2014 Impaired Waters List

Summary of Public Comments and WDNR's Responses

A public comment period on the Draft 2014 Impaired Waters List was held from February 4, 2014 to March 6, 2014. A total of 25 entities commented on the draft 2014 Impaired Waters List. The following is a summary of comments and WDNR responses indicating any changes draft 2014 impaired waters list. This attachment is submitted to EPA for their review of the 2014 impaired waters list. After EPA has reviewed the list and this supporting documentation, additional changes may be made to ensure compliance with federal requirements.

This attachment contains:

- Public Notice of the Public Comment Period
- A list of those who submitted comments
- Individual comments and WDNR responses

Contents

PUBLIC NOTICE OF THE PUBLIC COMMENT PERIOD

NEWS RELEASE, February 3 , 2014

Draft 2014 impaired waters list the topic of comment period, webinar

News Release Published: February 3, 2014 by the Central Office

Contact(s): Aaron Larson, water resources management specialist, 608-264-6129

MADISON - Wisconsin's proposed 2014 list of lakes and river stretches that do not meet water quality standards is available for public comment for the next 30 days and is the topic of a webinar set for February 12. The list identifies waters that need additional attention to join the other 751 Wisconsin waters that are judged as having good water quality in the current assessment period.

"Overall, long-term trend and satellite monitoring show that water quality is good and is improving in many ways," says Susan Sylvester, who leads the Department of Natural Resources' Water Quality Bureau. Limits on pollutants from wastewater dischargers, urban and rural runoff, new approaches for controlling water pollution, and partnerships with lake associations, local government and others have made a big difference.

"But based on information available for specific waters from expanded monitoring, we've identified lakes and rivers where more work is needed to improve water quality for fish to thrive, and for people to enjoy them recreationally," she says.

192 water bodies are newly proposed for the impaired waters list. A majority of those new listings -- 137 -- are for lakes or river stretches that exceed new phosphorus standards that took effect in December 2010 and many are in areas with restoration plans already in development. By comparison, Minnesota proposes to add 275 new waters to its draft 2014 list and Michigan proposes to add 214.

"Their listing does not necessarily mean that phosphorus levels in these waters got worse," said Aaron Larson, the water resources management specialist who is coordinating the listing process. "Phosphorus levels may be improving in some, but not enough yet to meet these new standards, and many of these waters were not assessed for previous listing cycles."

In fact, phosphorus, ammonia and sediment levels have decreased during the past 20 years in major rivers statewide as a result of stricter limits in wastewater, improved farming practices, construction site erosion control, and urban storm water management, Larson says.

Listing waters as "impaired" requires the state to develop restoration plans for them and also may make them eligible for state and federal cleanup funds. The department has routinely updated listings every two years since 1998.

Sylvester encourages people to review the proposed Impaired Waters list and tune in to the webinar on February 12 at 11 a.m.to learn more about the process WDNR used to develop the list and to ask any questions about that process and specific listings. Comments can be emailed to WDNR at WDNRImpairedWaters@wisconsin.gov or sent by U.S. mail to Aaron Larson, WDNR, Water Evaluation Section (WY/3), P.O. Box 7921, Madison, WI 53707.

The draft list and related materials are available on the Wisconsin WDNR website at WDNR.wi.gov, keyword "impaired waters." The 2014 list materials can be found on the main impaired waters topic page.

Listing can accelerate restoration of lakes and rivers

Wisconsin and other states are required every two years to assess and report to the federal government on water quality and what the state is doing to protect, monitor and restore it.

That comprehensive assessment is underway now to update figures from 2012, when 75 percent of Wisconsin lakes assessed for the report exhibited excellent or good water quality, and 70 percent of the rivers and streams assessed supported healthy aquatic life, according to Aaron Larson, the water resources management specialist who is coordinating the listing process. WDNR's impaired waters list is part of the comprehensive report and focuses on reviewing monitoring results for those waters that may have a problem, Larson says.

Lakes and river segments that do not meet water quality standards for different pollutants or problems like degraded habitat are added to the impaired waters list. Listed waterbodies become eligible for funding to develop or implement restoration plans known as Total Maximum Daily Loads, or TMDLs. These plans are essentially a pollution "budget" for a water body or watershed that sets reductions needed from rural, urban and point source discharges to meet water quality standards. For the 2014 listing cycle, 13 waterbodies are proposed to be removed from the list. One water, Argus School Branch in Green County, is being removed because restoration projects improved stream habitat and aquatic life conditions, Larson says.

"The good news is that identifying these issues through the Impaired Waters listing process helps concentrate efforts, attention and funding on these waters," he says. "It's an important first step on the road to working with partners to help restore these waters to where they should be to benefit fish, wildlife and people."

An online public webinar will be held on February 12, 1012 at 11:00 a.m. to provide information about the Clean Water Act regulatory framework for identifying and restoring impaired waters, the process for developing Wisconsin's impaired waters list, and proposed listing updates. People interested in participating in the webinar should register at the following link: https://www1.gotomeeting.com/register/377966673.

