



AMENDMENTS TO BENEFICIAL USE DESIGNATIONS

SETTING AQUATIC LIFE USES BASED ON BIOLOGICAL POTENTIAL

<https://www.pca.state.mn.us/wqs-designated-uses>

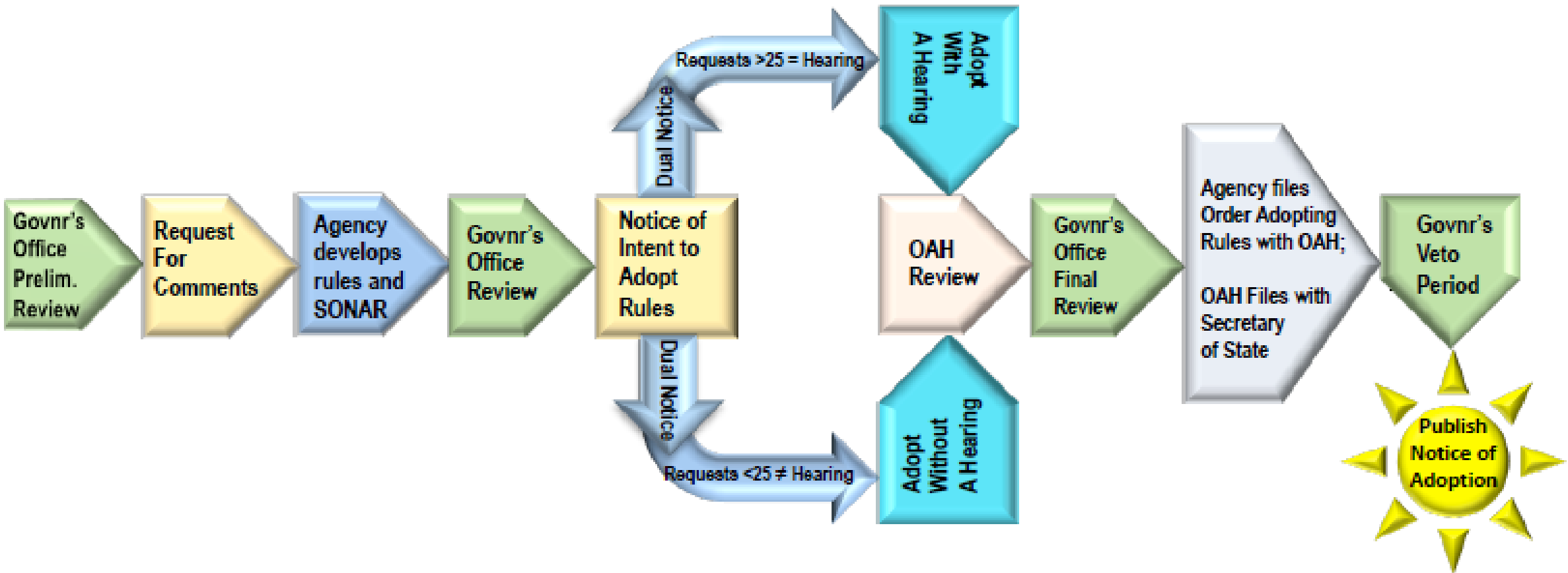
AGENDA

Public Information Meeting

Comments provided during this meeting will not be part of the rulemaking record. Comments will need to be submitted to the Office of Administrative Hearings Rulemaking e-Comments webpage (before 4:30pm on November 7, 2019) or at the December 11, 2019 public hearing

- Rule amendment process and schedule
- Overview of water quality standards
- How thermal habitat designations are reviewed
- What are Tiered Aquatic Life Uses and how are TALUs reviewed
- Implications of the proposed rule amendments
- Questions

RULE MAKING PROCESS



RULE SCHEDULE

Task	Date(s)
Dual Notice of Intent to adopt rules/public comment period	September 23 - November 7, 2019
Public Informational Meeting	October 29, 2019
Public Hearing	December 11, 2019
Administrative Law Judge Review and Order	Spring 2020
Notice of Adoption of Rules published in State Register	Spring 2020
U.S. EPA Review and Approval	Summer 2020



