Response to Comments on the Draft 2022 Wisconsin Consolidated Assessment and Listing Methodology (WisCALM)

January 2021

Water Evaluation Section, Water Quality Bureau
Environmental Management Division

A public comment period was held from October 12 to November 20, 2020. Comments were received from 7 separate entities. Comments have been copied verbatim, but in some cases truncated to focus specifically on the recommendations. Click here for a full copy of all comments.

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Response to Paul La Liberte of Wisconsin's Green Fire – Voices for Conservation

"These comments from Wisconsin's Green Fire – Voices for Conservation are specific to the Viewing Bucket Method for Estimating Algal Abundance in Wadeable Streams v3.3 in WisCALM. The Viewing Bucket method of WisCALM provides a site-specific assessment of stream primary production. While the method appropriately specifies study conduct, it does not address the importance of site selection. The ability of flowing water to support primary production is dependent on several things in addition to nutrients in the water column. Suitable substrate is important to sustain periphytic growth as is tree canopy sufficiently open to allow sunlight to reach the stream. Streams are often diverse systems with varying combinations of substrate and canopy. Within a study area a stream could have 50% suitable substrate for periphytic growth. This could be small individual patches or larger reaches. Likewise the reach could have 50% of stream surface shaded by tree canopy. Given this situation it is possible to select study sites to either selectively show impact (suitable substrate with open canopy) or selectively fail to show impact (unsuitable substrate or with heavy tree canopy).

The use of the Viewing Bucket Protocol as the basis for a less stringent site specific criteria for phosphorus is a very important application. Bias in site selection during these investigations must be avoided. Additional detail should be provided in the Viewing Bucket Protocol to prevent intentional or unintentional biased results from

unrepresentative site selection. Suggested language:

"Study sites should be selected to represent the canopy and substrate types prevalent in the study area. Comparisons of individual sites to assess biological impact of nutrient levels should have comparable canopy and substrate composition"

and

"Given the importance of the habitat components of canopy and substrate in determining the biological results of the Viewing Bucket method, data on these parameters should be collected at every transect in accordance with the methods specified in the Guidelines for Evaluating habitat in Wadable Streams section of the WisCALM document.""

A link to the current viewing bucket methods was included in section 12.3 Monitoring Strategies, Protocols, and Standard Operating Procedures, but the methods are not adopted for assessments in the draft 2022 version of WisCALM. The viewing bucket method was part of a biological criteria rule package that has not yet been passed through the Wisconsin legislature. These comments will be considered when finalizing the updated rule package.

"Developments in the field of quantifying solar radiation (and therefore canopy cover for streams) should be considered for future versions of Guidelines for Evaluating habitat in Wadable Streams section of the WisCALM document. An example can be found at https://www.solarpathfinder.com"

This concept and supporting research appear to have scientific merit and will be considered for future iterations of the Monitoring Strategy. The department will need time to develop appropriate protocols and metrics. Thank you for providing this information.

"We encourage DNR to begin gathering biology and chemistry data that will be useful for environmental condition assessments in backwater areas. The goal would be to establish the relationship between free floating plant (FFP) density and environmental conditions including nutrient and oxygen concentrations. This could include routine sampling in riverine backwaters and collection of additional environmental data during lake point intercept studies that encounter FFP"

Data collection of these parameters will be considered in our monitoring planning for the next two years.

Response to John Sullivan, Dave Marshall, and Jim Baumann of Wisconsin's Green Fire – Voices for Conservation

"The Department needs to consider the impacts of nuisance growths of filamentous algae and duckweeds in the assessment of water quality use attainment. Fortunately, procedures have been developed and implemented to facilitate this process (Sullivan 2008, Marshall 2013 and Houser et al. 2014). However, specific impairment thresholds using FFP water quality indicators have not been adopted by the Department. We have drafted methodologies for identifying nutrient-related impairment problems using FFPs as a response factor (see table below). A tired approach is recommended that would consider differences in surface water and use classification. We would urge the Department to consider these recommendations for Wisconsin's Consolidated Assessment and Listing Methodology for Clean Water Act Reporting."

This concept and methodology appear to have scientific merit. The Department will need some time to further consult with you and other experts to develop consensus on appropriate protocols and metrics. This topic will be considered for future iterations of WisCALM as there is unfortunately not enough time to finalize appropriate protocols and metrics for the 2022 version. Thank you for providing this information.

