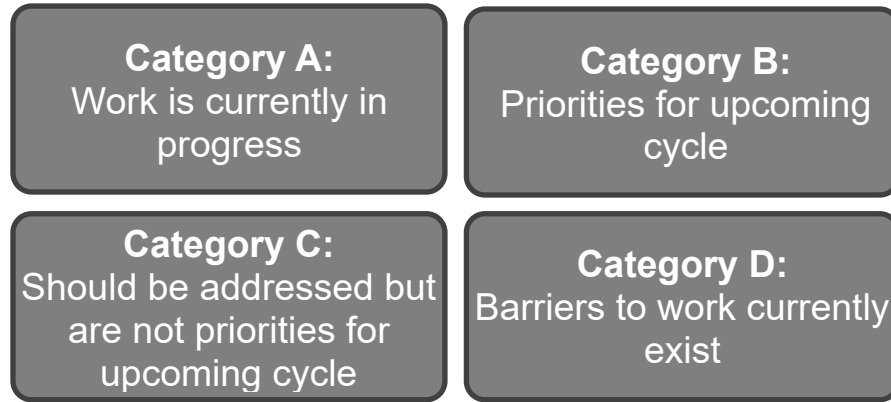


# **2021-2023 Triennial Standards Review**

## **Topic Prioritization Categories**



## **Please help us prioritize the topics below!**

Using the topic ranking form, please rank your top 5 priorities from the topics listed below. Detailed descriptions of the topics can be found on pages 2–5. Your input will be used to put the topics into prioritization Categories B, C, or D. Topics that are in Category A (already in progress) will not be ranked but are listed on pages 12–15.

- Aluminum Criteria Development
- Ammonia Criteria Revision
- Aquatic Life Criteria Revision/Development
- Bifenthrin Criteria Development
- Chlorantraniliprole Criteria Development
- Copper Criteria Revision
- Neonicotinoid Insecticides Criteria Development
- Nitrate/Nitrogen Criteria Development
- Outstanding/Exceptional Resource Waters Process Revision
- PFAS Compounds (other than PFOS and PFOA) Criteria Development
- Pharmaceuticals Criteria Development
- Sulfate Criteria Development
- Total Suspended Solids Criteria Development
- Wild Rice Designated Use Development

**We will also be taking comments on new technologies related to certain types of variances. These variances are described on pages 6–11 of this document.**

### Topic Descriptions

#### **Topics to be ranked\* into Category B (priorities for upcoming 3 years), Category C (not priorities for upcoming 3 years), or Category D (barriers to work exist)**

*\*Topics assigned to Category A are already in progress and will not be ranked. They are listed on pages 12–15 of this document.*

##### Aluminum Criteria Development

In December 2018, the EPA published national recommended ambient water quality criteria for the protection of aquatic life from the toxic effects of aluminum. The 2018 criteria incorporate more recent toxicity studies conducted since the previous recommended criteria published in 1988. The EPA's 2018 recommended criteria are equation-based and account for the effects of pH, hardness and dissolved organic carbon on aluminum toxicity. Wisconsin's water quality standards currently do not include aluminum criteria to protect aquatic life.

##### Ammonia Criteria Revision

In August 2013, the EPA published national recommended ambient water quality criteria for the protection of aquatic life from the toxic effects of ammonia, a constituent of nitrogen pollution. Federal acute and chronic criteria were revised to consider the sensitivity of mussels to ammonia. States are expected to revise their criteria accordingly in order to be protective of all aquatic organisms. Wisconsin has widespread occurrence of unionid mussels that are sensitive to ammonia.

##### Aquatic Life Criteria Revision/Development

Develop water quality criteria for the protection of aquatic life for substances for which the EPA has developed or revised criteria based on new toxicological data but for which there is currently no Wisconsin standard. Topics that could be considered include acrolein, carbaryl, diazinon, nonylphenol and tributyltin.

