28
14MN070	2014	Macroinvertebrates	7	10	1	19.5	10.25	27

Judicial Ditch 15 (07020012-682) photos: 14MN070

County Ditch 39 (07020012-683): The reach of Judicial Ditch 39 from an unnamed ditch to High Island Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Stressor identification determined that nitrates, habitat, and flow alteration/connectivity were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 39 (07020012-683) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN068	2014	Fish	3	33	8	2	0.33	43
14MN068	2014	Macroinvertebrates	7	17	4	13	2.80	50

County Ditch 39 (07020012-683) photos: 14MN068

Unnamed creek (07020012-684): The reach of an unnamed creek from an unnamed creek to Sand Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Macroinvertebrates were at the threshold, but were BCG Level 4. Chloride, TSS, Secchi tube, and pH met standards. Total phosphorus was elevated, but chlorophyll-a and BOD_5 met standards. Ammonia data were not sufficient for assessment, but measurements met standards. Dissolved oxygen was not assessed due to the possible influence of upstream wetlands. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07020012-684) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN128	2014	Fish	3	54	6	2.5	0.50	40
14MN128	2014	Macroinvertebrates	6	29	5.5	11	1.85	29

Unnamed creek (07020012-684) photos: 14MN128

County Ditch 8/53 (07020012-766): The reach of County Ditch 8/53 from an unnamed ditch to County Ditch 34 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, dissolved oxygen, TSS, and Secchi tube had some measurements above standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 8/53 (07020012-766) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN097	2014	Fish	3	44	6	5.5	0.93	38
14MN097	2014	Macroinvertebrates	6	31	2	10	3.67	20

County Ditch 8/53 (07020012-766) photos: 14MN097

Judicial Ditch 4 (07020012-767): The reach of Judicial Ditch 4 from an unnamed ditch to Forest Prairie Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Macroinvertebrates were not assessed because data were not available at the time of assessment. Ammonia, dissolved oxygen, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, TSS, and Secchi tube had some measurements above standards, but data were not sufficient for assessment. Stressor identification determined that nitrates, suspended sediment, and habitat were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Us e condition of this stream reach.

Judicial Ditch 4 (07020012-767) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN035	2014	Fish	3	0	4	11.5	2.50	22
14MN035	2015	Macroinvertebrates	6	28	7	3	0.50	61

Judicial Ditch 4 (07020012-767) photos: 14MN035

County Ditch 42 (07020012-772): The reach of County Ditch 42 from School Lake to Clear Lake outlet is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrates assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, TSS, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, dissolved oxygen, and Secchi tube had some measurements above standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 42 (07020012-772) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN030	2014	Fish	3	0	4.5	6.5	1.36	28
14MN030	2014	Macroinvertebrates	6	30	2	10	3.67	30
14MN030	2015	Macroinvertebrates	6	22	2	10	3.67	30

County Ditch 42 (07020012-772) photos: 14MN030

County Ditch 32A (07020012-783): The reach of County Ditch 32A from County Ditch 32 to an unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrates assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Stressor identification determined that eutrophication, nitrates, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 32A (07020012-783) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN053	2014	Fish	7	7	1	14.5	7.75	20
14MN053	2014	Macroinvertebrates	7	15	3	18.5	4.88	32

County Ditch 32A (07020012-783) photos: 14MN053

County Ditch 9 (07020012-784): The reach of County Ditch 9 from an unnamed ditch to Judicial Ditch 1A is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to a lack of macroinvertebrate habitat in the sampling reach. Habitat analysis using the habitat data collected during the fish visit also predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Stressor identification determined that eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 9 (07020012-784) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN058	2014	Fish	3	31	3	6.5	1.88	34
14MN058	2014	Macroinvertebrates	7	ND	1	11.5	6.25	34

County Ditch 9 (07020012-784) photos: 14MN058

Judicial Ditch 1 (07020012-785): The reach of Judicial Ditch 1 from County Ditch 4A to County Ditch 13 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and TSS each had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 1 (07020012-785) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN089	2014	Fish	7	16	2	7.5	2.83	31
14MN089	2014	Macroinvertebrates	7	18	1	21.5	11.25	28

Judicial Ditch 1 (07020012-785) photos: 14MN089

County Ditch 44 (07020012-786): The reach of County Ditch 44 from its headwaters to the Middle Branch of the Rush River is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, Secchi tube, and TSS each had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 44 (07020012-786) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN076	2014	Fish	3	9	4	11.5	2.50	28
14MN076	2014	Macroinvertebrates	7	10	1	21	11.00	31

County Ditch 44 (07020012-786) photos: 14MN076

Unnamed ditch (07020012-788): The reach of an unnamed ditch from an unnamed ditch to an unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Fish were also assessed at this time as not supporting the Modified Use aquatic life use goals, but this assessment incorrectly compared the fish scores to the General Use threshold. This impairment was corrected in the 2018 Impaired Waters List. Ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that nitrates, habitat, and flow alteration/connectivity were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed ditch (07020012-788) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN102	2014	Fish	3	50	4.5	8	1.64	37
14MN102	2014	Macroinvertebrates	7	22	1	16.5	8.75	28

Unnamed ditch (07020012-788) photos: 14MN102

County Ditch 56 (07020012-790): The reach of County Ditch 56 from its headwaters to an unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and TSS each had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 56 (07020012-790) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN083	2014	Fish	3	51	10	3.5	0.41	44
14MN083	2014	Macroinvertebrates	7	11	5	10.5	1.92	35

County Ditch 56 (07020012-790) photos: 14MN083

County Ditch 18 (07020012-791): The reach of County Ditch 18 from its headwaters to County Ditch 40 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to low flow conditions during the sampling visit; however, habitat analysis predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 18 (07020012-791) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN060	2014	Fish	3	14	8	5.5	0.72	31
14MN060	2014	Macroinvertebrates	7	ND	8	12.5	1.50	31

County Ditch 18 (07020012-791) photos: 14MN060

County Ditch 47A (07020012-792): The reach of County Ditch 47A from an unnamed ditch to County Ditch 75 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Dissolved oxygen had some measurements below standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 47A (07020012-792) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN081	2014	Fish	3	15	4.5	8.5	1.73	24
14MN081	2014	Macroinvertebrates	7	23	3	16.5	4.38	17

County Ditch 47A (07020012-792) photos: 14MN081

County Ditch 75 (07020012-793): The reach of County Ditch 75 from an unnamed ditch to County Ditch 47A is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and TSS each had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 75 (07020012-793) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN080	2014	Fish	3	17	4.5	4	0.91	32
14MN080	2014	Macroinvertebrates	7	32	0	18.5	19.50	25

County Ditch 75 (07020012-793) photos: 14MN080

Judicial Ditch 12 (07020012-794): The reach of Judicial Ditch 12 from its headwaters to High Island Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to low flow conditions during the sampling visit; however, habitat analysis predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, Secchi tube, and TSS each had one measurement above standards, but data were not sufficient for assessment. Stressor identification determined that eutrophication, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 12 (07020012-794) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN048	2014	Fish	3	27	7	3	0.50	40
14MN048	2014	Macroinvertebrates	7	ND	9	11.5	1.25	40

Judicial Ditch 12 (07020012-794) photos: 14MN048

County Ditch 30A (07020012-801): The reach of County Ditch 30A from an unnamed ditch to Judicial Ditch 1A is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Total phosphorus, ammonia, TSS, and pH data were not sufficient for assessment, but measurements met standards. Dissolved oxygen and Secchi tube each had one measurement that exceeded standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

County Ditch 30A (07020012-801) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN054	2014	Fish	7	9	1.5	14.5	6.20	26
14MN054	2014	Macroinvertebrates	7	12	0	17	18.00	25