Response to Dave Marshall, Retired DNR and member of Wisconsin's GreenFire and Friends of the Lower Wisconsin Riverway (FLOW) Science Committee

"For perhaps different reasons, the demise of both Lower Wisconsin River oxbow spring lakes and Mississippi River sloughs is largely the result of excessive floating mats of duckweeds and filamentous algae. As part of the State Wildlife Grant Program surveys of floodplain lakes that spanned from Pepin County across the state to Kenosha County, I reported to DNR that floodplain lakes appear to be the most degraded and threatened class of lakes in Wisconsin. Floodplain aggradation (Knox 2006) and nutrient loading have contributed to this problem. WisCalm 2022, as proposed, ignores this reality and should be revised to include duckweeds/filamentous algae mat criteria."

This concept and supporting research appear to have scientific merit and will be considered for future iterations of WisCALM. The department will need time to develop appropriate protocols and metrics. Thank you for providing this information.

Response to Carrie Coy, Great Lakes Policy Specialist and Douglas Craven, Natural Resources Department Director, of the Little Traverse Bay Bands of Odawa Indians

"To allow for adequate review and substantive comments in a timely fashion, LTBB requests the Healthy and Impaired Waters Lists report waters based on large watersheds, such as which (if any) Great Lake the waters flow into. A mapping tool would also be helpful to visualize and locate the proposed healthy or impaired waters. LTBB is primarily concerned about the contaminants reaching Lake Michigan, so lists based on large watersheds and mapping would assist in our efforts to estimate the loads flowing into Lake Michigan."

There are two DNR data visualization tools that will have updated information when the draft 2022 list is released. The Surface Water Data Viewer (SWDV) has data layers for Assessments & Impairments and Watershed Boundaries, including the Great Lakes and Mississippi River Basins (https://dnr.wisconsin.gov/topic/SurfaceWater/swdv). The Water Condition Viewer is being updated, but this viewer holds data layers for individual parameter assessments at specific stations (https://dnr.wisconsin.gov/topic/SurfaceWater/wcv).

An EPA tool available is the 'How's My Waterway' app (https://www.epa.gov/waterdata/hows-my-waterway). This tool allows you to look at the current list and the available monitoring data.

"LTBB is aware that the Impaired Waters List does not keep track of all of the contaminated waters. For example, if waters have mercury levels within the statewide advisory levels, those waters would be removed from the List. Is there a list which encompasses all currently impaired waters that do not meet threshold levels, even if they fall under general statewide advisories or have approved TMDL/restoration plans? This type of list would be very helpful when considering cumulative impacts on Lake Michigan waters and fish."

Wisconsin's Restoration Waters List houses all waters with approved TMDLs or alternative restoration plans. For Wisconsin's mercury fish tissue testing, if a waterbody's fish tissue samples exceed the mercury threshold it is listed with a specific fish consumption advisory for mercury and is also listed as impaired for mercury on the impaired waters list. Waters are *not* considered impaired where either (a) no fish tissue

data has been sampled, or (b) fish tissue has been sampled but it is below mercury thresholds, although both of these cases are covered under a general statewide advisory simply as a precautionary measure. Waters with fish tissue samples that are meeting the mercury threshold are marked as meeting their Fish Consumption use. Individual fish tissue reports going back to 2011 were used to do these mercury assessments, but at this time we do not have a comprehensive, consolidated list of all fish tissue testing that did not result in a specific consumption advisory. You can, however, look up fish tissue information for individual waterbodies using EPA's How's My Waterway tool (https://www.epa.gov/waterdata/hows-my-waterway).

Fish tissue samples:	**Exceed mercury threshold**	**Attain mercury threshold**	**No fish tissue samples available**
Fish Advisory:	Specific Fish Consumption Advisory	Statewide Advisory (does not indicate an exceedance of any mercury thresholds)	
Status on Impaired Waters List:	Impaired (not attaining Fish Consumption use)	Not Impaired (attaining Fish Consumption use)	Not Impaired (no data)

"LTBB requests that the surface water assessment guidance provide clarity on how primarily point sources are identified if the source does not have and/or has never had a permit for discharge, such as a WPDES permit. LTBB requests the report consider new industries or permitting changes as causes for impairment as well."

"Similarly, LTBB requests the exceedance frequency section mention that reasonable effort is put into determining and documenting what caused the exceedance, for the purpose of preventing further exceedances. This effort is meant to rectify the situation rather than waiting to see if further exceedances occur to improve water quality as soon as possible."