Revise existing Wisconsin water quality criteria for the protection of aquatic life for substances for which the EPA has new toxicological data. Topics that could be considered include cadmium and selenium.

##### Bifenthrin Criteria Development

Recent research has suggested that the pesticide bifenthrin is contributing to reduced macroinvertebrate numbers and species richness in Midwestern waters. For example, the Mississippi River is experiencing a decline in the population of burrowing mayflies, which has important implications for ecosystem health due to their importance as a food source for fish and wildlife. Bifenthrin use continues to increase in Wisconsin and the Midwest; thus, the DNR could consider whether it is possible to develop surface water criteria for bifenthrin.

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### Chlorantraniliprole Criteria Development

Chlorantraniliprole is an insecticide used on agricultural crops, turf grass and in lawn and landscape products and applications. In the EPA's Office of Pesticide Programs' ecological risk assessment for chlorantraniliprole, risks to freshwater invertebrates from chronic exposure were identified. Chlorantraniliprole has been detected in numerous groundwater samples in sandy irrigated agricultural areas and in stream water samples collected by DATCP; thus the DNR could consider whether it is possible to develop surface water criteria for chlorantraniliprole.

### Copper Criteria Revision

The EPA recommends that states use the Biotic Ligand Model (BLM) for calculating site-specific criteria for copper. The BLM characterizes the impacts of local water conditions on copper bioavailability by incorporating additional water conditions (e.g., temperature, pH, DOC, alkalinity) as inputs within the model and mechanistically modeling their impacts on bioavailability. A limited pilot study of this model has been done using Wisconsin data, but further study would likely be needed to determine the feasibility of using this model to calculate criteria, given its extensive data requirements. New methods for combining multiple linear regressions with the BLM (similar to regressions used with aluminum) have recently become available and may warrant further investigation.

### Neonicotinoid Insecticides Criteria Development

Neonicotinoid insecticides like clothianidin, imidacloprid and thiamethoxam are used extensively in Wisconsin agriculture. Their use has been implicated in global reductions in pollinator populations and they are thought to be similarly toxic to aquatic invertebrates. The EPA's Office of Pesticide Programs (OPP) released revised aquatic life benchmarks for aquatic invertebrates for clothianidin and imidacloprid in 2016 and thiamethoxam in 2017. Similarly, Wisconsin's DHS released recommended groundwater standards for all three neonicotinoids in 2019.

Although aquatic life benchmarks are not water quality criteria, the data contained within OPP's risk assessments undergo rigorous peer-review and can be used to develop water quality criteria for the protection of aquatic life. Given that neonicotinoids have been detected with increasing frequency in Wisconsin groundwater and surface water, particularly in the Central Sands region of the state, the DATCP has recommended that the DNR review OPP's aquatic life benchmark data to determine whether it is possible to develop surface water criteria.

### Nitrate/Nitrogen Criteria Development

The EPA water quality criteria guidance requires all states to develop nitrogen criteria as well as phosphorus criteria. Currently, the DNR regulates nitrogen only as a toxic substance through implementation of surface water quality criteria for ammonia. However, nitrogen also acts as a nutrient for many plant species and can contribute to

## 2021-2023 Triennial Standards Review - Topic Descriptions

nuisance plant and algal growth in surface waters. The result of these conditions may be depletions of dissolved oxygen or extreme pH conditions which are not supportive of a balanced fish and aquatic life community.

In summer 2020, the EPA released draft tools to assist states in developing lake nutrient criteria, including nitrogen criteria, to protect both human health and aquatic life. Nitrogen becomes nitrate in the environment and in that form can pose public health risks, mainly through drinking water consumption. Nitrogen also contributes to harmful algal blooms that can release algal toxins, which can pose a health risk through recreational exposure. There are some studies indicating that nitrate can be harmful or toxic to aquatic life.