LIST OF COMMENTERS

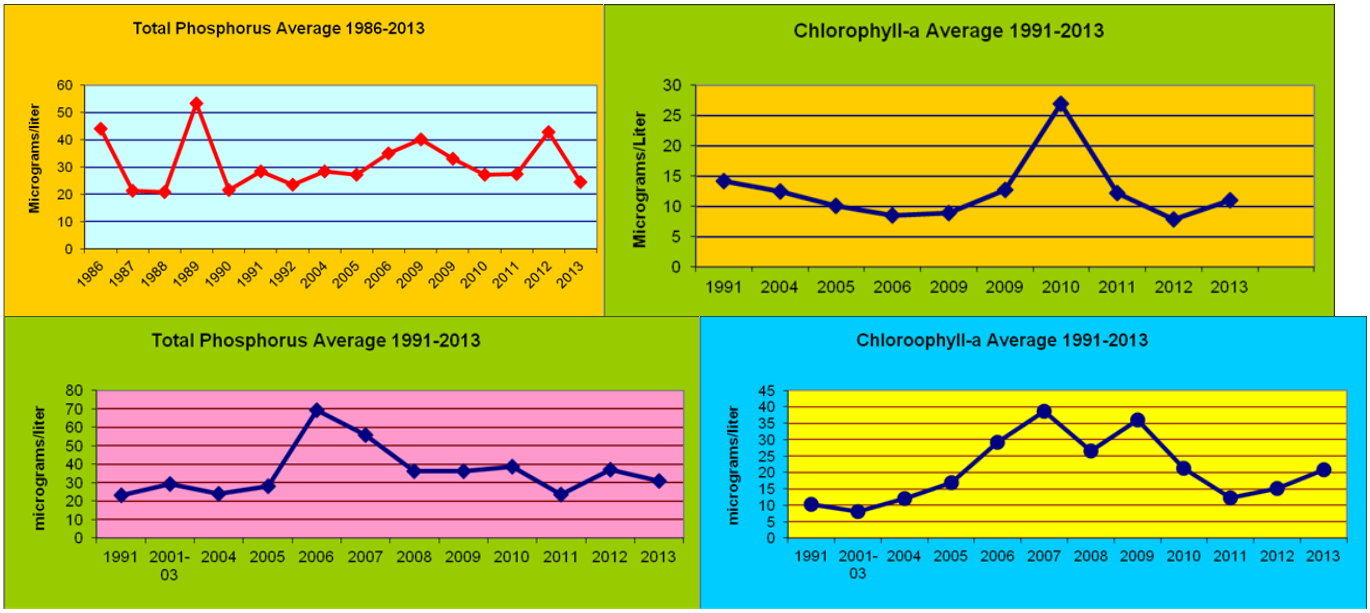
#	Commenter Name	Affiliation	Topic	Specifics
1	Dick Swanson	Citizen	CAFOs	CAFO waste
2	Lyman C. Welch	Water Quality Program Director, Alliance for the Great Lakes	Great Lakes	Nearshore assessments, TMDLs
3	Timm P. Speerschneider	DeWitt Ross & Stevens on behalf of the Cranberry Growers Association	Phosphorus	Category 5P
4	Robert L. Wallace	Professor of Biology, Ripon College	Specific Waterbody	Big Green Lake (146100)
5	Stephanie Prellwitz	Interim Executive Director, Green Lake Association	Specific Waterbody	Big Green Lake (146100)
6	Gene Soderbeck	President, Big Wood Lake Association	Specific Waterbody	Big Wood Lake (2649800)
7	Pete and Nancy Guzzetta	Dead Pike Lake Association	Specific Waterbody	Dead Pike Lake (2316600)
8	Phyllis G. Pelkola/Doherty	Citizen	Specific Waterbody	Dead Pike Lake (2316600)
9	Suzanne E Henkel	Dead Pike Lake Association	Specific Waterbody	Dead Pike Lake (2316600)
10	Meredith Tripp	Decatur Lake Mill Race Association	Specific Waterbody	Decatur Lake (879400)
11	Laurence J. Swaziek	Secretary, Friendship Lake District	Specific Waterbody	Friendship Lake (1352000)
12	Linda Moonan	Friendship Lake District, Lake Advisory Group	Specific Waterbody	Friendship Lake (1352000)
13	Ted Peters	Director, Geneval Lake Environmental Agency; President, Linn Sanitary District	Specific Waterbody	Geneva Lake (758300)
14	Reesa Evans	Lake Specialist, Certified Lake Manager, Adams County Land & Water Conservation Department	Specific Waterbody	Goose Lake (103600), Lake Arrowhead (1377700), Lake Sherwood (1377900)
15	Linda Zillmer	Citizen	Specific Waterbody	Lake Chetac (2113300)
16	Diane and Hans Predel	Citizens	Specific Waterbody	Lake Emily (161600)
17	Gary Jonas	Citizen	Specific Waterbody	Lake Emily (161600)
18	Ron and Sandy Raffay	Citizens	Specific Waterbody	Lake Emily (161600)
19	Ron Raffay	Citizen	Specific Waterbody	Lake Emily (161600)
20	Sharon Feucht	Secretary, Lake Emily Fishing Improvement Club	Specific Waterbody	Lake Emily (161600)
21	Patrick and Lynnette Kwiatkowski	Citizens	Specific Waterbody	Lake Emily (161600)
22	Larry Bresina, Curt Deering	Former and Current Chair, Pipe and North Pipe Lakes Protection and Rehabilitation District Water Quality Board	Specific Waterbody	North Pipe Lake (2485700)
23	Tom O'Hern	Member of Pipe Lake and North Pike Lake Protection District	Specific Waterbody	Pipe Lake (2490500) and North Pipe Lake (2485700)
24	Mark Schuelke	President, Turtle Lakes Chain Association	Specific Waterbody	N. and S.Turtle Lake (2310200)
25	Brent Brown	CH2M Hill	Specific Waterbody	Root River (2900)
26	Peter Swenson	EPA, Region 5	Multiple	

COMMENTS AND RESPONSES

Specific Waterbodies

ARROWHEAD LAKE AND LAKE SHERWOOD – (WBICs 1377700 and 1377900) "I am writing to comment on the proposal to list Arrowhead and Sherwood Lakes on the 303(d) impaired waters list. I have been working with these lakes and the Tri-lakes Management District for over 10 years. In the past several years, water quality sampling has been occurring at 3 places on Arrowhead Lake and 4 places on Sherwood Lake. This includes Secchi disk readings, total phosphorus sampling, and chlorophyll sampling. I am not sure that these lakes are appropriate for the 303(d) list.

It is correct that there have been algal blooms the past couple of years, but those coincided with very hot, still, rainless weather, when I would expect algal blooms to occur. Water quality information is available for about the last 20 years. The overall total phosphorus average for Arrowhead is 31.2 micrograms/liter. The overall chlorophyll level is 12.5 micrograms/liter.

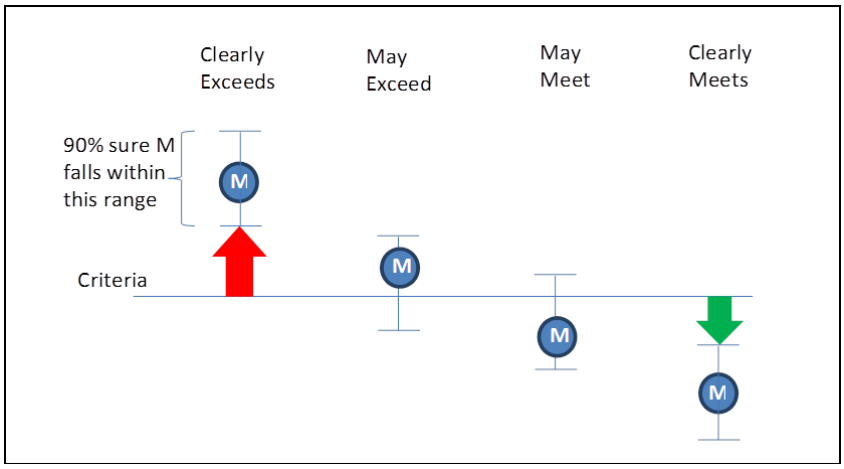


Similarly, the overall phosphorus average for Sherwood is 36.1 micrograms/liter, with the overall chlorophyll level 20.6 micrograms/liter.