County Ditch 30A (07020012-801) photos: 14MN054

Ninemile Creek (07020012-808): The reach of Ninemile Creek from Metro Boulevard to the end of an unnamed wetland is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2003, 2004, 2005, and 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. Habitat data indicate that the fish assemblage is only possibly limited by habitat, which may explain why one fish visit was above the General Use threshold. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Secchi tube was assessed as meeting standards. Total phosphorus, ammonia, chloride, dissolved oxygen, TSS, and pH data were not sufficient for assessment, but measurements met standards. Stressor identification determined that dissolved oxygen, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Ninemile Creek (07020012-808) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
03MN058	2003	Fish	3	31	8.5	2.5	0.37	51
03MN058	2014	Fish	3	28	8	2.5	0.39	47
03MN095	2003	Fish	3	22	-	-	-	-
03MN095	2004	Fish	3	56	-	-	-	-
03MN095	2005	Fish	3	43	-	-	-	-
03MN058	2003	Macroinvertebrates	5	27	4	6.5	1.50	51
03MN058	2014	Macroinvertebrates	5	20	1	8.5	4.75	30

Ninemile Creek (07020012-808) photos: 03MN058

Raven Stream, East Branch (07020012-819): The reach of the East Branch of the Raven Stream from the geographic coordinates (decimal degrees NAD83) -93.6106 west longitude, 44.5532 north latitude to 255th Street West is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. The fish assemblage scored above the General Use threshold. Habitat was fair and the habitat model indicated that habitat was only possibly limiting the fish community indicating that habitat may be sufficient to support a General Use fish assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Chloride was assessed as not meeting standards. Ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Dissolved oxygen had one measurement below the standard, but data were not sufficient for assessment. Average total phosphorus was above the standard, but chlorophyll-a met the standard. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Raven Stream, East Branch (07020012-819) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN131	2014	Fish	3	56	11	0.5	0.13	55
14MN131	2014	Macroinvertebrates	5	32	1	12	6.50	37

Raven Stream, East Branch (07020012-819) photos: 14MN131

Le Sueur Creek (07020012-823): The reach of Le Sueur Creek from County Ditch 23 to West Prairie Street is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled; however, habitat analysis predicts that the macroinvertebrate community is also limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and dissolved oxygen each had one measurement that exceeded standards, but data were not sufficient for assessment. Stressor identification determined that eutrophication, suspended sediment and habitat were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Le Sueur Creek (07020012-823) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
07MN063	2007	Fish	7	6	1	10.5	5.75	32
07MN063	2007	Macroinvertebrates	7	ND	2	19.5	6.83	32

Le Sueur Creek (07020012-823) photos: 07MN063

Rush River, South Branch (07020012-825): The reach of the South Branch of the Rush River from an unnamed ditch to the geographic coordinates (decimal degrees NAD83) -94.0478 west longitude, 44.4761 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from four stations in 2003, 2014, and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia and pH were assessed as meeting standards. Dissolved oxygen and Secchi tube data were not sufficient for assessment, but measurements met standards. TSS had some measurements above standards, but data were not sufficient for assessment. Average total phosphorus was above the standard, but chlorophyll-a met the standard. Stressor identification determined that dissolved oxygen, eutrophication, nitrates, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish and macroinvertebrate assemblages (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Rush River, South Branch (07020012-825) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN077	2014	Fish	7	15	3.5	7	1.78	38
03MN025	2003	Fish	2	12	10	8.5	0.86	53
14MN230	2014	Fish	2	30	7.5	10	1.29	38
14MN230	2015	Fish	2	18	5.5	13.5	2.23	35
14MN105	2014	Fish	2	19	3.5	10.5	2.56	40
14MN077	2014	Macroinvertebrates	7	19	16.5	8.75	30	1
03MN025	2003	Macroinvertebrates	5	23	2	9.5	3.50	53
14MN230	2014	Macroinvertebrates	5	22	2	10.5	3.83	38
14MN230	2015	Macroinvertebrates	5	20	8	6.5	0.83	50
14MN105	2014	Macroinvertebrates	7	33	4	12.5	2.70	28

Rush River, South Branch (07020012-825) photos: 14MN077 (upper left), 03MN025 (upper right), 14MN230 (lower left), 14MN105 (lower right)

Buffalo Creek (County Ditch 59) (07020012-831): The reach of Buffalo Creek (County Ditch 59) from High Island Ditch 5 to 276th Street/County Road 65 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, and Secchi tube data were not sufficient for assessment, but measurements met standards. Total phosphorus, TSS, and pH each had one measurement above standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Buffalo Creek (County Ditch 59) (07020012-831) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN109	2014	Fish	7	19	5.5	6	1.08	47
14MN109	2014	Macroinvertebrates	7	25	3	17.5	4.63	20

Buffalo Creek (County Ditch 59) (07020012-831) photos: 14MN109

Unnamed creek (07020012-835): The reach of an unnamed creek from Gaystock Lake to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to a lack of macroinvertebrate habitat in the sampling reach. Habitat analysis using the habitat data collected during the fish visit also predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus, dissolved oxygen, and TSS had some measurements that exceeded standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07020012-835) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN126	2014	Fish	3	48	3	8.5	2.38	19
14MN126	2014	Macroinvertebrates	7	ND	0.5	17	12.00	19

Unnamed creek (07020012-835) photos: 14MN126

Sand Creek (07020012-839): The reach of Sand Creek from the south line of the PLS System section T112 R23W S23 to the geographic coordinates (decimal degrees NAD83) -93.5454 west longitude, 44.5226 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). River eutrophication, chloride, and TSS were assessed as not meeting standards. Ammonia and pH data were not sufficient for assessment, but measurements met standards. Dissolved oxygen and Secchi tube had some measurements that exceeded standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen, eutrophication, suspended sediment, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Sand Creek (07020012-839) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN119	2014	Fish	2	0	3.5	17.5	4.11	29
14MN119	2014	Macroinvertebrates	6	32	3.5	12	2.89	27

Sand Creek (07020012-839) photos: 14MN119

Bevens Creek (07020012-843): The reach of Bevens Creek from its headwaters (Washington Lake [72-0017-00]) to 154th Street is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). River eutrophication was assessed as not meeting standards. Ammonia, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Dissolved oxygen and TSS had some measurements that exceeded standards, but data were not sufficient for assessment. Stressor identification determined that eutrophication, nitrates, and suspended sediment were stressors for the macroinvertebrate assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Bevens Creek (07020012-843) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN042	2014	Fish	3	49	12	2.5	0.27	54
14MN042	2014	Macroinvertebrates	6	18	4	9	2.00	36

Bevens Creek (07020012-843) photos: 14MN042

Bevens Creek (07020012-845): The reach of Bevens Creek from the geographic coordinates (decimal degrees NAD83) -93.8615 west longitude, 44.7265 north latitude to -93.8455 west longitude, 44.7327 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. The macroinvertebrate assemblage scored above the General Use threshold. Habitat was fair and the habitat model indicated that habitat was only possibly limiting the macroinvertebrate community indicating that habitat may be sufficient to support a General Use macroinvertebrate fish assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Dissolved oxygen had one measurement below the standard, but data were not sufficient for assessment. Stressor identification determined that eutrophication, habitat, and flow alteration/connectivity were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Bevens Creek (07020012-845) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14MN038	2014	Fish	2	21	13	9	0.71	42
14MN038	2014	Macroinvertebrates	6	43	7.5	4	0.59	45

Bevens Creek (07020012-845) photos: 14MN038

Unnamed creek (07020012-849): The reach of an unnamed creek from an unnamed ditch to the geographic coordinates (decimal degrees NAD83) -93.4251 west longitude, 44.6206 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. Macroinvertebrates were not sampled due to low flow conditions during the sampling visit; however, habitat analysis predicts that the macroinvertebrate community is limited by habitat. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017f). Ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but measurements met standards. Total phosphorus and dissolved oxygen each had one measurement that exceeded standards, but data were not sufficient for assessment. Stressor identification determined that dissolved oxygen and habitat were stressors for the fish assemblage (MPCA 2018g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Minnesota River – Lower Watershed (07020012) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07020012-849) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14MN078	2014	Fish	3	33	6.5	0	0.13	48
14MN078	2014	Macroinvertebrates	7	ND	10.5	6	0.61	48

Unnamed creek (07020012-849) photos: 14MN078

6. Saint Croix River Basin

a. Lower St. Croix River Watershed (07030005)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

Trout Brook (07030005-568): The reach of Trout Brook from an unnamed creek to the St. Croix River is proposed to be designated as a General Use cold water aquatic life and habitat. MPCA macroinvertebrate sampling in 2009 found a community typical of a cold water stream. In addition, water temperature data collected at 15 min intervals during the summer of 2009 indicates that this stream has the potential to support a cold water assemblage (avg. July water temp =14°C). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lower St. Croix River Watershed (07030005) to acknowledge the cold water status of this stream reach.

