

Impaired Waters Listings & Permit Limits

Government Affairs Seminar, Feb. 16, 2022
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What we'll cover




- 1) How waterbodies are assessed & listed
- 2) Proposed rules on Waterbody Assessments using biology
- 3) How much does being on the IW list matter to permit limits?
 - Permit calculations – mostly separate from IW listings
 - New dischargers – some restrictions
 - TMDLs – may provide relief

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Waterbody Assessment Process

• Why does the state assess surface waters?

- Protect people. 
 - Protect the environment. 
- &
- Clean Water Act requirements. 
 - State water quality requirements.

DNR Mission:

“To protect and enhance our natural resources...”

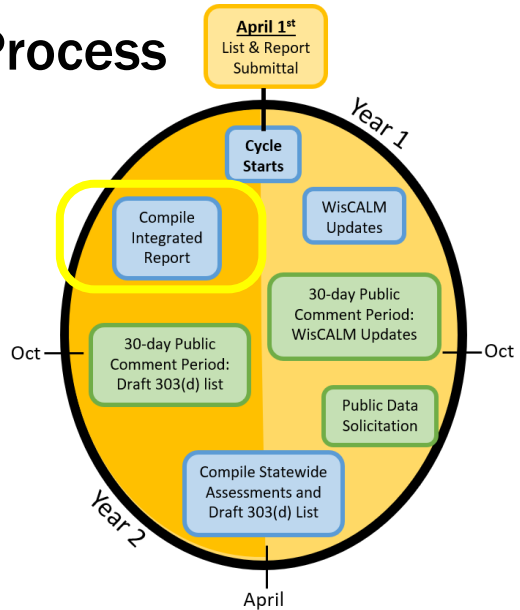
“To provide a healthy, sustainable environment and a full range of outdoor opportunities.”

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Waterbody Assessment Process

• When does the state assess surface waters?

- Occurs in 2-year cycles
 - Cycle named for year of list submittal to EPA: 2022
- Year 1: prepare
 - Methodology update
 - Collect data
 - Data cleanup
- Year 2: draft & review assessments



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Waterbody Assessment Process

• *Where does the water quality data come from?*



Lake Protection Groups



Colleges and Universities



Metropolitan Sewerage District

Public Health

Surface Water Integrated Monitoring System (SWIMS)



Conservation Groups

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Waterbody Assessment Process

• *What do we assess?*

Chemical & Physical

- Total Phosphorus
- Dissolved Oxygen
- Chloride
- Temperature
- Bacteria
- Toxins
- and more (see WisCALM)



Biological Populations

- Fish
- Aquatic insects ('bugs')
- Algae
- Plants



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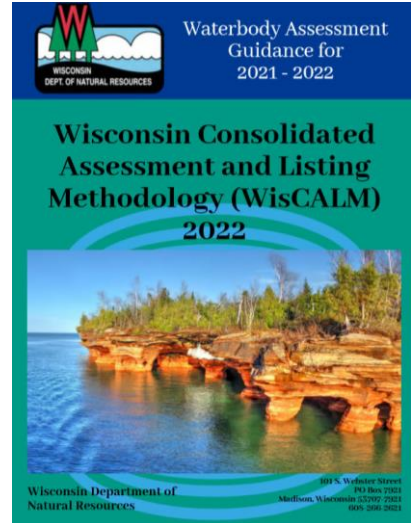
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Waterbody Assessment Process

• *How do we assess?*

Specifics in WisCALM:

- ▶ Time window used;
- ▶ Minimum number of samples needed;
- ▶ Automated assessments by station and assessment unit.