For man-made impoundments, these averages are within the phosphorus index (which I believe is 40 micrograms/liter phosphorus). This is why I raise the questions about them being listed as 'impaired.'" **(Reesa Evans – Lake Specialist, Certified Lake Manager at Adams County Land & Water Conservation Department)**

> **RESPONSE**: Arrowhead and Sherwood Lakes were listed for excess algal growth, but not total phosphorus. Both of these impoundments have natural community classifications of Deep Drainage Lake, which gives them a total phosphorus impairment threshold of 30 micrograms/liter. For chlorophyll the impairment threshold is 5% of days above nuisance algal

levels (20 micrograms/liter). The 2014 assessment methodology, outlined in Wisconsin's Consolidated Assessment and Listing Methods (WisCALM), uses monthly average data from



Comparison of the 90% Confidence Intervals to the threshold (WisCALM 2014, page 32).

2008 – 2012 and compares the lower 90th confidence interval value (L90) to the threshold. If the L90 value exceeds the impairment threshold then the water is listed.

Arrowhead Lake had a chlorophyll L90 value of 6.2%, which exceeds 5%. Sherwood Lake had a chlorophyll L90 value of 28.5%, which exceeds 5%. Due to these exceedances, both Arrowhead and Sherwood Lakes are included on the draft 2014 impaired waters list.

BIG GREEN LAKE – (WBIC 146100) Commenters support the proposed listing of Big Green Lake as an impaired lake due to the low dissolved oxygen concentrations that have been documented. The proposed listing is considered an important step in raising awareness of water quality issues and accelerating the installation of important conservation initiatives. (**Stephanie Prellwitz – Interim Executive Director of the Green Lake Association; Robert L. Wallace – Professor of Biology at Ripon College)**

RESPONSE: Your comments in support of this proposed listing have been noted.

BIG WOOD LAKE – (WBIC 2649800) "I've looked at the water quality data collected on Big Wood Lake and compared it against WisCALM methodology and cannot see the data which meets the criteria for listing. As such, we do not support the listing. Could you please provide an explanation of why it's being listed and the specific data being used as the basis of listing Big Wood Lake as impaired?" **(Gene Soderbeck – President of the Big Wood Lake Association)**

RESPONSE: The protocol in Wisconsin's Consolidated Assessment and Listing Methods (WisCALM) for assessing lake recreational use based on concentrations of chlorophyll was updated for the 2014 assessment cycle. Here is an excerpt from 2014 WisCALM (page 33) that summarizes the revised listing threshold:

"The protocol now uses the percent of days during the sampling season that a lake experiences nuisance algal blooms. Nuisance algal blooms are defined as exceeding 20 ug/L of Chl-a. For

deep lakes the impairment threshold is 5% of days of nuisance algal blooms during the sampling season."

The frequency of exceedances and 90% confidence interval was calculated with this data (formula on page 34 of 2014 WisCALM). In order to exceed the chlorophyll threshold of 5% of days exceeding 20 ug/L, the lower 90th percent confidence interval around the mean % of days exceeding 20 ug/L must be higher than 5%. For this data set (Table 1) the lower 90th percent confidence interval value is 16.2% (Table 2), which is greater than the threshold of 5%. Therefore, the lake is proposed for the impaired water list.

Table 1: Chloropyll data from Station 073044 "Wood Lake (Big) – North Basin-Site 1" in Big Wood Lake (WBIC 2649800) used for the recreation use assessments.

Date	Chl-a (µg/L)
07/27/2008	8.55
08/17/2008	17.0
07/26/2009	24.9
07/25/2010	14.8
08/29/2010	21.0
07/31/2011	27.6
08/27/2011	17.6
08/26/2012	22.3

Table 2: Calculation results

Statistic	Value (%)
Mean	19.2
Lower 90th Percentile	16.2
Upper 90th Percentile	22.2

LAKE CHETAC – (WBIC 2113300) The commenter objects to adding Lake Chetac to the impaired waters list, stating that the lake is not impaired for any uses. The commenter states that there is a lack of anthropogenic sources (point or nonpoint) of nutrients to the lake, aside from natural recycling of nutrients within the lake, and that the condition of the lakes has been reported to have improved over time since settlement. The commenter notes that Lake Chetac is a headwater of the Red Cedar Basin, where a TMDL in already being implemented, and also expresses concerns about the current management of Lake Chetac, including herbicides treatment of curly leaf pondweed and alum application. **(Linda Zillmer)**

RESPONSE: Assessing waterbodies against water quality standards and identifying impaired waters that don't meet standards is part of the overarching federal Clean Water Act (CWA) framework for restoring impaired waters. Wisconsin Department of Natural Resources (WDNR) follows a standardized process to assess waters of the state against applicable water quality standards. This lake was assessed during the 2014 listing cycle, and total phosphorus and chlorophyll sample data exceed listing thresholds for the recreation use.

When a waterbody is added to the list, it does not necessarily mean the condition of the waterbody has recently gotten worse. Factors such as the timeframes over which a waterbody was monitored and changes in the way WDNR assesses waterbodies can result in listing status changes for a particular waterbody. Many impaired waters already have restoration plans in place, some of which are currently being implemented, but full restoration is not expected to occur in the near term. Some impaired water restorations can occur over relatively short time frames (i.e. several years), but others can take decades to be fully achieved.

The proposed impaired waters listing of Lake Chetac does not preclude continued restoration planning and implementation work that is already underway. The listing may provide further impetus for continued implementation of management practices that will result in the lake meeting water quality standards. In addition, projects that address impairments of listed waters are eligible for and more likely to receive funding from certain federal and state grants.

Waters identified as impaired are then prioritized for the development of restoration projects. To restore impaired waters, WDNR develops cleanup plans, known as Total Maximum Daily Loads (TMDLs), for impaired waters. The Red Cedar River TMDL project mentioned in your comments may address the impaired recreation use of Lake Chetac. For phosphorus-related impairments, TMDL plans require reductions of phosphorus loads from all sources in a watershed (i.e. the area of land that drains into a waterbody) to meet criteria. The studies typically include implementation plans that provide a strategic framework for prioritizing and managing resources for water quality improvement. More information regarding TMDLs, including contacts and information about how to get involved with the development and implementation of a TMDL, is available at the following website: http://WDNR.wi.gov/topic/tmdls/.