New industries or permitting changes are not considered causes of impairment because permits limit the amount of pollution in the discharge to meet the state's water quality criteria. Unpermitted point sources would be in violation of state and federal law, and would be handled through the stepped enforcement process. When a new impairment listing is made the potential sources are identified, as outlined in draft 2022 WisCALM section 10.4. At the listing stage, confirming and documenting sources is not feasible. The work of identifying and documenting sources is done during development of a restoration plan, including watershed plans and TMDLs. Watershed planning occurs on a rotating basis (https://dnr.wisconsin.gov/topic/Nonpoint/9keyElement). Prioritization of TMDL development can be found in Wisconsin's TMDL Prioritization Framework.

"LTBB is aware that the appendix states that a do not eat advisory is triggered when PFOS concentrations in fish are 700 ng/g or greater. A do not eat advisory for fish in Michigan is triggered at 300 ng/g PFOS. LTBB would like to know how the 700 ng/g level was determined and which data Wisconsin agencies considered to reach that level. Also in the PFOS fish consumption advisory section, the concentrations overlap between unlimited consumption, 1 meal per week, and 1 meal per month categories. LTBB would like to know how consumption guidance is determined since the concentration level in the fish does not appear to be the only factor."

At the beginning of 2020, WDNR and Wisconsin Department of Health Services (WDHS) revised their PFOS meal threshold values, adopting those developed by the Great Lakes Consortium for Fish Consumption Advisories, which WDNR and WDHS are contributing members of. These values are shown in the table below. The Consortium best practices document outlining the basis for these meal thresholds can be found at:
health.state.mn.us/communities/environment/fish/docs/consortium/bestpracticepfos.pdf

PFOS in Fish (ng/g)	Meal Frequency
≤ 10	Unrestricted
> 10-50	1 meal/week
> 50-200	1 meal/month
> 200	DO NOT EAT

These values have been updated in Appendix C. The overlapping concentrations in the previous text was due to a typo.

Response to Julie Kinzelman, Laboratory Division Director, City of Racine Public Health Department

"The draft program guidance states that this replaces the previous fecal coliform standard. Fecal coliforms have not been used to regulate Great Lakes beaches for decades. Agencies responsible for regulatory monitoring of Great Lakes beaches have defaulted to an E. coli BAV (e.g. threshold limit of 235 MPN/100 ml in a single sample) as presented in the US EPA 2012 Recreational Water Quality Criteria and subsequent updates. How will the WI DNR reconcile this approach with the GM and STV threshold values stated herein and will beach managers be required to track these additional threshold values for beneficial use attainment? High priority beaches may monitor up to seven days per week during the swimming season vs. the 11 days stated in the program guidance. More frequent testing is likely to result in a single exceedance of the GM value within the specified 90-day period as a result of, for example, single extreme precipitation events. What are the ramifications for sites that have water quality that meets the BAV 95% of the time or greater? Will they be placed on the impaired waters list for a single exceedance of the GM value within the 90-day period? Please provide clarification within the program guidance as this may be confusing."

Based on US EPA's 2012 Recreational Water Quality Criteria (Table 1, page 6; https://www.epa.gov/sites/production/files/2015-10/documents/rwqc2012.pdf), WDNR is using Geometric Mean (GM) and Statistical Threshold Value (STV) criteria specifically for impairment assessments, while the Beach Action Value (BAV) will continue to be used to determine public health advisories and beach closures as part the BEACH Act monitoring of Great Lakes beaches. BAV comparisons require 1 sample, while GM and STV comparisons require, at minimum, 11 samples for STV assessment and 5 samples for GM assessment. Any additional samples within the assessment period will be used because more samples are likely to improve the accuracy of the assessment. For comparison to the STV, 10% of values within a 90-day period can exceed, which accounts for natural variation. For the GM criterion all samples within a 90-day period are used to calculate a geometric mean for comparison, which will decrease the influence of a single extreme value. A single sample exceedance of the GM criterion would likely not cause an impairment due to the other samples in the mean. In previous beach assessments of the GM using a 30-day period with 5 years of data, beaches that exceeded the BAV as much as 30% of the season did not exceed the 126 cfu/100 mL GM threshold. All impairment determinations are reviewed by a regional biologist and the beach program manager, so a listing based on a single exceedance would be evaluated for validity before being placed on the impaired waters list. The biologists and beach program manager make sure that the designation makes sense in context with the setting. The number of exceedances of the GM or STV and frequency of the exceedance of the BAV could be considered in a weight of evidence approach in best professional judgement (BPJ). Impaired waters designations also go out for public comment, which would allow the local beach manager to provide any additional context to impaired waters decisions.

