

# Wisconsin Consolidated and Listing Methodology (WisCALM) 2024 Change Log

## Water Quality Bureau, Environmental Division Wisconsin Department of Natural Resources March 2023

The majority of updates for this version of WisCALM were in response to new criteria. Surface water thresholds for PFOS and PFOA were published in August 2022 and the Biological Assessment Thresholds rule was published in October 2022. Other updates were for the sake of clarity. A public comment period was held from January 12 to February 24, 2023; a small number of changes were made in response to recommendations.

### Content Updated or Added

- Changed “Healthy Waters” list” to “Waters Attaining Standards” list to avoid confusion with the Healthy Watersheds High Quality Waters (HWHQW) project.
- Changed “Restoration Waters” list to “Waters In Restoration” list for clarity.
- Added section 2.5.4 Biological Threshold Assessments, including new Table 5 to distinguish biological thresholds from water quality criteria.
- Updated reference to monitoring strategy; new version for 2021 – 2025.
- Updated section 3.4.2 title to “WATERS – Waterbody and Assessment Data” to clarify this database also houses waterbody information, like classifications and jurisdiction.
- Updated Table 7 to include cycles 2026 and 2028.
- Section 4.2, updated text of note associated with fIBI assessment packages.
- Slight updates in section 4.4 Lake Classification to change Reservoir code reference.
- In section 4.5.1, changed term “flowages” to “impoundments” to be consistent with definitions.
- In section 4.6 “General” use was replaced with “Wildlife” use (“General” is not a use).
- Updated section 5 title to: General Condition Assessment – Aquatic Life Use.
- Moved footnote 17 about TP calculation excel spreadsheet from end of section 6.3 to section 6.1.4, after the figure showing comparison to the TP criteria. Added spreadsheet link.
- Added subsections under section 6.1:
  - 6.1.5 Applying a Combined Approach: Phosphorus Response Indicators, new Table 15 to show phosphorus ranges for applying response indicators.
  - 6.1.6 Chlorophyll-a (Lakes & Reservoirs)
  - 6.1.7 Macrophytes (aquatic plant metrics) (Lakes & Reservoirs), new Table 16
  - 6.1.8 Oxythermal Habitat (Two-Story Fishery Lakes) (updated language based on public comment)
  - 6.1.9 Benthic Algal Biomass & Diatom Taxa, new Table 17 (Sentence “Algal abundance is strongly influenced by the amount of light that reaches the benthos; canopy needs to be considered in selecting sites representative of stream condition and monitoring purpose”, was added to this section after public comment.)
  - Moved section 6.3 information to 6.1.10 Combined Phosphorus and Response Metric Listings, updated Table 18.
  - 6.1.11 Phosphorus and Biology Listings and updated Table 18 to reflect new TP-Biology listing determinations.
- Moved and edited paragraph on “Biology only” listings from original section 6.3 to 6.2 Biological Metrics.
- Updated language for 6.2.2 Macrophytes (aquatic plant metrics) (Lakes & Reservoirs) to reflect new methods; added table 20 with aquatic plant community thresholds.
- Updated Table 22 to reflect DO criteria for lakes other than Two-Story Fishery and Two-Story Fishery.