Trout Brook (07030005-568) photos: 96SC092

Browns Creek (07030005-587): The reach of Browns Creek from north line of the PLS System section T30 R21W S12 to the east line of section T30 R21W S13 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. This portion of Browns Creek does not have a significant groundwater influence and has characteristics of a low gradient, wetland system. The DNR manages this section of stream for a warm water community. Fish community sampling conducted by the MPCA as well as DNR has not found any cold water fish species in this section of stream. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lower St. Croix River Watershed (07030005) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a tributary was designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following

reach will be changed to Class 2Bdg in the beneficial use table for the Lower St. Croix River Watershed (07030005): 07030005-658.

Browns Creek (07030005-587) photos: 96SC066 (left), 07SC001 (right)


Unnamed ditch (07030005-593): The reach of unnamed ditch from its headwaters to Beaver Creek (County Ditch 3) is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water[15]. The entirety of an Unnamed Ditch located northeast of the City of North Branch, listed as Class 2A based on its association with Beaver Creek, will be proposed to be designated as a Class 2B water. Fish community sampling conducted by the MPCA in 2006 found no cold water species present in this stream. DNR staff indicated that this waterway was created in the 1960s where no previous channel existed and was not part of the brook trout fishery managed in Beaver Creek. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lower St. Croix River Watershed (07030005) to acknowledge the cool and warm water status of this stream reach.

[15] Note: The DNR removed this reach as well as 07030005-546 and its associated trout protection tributaries. Available evidence currently indicates that 07030005-546 and a tributary may have supported a cold water habitat after November 28, 1975. Temperature monitoring also indicates these reaches are currently cold. As a result, only 07030005-593 included for warm/cool water habitat designation as evidence indicates that cold water habitat is not an existing use. For now, 07030005-546 and the associated tributaries will retain the cold water habitat designation. There may be justification to designate some of the tributaries cool/warm water habitat, but at least one (tributary #7) has some evidence indicating that it supported a reproducing population of trout in 1977.

Unnamed ditch (07030005-593) photos: 06SC033

Unnamed creek (07030005-766): The reach of an unnamed creek from Browns Creek State Bike Trail to Browns Creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The MPCA will propose to reclassify a tributary to Brown's Creek (Unnamed Creek) as a Class 2B water from the south line of T30 R20W S19 to Brown's Creek. In addition, all tributaries associated with this Unnamed Creek will also be proposed for reclassification to Class 2B. This creek does not have characteristics of a cold water stream, and the basis for its original classification was its affiliation (i.e., located within the same section) with a nearby cold water stream, Brown's Creek. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lower St. Croix River Watershed (07030005) to acknowledge the cool and warm water status of this stream reach.

Unnamed creek (07030005-767): The reach of an unnamed creek from the south line of the PLS System section T30 R20W S19 to an underground diversion is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. See 07030005-766 (unnamed creek) for a complete description of the use designation proposal. The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lower St. Croix River Watershed (07030005) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a several tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Lower St. Croix River Watershed (07030005): 07030005-656, 07030005-657, 07030005-768, and 07030005-769.

Unnamed creek[16] **(Zavoral's Creek) (07030005-778):** The reach of an Unnamed creek from its headwaters to the St. Croix River is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR surveyed this creek in 2010 and collected brook trout. Multiple age classes were present and range of trout size indicated that these is consistent reproduction from year to year. There is no record of stocking for this reach indicating that there is a self-sustaining population of trout in this reach. No water temperature data were available, but the presence of a self-sustaining population of brook trout demonstrates that temperatures are suitable to support cold water aquatic life. The DNR amended its trout stream list in Minn. R. 6264.0050, subp. 4 to include this stream reach (State of Minnesota 2018). Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Lower St. Croix River Watershed (07030005) to acknowledge the cold water status of this stream reach.

7. Lower Mississippi River Basin

a. Mississippi River - Lake Pepin Watershed (07040001)

Watershed information: MPCA webpage; M&A Reports: Lake Pepin Watershed, Vermillion Watershed; Stressor ID Report; WRAPS Report

Unnamed creek (07040001-700): The reach of an unnamed creek (tributary to Wells Creek) from an unnamed creek to Wells Creek is proposed to be designated as a General Use cold water aquatic life and habitat. Fish community data collected by the MPCA in 2008 shows that this stream supports naturally reproducing populations of brook trout, brown trout, and slimy sculpin. Considering this information as well as MNDR's acknowledgement of the cold water characteristics of this stream, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Lake Pepin Watershed (07040001) to acknowledge the cold water status of this stream reach.

Unnamed creek (07040001-700) photos: 08LM134 (left), brook trout (right)

[16] This creek is called "Zavoral's Creek" by the DNR.

Vermillion River, South Branch (07040001-707): The reach of the South Branch of the Vermillion River from the west line of the PLS System section T113 R19W S1 to the north line of section T114 R18W S29 is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR designated this portion of the South Branch of the Vermillion River as a trout water in 2008 (State of Minnesota 2008a). Changing this section of the river to Class 2Ag represents an alignment between Minn. R. 7050.0470 and Minn. R. 6264.0050. As supporting evidence for this reclassification, the MPCA has also collected data documenting the presence of brown trout in this river as well as water temperatures (avg. July temp = 17.1°C, avg. Aug temp = 16.7°C) favorable for cold water species. Considering this information as well as MNDR's acknowledgement of the cold water characteristics of this stream, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Lake Pepin Watershed (07040001) to acknowledge the cold water status of this stream reach.

Vermillion River, South Branch (07040001-707) photos: 04LM029 (left), 08LM116 (right)

Wells Creek (07040001-708): The reach of Wells Creek from an unnamed creek to Highway 61 is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR acknowledges that this creek supports a cold water fishery and has made attempts in the past to include this stream on its designated trout waters list (Minn. R. 6264.0050). In addition, fish community data collected by the MPCA in 2004 and 2008 revealed the presence of both brown trout and brook trout at multiple locations along the stream, with brown trout often representing a large proportion of the community. Considering this information as well as DNR's acknowledgement of the cold water characteristics of this stream, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Lake Pepin Watershed (07040001) to acknowledge the cold water status of this stream reach.

Wells Creek (07040001-708) photos: 08LM136 (upper left), 04LM031 (upper right), 08LM135 (middle left), 04LM070 (middle right), 04LM007 (lower left), 08LM127 (lower right)

Unnamed creek[17] (Vermillion River Tributary) (07040001-720): The reach of an unnamed creek (Vermillion River Tributary), also known as Middle Creek, from west line of the PLS System section T114 R19W S30 to an unnamed creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. An evaluation of fish and macroinvertebrate community data collected near the upstream end of this section indicated the presence of a warm water assemblage. A temperature logger was deployed in 07040001-720 during 2018, which indicated that temperatures were within the growth range for brook trout only 59% of the summer. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Lake Pepin Watershed (07040001) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, a tributary was designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reach will be changed to Class 2Bdg in the beneficial use table for the Mississippi River - Lake Pepin Watershed (07040001): 07040001-683.