The assessment criteria and updated methods will have no impact on the work of beach managers; no extra data collection will be required, and they will not need to track these thresholds for beneficial use attainment.

Response to Dona Keclik, USEPA Region 5

1. *"Section 6.4 – Temperature page 38 discusses the Margin of Error in the probe. How did the state determine what the margin of error value should be?"*

   A review of all temperature probe types used by DNR staff, volunteers, and partners was done and the margin of error of each was determined. The tools with the largest margins of error were used as a baseline for the margin of error value. WDNR is in the process of reviewing the temperature probes it uses and will potentially be switching to a type that has a lower margin of error. If this switch occurs the temperature margin of error will be reviewed. Staff involved with the temperature probe review were part of this decision-making process.

2. *"Section 7.3 Pathogens – E. coli since the state is changing to E. coli will the state retain the fecal listings if there is not enough E. coli data at this point since the approval of the 2020 E. coli standard. Would these waters remain impaired for fecal or be changed to E. coli until there is enough evidence as discussed in the delisting for E. coli. (pages 45-46)? Has the state been collecting both prior to the approval of the new standard?"*

   The fecal coliform listings will remain until there is sufficient *E. coli* data for a delisting; the pollutant will remain fecal coliform. In most locations, fecal coliform and *E. coli* were not collected together.

3. *"Section 8.1 on page 47 refers to the WHO guidelines, but EPA's recommended criteria document 2016 EPA recommended recreational criteria for microcystins and cylindrospermopsin provides a more recent review of the science and lower threshold values of 8 ug/L for microcystins (and 15 ug/L for cylindrospermopsin, which is not a part of WI's methodology at all). The document also provides information on duration and frequency that could be used to inform assessments of attainment in lieu of or in combination with professional judgment."*

   WisCALM's Section 8.1 on algal toxin thresholds is only advisory in nature, as WDNR does not have algal toxin criteria in place at this time. In response to this comment, Section 8.1 was updated to replace the older World Health Organization recommendations with EPA's 2019 recommendations. It now specifies that WDNR recommends use of the new thresholds for local swimming advisories and for waterbody assessment as needed, using Best Professional Judgement evaluation of Public Health and Welfare Use.

4. Referring to language on page 57 under EPA Approved TMDL or Alternative Restoration Plan and on page 60 in section 11.2 Alternative Restoration Plans: "*The state needs to clarify that they are referring to two different categories both which are identified as restoration plans. The first is referring to waters that are in the approved EPA 4B category waters with plans that are enforceable where the other is the EPA category 5 alt or (5 alternative) which is also reviewed and agreed upon that they may be placed in 5 alt. Calling both alternative restoration plans can be confusing. It may be helpful to include 4B and 5 alt in the definitions for clarity."*

   In both sections (10.6.3 and 11.2) the language has been clarified to distinguish between the 4B and 5W (5-*alt*) alternative plans. WDNR plans that qualify for these subcategories were clarified in these sections and in all tables with 4B and 5W definitions. A subsection on Adaptive Management Plans was added to define this plan type.

5. *"The Environmental Accountability Projects on page 61 are still listed in category 5 correct?"*

   Projects Wisconsin previously defined as Environmental Accountability Projects (EAPs) have listings that are all in Category 5. Any new EAPs would be reviewed to determine suitability for 5-*alt* (5W) or 4B categorization.

Response to John Thomas, President and Bill Fristad, member of the Lake Mallalieu Association

"Water bodies can be described as ORW and ERW (Outstanding and Exceptional Resource Waters). How is it possible to learn if a particular lake has been given one of these designations, e.g. Lake Mallalieu in St. Croix County? Should this be mentioned in this section?" (Draft Guidance PDF page 10)

> A list of ORW and ERW waters by county can be found on this webpage: Current ORW and ERW waters can be found here: https://dnr.wisconsin.gov/topic/SurfaceWater/orwerw.html. This link has been added to the ORW and ERW callout box in section 1.3.