DEAD PIKE LAKE – (WBIC 2316600) Dead Pike Lake contains iron floc contamination that prevents residents from being able to swim or enjoy the water because of the quality and smell. The Dead Pike Lake Association has been trying to address this water quality issue for the last 14 years. A source of the iron floc is man-made ditches in Powell Marsh. This lake should be listed for iron floc because being able to swim in a lake is a basic requirement of the Clean Water Act. **(Pete and Nancy Guzzetta, Phyllis G. Pelkola/Doherty, Suzanne E. Henkel)**

RESPONSE: WDNR currently lacks numeric water quality criteria and a specific assessment method for recreation use impairments related to iron floc. Therefore, an impairment assessment was not conducted at this time; however, these comments were shared with the local WDNR staff and may be further investigated.

DECATUR LAKE – (WBIC 879400) "In viewing the 2014 proposed Impaired Waters Listing I noticed a 45.15 mile segment of the Sugar River (AU ID 13651, WBIC 875300) was listed. This segment of the river runs south from HWY 69/Lake Belle View through Decatur Lake near Brodhead on to where it crosses Cty T in Green Cty. Since Decatur Lake is a riverine lake of the Sugar River should it not be classified as impaired too? Phosphorus sampling at lake location 0.85 miles NW of Park Rd and Decatur Rd (station ID 10039881), this past year by Wave Action Volunteer, Dick Tripp showed high phosphorus levels ranging from 0.0899 ppm/Aug. to 0.1460 ppm/June. Actually, in practical terms how can one separate the lake from the river? If the river is impaired so is the lake. Clarification of this issue would be much appreciated." (**Meredith Tripp - Decatur Lake Mill Race Association)**

RESPONSE: A review of the Sugar River listings confirmed that Decatur Lake does overlap with the river listing. The lake was previously not included in our assessment database in error; however, we've determined that Decatur Lake should be classified as an "impounded flowing water" to which the phosphorus criteria of the inlet stream or river applies (see NR 102.06(4)(c) of Wisconsin Administrative Code). Based on our review of the phosphorus data collected from the lake, we will propose to list Decatur Lake on the draft 2014 impaired waters list due to phosphorus levels exceeding applicable criteria.

LAKE EMILY – (WBIC 161600) A large manure runoff event and continuous agricultural pollution has created excess phosphorus in Lake Emily. The lake has become heavily weeded and gets thick blankets of algae during the growing season, which has reduced recreation and fishing. "We are supportive of your effort to place Lake Emily on the EPA list of impaired waterways in the state of Wisconsin." **(Diane and Hans Predel, Ron and Sandy Raffay, Patrick and Lynette Kwiatkowski, Gary Jonas, Sharon Feucht – Secretary of the Lake Emily Fishing Improvement Club)**

RESPONSE: Your comments in support of this proposed listing have been noted.

FRIENDSHIP LAKE – (WBIC 1352000)

A) "The Friendship Lake District has been working closely with the the Lake Specialists in the Adams County Land and Water Department, and the Wisconsin Rapids and Eau Clair WDNR offices since 2012 to address the problems that are of concern with Friendship Lake.

In doing so we, the Friendship lake District in conjunction with the WDNR and Land and Water, have completely revised our Lake Management Plan to implement measures that will address the excess algal growth and possible other issues. A complete inventory of the Little Roch A Cri Watershed is being done this year, 2014, to determine PS/NPS affecting the total phosphorus for Friendship Lake. Since we have been actively involved to determine the best possible methods available to us in managing our impound lake, it is my belief that this Impaired determination for Friendship Lake is premature. It is my hope that the work we have done, and are doing will be taken into consideration and that this determination will be delayed." **(Linda Moonan – Friendship Lake District)**

B) "As a property owner and commissioner for the Lake District I am concerned that the proposed addition of Friendship Lake to the 2014 Impaired Water List will affect the value of my property. I know that your agency promotes the idea that this addition to the list is good because we will be able to get grant money to fix a "problem".

With that I do have a couple of questions regarding the proposed addition of Friendship Lake to the list:

1. The impairment Indicator for Friendship Lake is "Excess Algal Growth". In reading your information on the criteria for establishing the addition of lakes and waterways to this list you get input data from Wisconsin citizens and organizations. Can you give me any specific

citizen and/or organization and the specific data submitted that caused you to propose the addition of Friendship Lake to the list? I am assuming that since the pollutant source is listed as "unknown" it was not a phosphorous measurement that prompted the addition of the lake to the list.

2. If the lake remains on the 2014 list, who provides input on the development of the TMDL? The WDNR, the County, the Friendship Lake District? The Friendship Lake District is currently working with Adams county in establishing a Lake Management Plan that has the goal of controlling the lakes algal growth and phosphorous levels. I take it this was be a good resource.

3. Under the column, Listing Detail, were would I find the meaning of the "footnotes" in brackets such as 5A, 5B, 5P, etc.?

I look forward to getting a response to my questions and thank you for your time. Again, I am concerned that this label of impaired lake for Friendship Lake may affect my property value. If we do have to address the algal levels through this means and not just on the local county/WDNR level then that is what we have to do." **(Laurence J. Swaziek)**

RESPONSE: The protocol outlined in Wisconsin's Consolidated Assessment and Listing Methods (WisCALM) was used for assessing Friendship Lake. This protocol describes procedures for comparing sample data against applicable water quality criteria and listing thresholds, as well as the definitions of the various waterbody listing categories. Chlorophyll sample data from this lake exceed 2014 listing thresholds for the recreation use; however, total phosphorus data do not exceed listing thresholds. Therefore, the lake is proposed to be placed in category 5A of the impaired waters list. The chlorophyll dataset listed below (Table 3) was used to assess the lake against the threshold of 20 ug/L.

Table 3. Chlorophyll sample data (ug/L) used to assess Friendship Lake for the draft 2014 impaired waters list.

Sample Date	Result Amount (ug/L)
7/23/2006	27.90
9/1/2003	18.70
8/31/2012	64.40
9/8/2006	21.60
7/26/2004	6.86
8/2/2005	9.11
8/29/2004	15.60
7/27/2003	11.40

As the commenter mentioned, restoration projects that address waters on the impaired waters list are eligible for and more likely to receive funding from certain federal and

state grants. The proposed impaired waters listing of Friendship Lake does not preclude continued restoration planning and implementation work that is already underway. The listing may provide further impetus for continued implementation of management practices that will result in the lake meeting water quality standards.