Unnamed creek[17] (Vermillion River Tributary) (07040001-721): No use designation change is proposed for the reach of an unnamed creek (Vermillion River Tributary), also known as Middle Creek, from an unnamed creek to an unnamed creek. However, this reach was designated General Use cold water aquatic life and habitat (Class 2Ag*) as a trout protection water for 07040001-671. Although a review of data from the upstream reach (07040001-720) indicated cool or warm water habitat, this reach is likely a cold water habitat. A temperature logger was deployed in 07040001-721 during 2008 and indicated that temperatures were within the growth range for brook trout 95% of the time. Although no cold or cool water fish species were collected from this reach, the macroinvertebrate community consisted of a large percentage (33.4%) of cold water taxa. Considering this information, it is reasonable to confirm the Class 2Ag classification assigned to General Use cold water aquatic life and habitat. The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Lake Pepin Watershed (07040001).

Unnamed creek (Vermillion River Tributary) (07040001-721) photos: 08LM122

[17] This tributary of the Vermillion River is also known as Middle Creek

b. Cannon River Watershed (07040002)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Unnamed creek (Little Cannon River Tributary) (07040002-639): The reach of an unnamed creek (Little Cannon River Tributary) from the east line of the PLS System section T110 R18W S1 to the Little Cannon River is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. This reach was designated as cold water as a trout protection water by the DNR and has never been managed for trout. Unnamed Creek (Trib. To Little Cannon River) was designated as a trout protection water (DNR), and therefore a Class 2A cold water stream (MPCA), without any evidence that the stream naturally supported a cold water aquatic community. Fish and macroinvertebrate data collected by the MPCA in 2011 did not indicate the presence of a cold water community with no cold water fish species and only one macroinvertebrate cold water taxon was collected. Water temperature data collected within this stream suggests that it is more transitional with temperatures within the growth range for brook trout 76% of the time. There is no indication that this stream supported a cold water community on or after November 28, 1975. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cannon River Watershed (07040003) to acknowledge the cool and warm water status of this stream reach.

Unnamed creek (Little Cannon River Tributary) (07040002-639) photos: 11LM027

Unnamed creek (Little Cannon River Tributary) (07040002-670): The reach of an unnamed creek (Little Cannon River Tributary) from the east line of the PLS System section T110 R18W S1 to the Little Cannon River is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. This reach was designated as coldwater as a trout protection water and has never been managed for trout. Fish and macroinvertebrate data collected by the MPCA in 2011 did not indicate the presence of a cold water community with only one cold water fish species (a single brown trout) and two macroinvertebrate cold water species collected. Water temperature has not been intensively monitored in this stream. There is no indication that this stream supported a cold water community on or after November 28, 1975. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cannon River Watershed (07040003) to acknowledge the cool and warm water status of this stream reach.

Unnamed creek (Little Cannon River Tributary) (07040002-670) photos: 11LM023

Belle Creek (07040002-740): The reach of Belle Creek from an unnamed creek (07040002-699) to the Cannon River is proposed to be designated as a General Use cold water aquatic life and habitat. Belle Creek has a long history of water quality issues that have limited its potential to support a cold water aquatic community. The trout water designation for this stream was removed in 1976 due to poor water quality and increased water temperatures recorded in 1975. Since that time, efforts in the watershed to control flooding and address erosion has resulted in a naturally self-sustaining population of brown trout. Biological and temperature monitoring data collected by the MPCA also indicate that this reach supports a cold water community. The DNR has recognized these improvements and designated the section of Belle Creek from the west line of the PLS System section T112 R16W S16 to the Cannon River as a trout water. The MPCA is proposing to extend the Class 2Ag to the confluence with 07040002-699, as this appears to be the source of cold water in the upper reaches of this stream. Temperature data collected just upstream of this tributary are only in the growth range for brook trout 62% of the time in indicating that the portion of this stream from the west line of the PLS System section T112 R16W S16 to 07040002-734 is warm or cool water habitat. Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cannon River Watershed (07040003) to acknowledge the cold water status of this stream reach.

Belle Creek (07040002-740) photos: 04UM090 (upper left), 11LM006 (upper right), brown trout (lower)

Unnamed creek[18] (07040002-738): The reach of an unnamed creek from an unnamed creek to the Cannon River is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR surveyed fish in this reach in 1996, 1997, 1999, and 2013. All four surveys collected brook trout and

[18] This creek is called "Trail Run Creek" by the DNR.

brown trout were collected in1997 and 1999. During surveys, several age classes were present. There is no record of stocking for is reach and the source of trout in this reach are likely other tributaries of the Cannon River. The DNR notes that despite the small size of the stream, it has decent fish habitat. Based on the DNR surveys there is a self-sustaining population of trout in this reach. No water temperature data were available, but the presence of a self-sustaining population of brook trout demonstrates that temperatures are suitable to support cold water aquatic life. The DNR amended its trout stream list in Minn. R. 6264.0050, subp. 4 to include this stream reach (State of Minnesota 2018). Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Cannon River Watershed (07040003) to acknowledge the cold water status of this stream reach.

c. Mississippi River - Winona Watershed (07040003)

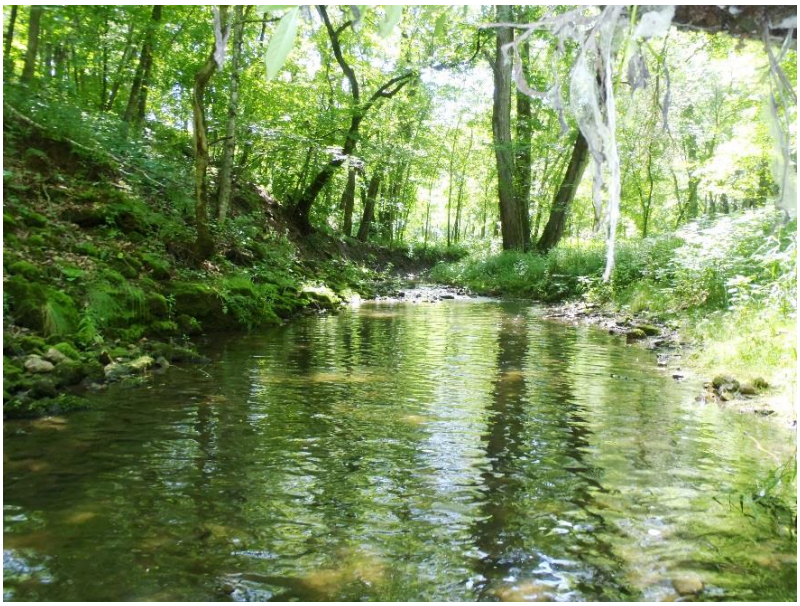
Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Whitewater River, North Fork (07040003-524): The reach of the North Fork of the Whitewater River from south line of the PLS System section T108 R12W S27 to the east line of T108 R12W S25 is proposed to be designated as a General Use cold water aquatic life and habitat. Fish surveys by both the DNR and MPCA have routinely collected brown trout in this reach. A temperature logger deployed at 04LM136 in 2004 measured water temperatures that were in the growth range for brook trout 96% of the time. This reach is also adjacent to a downstream Class 2A reach (07040003-553). The DNR also designated part of the upstream AUID (07040003-525) as a trout water. However, there is limited biological and temperature data in this reach. Three brown trout were collected in this reach by the MPCA in 2010, but additional data should be collected to determine if cold water habitat is an existing use in this reach. Considering this information, it is reasonable to remove the Class 7 classification assigned to Limited Resource Value Waters and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Winona Watershed (07040003) to acknowledge the cold water status of this stream reach.