Uses

Standards

Anti-
degradation

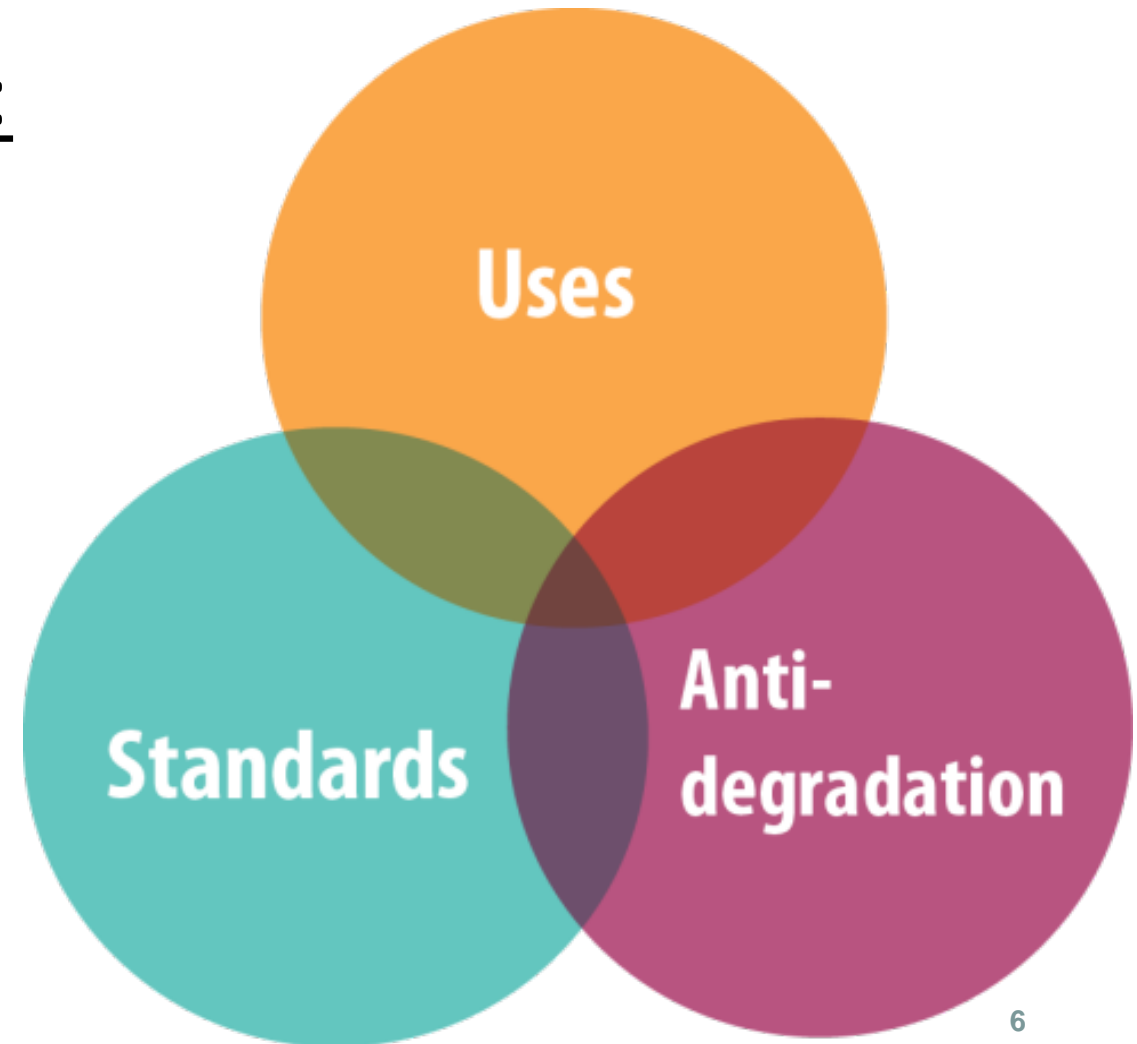
WATER QUALITY STANDARDS OVERVIEW

A fundamental tool of the Clean Water Act

WATER QUALITY STANDARDS

Address three key questions:

- What and who are we protecting?
- What conditions are protective?
- How do we maintain high water quality?

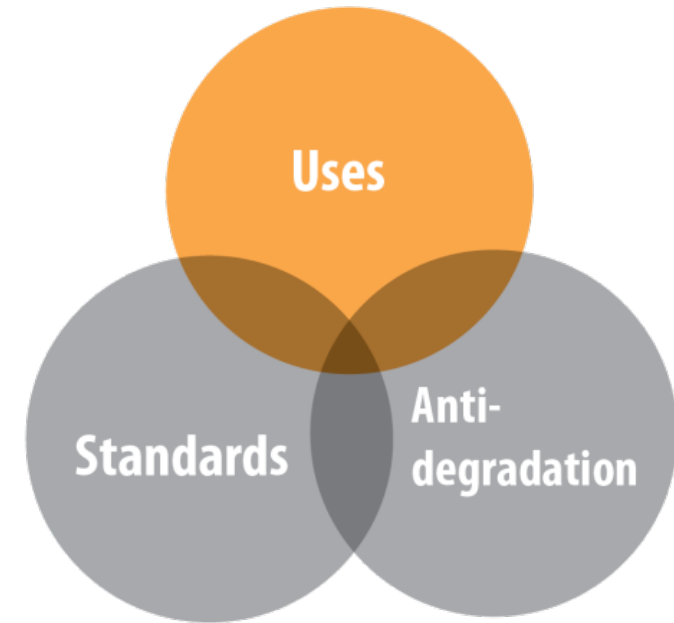


BENEFICIAL USES

One of the most important beneficial uses in Minnesota which protects fish, insects, mussels, plants, and ecosystem services they provide

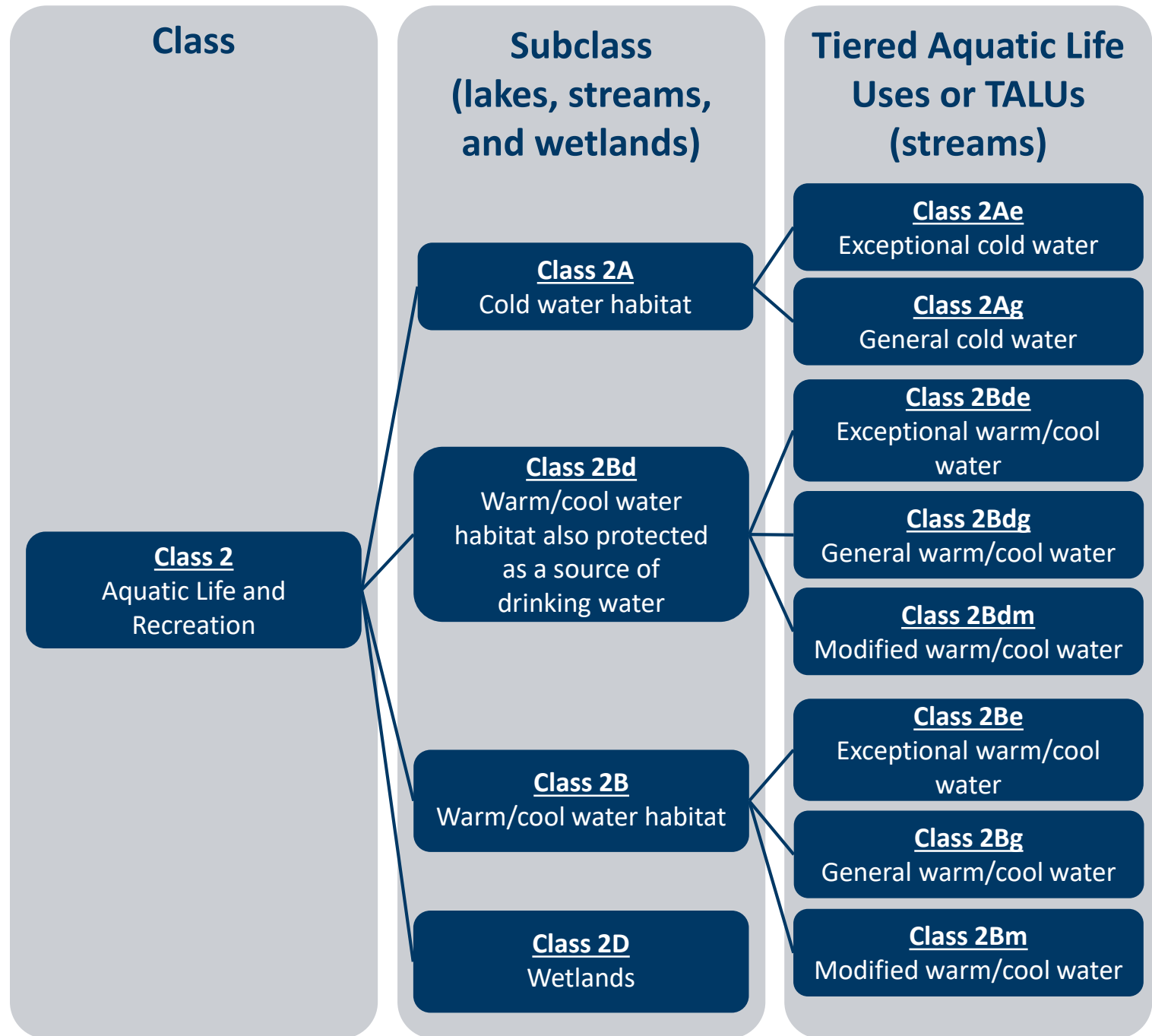
Seven use classes in MN Rules:

1. Drinking water
2. Aquatic life and recreation
3. Industrial use and cooling
4. Agricultural and wildlife use
5. Aesthetics and navigation
6. Other uses
7. Limited resource value



CLASS 2

- Class 2 is divided into subclasses based on natural habitat types
- Streams are further divided into Tiered Aquatic Life Uses (TALUs) based on biological potential

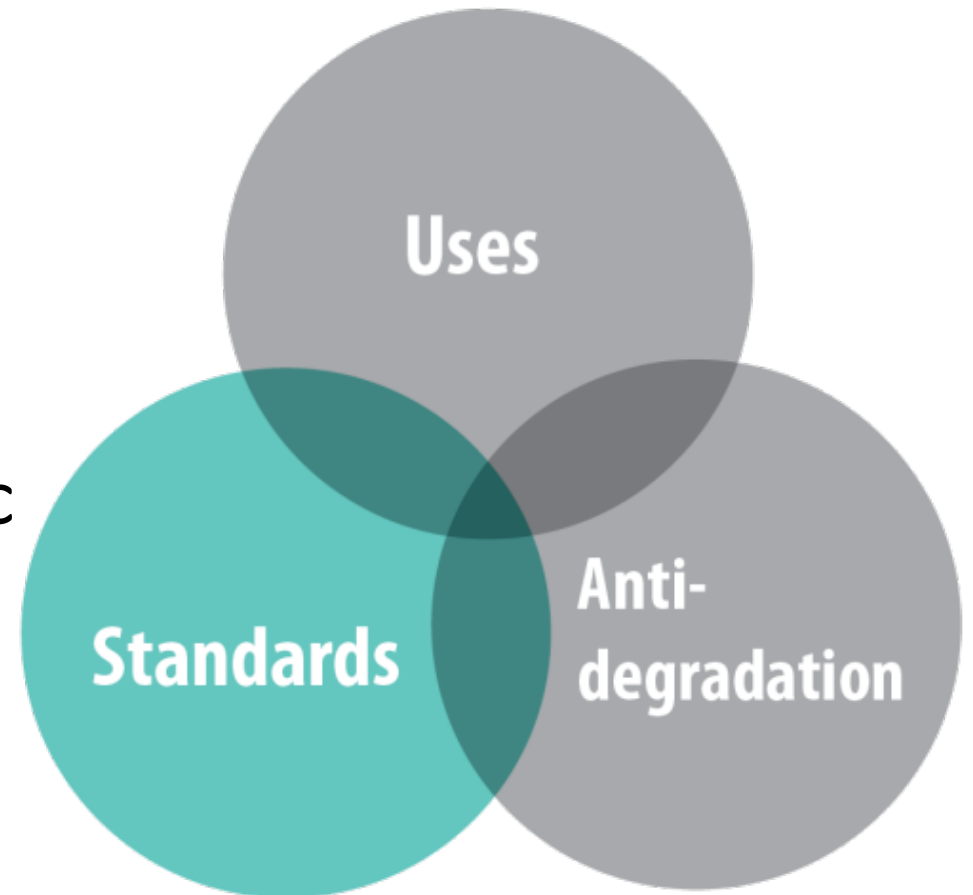


WHAT CONDITIONS ARE PROTECTIVE?