As described in a previous response above, WDNR develops cleanup plans, known as Total Maximum Daily Loads (TMDLs), to restore impaired waters often times in partnership with local stakeholders. For phosphorus-related impairments, these plans require reductions of phosphorus loads from all sources in a watershed (i.e. the area of land that drains into a waterbody) to reduce contributions of phosphorus in order to meet criteria. The studies typically include implementation plans that provide a strategic framework for prioritizing and managing resources for water quality improvement. The revised Friendship Lake Management Plan and the additional information being collected from the Little Roch A Cri watershed are great resources that could be used to develop a TMDL for Friendship Lake. More information regarding TMDLs, including contacts and information about how to get involved with the development of a TMDL, is available at the following website: http://WDNR.wi.gov/topic/tmdls/.

GENEVA LAKE BEACHES – (WBIC 758300) "Robinson Hillside Beach, listed for E. coli in 2008, should not be listed as impaired based on the long-term bacterial monitoring data available for station HR3. Robinson Hillside Beach is located on the west side of the pier located at the end of Hillside Rd. The area identified on the WDNR's surface water data viewer map as the Robinson Hillside Beach is almost a mile east of the actual beach location and is along private lakefront property. On the east side of the pier, at the end of Hillside Road, is a launching ramp and the mouth of a small groundwater discharge creek. As part of long-term bacterial monitoring of this beach (started in the 1970's) three sites were included: in the creek approximately 200 ft. south of the lake (HR1), the creek/lake mixing zone (HR2) and the beach (HR3).

1) I am familiar with E-coli criteria for beaches but is there any specific criteria for E-coli or bacteria in surface waters as a whole, be it lake or stream?
2) I saw that Hillside Creek Beach was listed as impaired before 2008 but was removed in 2005. Can you share with me that process and why it was relisted in 2008? What data was used to determine that Hillside Creek Beach, Geneva Lake is impaired?

I ask that you reconsider identifying the Geneva Lake HR1, Hillside Beach as an Impaired Water. I do not believe that there is enough evidence or data to justify the belief that the beach it is not meeting the bacterial criteria for a public beach and as such ask that it be delisted." **(Ted Peters – Director of Geneva Lake Environmental Agency and President of the Linn Sanitary District)**

RESPONSE: A review of the WDNR's data on this beach revealed that "HR1, Robinson Hillside Beach" should not be listed because it does not exist and was assessed using a station that was not associated with a beach. Responses to commenter's specific questions are below:

1) EPA recently finalized their nationally recommended Recreation Water Quality Criteria in 2012. However, our current state rules and guidance related to recreational water quality assessments are not based on EPA's 2012 Recreation Water Quality Criteria, because

Wisconsin has not yet adopted these criteria. We currently have the recreational use criteria in NR102.04(6) of Wisconsin Administrative Code applicable to all surface waters of the state, which are "…the membrane filter fecal coliform count may not exceed 200 colonies per 100 ml as a geometric mean and may not exceed 400 colonies per 100 ml in more than 10% of all samples during any month." Samples shall be required at least 5 times per month.

2) The station HR1 was incorrectly used as the basis for listing "HR1, Robinson Hillside Beach" each time it was assessed, which led to it being relisted because *E. coli* values from this station exceed listing thresholds. The beach "HR1, Robinson Hillside Beach" is proposed for delisting.

Another beach, named "Linn/Robinson Public Beach," is associated with site HR3, though this too was mapped incorrectly. With the information provided to the WDNR from Mr. Peters, the beach delineations have been corrected.

GOOSE LAKE – (WBIC 103600) "I am writing to comment on the proposed listing of Goose Lake in the Town of Jackson, Adams County, to the 303(d) Impaired Waterways list. I think someone has made a mistake. I have been working on that lake for over 10 years. This lake is actually a special high-quality lake with ⅓ to ½ being bog. The average summer Secchi disk reading over the last 20 years g is 8.2 feet (the lake is only about 15 or 16 feet max). The average growing season chlorophyll level is only 4.2 micrograms/liter. The average summer phosphorus reading from 1992-2013 is 22.4 micrograms/liter. This is clearly in the middle of the phosphorus index range for natural lakes of 15 to 40 micrograms/liter. So I'm confused when the reason given for the proposed listing is "excess phosphorus". Considering that so much of the lake is bog, so there's natural organic matter to start with, I consider the average phosphorus level pretty good.

This lake has an astounding aquatic plant community, including some species of concern and several high quality aquatic and bog plants. The last aquatic plant survey done there (2011) revealed 93 aquatic plant species, plus freshwater sponge and aquatic moss. The Simpson's Index of Diversity was .**96** (out of 1.00). The Floristic Quality Index was **53.148** (state average is 16.9-27.5). I do not feel that this lake is appropriate for listing on the 303(d) list." **(Reesa Evans – Lake Specialist, Certified Lake Manager at Adams County Land & Water Conservation Department)**

RESPONSE: After a review of the phosphorus data and nature of this lake we concluded that the wrong Natural Community classification of Deep Seepage was applied for the assessment. Temperature profiles for Goose Lake indicate that this lake mixes, meaning the Natural Community should be classified as Shallow Seepage. With this new classification, Goose Lake does not exceed phosphorus criterion of 40 µg/L and will be removed from the draft impaired waters list.

PIPE LAKE AND NORTH PIPE LAKE – (WBICs 2490500 and 2485700, respectively) Commenters request clarification of the WDNR proposal to list North Pipe Lake as impaired due to excess algae growth and offer several comments regarding the relationship between chlorophyll and phosphorus concentrations in the lakes, whether current nutrient levels are higher than natural background concentrations, attainability

of the applicable phosphorus criteria and chlorophyll listing thresholds, and whether there is a need to further manage the lake beyond the current, WDNR-approved 5-Year Plan. **(Larry Bresina – Former Pipe and North Pipe Lakes Protection and Rehabilitation District Water Quality Chair, Curt Deering – Current Pipe and North Pipe Lakes Protection and Rehabilitation District Board Chair)**

> **RESPONSE**: WDNR follows a standardized process to assess waters of the state against applicable water quality standards. Chlorophyll sample data collected from North Pipe Lake (WBIC 2485700) exceed listing thresholds for the recreation use; however, total phosphorus data do not exceed water quality criteria. Water bodies not meeting standards are identified as impaired and prioritized for the development of restoration projects. Projects that address waters on the impaired waters list are more eligible and likely to receive funding from certain federal and state grants.
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> When a waterbody is added to the list, it does not necessarily mean the condition of the waterbody has recently gotten worse. Factors such as the timeframes over which a waterbody was monitored and changes in the way WDNR assesses waterbodies can result in listing status changes for a particular waterbody. Many impaired waters already have restoration plans in place, some of which are currently being implemented, but full restoration is not expected to occur in the near term. Some impaired water restorations can occur over relatively short time frames (i.e. several years), but others can take decades to be fully achieved.
>
> The proposed impaired waters listing of North Pipe Lake does not preclude continued restoration planning and implementation work that is already underway. The listing may provide further impetus for continued implementation of management practices that will result in the lake meeting water quality standards. Projects that address impairments of listed waters are eligible for and more likely to receive funding from certain federal and state grants.
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> Waters identified as impaired are then prioritized for the development of restoration projects. To restore impaired waters, WDNR develops cleanup plans, known as Total Maximum Daily Loads (TMDLs), for impaired waters. For phosphorus-related impairments, TMDL plans require reductions of phosphorus loads from all sources in a watershed (i.e. the area of land that drains into a waterbody) to meet criteria. The studies typically include implementation plans that provide a strategic framework for prioritizing and managing resources for water quality improvement. More information regarding TMDLs, including contacts and information about how to get involved with the development and implementation of a TMDL, is available at the following website: http://WDNR.wi.gov/topic/tmdls/.