### Outstanding/Exceptional Resource Waters Process Revision

Federal law requires states to identify and protect “High Quality Waters.” In Wisconsin, these waters are referred to as Outstanding or Exceptional Resource Waters (ORW/ERWs) and are enumerated in sections NR 102.10 and NR 102.11, respectively. Waterbodies that are assigned the special ORW/ERW designation have additional protections afforded them that are not automatically provided for waterbodies not given these designations. The DNR has not standardized the ORW/ERW designation process. The department’s existing guidance on classifying waters as ORW/ERW is outdated, and these methods could be updated so that the process is clear and based on current scientific understanding. However, the DNR was not able to begin this process during previous cycles due to other workload and priorities.

### PFAS Compounds (other than PFOS and PFOA) Criteria Development

Per- and polyfluoroalkyl substances (PFAS) are manmade substances that have been used to repel oil and water in a variety of industrial and consumer products and are also contained in firefighting foams. PFAS are extremely persistent in the environment and bioaccumulate in humans and wildlife. The DNR is currently in the process of developing surface water quality standards for PFOS and PFOA for the protection of human health. However, PFOS and PFOA are only two of many PFAS compounds, so in 2019 the DNR requested that Wisconsin’s DHS determine whether there is enough toxicity data to recommend groundwater standards for 34 additional PFAS compounds. The DNR could explore development of surface water standards for those PFAS compounds that the DHS determines there is enough toxicity data to recommend a groundwater standard.

### Pharmaceuticals Criteria Development

Pharmaceutical byproducts and personal care products (PCPPs) have been found throughout the Great Lakes. Existing research illustrates that these products are a cause for concern as they have been linked to several problems such as intersex fish. In an effort to be proactive and protective of humans and wildlife, the DNR could consider developing water quality standards for pharmaceuticals and their byproducts.

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### Sulfate Criteria Development

Wild rice (*Zizania palustris*) is a critically important natural resource, particularly to the Native American Tribes of Wisconsin who depend on it for subsistence and whose lifeway and history are inseparable from the traditions of harvesting and consuming this food. It is also a key food source for wildlife. Wild rice seedling emergence, seedling survival, biomass, growth, viable seed production, and seed mass have been shown to be negatively correlated with sulfate concentrations in water. In order to support the preservation and restoration of wild rice in Wisconsin, the DNR could review available toxicity data and develop water quality criteria for sulfates. Minnesota has conducted studies regarding sulfate criteria development for wild rice protection.

### Total Suspended Solids Criteria Development

Excess suspended solids in waterbodies can be caused by several factors including excess soil erosion, wastewater discharge, snowmelt and stormwater runoff. In the water column, suspended particles scatter and absorb light rays instead of transmitting them, thus decreasing light penetration. Less light penetration may adversely affect aquatic ecosystems by reducing the number of rooted plants which yields less protective in-water habitat for fish/aquatic life. The DNR has assessed sedimentation impairments in streams based on best professional judgment of total suspended solids (TSS). TSS is a commonly listed pollutant on the state's Impaired Waters List based on the narrative water quality standard in chapter NR 102. Numeric water quality criteria for TSS would provide clear listing guidance as well as delisting guidance for stream segments that have shown considerable improvement but for which there is no clear target to make this determination. A standard sampling protocol and analytical method already exist for TSS, but a numeric criterion and assessment methodology could be developed.

### Wild Rice Designated Use Development

Wild rice is an important ecological and cultural resource in Wisconsin, particularly in tribal areas. However, the distribution of wild rice has been greatly reduced from its historical range within the Great Lakes region and specifically within Northern Wisconsin and the Menominee Indian Reservation. The wild rice Area of Special Natural Resource Interest (ASNRI) classification under Wis. Stat. s. 30.01(1am)(d) provides some protection for wild rice waters for some permitted activities, primarily in the ceded territories in the northern half of the state. However, a Designated Use could be applied more broadly than the ASNRI classification, to all relevant surface waters of the state. Therefore, in order to support the preservation and restoration of wild rice in Wisconsin, the DNR could consider developing a wild rice designated use.