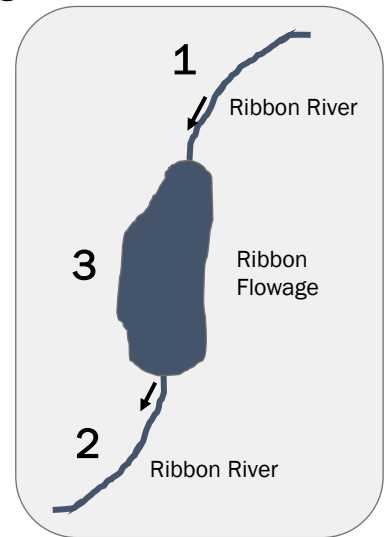


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Waterbody Assessment Process

• *How do we quantify assessments?*

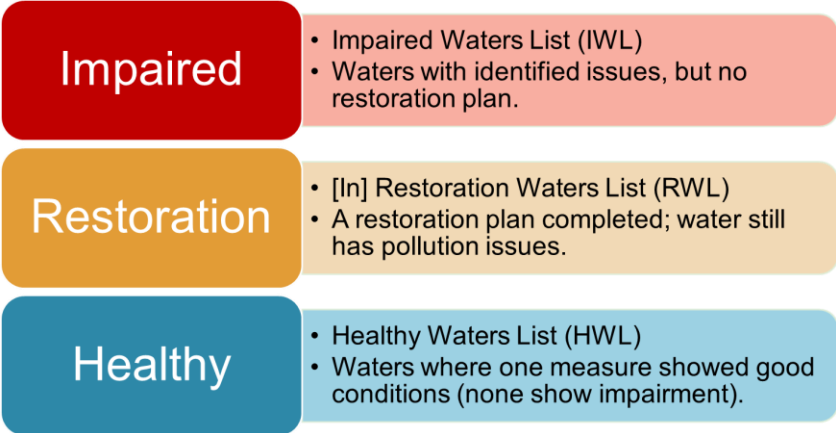
- ▶ **Assessment Units (AUs)**
 - ▶ Ribbon River = 2 AUs
 - ▶ Ribbon Flowage = 1 AU
- ▶ **Pollutant Listings**
 - ▶ AUs can have multiple pollutant listings



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Waterbody Assessment Process

• *How do we categorize listings and AUs?*

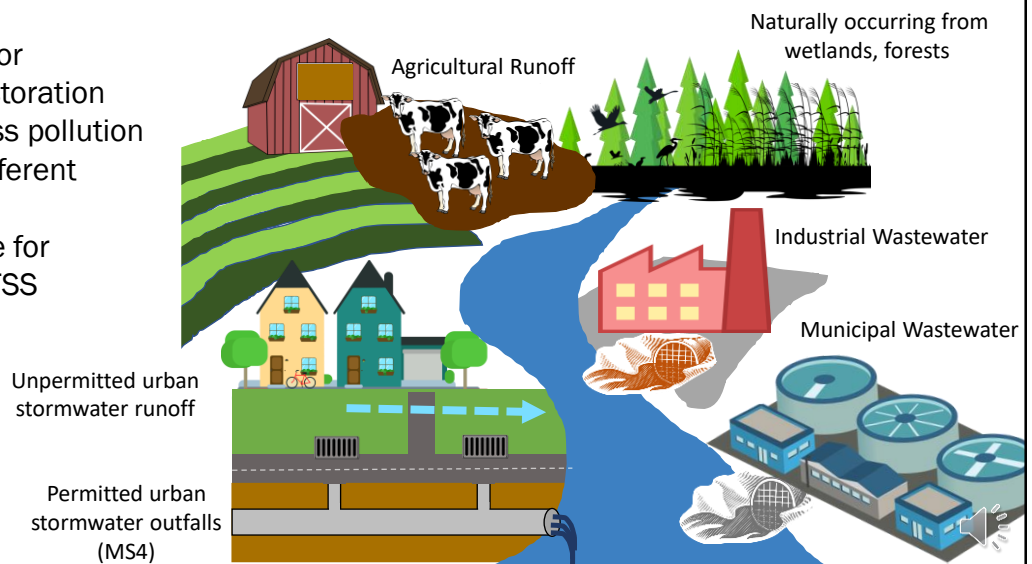


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Impaired waters are addressed with TMDLs: Total Maximum Daily Load analysis