- Added section 6.5 Oxythermal Habitat, including Figure 13 that demonstrates oxythermal habitat in a two-story fishery lake during spring and peak summer, and Table 23 with oxygen and temperature requirements by coldwater fish species.\*Numbering updated after public comment period.
- Renumbered the subsequent sub-sections to 6.6 and 6.7. \*Numbering updated again after public comment period.
- Updated Table 26:
  - Added “& Reservoirs” to caption and title.
  - Added “Stratified” after “Deep” because these are used synonymously throughout the document.
  - Updated threshold for Chl-a for Two-Story Fishery Lakes to 8 ug/L, 51 TSI.
  - Updated Aquatic Plant Metrics exceedance frequency and impairment threshold text.
  - Added note “(3) Phosphorus criteria do not apply to lakes with less than 5 acres in surface area (NR 102.06(6)(b)).”
  - Renamed former note 3 to 4.
  - Updated note for temperature impairment thresholds, directing to Table 21.
  - Combined DO and temperature rows for Two-Story Fishery lakes column and added link to new section 6.6.
- Updated Table 27:
  - Added new footnote “(2) Spawning season threshold does not apply to Class III Trout waters.” Renumbered footnotes 2 and 3.
  - Updated note for temperature impairment thresholds, directing to Table 21.
- Added subsections
  - 7.1.1 Chlorophyll-a (Algal blooms) (Lakes, Reservoirs, Impounded Flowing Waters, Large Rivers)
  - 7.1.2 Benthic Algal Biomass (Streams)
- Updated section 7.2.1 Chlorophyll-a (Algal blooms) and added Table 28 to house REC Chl-a thresholds.
- In section 7.3 Pathogens – *E. coli*, under Calculations, instructions for using a Daily Maximum were added.
- Updated Table 30:
  - Added “& Reservoirs” to caption and title.
  - Added “Stratified” after “Deep” because these are used synonymously.
  - Renumbered footnote after deleting former # 2.
- Added Table 31. Recreation impairment thresholds for streams and rivers.
- Added sections 8.2 PFOS and PFOA and 8.5.6 PFOA to incorporate newly approved PFOS and PFOA criteria. Created Table 32. Wisconsin DNR surface water criteria for PFOS and PFOA.
- Renumbered the next sub-sections to 8.3, 8.4, and 8.5.
- After public comment, section 8.3 was updated. It was simplified by removing descriptions of historical listing methods (changes made in 1998, 2001, and 2012) and duplicative sentences on current methods. The sentences, “EPA generally considers that fish consumption advisories (FCAs) demonstrate impairment of CWA section 101(a) “fishable” uses. This applies to fish consumption advisories for all pollutants that constitute potential risks to human health, regardless of the source of the pollutant (2006 EPA IR Memo)” were added to support the use of fish consumption advisories for listing purposes.
- Updated title of section 10 to “Decision Making – To List or Delist Waters”
- Under section 10.5 Pollutant and Observed Effect (Impairment) Combinations:
  - replaced Figure 15 with Table 35; updated assessment to include a phosphorus response indicator
  - replaced Figure 16 with Table 36
- Under 12.1, added “Integrated Reporting Guidance under CWA Sections 303(d), 305(b) and 314 (EPA IR Memos): <https://www.epa.gov/tmdl/integrated-reporting-guidance-under-cwa-sections-303d-305b-and-314>”
- Renumbered 12.7 to 12.6 as the former 12.6 was removed.
- Added Appendix E to show parameters IDs for parameters used in assessment packages.

## **Content Removed**

- Figure 4, a screenshot of the SWIMS database login page, because this is the former landing page and a new one will be in place by the time WisCALM is finalized.
- In section headers for each use the words “Impairment Condition” was removed because the original formatting of having “Impairment” and “General” sections for each Designated Use is no longer being used.
- Section 4.2, removal of sentences about separate documents for assessment packages.
- Footnote 10 on title 6.1 Total Phosphorus; referenced a document in the reference section, partially relevant. Citing MN material for WI criteria belongs in WI’s phosphorus criteria technical support document.
- Footnote 13 about low TMDL priority for 5P; this information is elsewhere.
- Footnotes 14 and 15 about where in Two-Story Fishery lakes the temperature data should be taken. This is covered in the new section 6.6 Oxythermal Habitat.
- Table 26 footnotes 4 and 7; unnecessary with new methods.
- Table 30 footnote 2; these thresholds are codified.
- Text “- Lakes” was removed from title of section 7.2 because the thresholds apply to IFWs also.
- Section 12.6 Assessment Package Documentation; this is replaced by new Appendix E.

## **Formatting**

- Updated fonts, cover, and most colors to align with the 2021 DNR Style Guide.
- Reduced the amount of caption being shown to clean up Figures and Tables TOCs.
- Removed noted typos.