### **Variances**

Water quality variances temporarily allow a permitted facility to discharge a pollutant at a level higher than the effluent limit that would normally be applied to meet the water quality standard for that pollutant. Variances are allowed under state and federal laws and all variances must be approved by the EPA. A permitted facility can qualify for a variance if it satisfies the federal and state eligibility criteria. To receive approval for a variance, a facility must develop a plan that effectively reduces discharges of the pollutant over time through source reduction, operational changes and other pollutant minimization activities. A variance is appropriate when a facility is unable to meet the water quality standard for a given pollutant and a solution for treatment or source reduction is not readily achievable for reasons allowed under state and federal laws (e.g. widespread economic impacts). Variances provide an opportunity for the facility to work towards improving water quality in an economical manner.

As part of the Triennial Standards Review, participants are asked whether they have knowledge of technological solutions that are now reasonably available and cost effective that would reduce the need for any of the following variances. Variances are administered under Wis. Stat. s. 283.15 and 283.16.

To learn more, visit the webpage for [water quality variances](#).

### **Multi-Discharger Variance (MDV) for Phosphorus**

The phosphorus MDV extends the timeline for complying with low-level phosphorus limits. In exchange, point sources commit to step-wise reductions of phosphorus in their discharge as well as to help reduce discharges of phosphorus from other nonpoint sources. For instance, dischargers might help agricultural operations and urban areas through county payments or through installation of phosphorus reduction projects.

The phosphorus MDV is implemented under Wis. Stat. s. 283.16 and it is similar to individual variances which are granted under Wis. Stat. s. 283.15. However, multiple point sources can be covered under the MDV, whereas an individual variance only applies to a single facility.

Wisconsin received federal approval for a phosphorus MDV in 2017. Pursuant to Wis. Stats. s. 283.16(2m), through the Triennial Standards Review the DNR must request comments on the MDV to determine whether a formal review of the variance under Wis. Stats. s. 283.16(3) is necessary. The DNR is therefore asking the public for information on new treatment technologies that are readily available and cost effective that might influence whether a formal review of the MDV is needed.

The review, if undertaken, would re-evaluate the initial determination that the phosphorus standard, as applied to point sources via water quality-based effluent limitations (WQBELs), causes substantial and widespread adverse social and economic

## 2021-2023 Triennial Standards Review - Topic Descriptions

impacts on a statewide basis. The review would be conducted by the Department of Administration in consultation with the DNR and would re-evaluate compliance costs for categories of point sources that cannot achieve compliance with WQBELs for phosphorus without a major facility upgrade.

### Individual Variances

Individual variances are variances that the DNR issues individually to single facilities. Pursuant to Wis. Stat. s. 283.15(11), the DNR will also accept comments on individual variances as part of the Triennial Standards Review. Currently, Wisconsin has individual variances in place for the pollutants shown below. A list of facilities that have individual variances appears on pages 8–11 of this document.

#### Arsenic

This naturally occurring substance is most often found in groundwater that has been contaminated through contact with bedrock and glacial deposit. Arsenic is known to have the highest concentrations in northeastern and southeastern Wisconsin.

#### Chloride

Facilities can apply for variances to chloride water quality standards which provide additional time to meet the limit through creative source reduction measures. Common sources of excess chloride include inflow and infiltration to municipal sewers during snow melt, road salting practices, water softener backwash, and certain other industrial processes often associated with food processing.

#### Copper

Copper is a common pollutant in many Wisconsin wastewater treatment facilities. In particular, the northern and northwestern regions of the state have an unacceptable amount of copper in their effluent. High levels of copper in water can often be contributed to water corroding copper plumbing or similar copper containing infrastructure.