Whitewater River, North Fork (07040003-524) photos: 04LM135 (left), 04LM136 (right)

Logan Branch (07040003-F31): The reach of Logan Branch from an unnamed creek to the east line of the PLS System section T107 R11W S4 is proposed to be designated as a General Use cold water aquatic life and habitat. Logan Branch sustains a low density brown trout population despite a lack of active management and stocking. Brown trout of varying age classes, including young of year, have been documented in multiple surveys from the confluence of North Fork of the Whitewater River to roughly river mile 4.3. Available temperature data is limited and temperature may be a limiting factor during warm weather periods. The MPCA is proposing to designate Logan Branch from river mile 4.3 (at a confluence with an unnamed creek in PLS System section T107 R11W S9) downstream to the existing coldwater use reach (07040003-552) to coldwater habitat (Class 2Ag). Although this split location is in agreement with historical DNR data, it does not align with DNR's designation which extends the trout water designation upstream to roughly river mile 6.0 (east line of PLS System section T107 R11W S8). Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Winona Watershed (07040003) to acknowledge the cold water status of this stream reach.

Logan Branch (07040003-F31) photos: 10LM011



Unnamed creek[19] (07040003-609): The reach of an unnamed creek from an unnamed creek to the Whitewater River is proposed to be designated as a General Use cold water aquatic life and habitat. This unnamed creek was monitored by the MPCA in 2004 and 2012. The purpose of the 2012 monitoring was largely to investigate the coldwater potential of this stream. Macroinvertebrate cold water taxa included *Gammarus*, *Eukiefferiella*, *Heterotrissocladius*, *Hesperophylax designatus*, and *Brachycentrus occidentalis* and comprised 9 to 16 percent of the samples. Continuous water temperatures measured during the summer months of 2012 were within the growth range for brook trout 100% of days and does not freeze in the winter. Trout have not colonized this reach due to waterfowl pools constructed in the downstream portion of this reach. However, the stream stays open year round and the DNR believes this reach could support populations of trout. It is also connected to coldwater reaches downstream (07040003-537). Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Winona Watershed (07040003) to acknowledge the cold water status of this stream reach.

Unnamed creek (07040003-609) photos: 04LM105

Unnamed creek[20] (07040003-625): The reach of an unnamed creek from an unnamed creek to the Mississippi River is proposed to be designated as a General Use cold water aquatic life and habitat. A natural population of brook trout was documented by the DNR in in this creek in 1987 and 1989. No trout were found in a 1993 DNR survey, but brook trout were stocked in 1995 and 1997 and this stocking was successful. Brook trout numbers increased from 203 adults per mile in 1996 to 458 adults per mile in 2001. DNR assessments in 2010 indicated a very healthy self-sustaining brook trout population. Slimy sculpin were reintroduced in 2004 and 2005 and multiple year classes were found in the 2010 survey. No temperature logger data exists, but clearly, the thermal regime of this stream is

[19] This creek is also called “Monarch Tributary” by the DNR.
[20] This creek is called “Latsch Creek” by the DNR.

capable of supporting a coldwater fish community. Available DNR surveys only include sampling up to roughly mile 0.64 and conditions upstream of this point are unknown. The confluence of 07040003-625 and an unnamed creek (DNR Kittle # MAJ-070411644) is roughly one mile upstream from the Mississippi confluence. Given the lack of information upstream of this confluence, the MPCA is only proposing to designate 07040003-625 as cold water habitat. Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Winona Watershed (07040003) to acknowledge the cold water status of this stream reach.

Whitewater River, South Fork (07040003-F17): The reach of the South Fork of the Whitewater River from St. Charles Township Road 7 to the east line of the PLS System section T106 R10W S2 is proposed to be designated as a General Use cold water aquatic life and habitat. Fish community monitoring by the MPCA in 2010 collected mottled sculpin and more than 50 brown trout. Considering this information it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Winona Watershed (07040003) to acknowledge the cold water status of this stream reach.

Whitewater River, South Fork (07040003-F17) photos: 10LM016

Whitewater River, Middle Fork (07040003-F18): The reach of the Middle Fork of the Whitewater River from the west line of the PLS System section T107 R11W S35 to Crow Spring is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. This section of stream is a cold/warm water transition zone. Crow Spring is the main source of cold water for downstream portions of the Middle Fork Whitewater River. Fish and macroinvertebrate data collected by the MPCA in 2004 is not indicative of a cold water aquatic community. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Mississippi River - Winona Watershed (07040003) to acknowledge the cool and warm water status of this stream reach.

Whitewater River, Middle Fork (07040003-F18) photos: 04LM035

d. Root River Watershed (07040008)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report

Root River, Middle Branch (Deer Creek) (07040008-545): The reach of the Middle Branch of the Root River from Spring Valley Creek to Bear Creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR acknowledges that this section of the river does not support a cold water fishery. Fish community data collected by the MPCA in 2008 revealed that this stream has very few cold water species. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Root River Watershed (07040008) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, several reaches were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Root River Watershed (07040008): 07040008-B93 and 07040008-B94.

Root River, Middle Branch (Deer Creek) (07040008-545) photos: 08LM013

Unnamed creek (Camp Hayward Creek[21]) (07040008-624): The reach of an unnamed creek (Camp Hayward Creek) in the PLS System section T104 R8W S30 is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR inadvertently left the reach of this river in the PLS System section T104 R8W S30 off the list of PLS sections in Minn. R. 6264.0050 when the stream was originally designated and rectified this omission in 2018 through rule making (State of Minnesota 2018). This reach is currently designated Class 2Bg by default in the beneficial use table for the Root River Watershed (07040008) incorporated by reference in Minn. R. 7050.0470. There is no assessable MPCA biological data from this reach to perform a full cold water use review. However, because this reach was erroneously designated, it is short (0.12 mi), and it is downstream of an existing Class 2Ag reach (07040008-658), it is reasonable to assign this reach to General Use cold waters (Class 2Ag). The MPCA proposes to assign this reach as General Use cold water aquatic life and habitat in Minn. R. 7050.0470 by updating the beneficial use table for the Root River Watershed (07040008). Due to the lack of assessable biological data, this reach will remain an unconfirmed General Use in the beneficial use table.

Root River, Middle Branch (07040008-B95): The reach of the Middle Branch of the Root River from Bear Creek to the north line of the PLS System section T103 R12W S9 is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. See 07040008-545 (Middle Branch of the Root River) for a complete description of the use designation proposal. The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Root River Watershed (07040008) to acknowledge the cool and warm water status of this stream reach.

Sugar Creek (Rice Creek)[22] (07040008-G86): The reach of Sugar Creek from the west line of the PLS System section T103 R11W S8 to Rice Creek is proposed to be designated as a General Use cool and warm water aquatic life and habitat also protected as a source of drinking water. The DNR classifies this section of stream as warmwater and does not manage it for trout. Fish community data collected by the MPCA in 2008 demonstrated that this stream does not support a cold water fish assemblage. Above this reach (i.e., the reach in PLS System section T103 R11 S7), the DNR classifies the reach as a marginal trout habitat and this reach will retain the cold water habitat designation. Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to General Use cool and warm waters also protected as a source of drinking water (Class 2Bdg). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Root River Watershed (07040008) to acknowledge the cool and warm water status of this stream reach. In addition to this reach, several tributaries were designated Class 2Ag as trout protection waters due to their PLS section affiliation with this reach. As a result, the Class 2Ag designation for the following reaches will be changed to Class 2Bdg in the beneficial use table for the Root River Watershed (07040008): 07040008-B47, 07040008-B48, 07040008-B49, 07040008-B50, 07040008-B51, 07040008-B52, 07040008-B53, 07040008-B54, and 07040008-B55.

[21] This creek is also known as “Camp Hazzard Creek”
[22] This creek is called “Rice Creek” by the DNR.

Sugar Creek (Rice Creek) (07040008-G86) photos: 08LM083

Curtis Creek (07040008-G90): The reach of Curtis Creek from an unnamed spring to the Middle Branch of the Root River is proposed to be designated as a General Use cold water aquatic life and habitat. The fish community of this stream was sampled by the MPCA on two separate occasions in 2008. On both occasions, more than 50 brown trout individuals were captured and were the only fish species collected. Water temperature readings during these sampling visits were 15.0°C in July and 12.2°C in August. Considering this information, it is reasonable to remove the Class 7 classification assigned to Limited Resource Value Waters and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Root River Watershed (07040008) to acknowledge the cold water status of this stream reach.