NORTH AND SOUTH TURTLE AND ROCK LAKES – (WBICs 2310400, 2310200 and 2311700, respectively) Commenter requested an explanation about why the North and South Turtle and Rock Lakes in Vilas County are included on the impaired waters list for mercury contaminated fish tissue when the lakes are not currently included in special consumption advisory listings issued jointly by WNDR and the Wisconsin Department of Health and Human Services. Commenter also requests clarification regarding the current consumption advisories that should be followed, and the timeline for resampling fish tissue mercury concentrations from these lakes.

The commenter also questioned the "Two-story Fishery" classification for South Turtle Lake based on a measured maximum depth of 28 feet and observations of the fishery. The commenter felt a more suitable classification would be "Lowland Drainage Lake," and requested a reassessment of the phosphorus data after review of the lake classification.

> **RESPONSE:** Many lakes listed in the 2000 fish consumption advisory, including North and South Turtle and Rock Lake are now covered by the general statewide advisory. Since 2001, we provide general statewide advice and exceptions or "specific advice" where higher mercury (or PCB or other contaminant) concentrations have been found. North and South Turtle and Rock Lake do not require specific advice beyond the statewide advisory based on fish tissue concentrations of mercury. However, more current data is needed in order to remove the lakes from the impaired waters list that they have been on since 1998.
>
> The most recent fish consumption advice should be followed; currently, the general statewide advice applies to North and South Turtle and Rock Lake. The general advice can be found at: http://dnr.wi.gov/topic/Fishing/Consumption/ and is listed in the table below. This advice applies to all waters in Vilas County, but several lakes (Annabelle, Broken Bow, Ike Walton, Jag, Kentuck, Lynx, Oxbow, Shannon, Snipe, and White Birch) have more stringent exceptions. Mercury concentrations do vary among species, size and age of fish and also vary greatly among lakes. See Figure 2 that shows the variability of mercury between species and Figure 5 for an example of how mercury concentrations in walleye vary between lakes and with walleye length in the following report: http://dnr.wi.gov/topic/Fishing/documents/publications/AdminReport73.pdf.
>
> North and South Turtle and Rock Lake are listed as priority for fish tissue mercury sampling. With our current staffing and resources, we expect that we will resample these lakes within the next 10 years.
>
> After reviewing comments and the information we have regarding South Turtle Lake we have determined that the "Two-story fishery" classification was made in error. This lake should be classified as a "Shallow Headwater Drainage" lake with a corresponding phosphorus criterion of 40 ug/L. The revised assessment shows that this lake clearly meets the applicable phosphorus criteria. We've updated our databases with the correct classification and removed the proposed phosphorus impairment listing based on the revised assessment.

ROOT RIVER – (WBIC 2900; AU# 425682) Commenter requested description of the process of assessment unit delineation and a review of the assessment unit (AU) delineation for segment 2 of the Root River (**Brent Brown, CH2M Hill**).

> **RESPONSE**: Streams are divided into segments for purposes of assessment against water quality standards. These stream segments, known as assessment units, are considered similar in physical, chemical and biological characteristics, such that data collected from within the segment is representative of the entire segment. Breakpoints between assessment units have been identified based on confluences of streams, points of discharge, road crossings, county lines, or extent of existing water body classifications, such as designated beneficial use classifications, trout waters, Outstanding or Exceptional Resource Water extents, etc. Generally, sample results for a

particular station are applied to the entire assessment unit that the station lies within. In some cases, the sample dataset may also be applied to upstream or downstream assessment units, if those datasets are determined to be representative of upstream/downstream assessment units based on professional judgment of the scientist reviewing the assessments.

After further review of available water quality and stream flow data, the downstream boundary of assessment unit delineation for segment 2 of the Root River (AU# 425682) was moved upstream from the 13th Street crossing near the Racine/Milwaukee County line to the confluence with the Root River canal. The Root River Canal is a substantial tributary (57sq. mi. basin area) with important contributing discharge to the Root River, comprising an estimated 40% of the stream flow below the confluence with the Root River mainstem. It is reasonable to expect different properties of water chemistry, from both natural and anthropogenic sources, below this confluence.

General Comments

COMMENTS: CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFO) – Commenter expresses concerns regarding potential impacts to water quality from CAFO manure/process and waste water handling activities. **(Dick Swanson)**

> **RESPONSE:** Every Wisconsin farm, regardless of size, is responsible for meeting performance standards and prohibitions to prevent polluting lakes, rivers, wetlands or groundwater. The state regulates waste structures and manure application at large farms as CAFOs (Concentrated Animal Feeding Operations) under the U.S. EPA Clean Water Act's pollutant discharge permit program (known in Wisconsin as WPDES). More information about the WDNR's program for regulation of CAFOs is available at the following website: http://dnr.wi.gov/topic/AgBusiness/CAFO/.

COMMENTS: ASSESSMENT METHODOLOGY – The commenter reiterates their remarks expressed during the public comment period for the 2012 draft impaired waters list regarding the use of numeric criteria solely for listing decisions. The commenter states that more data should be gathered and more rigorously evaluated, including data that demonstrates biological impairment, when making impaired waters listing decisions. Waters that don't meet these requirements should be placed in listing category 3 – waters with insufficient information to assess. **(Timm P. Speerschneider on behalf of Wisconsin State Cranberry Growers Association)**

> **RESPONSE:** In their February 17, 2012 letter to WDNR, EPA stated that "waters that meet minimum data requirements and exceed numeric total phosphorus criteria must be placed on the 303(d) list in order to implement Wisconsin water quality standards as written and to meet Clean Water Act (CWA) goals." In response, WDNR has begun the process of revising our administrative rules to modify our assessment and impaired waters listing processes and more formally incorporate biological confirmation of impairment into these processes. If the proposed rule revisions are adopted, WDNR would make assessment and listing decisions in accordance with the revised rule. Under the proposed rule revisions, waters that exceed applicable phosphorus concentration thresholds and are biologically impaired would be included on the impaired waters list. Whereas, waters that exceeded applicable phosphorus concentration thresholds only and are not biologically impaired would be delisted from the impaired waters list. In the interim, assessments and listing decisions will follow current WisCALM guidance, which implements the existing phosphorus criteria in Wis. Adm. Code NR 102.06 by including such waters in the 5P category.