#### Mercury

Many wastewater treatment facilities in Wisconsin are not able to meet the very restrictive mercury limit in their effluent for a variety of reasons. Facilities can apply for variances to mercury water quality standards which provide additional time to meet the limit through creative pollutant minimization strategies. Common mercury sources include dental and medical facilities, laboratories, and household products.

#### Phosphorus

Many facilities are not currently able to meet phosphorus effluent limits due to the need for major upgrades that are necessary to achieve compliance with the limits. Some types of facilities are eligible to apply for the phosphorus multi-discharger variance, but those that are not may still be eligible for an individual phosphorus variance. Under an individual phosphorus variance, the facility works toward source reduction measures

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through optimization at the treatment plant and identification of sources throughout the collection system.

*Facilities with individual variances as of August 2020 (updated quarterly)*

Permit No.	Permittee Name	County	Variance Pollutant
0020745	Algoma	Kewaunee	Chloride
0022101	Alma	Buffalo	Phosphorus
0022144	Antigo	Langlade	Mercury
0023221	Appleton City	Outagamie	Mercury
0022225	Argyle	Lafayette	Phosphorus
0021512	Arlington	Columbia	Chloride
0031267	Arpin	Wood	Phosphorus
0023272	Augusta	Eau Claire	Phosphorus
0060151	Avoca	Iowa	Phosphorus
0020605	Baraboo	Sauk	Mercury
0023370	Beloit	Rock	Mercury
0049794	Bloomfield (Pell Lake SD)	Walworth	Chloride
0031658	Blue Mounds	Dane	Chloride
0020443	Brillion	Calumet	Chloride
0023469	Brookfield	Waukesha	Chloride
0021601	Brownsville	Dodge	Chloride
0032051	Browntown	Green	Phosphorus
0022926	Burlington	Racine	Mercury
0003077	Cascades Tissue Group	Eau Claire	Mercury
0021423	Cassville	Grant	Phosphorus
0020711	Cedar Grove	Sheboygan	Chloride
0000680	Cellu Tissue/Clearwater Paper Neenah	Winnebago	Mercury
0022799	Chilton	Calumet	Chloride
0036706	Clayton	Polk	Phosphorus
0030848	Cleveland	Manitowoc	Arsenic
0022217	Cuba City	Grant	Chloride
0040223	Dairyland Alma	Buffalo	Mercury
0030830	Dale	Outagamie	Chloride
0023698	Dallas	Barron	Phosphorus
0023744	Deerfield	Dane	Chloride
0032026	Delafield Hartland	Waukesha	Chloride
0023817	Dickeyville	Grant	Chloride
0026913	Dodgeville	Iowa	Chloride
0003620	Domtar Nekoosa	Wood	Mercury
0003204	Dunn Paper - Ladysmith, LLC	Rusk	Mercury



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Permit No.	Permittee Name	County	Variance Pollutant
0020397	East Troy	Walworth	Chloride
0030716	Eden	Fond du Lac	Chloride
0023914	Elk Mound	Dunn	Copper
0037389	Essity Professional Hygiene North America LLC	Winnebago	Mercury
0000825	Expera Thilmany	Outagamie	Mercury
0023981	Fennimore	Grant	Chloride
0036021	Fontana Walworth	Walworth	Chloride
0001848	Georgia Pacific - Broadway	Brown	Mercury
0001261	Georgia Pacific - Day Street	Brown	Mercury
0024686	Grand Chute Menasha	Winnebago	Mercury
0024139	Gratiot	Lafayette	Phosphorus
0065251	Green Bay MSD	Brown	Mercury
0000973	Green Bay Packaging	Brown	Mercury
0020192	Hartford	Washington	Chloride
0031232	Heart of Valley	Outagamie	Mercury
0028207	Holland SD	Brown	Chloride
0031038	Ixonia SD	Jefferson	Chloride
0024333	Jefferson	Jefferson	Mercury
0025321	Joy Global Surface Mining	Milwaukee	Mercury
0029581	LaCrosse	LaCrosse	Mercury
0003450	LignoTech USA	Marathon	Mercury
0024597	Madison MSD	Dane	Mercury, Chloride
0036552	Maple Grove Estates	La Crosse	Chloride
0026182	Marinette	Marinette	Mercury
0021024	Marshfield	Wood	Mercury
0020311	Mellen	Ashland	Mercury
0024708	Menomonie	Dunn	Mercury
0020150	Merrill	Lincoln	Mercury
0029106	Mindoro	La Crosse	Phosphorus
0024821	Montfort	Grant	Phosphorus
0035963	Mount Calvary	Fond du Lac	Chloride
0020281	Mount Horeb	Calumet	Chloride
0003034	Mule Hide Mfg.	Chippewa	Mercury
0026085	Neenah Menasha	Winnebago	Mercury
0020893	New Holstein	Calumet	Chloride
0037991	NewPage WQC	Wood	Mercury
0031470	Norway SD	Racine	Chloride
0031259	Oakdale	Monroe	Copper
0021181	Oconomowoc	Waukesha	Chloride
0022861	Oconto	Oconto	Mercury
0020753	Ontario	Vernon	Phosphorus