"Similar to the question above, how does one learn which of the "five condition categories" a particular lake has been given or not yet been given?" (Draft Guidance PDF page 12)

> The condition category assigned to a water can be found by reviewing the most recent Water Condition Lists available on DNR's website: https://dnr.wisconsin.gov/topic/SurfaceWater/ConditionLists.html. A small callout box has been added to section 2.3 to direct readers to this webpage.

"Some chemical parameters to determine the general condition of a water body are listed as temperature, total phosphorous (TP) and chloride. As part of the DNR Citizen Lake Monitoring (CLM) Program temperature and TP are monitored, but not chloride. Should chloride be added to the monthly CLM monitoring schedule to allow more of the relevant data to be available to determine a lake's general condition since the other data is being regularly gathered and submitted in SWIMS?" (Draft Guidance PDF page 14)

> Chloride contamination due to salting roads and pavement is a concern, particularly for waterbodies close to roads. This is an interesting suggestion that could be examined further. Protocols and training materials for CLMN would need to be developed. Unfortunately, adding chloride monitoring to the suite of parameters under CLMN would have to be balanced by reducing the number of samples taken in other areas (e.g., fewer sites for phosphorus and chlorophyll *a* monitoring). Thus, the tradeoff needs further consideration. Even though chloride is not currently offered by CLMN, individuals can collect samples for chloride analysis on their own. Individuals can work with the State Laboratory of Hygiene or another accredited lab to obtain and analyze chloride samples. There are also other monitoring programs for volunteers to join. The Izaak Walton League of America has a Winter Salt Watch program that one could join.

"Citizen Based Monitoring Programs" are mentioned in the last paragraph of this page. Does this include the WDNR-CLM program? If so, the language could be changed to explicitly state this. This data does meet the Quality Assurance criteria and is entered into SWIMS, as mentioned on page 18." (Draft Guidance PDF page 17)

> Citizen Based Monitoring Programs does include the Citizen Lake Monitoring Network. The following language was added to the end of the first sentence in that paragraph: "including the Citizen Lake Monitoring Network (CLMN) and Water Action Volunteers (WAV).".

"There is no specific reference to sediment build-up in a lake being a factor in overall lake health assessment. Sediment is mentioned on page 46 (Section 6.7) as a possible "other" factor to consider. On page 54 (section 8.3) contaminated sediment is considered as a possible factor, but simply the volume of sediment buildup is not specifically mentioned. Sediment covering vegetation and the lake bottom has a strong effect on vegetation growth and overall enjoyment (e.g. swimming and boating). This is obviously an issue that does affect Lake Mallalieu, as it is a drainage lake and a dam upstream has been removed and rebuilt in the past several years. This construction and breaching events have brought large amounts of sediment into Lake Mallalieu. Should sediment buildup be considered for watershed/reservoir lakes?"

Sediment covering sensitive habitat in lakes is an issue not currently addressed by WisCALM, but could be part of the regional biologist's best professional judgment evaluation of the waterbody. This topic has scientific merit and will be considered for future iterations of WisCALM. The department will need time to develop appropriate protocols and metrics. Thank you for providing this information.

"Another suggestion for watershed/reservoir lakes is that the water quality of the river that feeds the lake should be monitored to help determine if the water quality in the lake is totally, partially, or not at all controlled by the incoming feed water. For example, is the high phosphorous level in Lake Mallalieu totally due to the incoming water from the Willow River or is it more due to runoff from lakeside homes and cities. Stream measurements are made on the Willow River (e.g. temp., D.O., flow, clarity), but measure the phosphorous or nitrogen levels are not made."

This is a good suggestion but is addressed after the lake is listed as impaired. At the listing stage confirming and documenting sources is not feasible. The work of identifying and documenting sources is done during development of a restoration plan, including watershed plans and TMDLs.

Response to Scott Manley, Executive Vice President, Government Affairs, Wisconsin Manufactures & Commerce and Scott Suder, President, Wisconsin Paper Council

"*Thus, DNR specifically notes that it is using, for example, macroinvertebrate and fish indices of biotic integrity (Sections 5.2 and 6.2) and chlorophyll concentration (Section 6.2) to make impairment decisions, in the absence of a promulgated water quality criteria. This is unlawful because, as noted above, standards are required to be promulgated as rules. Moreover, such decisions have significant regulatory consequences. Once identified as impaired, DNR proposes to include those waters on an "impaired waters" list pursuant to section 303(d) of the Clean Water Act. Once listed, states must develop "Total Maximum Daily Loads" (TMDL) for each pollutant/waterbody combination on the list. This TMDL represents the maximum amount of a pollutant that can occur in a waterbody and still meet the applicable water quality standards. The portion attributed to point source dischargers ultimately results in discharge limits in WPDES permits."*