COMMENTS: GREAT LAKES ASSESSMENT METHODOLOGY – Commenters petition WDNR to improve its impaired waters listing process by addressing the recommended assessment methods revisions in order to protect Lake Michigan and Lake Superior against phosphorus, nuisance algae and debris. More specifically, the commenters recommend listing Great Lakes beaches and nearshore waters as impaired due to excessive phosphorus and algal levels and conducting a more detailed evaluation of floating debris which includes onshore litter. **(Lyman Welch and Ashley Hewson, Alliance for the Great Lakes)**

> **RESPONSE:** WDNR currently does not have an established assessment protocol for assessment of Great Lake nearshore waters or a clear means to delineate an area of impact. Without these two elements, nearshore data cannot be assessed for the 2014 listing cycle. Due to staff and resource

limitations, no further changes to assessment protocols for the 2014 assessment cycle were made. However, in the coming months, WDNR plans to form a workgroup charged with developing a robust method for assessing the recreation use of Great Lakes nearshore waters to be included in the 2016 WisCALM.. Because Lakes Michigan and Superior are large, interjurisdictional waters, the development of assessment protocols for the Great Lakes will be a collaborative effort with external partners, other waters quality agencies and the USEPA.

COMMENTS: TMDL PRIORITIZATION – Federal regulations require that waters on the 303(d) list that require TMDLs are given a priority ranking. Commenters requests that WDNR clarify what factors and approaches are currently used to determine the high, medium, and low priority rankings assigned to impaired waters, and recommend.establishing a more concrete prioritization system and projected timeline for Total Maximum Daily Load (TMDL) development for impaired waters. **(EPA, Region 5; Lyman Welch and Ashley Hewson, Alliance for the Great Lakes)**

RESPONSE: WDNR assigns a coarse priority ranking (high, medium or low) to waters on the impaired waters list for Total Maximum Daily Load (TMDL) development. Priority rankings are evaluated during each listing cycle to determine if TMDL development can be completed based on staff and fiscal resources. If a TMDL is in development or planned to be developed, WDNR ranks the waterbody as a "high" priority. A ranking of "medium" indicates that information is currently being gathered that may be used for future TMDL development. A ranking of "low" indicates that a TMDL will be completed in the future.

The following factors are also considered when selecting waters for TMDL development:

- **Likelihood to respond**: WDNR may consider the likelihood of the water to respond to management actions when assigning a rank.
- **Severity of the impairment**: WDNR will also consider the severity of the impairment in assigning a priority. In some cases, extreme conditions may be present that need attention more quickly than those that are not so extreme. Waters with frequent fish kills or acute toxicity issues are examples of this concern.
- **Public health concerns**: Waters with issues that may affect human health can be considered "high" priority if development and implementation of a TMDL can result in improving water quality.

WDNR is participating in the discussions with other state water quality agencies regarding the prioritization goal of EPA's recent Clean Water Act Section 303(d) Visioning efforts, and is considering all relevant examples of approaches to implementing that goal.

WDNR has recently formed the Watershed Assessment, Restoration and Protection (WARP) advisory team, an internal cross-program advisory team, that includes representatives from the Section 319 nonpoint source implementation, point source permitting, TMDL development and implementation, drinking and ground water quality, and surface water quality monitoring and assessment staff to ensure integration among these programs. The focus of the WARP advisory team to date has been on cross-program communication, tracking TMDL project status and coordination, and guidance development. The advisory team may take on the topic of revamping our TMDL prioritization and selection process at a future date.

EPA COMMENTS

COMMENTS: GROUNDWATER DATA - EPA recommends that WDNR include in future updates to WisCALM a discussion of how available groundwater data are used in making general condition assessments of water resources (e.g. Section 2.0 and 3.0). **(EPA, Region 5)**

> **RESPONSE:** Monitoring of public drinking water wells is carried out to ensure that federal public health standards for contaminants in drinking water are met. WDNR does not currently use groundwater data to make general condition assessment of water resources; we will consider incorporating groundwater data in general condition assessments as staff and fiscal resources allow and will work with EPA to identify options and examples of assessments from other states that incorporate groundwater data.

COMMENTS: PHOSPHORUS ASSESSMENTS – EPA requests that WDNR provide an evaluation of how the lower 90th percent confidence interval performed over a set of sample water bodies in comparison to other statistics such as the mean and the median. EPA is also interested in the number of waterbodies that are placed in Category 3 (insufficient information) as a result of using the confidence interval approach, and how that number compares to the amount of waters that are listed as impaired. EPA requests that WDNR identify waters that were placed in Category 3 due to use of the confidence interval methods described for TP assessments (i.e., where an impairment decision is not made because the TP criterion is between the confidence interval values). **(EPA, Region 5)**

> **RESPONSE:** We compared two methods for evaluating stream phosphorus concentrations relative to criteria using samples from 203 wadeable streams. Each site had six monthly growing season samples. The sample medians (MS) were almost always higher than the lower 90% confidence limit of the median (ML90), by an average of 23%. However, out of these 203 sites, only 21 (10%) would be classified as impaired by MS but not ML90. These 21 streams would be placed in category 3, and prioritized for further sampling to refine the estimate of the median. Twenty-five sites whose sample medians are below the criteria but whose upper 90% confidence limit of the median are above the standard would also be placed in category 3. In comparison, 79 sites would be classified as clearly meeting standards, and 78 sites would be classified as clearly exceeding standards. Based on this analysis, six samples would provide a definitive evaluation of 77% of sites, and 23% of sites would require further sampling.

Category	**Number of streams**
Clearly Exceeds	78
May Exceed	21
May Meet	25
Clearly Meets	79

Of all the waters that had sufficient phosphorus datasets to assess for the 2014 impaired water list, 57 (11%) of the 502 lakes assessed had a dataset that fell in the ambiguous range (i.e. 90% confidence interval spans the applicable criterion), and 123 (12%) of the 1,025 assessed stream segments fell in the ambiguous range.