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Permit No.	Permittee Name	County	Variance Pollutant
0022233	Oostburg	Sheboygan	Chloride
0021709	Orfordville	Rock	Phosphorus
0025038	Oshkosh WWTP	Winnebago	Mercury
0002810	Packaging Corporation of America Tomahawk	Lincoln	Mercury
0025062	Paddock Lake	Kenosha	Chloride
0030651	Peshtigo	Marinette	Mercury
0029050	Phelps SD	Vilas	Copper
0041149	Phillips Plating	Price	Phosphorus
0049760	Poplar	Douglas	Phosphorus
0020427	Portage	Columbia	Mercury
0021547	Potosi-Tennyson	Grant	Phosphorus
0029025	Potter	Calumet	Chloride
0020257	Prairie du Chien	Crawford	Mercury
0001031	Procter & Gamble	Brown	Mercury
0021661	Readstown	Vernon	Phosphorus
0020371	Reedsburg	Sauk	Mercury
0029017	Rib Lake	Taylor	Phosphorus
0035581	Rib Mountain	Marathon	Mercury
0020109	Richland Center	Richland	Mercury
0021032	Ripon	Fond du Lac	Chloride
0022802	Rockland	Manitowoc	Chloride
0028428	Rosendale	Fond du Lac	Chloride
0028975	Roxbury	Dane	Phosphorus
0031496	Salem Utility District	Kenosha	Mercury
0028924	Siren	Burnett	Copper, Zinc
0020290	Slinger	Washington	Chloride
0022241	Soldiers Grove	Crawford	Phosphorus
0022292	South Wayne	Lafayette	Phosphorus
0020737	Sparta	Monroe	Mercury
0031186	St Joseph SD	La Crosse	Phosphorus
0022195	St Nazianz	Manitowoc	Chloride
0060216	Stetsonville	Taylor	Phosphorus
0029572	Stevens Point	Portage	Mercury
0020338	Stoughton	Dane	Mercury
0025585	Sullivan	Jefferson	Chloride
0025593	Superior	Douglas	Mercury
0020559	Sussex	Waukesha	Chloride
0022853	Three Lakes	Oneida	Copper
0021318	Tomah	Monroe	Mercury
0021695	Twin Lakes	Kenosha	Chloride
0001040	Tyco Fire Protection	Marinette	PENDING (Mercury, Arsenic)