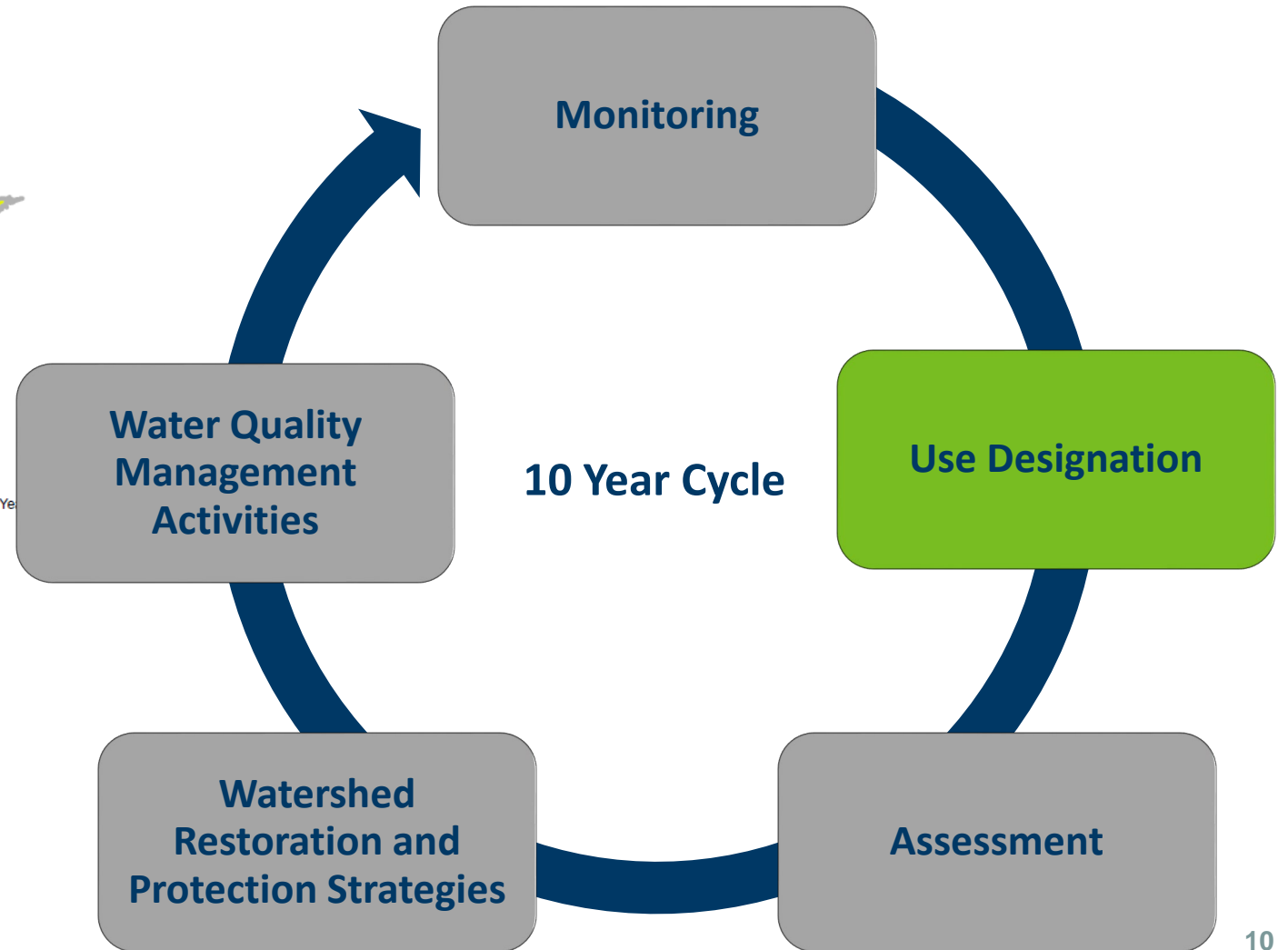
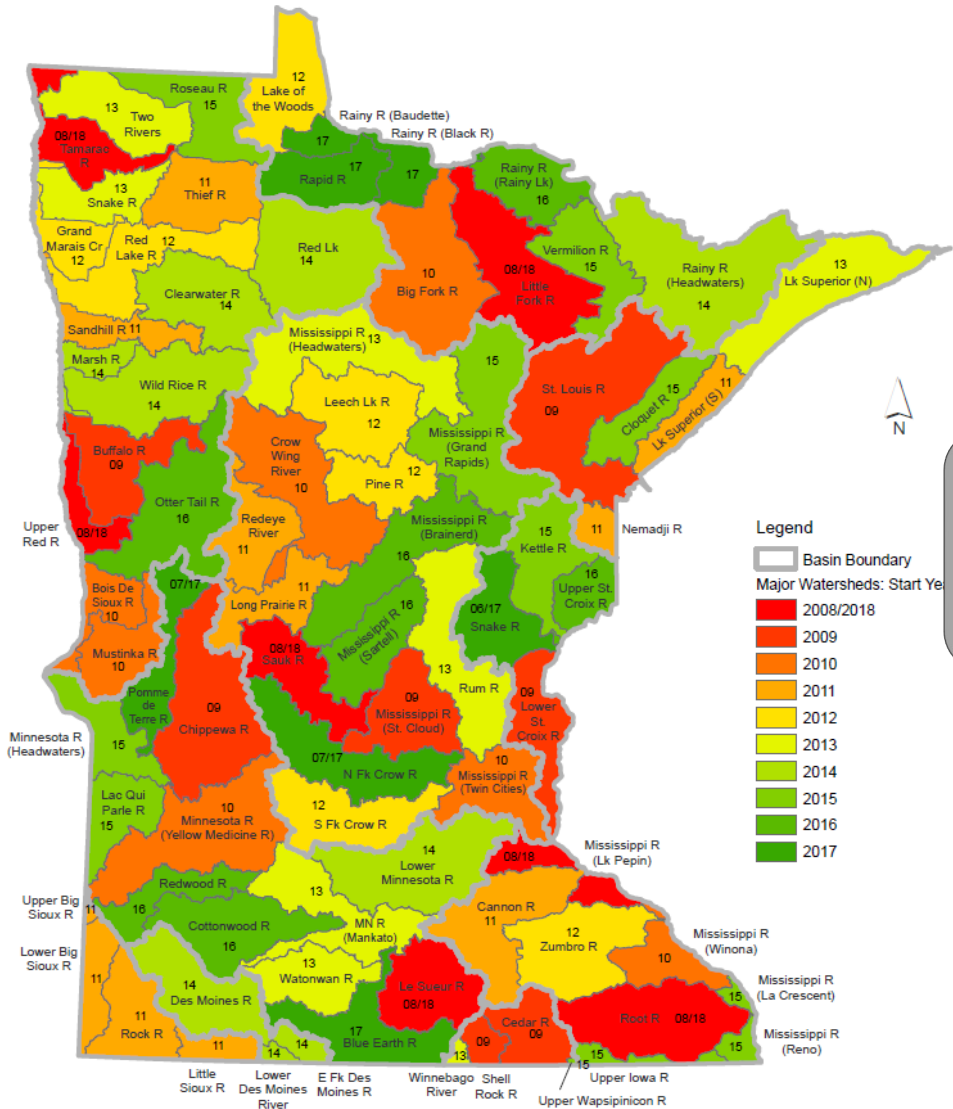
Standards

- Identify the conditions needed to support the beneficial use (e.g., 5.0 mg/L dissolved oxygen as a daily minimum to protect aquatic life)
- Generally statewide or region-specific
- Can be narrative or numeric

The proposed rule amendments do not amend narrative or numeric standards or antidegradation rules



INTENSIVE WATERSHED MONITORING (IWM)



OVERVIEW OF AMENDMENTS

Designation of aquatic life uses based on biological potential

- The rule amendments result in more accurate and representative aquatic life use designations
- Appropriate use designations are important because they impact water quality management actions
- Correct use designations improve water quality management outcomes and result in better overall condition for Minnesota's waters