Listing a waterbody as impaired based on the macroinvertebrate and fish indices of biotic integrity or based on elevated chlorophyll-a levels does not have regulatory consequences. Also, listing a waterbody based only on a biological impairment or chlorophyll impairment does not require development of a TMDL and does not impact WPDES permits. Put another way, listing a waterbody as impaired for biotic integrity or chlorophyll a is not the equivalent of listing a waterbody as impaired for exceeding a numeric pollutant criterion/standard. As stated in the comment above, a TMDL is done for a pollutant, not an observed impairment. If a waterbody is listed as impaired for biotic integrity or for chlorophyll-a levels and is also listed as impaired for a pollutant because the promulgated criterion for the pollutant is exceeded, then in that case a TMDL is developed based on achieving the promulgated criterion for the pollutant. Achieving the TMDL pollutant concentration (e.g. phosphorus) will hopefully also improve chlorophyll-a levels and the biological health of a waterbody, but those are not the basis for permit limitations, nor does achievement of TMDL pollutant goals guarantee that the biological impairment will be eliminated. There could be other non-pollutant causes to the biological impairment.

In a case where a waterbody is listed as impaired for chlorophyll-a levels or biotic integrity but a promulgated criterion for a pollutant (e.g. phosphorus) is not also exceeded, then the department must determine the cause of the biotic or chlorophyll-a impairment. In many cases, other causes of impairment besides pollutants may be identified, such as the need for habitat restoration, erosion control, or management of invasive species. If after further studies are conducted it is determined that a pollutant is the cause of the chlorophyll-a or biotic impairment but the promulgated criterion is achieved, the

department must first promulgate by rule a more protective site specific criterion before a TMDL is implemented and there are potential regulatory consequences.

While there are not currently numeric criteria for these metrics, a healthy biotic community is necessary for the aquatic life designated uses in chapters NR 102 and 104. High chlorophyll-a levels negatively impact designated recreational and public health uses in these chapters as well. Section NR 104.01(1) & (2) require that designated uses be achieved. There are also promulgated narrative criteria to protect aquatic life and public rights in waters in s. 102.04(1) Wis. Adm. Code.

Section 281.13, Wis. Stats., grants the department authority to research and evaluate the quality and condition of the state's natural water sources. In order to determine if animal, plant, or aquatic life are impacted a measure of biological health is required. The metrics of IBIs and chlorophyll are based on research using Wisconsin data and regional equivalents.

In summary, Biological or chlorophyll-a listings where the pollutant is unknown have no impact on permits unless or until a pollutant is identified as the cause of the biological impairment and either the promulgated pollutant criterion is also exceeded, or a site-specific criterion is promulgated. The listings are also subject to public comment and change every couple of years. Finally, as the commenter is aware, the department has proposed a rule that establishes biocriteria and well as numeric chlorophyll-a criteria, but the proposed rule was opposed by the commenter during the legislative review process.

"*In addition, the WisCALM Guidance also discusses exceedance frequencies on numeric water quality criteria that are allowed under DNR administrative rules. The Guidance goes on to indicate: "In addition, allowable exceedance frequencies for some water quality or biological thresholds that are not included in Wis. Adm. Code are provided in the Lakes and Rivers/Streams chapters." Again, DNR must go through rulemaking to establish such thresholds."*

In order to determine whether numeric criteria of any kind are being met in a surface water, it is necessary to identify the appropriate exceedance frequencies (the number or percent of criteria exceedances that are allowable over a given time frame). For certain pollutants, Wis. Admin. Code contains clear numeric criteria thresholds but lacks explicitly-stated exceedance frequencies for listing purposes. The Department is committed to including exceedance frequencies each time a new criterion is developed or an existing criterion is updated in the Code. Until such time, to fill that gap, exceedance frequencies for these parameters are contained in guidance. By the strictest interpretation, if no exceedance frequency is recommended in WisCALM, then no exceedances are allowed at any point in time, and any one time exceedance would require listing. However, DNR and EPA recognize that some level of exceedance is biologically and ecologically reasonable to allow before concluding that a system is impaired. DNR has worked with EPA through the WisCALM guidance process to document protocols for parameters in which some level of exceedance is reasonable. The WisCALM guidance is subject to change and public comment every couple of years.