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Permit No.	Permittee Name	County	Variance Pollutant
0028291	Union Grove	Racine	Mercury, Chloride
0002038	Valero	Jefferson	Mercury
0000914	WE Energies Oak Creek	Milwaukee	Mercury, Arsenic
0043583	WE Energies Pleasant Prairie	Kenosha	Mercury
0001589	WI Power & Light Edgewater	Sheboygan	PENDING (Mercury, Arsenic)
0028541	Watertown	Jefferson	Mercury
0029971	Waukesha	Waukesha	Chloride
0030490	Waupaca	Waupaca	Mercury
0025739	Wausau	Marathon	Mercury
0025763	West Bend	Washington	Chloride
0028754	Western Racine	Racine	Mercury
0042765	Weston	Marathon	Mercury
0049069	Whitewater Cogen LSP	Jefferson	Mercury
0031402	Wis Dells	Columbia	Mercury
0025844	Wisconsin Rapids	Wood	Mercury
0022438	Wrightstown SD #1	Brown	Chloride
0029831	Yorkville	Racine	Chloride

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### Topics that are already in progress (Category A)

The following topics are not available for ranking because they are already in progress. The DNR will continue work on these topics.

#### Antidegradation Policy and Implementation Revision

*Status: On hold; Scope Statement expired*

Antidegradation is a policy designated to protect high-quality waters from degradation due to new or increased discharges to surface waters. Updates to this policy and associated procedures are needed to clarify when antidegradation review is required and to make Wisconsin's rules consistent with federal antidegradation requirements. A Scope Statement was approved to begin work on these rules in 2016, and work was done during this timeframe but not completed. The Scope Statement expired in 2020. To continue work on this rule, the DNR plans to submit a new Scope Statement to the governor's office to seek approval for moving ahead. For more information, visit <http://dnr.wi.gov/topic/surfacewater/antidegradation.html>.

#### Biological Criteria Development (Numeric biocriteria)

*Status: In development*

Biological criteria (biocriteria) set expectations for the quality of aquatic communities such as fish, aquatic insects, plants and algae in lakes, streams and rivers. These expectations aid in the protection of waterbodies from damaging pollutants. In fall 2019, the DNR submitted a rule package to the legislature that included a set of *narrative* biocriteria, which provide a general statement of expectations but do not provide *numeric* thresholds describing the level of quality expected from biological communities. Numeric biocriteria would provide a more precise set of metrics by which to assess waterbodies' health. The DNR is working with the EPA to review numeric thresholds for stream fish and aquatic insects. The DNR plans to revise previously applied thresholds and propose numeric biocriteria (to replace or in addition to the narrative criteria) in a future rule package.

#### Chloride Variance Streamlining

*Status: In progress*

The DNR and the EPA have implemented improvements and are continuing to identify several areas within the chloride variance process that could be improved or updated to help streamline the variance process for permittees, the DNR and the EPA. The DNR has developed documents to enable consistent review of Annual Reports and a general Source Reduction Measure (SRM) plan template (applicable to any substance, including chloride). Improvements currently in progress include updates to the facility specific data sheet and creation of SRM Annual report templates. Updates to the variance application have also been identified as an area for improvement.

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### Cyanobacterial Toxin and Cell Density Guidance for Recreational Exposure

*Status: Review complete; guidance to be developed*

The EPA released human health recreational ambient water quality criteria or swimming advisory values for microcystin and cylindrospermopsin in May 2019. The criteria are for use as the basis for swimming advisories for notification purposes and are designed to protect children from the harmful effects of chronic exposure to microcystin and cylindrospermopsin. States may apply the recommendations as advisory levels or may adopt them as state water quality standards.

The DNR completed a review of the EPA's recommendations and determined to apply the values as swimming advisories rather than as statewide criteria. This decision was made because harmful algal blooms that result in algal toxins are often a response to other water quality impairments/issues for which criteria already exist or are potentially forthcoming (i.e., phosphorus, chlorophyll, nitrogen). The DNR recommends that local and tribal public health agencies use these swimming advisories for notification purposes in recreational waters to protect the public. The DNR plans to develop guidance to assist with implementation of these recommendations.