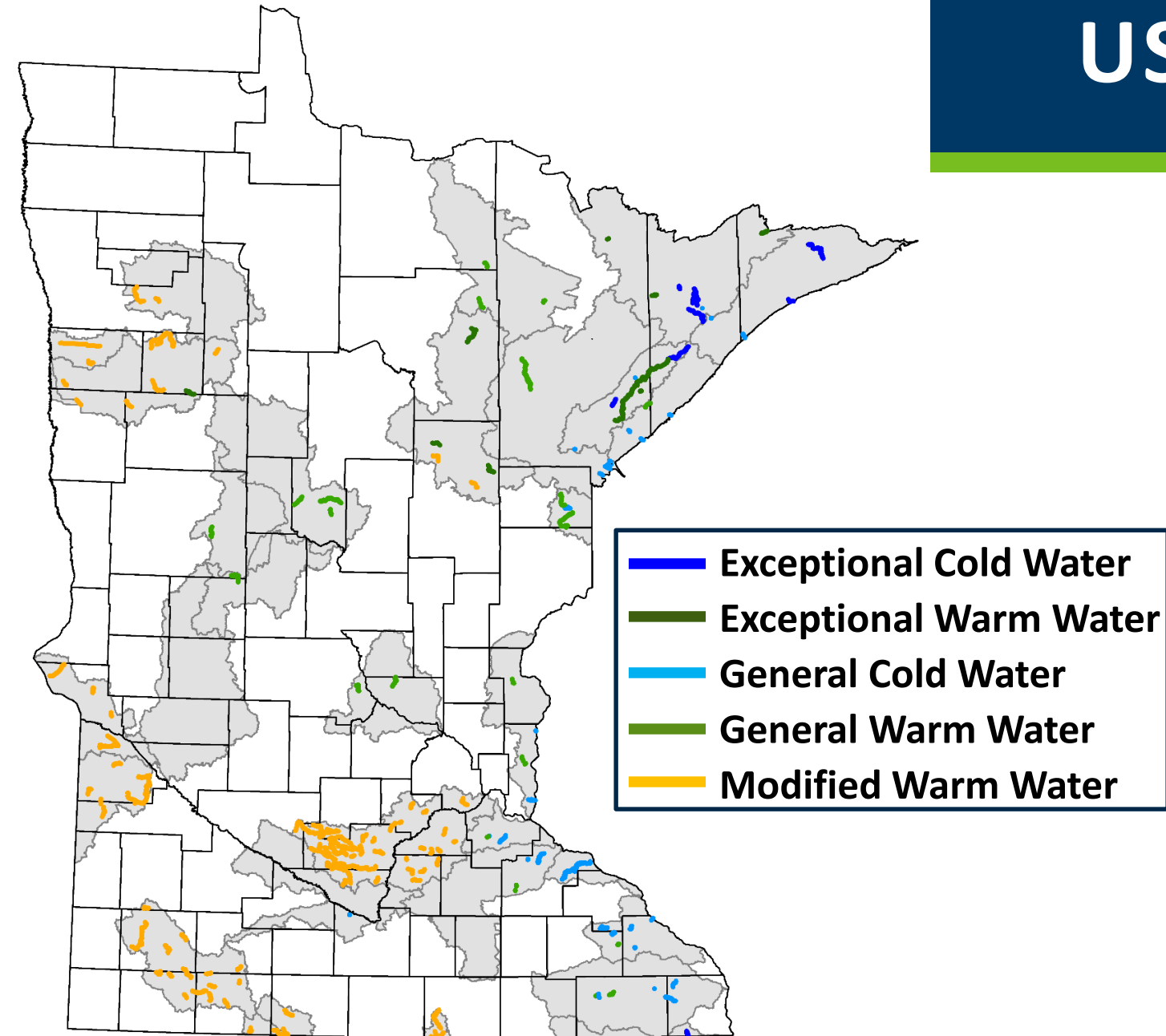
OVERVIEW OF AMENDMENTS

Designation of aquatic life uses based on biological potential

Use designations (191) in this rule amendment can be divided into two types:

- 1) Cold and warm water designations based on natural water body type
- 2) Tiered aquatic life use (TALU) designations based on potential biological condition

USE DESIGNATIONS



- 1) Cold water and cool/warm water designations in watersheds monitored in 2008, 2009, 2010, and 2011
- 2) Tiered aquatic life use (TALU) designations in watersheds monitored in 2014 and 2015 (plus some in 2012 and 2013 watersheds)



WARM AND COLD WATER HABITAT REVIEWS

Accurate designation of thermal habitat types

COLD AND WARM WATER HABITATS

“Class 2A waters; aquatic life and recreation. The quality of class 2A surface waters shall be such as to permit the propagation and maintenance of a healthy community of cold water aquatic biota, and their habitats” Minn. R. 7050.0222, subp. 2

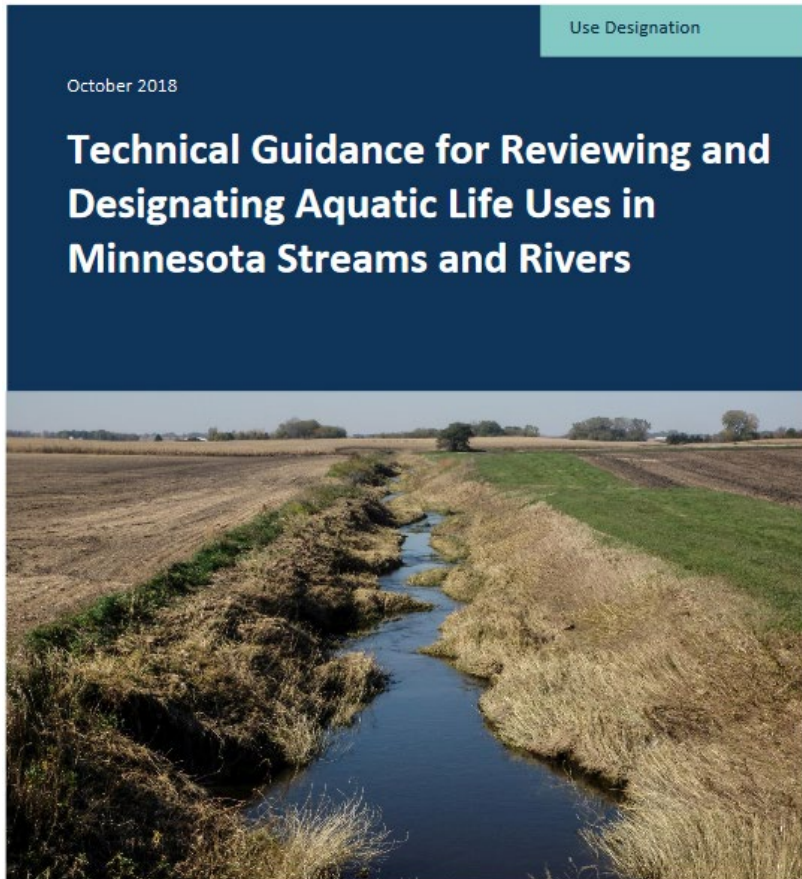
- Most streams and lakes are classified as either warm/cool water (Class 2B and 2Bd) or cold water (Class 2A) habitats
- The proposed amendments do not change this dichotomy or the goals for these water types
- The thermal habitat designation is based on the biological communities they support or should support
- Thermal designations need to be correct because biological assessment tools are different for these water body types

COLD WATER HABITATS

- Historically the MPCA relied directly on DNR's trout waters list (Minn. R. 6264.0050) for Class 2A designations
- DNR trout waters will continue to largely align with Class 2A, but:
 - Management of these waters differs between agencies
 - Some cold water habitats do not support trout
 - DNR considers land owner requests with designations
 - DNR does not need to consider existing use