- A framework for watershed restoration
- TMDLs address pollution from many different sources
- Most are done for phosphorus, TSS



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Two proposed rules related to Assessments

1. Waterbody Assessments using biology
 2. A process for developing site-specific criteria for phosphorus (SSC for P)
- These were submitted to the legislature recently for consideration

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1. Waterbody Assessments using Biology

• **What do we assess?**

Chemical & Physical

- Total Phosphorus
- Dissolved Oxygen
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- Temperature
- Bacteria
- Toxins
- and more (see WisCALM)



Biological Populations

- Fish
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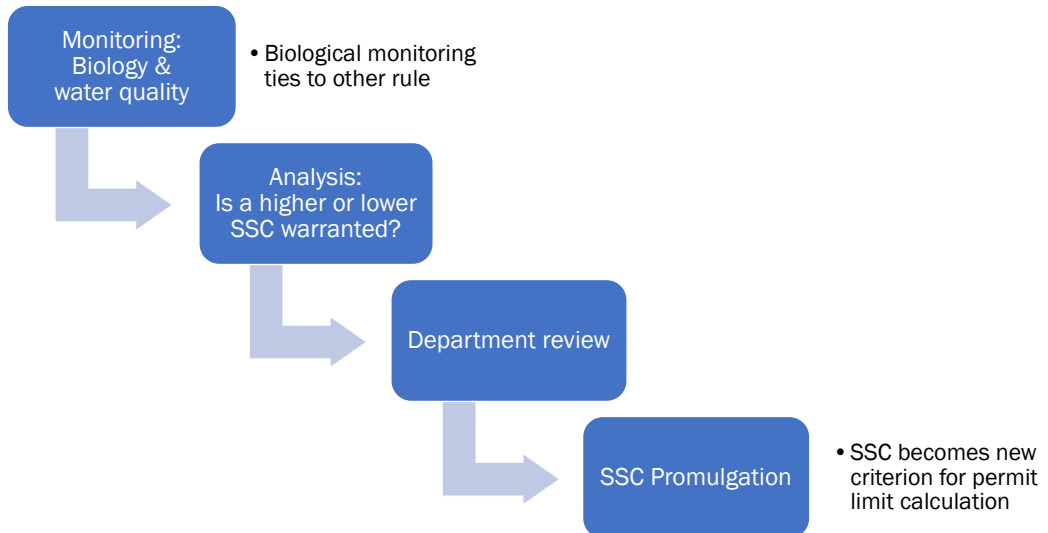
In this rule package:

- Moving some of these methods for assessing biology from guidance into code
- Doesn't affect permits or regulations

Only criteria for chemical/physical pollutants are used for permit limits or TMDLs

If biological community is impacted, but no pollutant is identified, it would go on the IW list for biology but not for any specific pollutant