Curtis Creek (07040008-G90) photos: 08LM015

Bridge Creek (07040008-G92): The reach of the Bridge Creek from unnamed creek to an unnamed creek is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR acknowledges that this creek supports a cold water fishery. Fish community data collected by the MPCA in 2008 had a high proportion of brook trout. A water temperature of 15.1°C was recorded during the fish sampling visit on August 4, 2008 at 5:30 pm. Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Root River Watershed (07040008) to acknowledge the cold water status of this stream reach.

Bridge Creek (07040008-G92) photos: 08LM103

Unnamed creek[23] (07040008-H02): The reach of an unnamed creek from the north line of the PLS System section T104 R7W S15 to the Root River is proposed to be designated as a General Use cold water aquatic life and habitat. The DNR surveyed this creek in 2016 and collected brook trout. A range of trout size indicated that these is reproduction from year to year. In addition, the DNR observed large numbers of young-of-the-year trout which were too small to be adequately sampled by the sampling gear used in the survey. There is no record of stocking for this reach indicating that there is a self-sustaining population of trout in this reach. Limited water temperature data were available, but the presence of a self-sustaining population of brook trout demonstrates that temperatures are suitable to support cold water aquatic life. The DNR amended its trout stream list in Minn. R. 6264.0050, subp. 4 to include this stream reach (State of Minnesota 2018). Considering this information, it is reasonable to remove the Class 2Bg classification assigned to General Use cool and warm water aquatic life and habitat and replace it with the use assigned to General Use cold waters (Class 2Ag). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Root River Watershed (07040008) to acknowledge the cold water status of this stream reach.

[23] This creek is called “Kendall Creek” by the DNR.

e. Upper Iowa River Watershed (07060002)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

Bee Creek (Waterloo Creek) (07060002-515): The reach of the Bee Creek (Waterloo Creek) from the north line of the PLS System section T101 R6W S29 to the Minnesota/Iowa border is proposed to be designated as an Exceptional Use cold water aquatic life and habitat. Biological data from both macroinvertebrates and fish collected in 2015 from one station demonstrated that this reach meets the aquatic life use goals for Exceptional Use. The channel in this reach is natural and habitat assessment demonstrated that this reach has good habitat (MSHA = 76-80). Considering this information, it is reasonable to remove the Class 2Ag classification assigned to General Use cold water aquatic life and habitat and replace it with the use assigned to Exceptional Use cold waters (Class 2Ae). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the beneficial use table for the Upper Iowa River Watershed (07060002) to acknowledge the Exceptional Use condition of this stream reach.

Bee Creek (Waterloo Creek) (07060002-515) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
15LM004	2015	Fish	10	92	8	3	0.44	76
15LM004	2015	Macroinvertebrates	9	79	5.5	3	0.62	80

Bee Creek (Waterloo Creek) (07060002-515) photos: 15LM004

8. Cedar-Des Moines Rivers Basin

a. Winnebago River Watershed (07080203)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

Lime Creek (07080203-501): The reach of Lime Creek from Bear Lake to Minnesota/Iowa border is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological

data from fish and macroinvertebrates collected from two stations in 2015 and 2016 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. One fish sample scored above the General Use threshold. The sample included several lentic fish species. Despite the poor habitat, these species may be migrating into the stream from nearby Bear Lake and elevating this IBI score. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the macroinvertebrate assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting Modified Use aquatic life use goals. Dissolved oxygen and river eutrophication standards were assessed as not meeting standards. Ammonia, chloride, and pH were assessed as meeting standards. TSS and Secchi tube had some exceedances, but data were not sufficient for assessment. Stressor identification determined that eutrophication, dissolved oxygen, high suspended sediment, poor habitat, and flow alterations were likely stressors with temperature and fish passage as other possible stressors (MPCA 2017g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Winnebago River Watershed (07080203) to acknowledge the Modified Use condition of this stream reach.

Lime Creek (07080203-501) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15CD002	2015	Fish	2	56	4	15	3.20	21
15CD002	2016	Fish	2	29	3.5	18	4.22	23
15CD001	2015	Fish	2	29	4.5	12.5	2.45	25
15CD001	2016	Fish	2	35	3	17.5	4.63	23
15CD001	2015	Macroinvertebrates	7	33	1	17.5	9.25	20
15CD001	2016	Macroinvertebrates	7	20	0	19.5	20.50	14

Lime Creek (07080203-501) photos: 15CD002 (upper), 15CD001 (lower)

Steward Creek (County Ditch 23) (07080203-504): The reach of Steward Creek (County Ditch 23) from its headwaters to Bear Lake is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2015 and 2016 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Single visits for each assemblage were above General Use biocriteria, but similar samples collected in close temporal proximity were below biocriteria. Fish and macroinvertebrate sampling indicate that these assemblages are on average below the General Use goal. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals. Dissolved oxygen was assessed as not meeting standards. Ammonia, chloride, and pH were assessed as meeting standards. TSS and Secchi tube data were not sufficient for assessment, but all measurements met standards. River eutrophication data were not sufficient for assessment, but total phosphorus was below standards. Stressor identification determined that nitrate, eutrophication, dissolved oxygen, poor habitat, and flow alterations were as likely stressors (MPCA 2017g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Winnebago River Watershed (07080203) to acknowledge the Modified Use condition of this stream reach.

Steward Creek (County Ditch 23) (07080203-504) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15CD009	2015	Fish	3	56	3	7.5	2.13	33
15CD009	2016	Fish	3	43	3.5	9	2.22	31
15CD003	2015	Fish	7	37	3.5	11	2.67	41
15CD003	2016	Fish	7	27	5	10	1.83	44
15CD009	2015	Macroinvertebrates	7	17	0	16	17.00	29
15CD009	2016	Macroinvertebrates	7	22	0.5	19.5	13.67	35
15CD003	2015	Macroinvertebrates	7	27	1	18.5	9.75	30
15CD003	2015	Macroinvertebrates	7	34	1	18.5	9.75	30
15CD003	2016	Macroinvertebrates	7	44	3	15	4.00	38

Steward Creek (County Ditch 23) (07080203-504) photos: 15CD009 (left), 15CD003 (right)

Unnamed creek (07080203-509): The reach of an unnamed creek from Judicial Ditch 26 to Minnesota/Iowa border is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 and 2016 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals. Dissolved oxygen was assessed as not meeting standards. pH was assessed as meeting standards. Ammonia, chloride, TSS, and Secchi tube data were not sufficient for assessment, but all measurements met standards. River eutrophication data were not sufficient for assessment, but total phosphorus was below standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Winnebago River Watershed (07080203) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07080203-509) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15CD004	2015	Fish	3	44	3	11	3.00	31
15CD004	2015	Macroinvertebrates	7	39	1	18.5	9.75	33
15CD004	2016	Macroinvertebrates	7	28	4.5	15	2.91	43

Unnamed creek (07080203-509) photos: 15CD004

Judicial Ditch 25 (07080203-515): The reach of Judicial Ditch 25 from an unnamed ditch to an unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2015 and 2016 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. A single visit for macroinvertebrates were above General Use biocriteria, but within the confidence limit. Similar samples collected in close temporal proximity were below the biocriterion indicating that this assemblage is not meeting the General Use goal. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals. Dissolved oxygen was assessed as not meeting standards. Ammonia, chloride, TSS, and Secchi tube data were not sufficient for assessment, but all measurements met standards. River eutrophication data were not sufficient for assessment, but total phosphorus was below standards. Stressor identification determined that eutrophication, dissolved oxygen, poor habitat, and flow alterations were likely stressors with nitrate and fish passage as other possible stressors (MPCA 2017g). Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Winnebago River Watershed (07080203) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 25 (07080203-515) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15CD005	2015	Fish	7	0	1	13	7.00	20
15CD005	2015	Macroinvertebrates	7	47	1	19.5	10.25	30
15CD005	2016	Macroinvertebrates	7	37	2	18	6.33	40
15CD005	2016	Macroinvertebrates	7	35	2	18	6.33	40