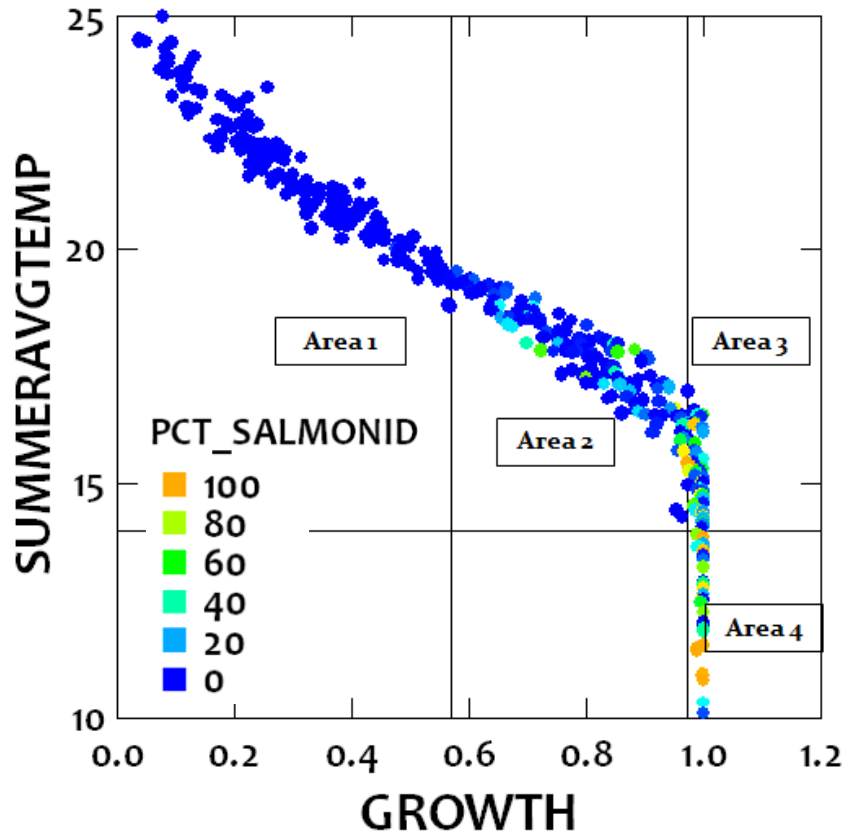
COLD-WARM WATER REVIEWS



- Use designation requires demonstration that the current designated use is incorrect (i.e., not an existing use)
- All biological monitoring data are screened to identify possible classification issues
- Potentially misclassified reaches are reviewed in detail