As requested, WDNR will provide a list of waters (along with the impaired waters submittal) where a TP-related impairment assessment decision is not made because the TP criterion is between the confidence interval values.

COMMENTS: DESIGNATED USE IMPAIRMENTS - Federal regulations specify that the 303(d) list include waters that are not meeting designated uses (40 CFR 130.7(b)(5)(i)). This information is not clearly provided in the draft list. Some information such as 'Impairment indicators,' does suggest which designated use(s) may be impaired, but does not clearly identify this information. In its final 2014 list, WDNR should identify which designated uses are affected by the impairments on the 303(d) list, or summarize designated uses that are impaired within waterbodies across the state. **(EPA, Region 5)**

RESPONSE: The final Integrated Reporting dataset submitted to EPA through the exchange network will include the impaired use(s) for each pollutant/waterbody listing combination.

COMMENTS: LISTING CATEGORY CLARIFICATIONS - Please identify the proposed WDNR Categories for each of the waters listed in worksheet 'D 2014 Proposed Delistings' of the draft list). This information is necessary to complete SP-10 and SP-11 summary information collected by EPA. In addition, EPA requests that WDNR identify waters that are proposed for Category 4, including subcategories. This information will assist the region in completing its review of the waters that WDNR has identified as impaired, including waters that would not require TMDL development. **(EPA, Region 5)**

RESPONSE: The WDNR waterbody reporting category will be included for each proposed delisting in the submitted draft list.

COMMENTS: LISTING DATE – EPA requests that WDNR clarify the listing date for some waters. In the 2014 draft list 16 waters are identified in the 'Date listed' column as listed in 2013. On the final 2014 list, please clarify whether these 16 waters were proposed to be added on the 2012 or 2014 list. This clarification would improve accuracy of information summarized for different 303(d) list years. **(EPA, Region 5)**

RESPONSE: The listing date for the 16 waters identified in the table provided in EPA's comments were corrected to identify them as being first listed in 2012.

COMMENTS: LISTING DATE – EPA requests that WDNR clarify how it plans to follow-up on Watch Waters, and whether these waters are assigned to an Integrated Reporting category. As written it is unclear what further action is planned. **(EPA, Region 5)**

RESPONSE: Watch Waters are those for which limited data indicate potential impairment, but insufficient data are available to make a final impairment decision, and, therefore, are identified for further monitoring. These waters are not included on the Impaired Waters List due of

circumstances warranting further observation or evaluation. These waters are placed in Integrated Reporting Category 3 and identified as monitoring priorities in our WATERS database for follow-up monitoring.

A water may be designated as a Watch Water if water quality data indicating impairment are were collected from unrepresentative "extreme weather" periods, as defined in Section 2.5, resulting in insufficient data to assess. Watch Water status is also designated when phosphorus data are assessed for a particular water but a "clear" decision cannot be made (i.e. 90th percent confidence interval of the phosphorus sample concentration data overlaps the criterion). WisCALM guidance defines a "clear" exceedance of the phosphorus criteria as the lower 90th percent confidence interval of a phosphorus sample concentration dataset that exceeds the applicable criterion. Conversely, the phosphorus criteria are "clearly met" when the upper 90th percent confidence interval of the phosphorus sample concentration data is below the applicable criterion.

COMMENTS: WATERS IDS - Please include, on the final 2014 list, the 'Waters ID's' for East Balsam Lake, Cazenovia Branch, and Unnamed Tributary to Yellow River. **(EPA, Region 5)**

RESPONSE: The WATERS IDs for these waters are as follows: East Balsam Lake (4698566), Cazenovia Branch (13010), and Unnamed Tributary to Yellow River (4699046) and will be included on the final 2014 list submittal.

EPA Comments on WDNR's 2014 Consolidated Assessment and Listing Methodology (WisCALM)

COMMENTS: TIERED USES AND BIOLOGICAL THRESHOLDS - From Page 1 of Region 5 comments to WDNR dated July 31, 2013: Region 5 remains concerned about the State's ability to produce sufficient data to make routine attainment determinations using the tiered monitoring approach, and about the biological thresholds used for assessing attainment. Region 5 would like to continue working with the State to resolve these issues and appreciates the work done recently on reviewing the biological assessment program. **(EPA, Region 5)**

RESPONSE: DNR will continue to work with EPA to address their concern regarding impairment thresholds. WDNR plans to create a new subchapter in Chapter NR 102 of Wisconsin Administrative Rule relating to establish biological criteria for certain water body types and describe processes for related waterbody assessments. WDNR plans to collaborate with stakeholders and EPA in the development of these rules.

COMMENTS: DRINKING WATER - Based on the conversations between Region 5 and WDNR on March 7, 2014, it is our understanding that the footnote 2 on page 2 of the 2014 WisCALM document is no longer necessary because the Public Health and Welfare Use found at NR 102.04 (7) contains a designation for public drinking water supply that is equivalent to the Drinking Water use mentioned by

Region 5 in past comments. Region 5 will assist WDNR in the Review of the current rule language to determine if revisions are necessary to clarify the existing language regarding public water supply.

> **RESPONSE**: WDNR will remove footnote 2 on page 2 of the 2014 WisCALM document in the 2016 update and will continue discussions with EPA, Region 5 to regarding potential clarifications of the existing rule language applicable to public water supply waters.

COMMENTS: TEMPERATURE ASSESSMENTS - From Page 4 of EPA Region 5 comments to WDNR dated July 31, 2013, the following items have not been addressed regarding temperature:

a) Section II.3 under Rivers and Streams Assessment, item "i"; and

b) Section II.3. under Lakes Assessment, item "i"; and

c) Section II.3 under Acute and sub-lethal temperature criteria, item "ii."

> **RESPONSE**: WDNR agrees that smaller temperature datasets than the minimum sample sizes listed in Tables 5 and 14 of the final 2014 WisCALM guidance may be considered in certain cases, such as incidences of a high magnitude of exceedance. WDNR will exercise best professional judgment in making a decision to use datasets smaller than the minimum specified in WisCALM. This clarification was added as a footnote in Tables 5 and 14 of the final 2014 WisCALM guidance.
>
> The final 2014 WisCALM guidance uses a 10% exceedance rate of the acute criterion to assess impairment; however, EPA is reevaluating the "10% rule" and has indicated that they may provide further explanation in the 2016 Integrated Reporting guidance. During EPA's initial review of WisCALM 2014, EPA requested further discussion on the use of the 10% rule for criteria that expressed in the states standards as "never to be exceeded," following their development of guidance on this topic. WDNR will reexamine the use of a 10% rule when new EPA guidance on this issue becomes available.