### Designated Uses Structure/Process Revision

*Status: On hold; Scope Statement expired*

Under the Clean Water Act, the DNR assigns all waterbodies a set of designated uses to protect human health and aquatic life. The DNR has been working on a rule package to update the state's designated use classification system for aquatic life. This rule package would revise the categories to better capture the various types of waters found in Wisconsin. Draft rule language was prepared, and the DNR met with an advisory committee of stakeholder representatives from 2017 to 2019 to obtain feedback on the proposed rule changes. However, in early 2019, the DNR determined that due to legislative deadlines and staff workload, the designated uses rule would need to be put on hold in order to focus on completing the biocriteria and phosphorus site-specific criteria rules before their Scope Statements expired. Therefore, the designated uses rule effort was allowed to expire in February 2020. As part of its prioritization process, the DNR is considering whether to continue work on the designated uses rule soon, which would require approval of a new Scope Statement by the governor's office.

### Human Health Criteria Revision/Development

*Status: In progress*

The DNR has begun a review of recent EPA recommendations on how states should calculate human health criteria (HHC) — i.e., water quality standards that protect human health while swimming or eating locally-caught fish. This review encompasses multiple efforts, including: 1) making updates to Wisconsin's existing HHC based on the latest toxicological information, 2) adopting HHC for chemicals which the EPA has criteria and/or a drinking water standard for and Wisconsin does not, 3) evaluating the most appropriate fish consumption rates to be protective of all state and tribal fish

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consumers, and 4) updating water consumption rate and average body weight to be consistent with the EPA's latest recommendations.

Work is currently underway on all four efforts described above. Revisions to existing criteria were first prioritized based on the magnitude of the proposed changes, and each of the revised criteria are being individually evaluated. The DNR received fish consumption information from tribal representatives, environmental justice organizations and the Great Lakes Consortium for Fish Consumption Advisories and conducted a literature search to gather information on fish consumption rates. The DNR has also worked with the Department of Health Services (DHS) to gather body weight data.

Due to the broad scope and large effort that goes into each of these tasks, criteria revisions (efforts 1 and 2) and exposure parameter revisions (efforts 3 and 4) will be accomplished in two separate rulemaking efforts, which will likely begin in 2021.

### Mercury Variance Streamlining

#### *Status: In progress*

Mercury, mainly from air deposition, has accumulated in fish tissue so that there are fish consumption advisories in place for many Wisconsin waterbodies. Individual mercury variances for facilities discharging wastewater have been processed for 10-15 years, using a 1997 report to say that no economically feasible treatment exists. A streamlined variance process is currently under development that would include an updated justification for variances and standardize the factors used for variance approvals statewide. A pollutant minimization plan (PMP) would continue to be required for all facilities with a mercury variance.

### Per-and polyfluoroalkyl substances (specifically PFOS/PFOA) Criteria Development

#### *Status: In progress*

The DNR is working on developing surface water quality criteria for two types of per-and polyfluoroalkyl substances to protect human health: perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). These manmade substances have been used to repel oil and water in a variety of industrial and consumer products, such as carpet and clothing treatments, food packaging and cookware. They are also contained in firefighting foams. They are extremely persistent in the environment and bioaccumulate in humans and wildlife. Health-based advisories or screening levels have been developed by the EPA and other states.

A Scope Statement to begin work on PFOS/PFOA surface water criteria was approved in November 2019. This work included review of toxicological data in partnership with DHS in order to develop toxicity values for PFOS and PFOA. These toxicity values form the basis of both the DNR's surface water criteria and the DHS's recommended groundwater standards. The DNR is also using data on PFAS in fish and water samples collected from Wisconsin and other Great Lakes states to develop bioaccumulation factors (BAFs) for PFOS and PFOA. The rule will also include updates to the

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procedures for implementing the new criteria in Wisconsin Pollutant Discharge Elimination System (WPDES) permits.

Stakeholder meetings are being held regularly throughout the rule development process, which is likely to continue through 2022. More information about this rulemaking effort can be found at <https://dnr.wi.gov/topic/SurfaceWater/NR105.html>.