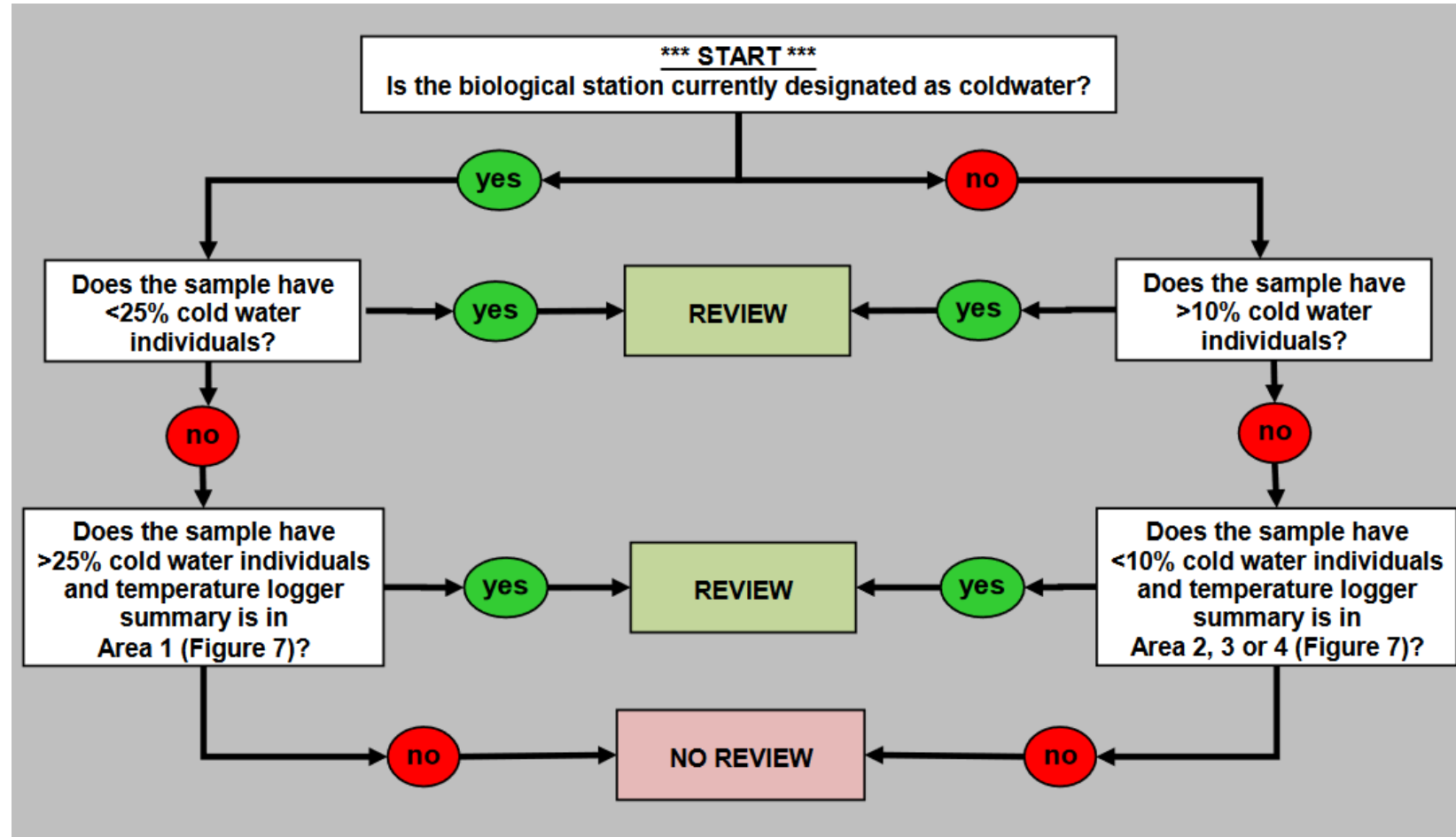


DATA SCREENING



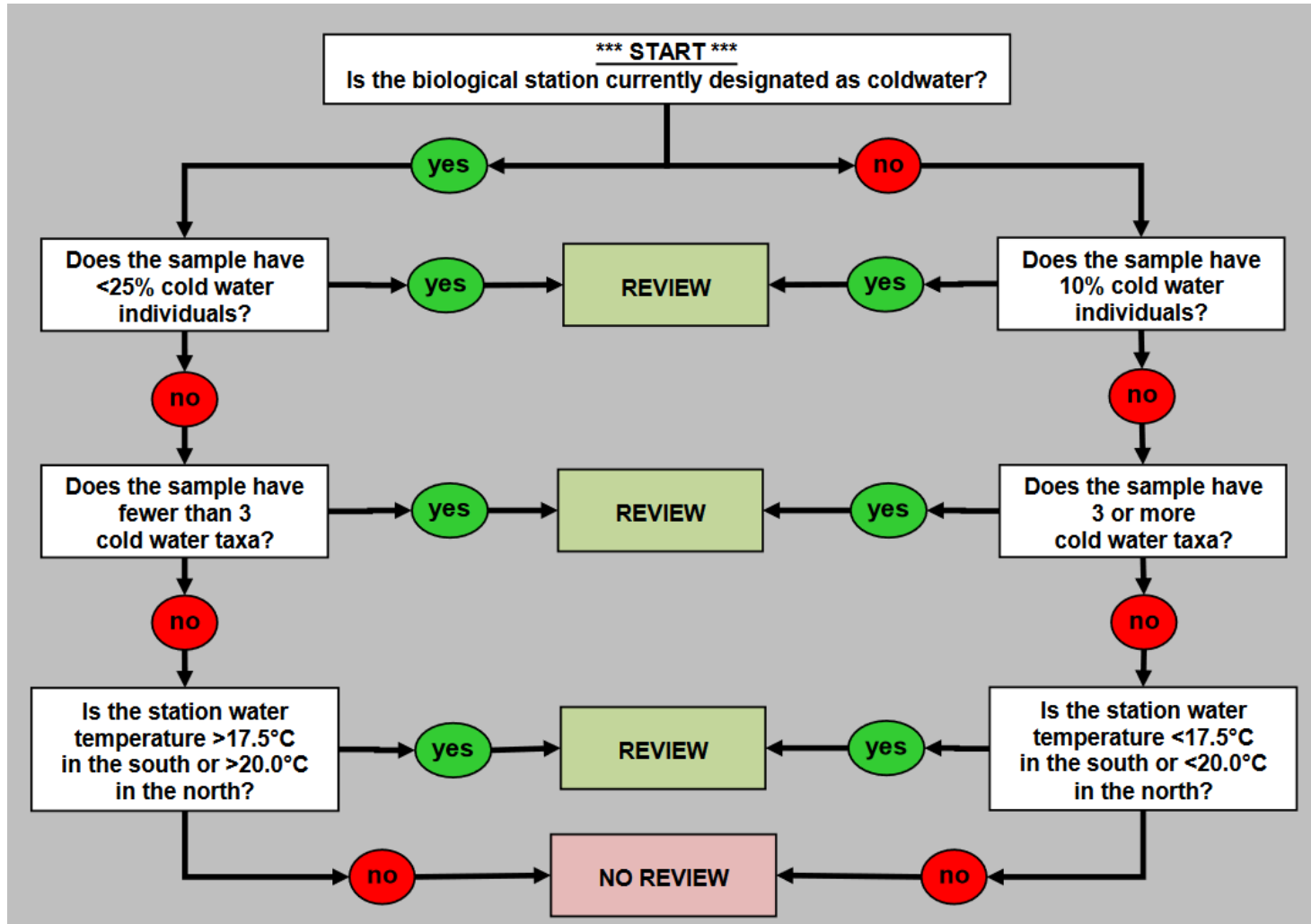
Area 1: No Trout
 Area 2: Trout may be present, generally in low numbers
 Area 3: Trout more likely present and in higher numbers
 Area 4: Trout almost always present, in good numbers

Fish Screening Process



DATA SCREENING


Invertebrate Screening Process




Use Designation

October 2018

Technical Guidance for Reviewing and Designating Aquatic Life Uses in Minnesota Streams and Rivers



m MINNESOTA POLLUTION CONTROL AGENCY



COLD WATER REVIEW PROCESS

- Historical and contemporary data reviewed:
 - MPCA biomonitoring data (fish and macroinvertebrates)
 - Temperature data
 - DNR data (biology, temperature, stocking records, creel surveys, etc.)
- Discussions with DNR
- The MPCA compiles information to document the use designation recommendation including:
 - No change (either the use designation is correct or data is insufficient)
 - Change designated use for the entire reach
 - Change designated use for part of the reach