2. Process for developing site-specific P criteria



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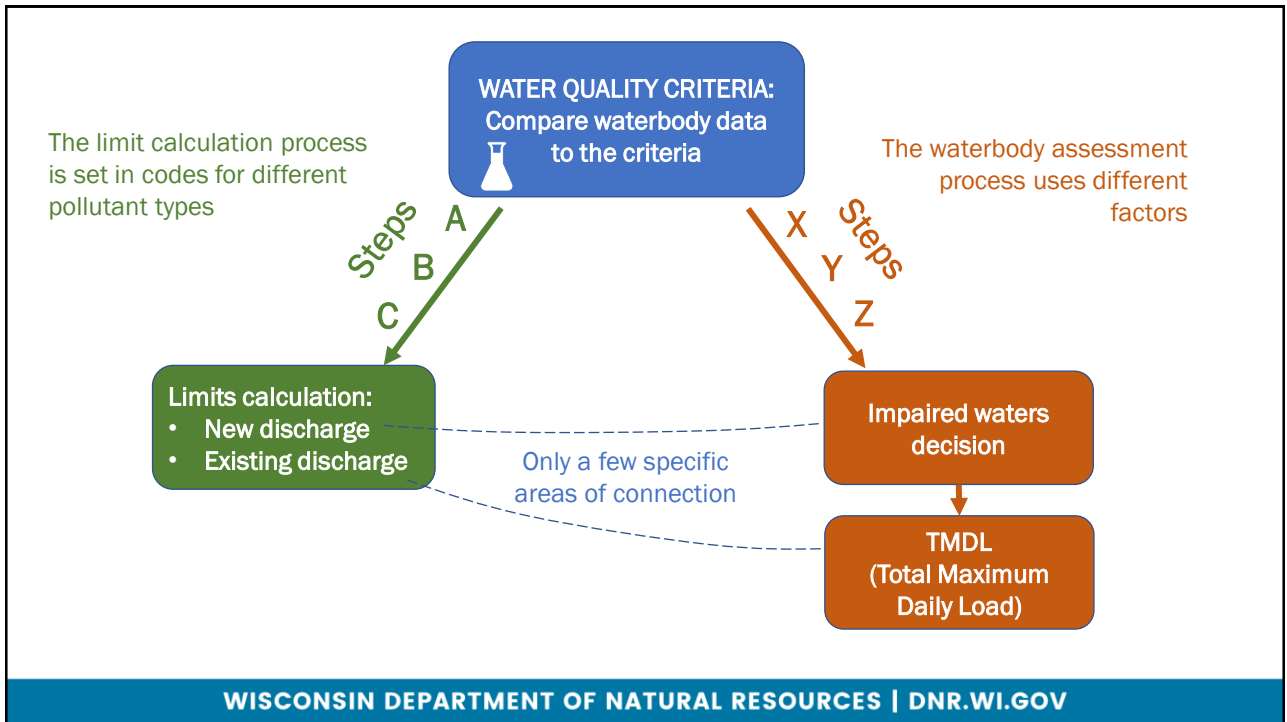
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Permit calculations are separate from the Impaired Waters (IW) list

- Permit limits are either technology-based or water quality-based
 - Technology-based are not related to water quality
 - Water quality-based are derived from criteria or TMDLs
- Impairment listing is a separate process from permit limit calculation, and only affects permits in a few very specific ways

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New dischargers & the IW list

- Federal regs* do not allow a new discharge to an IW unless there is a TMDL and available reserve capacity
- Similar state regs for phosphorus, with a little more flexibility.** A new discharger to an IW must show:
 - There is a TMDL with available reserve capacity
 - OR
 - The new discharge will be offset by other reductions, or
 - The new discharge will improve water quality
 - For a proposed new phosphorus discharge, limits are typically set below criteria to improve water quality

*40 CFR 122.4(i)

** NR 217.13(8)

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Existing Dischargers

Phosphorus mass limits

- If the waterbody is listed as impaired for phosphorus, mass limits will be added to the permit (already included in most permits)

TMDLs→ Possible permit relief

- Because a TMDL accounts for both point source & nonpoint source pollution reductions...
- This can result in less-stringent limits than permittees may otherwise get without a TMDL
- Example: Wisconsin River TMDL: without the TMDL most would've gotten .1 mg/L for middle/lower river, but with the TMDL mass limits average around .3 mg/L

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Recap

- 1) Waterbodies are assessed every 2 years for both chemical/physical pollutants and biology
- 2) Proposed rules move the methods for assessing biology from guidance into code, but don't affect permit limits
- 3) Permit calculations are mostly separate from the IW list. It only affects permits in a few specific ways:
 - New dischargers – some restrictions
 - Existing dischargers – mass limits for phosphorus
 - TMDLs – may provide relief

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CONNECT WITH US

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