Judicial Ditch 25 (07080203-515) photos: 15CD005

b. Des Moines River - Headwaters Watershed (07100001)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

County Ditch 20 (07100001-504): The reach of County Ditch 20 from its headwaters to the east side of Heron Lake is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2014 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). The upper station (14DM067) is within the drained lake/wetland basin that used to occupy this area and as a result, the biological samples from this station may not be representative of the watershed. Considering this, more weight was given to the macroinvertebrate results at the lower station (14DM066) that met Modified Use goals. As a result, the macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals. Total phosphorus, ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Dissolved oxygen had one exceedance of standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

County Ditch 20 (07100001-504) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14DM067	2014	Fish	7	12	1.5	16	6.80	22
14DM066	2015	Fish	2	25	5.5	10	1.69	53
14DM067	2014	Macroinvertebrates	7	15	0	20.5	21.50	15
14DM066	2014	Macroinvertebrates	5	27	2	9	3.33	50

County Ditch 20 (07100001-504) photos: 14DM067 (left), 14DM066 (right)

Judicial Ditch 76 (07100001-515): The reach of County Ditch 76 from unnamed creek to Okabena Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2007 and 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 76 (07100001-515) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07DM004	2007	Fish	3	49	7	0.5	0.19	57
07DM004	2014	Fish	3	33	6	5	0.86	45
07DM004	2007	Macroinvertebrates	7	4	10	9.5	0.95	57
07DM004	2014	Macroinvertebrates	7	27	5	13	2.33	42

Judicial Ditch 76 (07100001-515) photos: 07DM004

Unnamed creek (07100001-518): The reach of unnamed creek from unnamed creek to Judicial Ditch 3 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2004, 2014, and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Ammonia, TSS, and Secchi tube data were not sufficient for assessment, but all measurements met standards. Total phosphorus, dissolved oxygen, pH each had one exceedance of standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07100001-518) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM030	2015	Fish	3	12	9.5	2	0.29	53
04DM011	2004	Fish	7	11	2.5	11	3.43	45
14DM030	2014	Macroinvertebrates	7	15	13.5	7	0.55	56
04DM011	2004	Macroinvertebrates	7	27	1	16.5	8.75	45

Unnamed creek (07100001-518) photos: 14DM030 (left), 04DM011 (right)

Judicial Ditch 26 (07100001-523): The reach of Judicial Ditch 26 from unnamed creek to Jack Lake is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 26 (07100001-523) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM049	2014	Fish	3	ND	3	10	2.75	27
14DM049	2014	Macroinvertebrates	7	2	2	15.5	5.50	24
14DM049	2014	Macroinvertebrates	7	3	2	15.5	5.50	24

Judicial Ditch 26 (07100001-523) photos: 14DM049

Perkins Creek (07100001-544): The reach of Perkins Creek from Warren Lake to Des Moines River is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Perkins Creek (07100001-544) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM024	2014	Fish	3	ND	11.5	4	0.40	50
14DM024	2014	Macroinvertebrates	5	15	3.5	6.5	1.67	52

Perkins Creek (07100001-544) photos: 14DM024

Judicial Ditch 14 (07100001-589): The reach of judicial Ditch 14 from unnamed ditch to unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017h). Two macroinvertebrate visits were above the General Use biocriteria and one visit was just below the General Use biocriteria, but all three were within the confidence limit. Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Perkins Creek (07100001-544) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM101	2014	Fish	3	45	5.5	7	1.23	37
14DM101	2015	Macroinvertebrates	7	41	2	18.5	6.50	30
14DM101	2014	Macroinvertebrates	7	42	0	18.5	19.50	20
14DM101	2014	Macroinvertebrates	7	46	0	18.5	19.50	20

Judicial Ditch 14 (07100001-589) photos: 14DM101

Unnamed ditch (107100001-594): The reach of unnamed ditch from unnamed ditch to unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2007 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish assemblage attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is possibly limiting the fish assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017h). One macroinvertebrate visit was above the General Use biocriterion. The macroinvertebrate assemblage may have scored above the General Use threshold due to decent substrates and base flow. Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Unnamed ditch (107100001-594)) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07DM006	2007	Fish	3	40	9.5	1	0.19	49
07DM006	2007	Macroinvertebrates	7	52	8	10.5	1.28	49

Unnamed ditch (107100001-594) photos: 07DM006

Unnamed creek (07100001-608): The reach of unnamed creek from unnamed creek to unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017h). One fish visit was marginally above the General Use biocriteria, but it was within confidence limits. The fish sample was considered of medium quality due to sampling early in the season that may sampled migratory fish species. As a result, it is not possible to determine if the fish assemblage meets General Use goals. Total phosphorus, ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. TSS had one exceedance of standards, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07100001-608) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM022	2014	Fish	3	56	6.5	0.5	0.20	45
14DM022	2014	Macroinvertebrates	7	35	7	14.5	1.94	34

Unnamed creek (07100001-608) photos: 14DM022

Unnamed creek (07100001-614): The reach of unnamed creek from unnamed cr to Judicial Ditch 84 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Dissolved oxygen had one measurement below the standard, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07100001-614) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM032	2014	Fish	3	46	4	9	2.00	33
14DM032	2014	Macroinvertebrates	7	18	5	10.5	1.92	38
14DM032	2014	Macroinvertebrates	7	10	5	10.5	1.92	38

Unnamed creek (07100001-614) photos: 14DM032

Unnamed creek (07100001-615): The reach of unnamed creek from unnamed cr to Elk Creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Dissolved oxygen had one measurement below the standard, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07100001-615) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM036	2014	Fish	3	33	6	0.5	0.21	46
14DM036	2014	Macroinvertebrates	5	36	1	8.5	4.75	49

Unnamed creek (07100001-615) photos: 14DM036

Unnamed creek (07100001-621): The reach of unnamed creek from unnamed lake to Des Moines River is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, and Secchi tube data were not sufficient for assessment, but all measurements met standards. pH had one measurement below the standard, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07100001-621) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM052	2014	Fish	7	29	1	13.5	7.25	21
14DM052	2014	Macroinvertebrates	7	17	1	20	10.50	14

Unnamed creek (07100001-621) photos: 14DM052

Unnamed creek (07100001-624): The reach of unnamed creek from its headwaters to unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Dissolved oxygen had one measurement exceeding the standard, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Unnamed creek (07100001-624) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM055	2014	Fish	3	ND	3	9	2.50	22
14DM055	2015	Fish	3	16	9	2.5	0.35	50
14DM055	2014	Macroinvertebrates	7	18	3	11.5	3.13	33

Unnamed creek (07100001-624) photos: 14DM055

Lake Shetek Inlet (07100001-642): The reach of Lake Shetek Inlet from the geographic coordinates (decimal degrees NAD83) -95.8869 west longitude, 44.2032 north latitude to -95.8495 west longitude, 44.2061 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2004 and 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblages. Habitat was also predicted to be limiting the macroinvertebrates, but this assemblage was above the General Use threshold for two visits. Closer examination of the habitat indicates that woody debris and rock substrate was present which may be mitigating the impacts of other poor habitat elements. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Lake Shetek Inlet (07100001-642) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
04DM026	2004	Fish	2	11	6	13.5	2.07	42
04DM026	2014	Fish	2	25	8.5	8	0.95	54
04DM026	2004	Macroinvertebrates	7	45	7	13.5	1.81	42
04DM026	2014	Macroinvertebrates	7	54	5	8.5	1.58	42