TIERED AQUATIC LIFE USES (TALU) FRAMEWORK

Beneficial use goals based on biological potential

ONE-SIZE-FITS-ALL USES



Brule River



Wild Rice River



County Ditch 34

TIERED AQUATIC LIFE USES



Brule River

Exceptional Use
High quality aquatic life



Wild Rice River

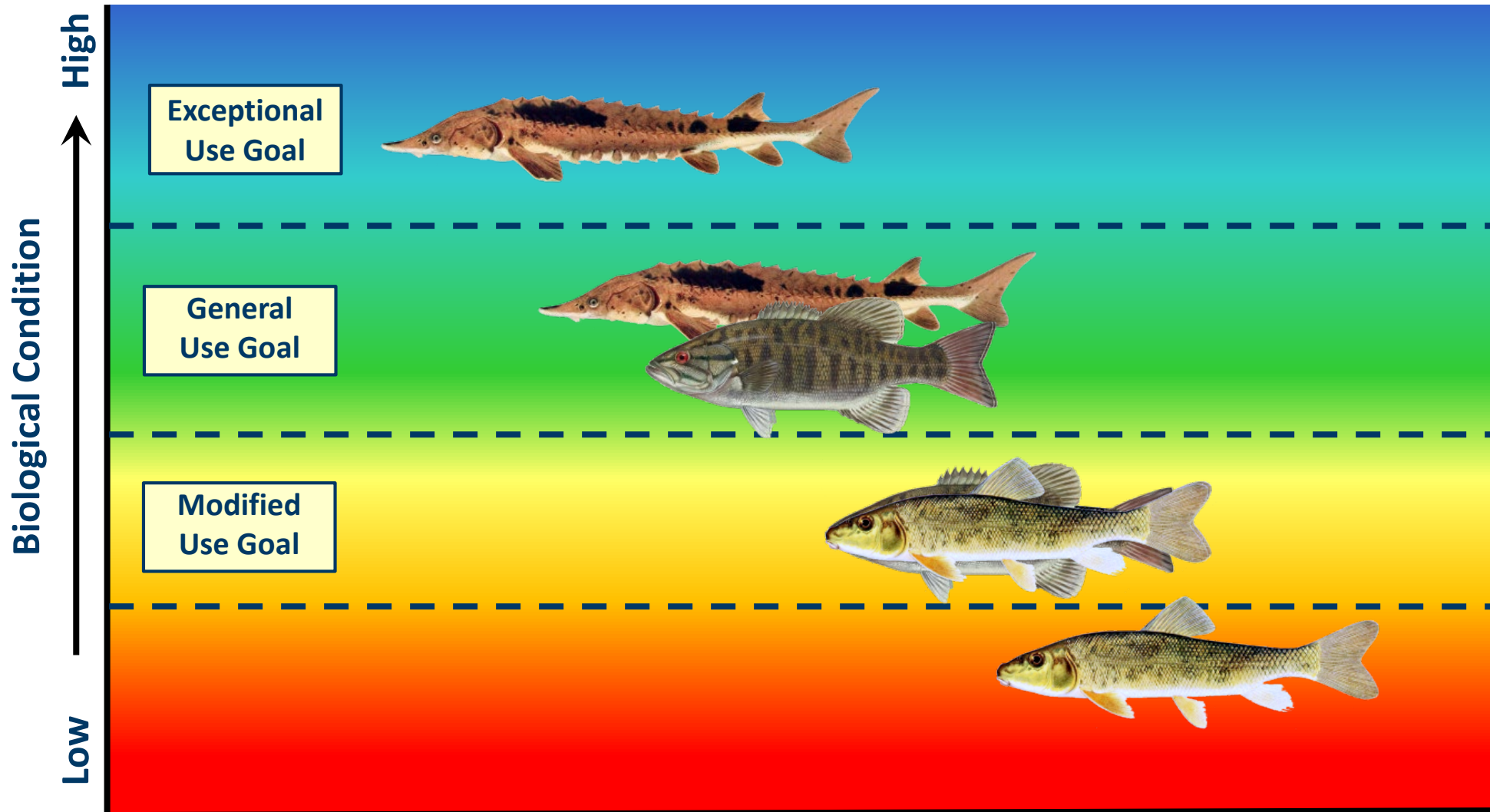
General Use
Good aquatic life



County Ditch 34

Modified Use
**Aquatic life limited by
human altered habitat**

AQUATIC LIFE USE GOALS



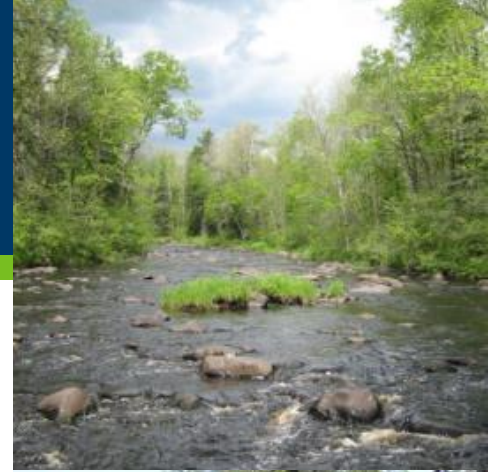
BIOLOGICAL CRITERIA

- The biological condition of fish and macroinvertebrates are measured using Index of Biological Integrity (IBI) models
- IBI scores are assessed against biological criteria to determine if aquatic life is meeting goals
- First the TALU needs to be determined

Stream Type	Exceptional	General	Modified
	Use	Use	Use
	<u>Fish</u>		
Southern Rivers	71	49	
Southern Streams	66	50	35
Southern Headwaters	74	55	33
Northern Rivers	67	38	
Northern Streams	61	47	35
Northern Headwaters	68	42	23
Low Gradient Streams	70	42	15
Southern Coldwater	82	50	
Northern Coldwater	60	35	
	<u>Macroinvertebrates</u>		
Northern Forest Rivers	77	49	
Prairie and Southern Forest Rivers	63	31	
Northern Forest Streams RR	82	53	
Northern Forest Streams GP	76	51	37
Southern Streams RR	62	37	24
Southern Forest Streams GP	66	43	30
Prairie Streams GP	69	41	22
Northern Coldwater	52	32	
Southern Coldwater	72	43	

DETERMINING TIERED USES

Does the stream meet the General or Exceptional Use biological criteria?



BIOLOGICAL CRITERIA

Stream Type	Exceptional	General	Modified
	Use	Use	Use
	<u>Fish</u>		
Southern Rivers	71	49	
Southern Streams	66	50	35
Southern Headwaters	74	55	33
Northern Rivers	67	38	
Northern Streams	61	47	35
Northern Headwaters	68	42	23
Low Gradient Streams	70	42	15
Southern Coldwater	82	50	
Northern Coldwater	60	35	
	<u>Macroinvertebrates</u>		
Northern Forest Rivers	77	49	
Prairie and Southern Forest Rivers	63	31	
Northern Forest Streams RR	82	53	
Northern Forest Streams GP	76	51	37
Southern Streams RR	62	37	24
Southern Forest Streams GP	66	43	30
Prairie Streams GP	69	41	22
Northern Coldwater	52	32	
Southern Coldwater	72	43	

DETERMINING TIERED USES

Does the stream meet the criteria for Exceptional Use biological use?



Is habitat limiting the stream's ability to support a diverse aquatic community?



Is the limiting habitat the result of human activity?



Eligible for Modified Use

Use Designation

October 2018

Technical Guidance for Reviewing and Designating Aquatic Life Uses in Minnesota Streams and Rivers

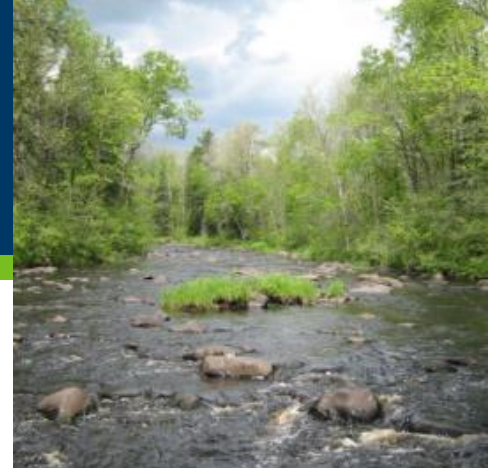


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Designate General or Exceptional Use

Designate General Use

Designate General Use



TIERED AQUATIC LIFE USE REVIEWS

- TALUs are needed to establish attainable beneficial uses to streams
- The proposed rule amendments will designate Modified and Exceptional Uses to a subset of streams

Use Designations

June 2019

**Amendments to Aquatic Life (Class 2)
Use Designations**



RULE LANGUAGE CHANGES

- Minn. R. Part 7050.0219: Removal of references to the now defunct Class 2C
- Minn. R. Part 7050.0420: The proposed amendment changes the description of how cold water habitats are reviewed and designated by the MPCA
- Minn. R. Part 7050.0470, subps . 1-9: 191 stream reaches and lakes will be designated

THE PROPOSED AMENDMENTS:

- **Will** document existing uses to provide protection from “backsliding”;
- **Will** provide protections for high quality waters;
- **Will** set appropriate designated uses for waters affected by legal historical impacts, such as channelized streams;
- **Will** modernize how cold water habitats are designated to ensure that existing uses are protected;
- **Will** balance the requirement and need to protect and restore aquatic resources with important socio-economic needs;
- **Will** improve the outcomes of water quality management activities resulting in better overall condition for Minnesota’s waters.

THE PROPOSED AMENDMENTS:

- **DO NOT** change numeric or narrative standards;
- **DO NOT** designate any use class other than Class 2 [although Class 2A designations carry with them Classes 1B and 3B];
- **DO NOT** remove the Class 1 (drinking water) designation from any waters;
- **DO NOT** automatically remove Class 2A designations from trout waters;
- **DO NOT** extend protections to waters not already protected by water quality standards;
- **DO NOT** provide a rationale for the *a priori* relaxation of pollution controls or the removal of waters from the impaired waters list; and
- **DO NOT** downgrade existing beneficial uses.

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<https://www.pca.state.mn.us/wqs-designated-uses>

QUESTIONS