Lake Shetek Inlet (07100001-642) photos: 04DM026

Jack Creek, North Branch (07100001-649): The reach of the North Branch of Jack Creek from T-148 to 1st Street is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2004 and 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Macroinvertebrate data were not assessed because the data were expired (i.e., older than 10 years). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Jack Creek, North Branch (07100001-649) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
04DM032	2004	Fish	3	11	9	4.5	0.55	52
14DM047	2014	Fish	3	28	5	9	1.67	18
04DM032	2004	Macroinvertebrates	7	33	10	12	1.18	52
04DM032	2004	Macroinvertebrates	7	24	10	12	1.18	52

Jack Creek, North Branch (07100001-649) photos: 04DM032 (left), 14DM047 (right)

Jack Creek (07100001-658): The reach of Jack Creek from Minnesota Highway 60 to the geographic coordinates (decimal degrees NAD83) -93.3062 west longitude, 43.7685 north latitude is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Ammonia, chloride, dissolved oxygen, and pH data were assessed as meeting standards. TSS and Secchi tube were assessed as not meeting standards. , not sufficient for assessment, but all measurements met standards. An assessment of river eutrophication standards were inconclusive as total phosphorus exceeded the standard, but both chlorophyll-a and BOD_5 met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Jack Creek (07100001-658) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM009	2014	Fish	2	9	4.5	8.5	1.73	32
14DM009	2014	Macroinvertebrates	7	28	7	13	1.75	30

Jack Creek (07100001-658) photos: 14DM009

Beaver Creek (07100001-664): The reach of Beaver Creek from Judicial Ditch 14 to County Ditch 20 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2007 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Beaver Creek (07100001-664) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
07DM002	2007	Fish	2	20	2	7.5	2.83	49
07DM002	2007	Macroinvertebrates	7	24	3	10.5	2.88	49

Beaver Creek (07100001-664) photos: 07DM002

Judicial Ditch 12 (07100001-665): The reach of Judicial Ditch 12 from unnamed creek to County State-Aid Highway (CSAH) 18 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish collected from one station in 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. A single macroinvertebrate visit was 2 points above the General Use biocriteria and within the confidence limit. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. TSS had one measurement above the standard, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 12 (07100001-665) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
15EM023	2015	Fish	3	33	2	6.5	2.50	44
15EM023	2015	Fish	3	ND	6.5	6.5	1.00	31
15EM023	2015	Macroinvertebrates	7	43	1	12	6.50	41

Judicial Ditch 12 (07100001-665) photos: 15EM023

County Ditch 4 (07100001-667): The reach of County Ditch 4 from unnamed creek to unnamed creek is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2004 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. A single visit for fish was 4 points above the General Use biocriteria, but within the confidence limit. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrates were not assessed in this reach because the data were expired (i.e., more than 10 years old). (MPCA 2017h). Chemistry data were also expired and not assessed. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

County Ditch 4 (07100001-667) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
04DM030	2004	Fish	3	59	4.5	5	1.09	49
04DM030	2004	Macroinvertebrates	7	11	5	14	2.50	49

County Ditch 4 (07100001-667) photos: 04DM030

c. Des Moines River – Lower Watershed (07100002)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

Brown Creek (Judicial Ditch 10) (07100002-502): The reach of Brown Creek (Judicial Ditch 10) from its headwaters to the Minnesota/Iowa border is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from two stations in 2004 and 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The macroinvertebrate assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River – Lower Watershed (07100002) to acknowledge the Modified Use condition of this stream reach.

Brown Creek (Judicial Ditch 10) (07100002-502) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
04DM021	2004	Fish	3	27	4	6.5	1.50	36
14DM088	2014	Fish	3	38	3	10	2.75	13
04DM021	2004	Macroinvertebrates	7	21	4.5	15.5	3.00	36
14DM088	2014	Macroinvertebrates	7	12	3	13.5	3.63	38

Brown Creek (Judicial Ditch 10) (07100002-502): 04DM021 (left), 14DM088 (right)

Judicial Ditch 6 (07100002-513): The reach of Judicial Ditch 6 (Judicial Ditch 10) from unnamed ditch to unnamed ditch is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River – Lower Watershed (07100002) to acknowledge the Modified Use condition of this stream reach.

Judicial Ditch 6 (07100002-513) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM085	2014	Fish	3	ND	3	10.5	2.88	16
14DM085	2015	Fish	3	43	3.5	7	1.78	29
14DM085	2014	Macroinvertebrates	7	38	4	11.5	2.50	38

Judicial Ditch 6 (07100002-513) photos: 14DM085

d. Des Moines River – East Fork Watershed (07100003)

Watershed information: MPCA webpage, M&A Report, Stressor ID Report, WRAPS Report (in progress)

County Ditch 53 (07100003-506): The reach of County Ditch 53 from unnamed creek to Minnesota/Iowa border is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from fish and macroinvertebrates collected from one station in 2014 and 2015 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the fish and macroinvertebrate assemblages. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish assemblage was assessed as not supporting the Modified Use aquatic life use goals (MPCA 2017h). Total phosphorus, ammonia, dissolved oxygen, TSS, Secchi tube, and pH data were not sufficient for assessment, but all measurements met standards. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River – East Fork Watershed (07100003) to acknowledge the Modified Use condition of this stream reach.

County Ditch 53 (07100003-506) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	**Year**	**Assemblage**	**Type**	**IBI**	**Good**	**Poor**	**P/G**	**MSHA**
14DM097	2014	Fish	3	ND	6.5	3.5	0.60	43
14DM097	2015	Fish	3	30	5	10.5	1.92	24
14DM097	2014	Macroinvertebrates	7	28	5.5	10	1.69	51

County Ditch 53 (07100003-506) photos: 14DM097

County Ditch 1/Judicial Ditch 50 (07100003-515): The reach of County Ditch 1/Judicial Ditch 50 from unnamed creek to County Ditch 11 is proposed to be designated for Modified Use cool and warm water aquatic life and habitat. Biological data from macroinvertebrates collected from one station in 2014 demonstrated that this reach does not meet the aquatic life use goals for General Use warm and cool water aquatic life and habitat. A single visit for fish was 10 points above the General Use biocriterion, but the Modified Use designation is based on the macroinvertebrate assemblage. This reach has been altered for drainage and available evidence (e.g., aerial imagery) indicates that the reach was maintained for drainage before November 28, 1975. In addition, no evidence indicates that the fish or macroinvertebrate assemblages attained the aquatic life use goals for General Use on or after November 28, 1975. Habitat assessments demonstrated that poor habitat is limiting the macroinvertebrate assemblage. The poor habitat condition cannot be reversed at this time and is not likely to recover naturally due to drainage maintenance. The fish and macroinvertebrate assemblages were assessed as supporting the Modified Use aquatic life use goals (MPCA 2017h). Ammonia and Secchi tube were assessed as meeting standards. Total phosphorus, dissolved oxygen, and pH data were not sufficient for assessment, but all measurements met standards. TSS had two samples above the standard, but data were not sufficient for assessment. Considering this information, 40 CFR § 131.10(g)(3) applies to this reach and it is reasonable to assign the use assigned to Modified Use warm and cool water aquatic life and habitat (Class 2Bm). The MPCA proposes to make this change in Minn. R. 7050.0470 by updating the use table for the Des Moines River - Headwaters Watershed (07100001) to acknowledge the Modified Use condition of this stream reach.

County Ditch 1/Judicial Ditch 50 (07100003-515) fish, macroinvertebrate, and habitat data

		Biology			Habitat			
Station	Year	Assemblage	Type	IBI	Good	Poor	P/G	MSHA
14DM091	2014	Fish	3	65	4	3.5	0.90	42
14DM091	2014	Macroinvertebrates	7	22	9	10.5	1.15	55

County Ditch 1/Judicial Ditch 50 (07100003-515) photos: 14DM091

9. Missouri River Basin

No proposed designations

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