

Response to Comments on Updated Clean Water Act Reporting Category for the Yahara Chain of Lakes for the Draft 2012 Impaired Waters List

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This document summarizes Wisconsin Department of Natural Resources (DNR) responses to comments received on the updated Clean Water Act reporting category for the Yahara Chain of Lakes (Mendota, Monona, Waubesa, and Kegonsa) during the public comment period held from December 12, 2013 to January 13, 2014. Updates to the impaired waters listing category were proposed for the Yahara Chain of Lakes in response to previous comments on Wisconsin's draft 2012 impaired waters list. Public comments on these listing updates were received from two individuals. Their comments and DNR's responses are listed below.

**Commenter:** Jim Lorman <lorman@edgewood.edu>

“The recent WSJ article about adding Mendota, Monona, Waubesa, and Kegonsa to the Impaired Waters (303d) List ([http://host.madison.com/news/local/environment/article\\_7ce4fb1a-b310-5cee-ab3b-a6cc6987ab5c.html](http://host.madison.com/news/local/environment/article_7ce4fb1a-b310-5cee-ab3b-a6cc6987ab5c.html)), says that Wingra is (was already) listed for phosphorus (as well as PCBs):

"Lakes in the Yahara chain have been listed because of other pollutants, such as mercury and PCBs, according to the DNR website for impaired waters. Lake Wingra, which drains into Lake Monona, is **listed for phosphorus...**"

I had not heard that Lake Wingra was listed for phosphorus, and it does not appear on the 2012 list. Is this an error by the reporter?

But the proposed listing of the other Yahara Lakes does raise the question of why Wingra wouldn't also be listed. Aren't Lake Wingra P levels comparable to other Madison Lakes (e.g., see <http://www.cleanlakesalliance.com/wp-content/uploads/2012/05/SaveOurLakesReportOnline.pdf>), and what consideration has been given to listing Lake Wingra for phosphorus?"

**DNR Response:**

Lake Wingra is on the 2012 list. It was not included in the initial list that was submitted to EPA in August, but was later added after further review and in response to EPA comment. To make this listing decision, we evaluated data collected from the Yahara River watershed to determine whether the lakes would meet applicable total phosphorus standards if the load allocations from the Rock River TMDL are met. Based on our assessment, it is reasonable to expect that Lakes Mendota, Monona, Waubesa and Kegonsa would meet criteria; therefore, we are proposing to place those lakes in Category 4A. However, load allocations were not assigned in the TMDL to sources contributing to Lake Wingra; therefore, we are proposing to place Lake Wingra in Category 5P for the pollutant total phosphorus, as the total phosphorus criteria are exceeded, but chlorophyll listing thresholds are not.

Lake Wingra listing documentation is available at the following website:

<http://dnr.wi.gov/water/impairedDetail.aspx?key=11667>

**Commenter:** Bill and Georgia Novak <bgnovak@hotmail.com>

“Read through some of the report and was able to access all parts but part A—the actual list of impaired waters-upon trying to open it a mysterious message appears saying I may not have proper clearance. parts B,C etc. all open perfectly. I fished Mendota and Monona a great deal in the 50’s-early 70’s, eutrophic but never saw it like I did in the late 90’s when my daughter went to the U. and the algae was an inch thick and the water was pea soup like. The email I got from the DNR seems to say the lakes are worse than they were (Phos. levels) but that the DNR is having a public meeting to explain a new listing for the lakes that will put them in compliance ?? with the EPA standards. I read it over and over and it was still an ambiguous email. Thanks Bill Novak”

**DNR Response:**

The link on [DNR’s website](#) to download Attachment A: Wisconsin’s Final Draft 2012 Impaired Waters List is operational; the file type is a Microsoft Excel spreadsheet. Please contact DNR for a copy of the 2012 list in an alternate format, if needed.

Available data show that the Yahara Chain of Lakes exceed applicable phosphorus criteria. DNR has also determined that Lakes Mendota, Monona, Waubesa and Kegonsa will meet applicable total phosphorus criteria if the load reductions called for in the Rock River Total Maximum Daily Load (TMDL) study are achieved. Therefore, we are proposing to place those lakes in a category of impaired waters that are addressed by EPA-approved TMDLs - Category 4A. When the TMDL is fully implemented, DNR expects that water quality of these lakes will improve to a level that meets water quality standards. Documents providing supporting justification for this reporting category change were provided to EPA with the final draft list submittal on August 28, 2013.

**To announce the comment period and public meeting, the following press release was issued on December 13, 2013:**

[http://dnr.wi.gov/news/breakingnews\\_lookup.asp?id=3031](http://dnr.wi.gov/news/breakingnews_lookup.asp?id=3031)

**Dec. 19 public meeting set on adding Yahara lakes to impaired waters list**

News Release Published: December 13, 2013 by the [Central Office](#)

Contact(s): Aaron Larson, 608-264-6129

MADISON - The state's proposal to add the Yahara lakes to a new category of impaired waters is the topic of a Dec. 19 public meeting in Fitchburg.

The proposal is part of the federally mandated process the Department of Natural Resources must follow every two years to update the list of lakes and river segments not meeting water quality standards and requiring the development of Total Maximum Daily Load (TMDL) studies. TMDL studies are plans to restore water quality for waters that are not meeting water quality standards.

"Because there is already a TMDL in place for the Rock River basin that encompasses the Yahara lakes, and there is already a local plan to address the lakes, adding the Yahara lakes to the list will not require a new plan or project," says Aaron Larson, the water quality specialist leading the effort. "This is the formal process we are required to follow by EPA."

DNR is proposing to add the Yahara Lakes (lakes Mendota, Monona, Waubesa, and Kegonsa) to the 2012 Impaired Waters List in a new category of water bodies with EPA-approved plans. Recent phosphorus data from Lakes Mendota, Monona, Waubesa, and Kegonsa indicate that these waters do not meet phosphorus water quality criteria, Larson says.

During this meeting, DNR staff will explain how interpretation of monitoring data compel this listing decision and the implementation of the Rock River TMDL along with other watershed plans will address the phosphorus-related water quality impairments in the Yahara Lakes.

Ken Johnson, who leads DNR's Water Division, says that the list of waters not meeting water quality standards, also known as the Impaired Waters List, is updated to reflect waters that are newly added or removed based on new information or changes in waterbody status. The list includes many new water bodies because Wisconsin changed its water quality standards for phosphorus 2010. The new water quality standards issued in 2010 were the strictest standards in the country, Johnson says. The 2012 list is the first list reflecting these tougher standards.

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[Find information supporting the proposed listing on DNR's web site.](#)

The meeting begins at 4 p.m. at the DNR Service Center in Fitchburg, 3911 Fish Hatchery Road. A 30-day comment period is now open and will run through Jan. 13, 2013, for the public to provide written comments on DNR's proposal to change the listing category for the Yahara Lakes.

Comments received during that period and DNR responses will be forwarded to EPA as supplemental documentation for the federal agency's review and approval of Wisconsin's 2012 Impaired Waters List. Email is the preferred comment format, but letters by mail are also accepted. Comments can be emailed to DNR at [DNRImpairedWaters@wisconsin.gov](mailto:DNRImpairedWaters@wisconsin.gov) or sent by U.S. mail to Aaron Larson, DNR, Water Evaluation Section (WY/3), P.O. Box 7921, Madison, WI 53707.

The following information was posted on DNR's website during the comment period ([http://dnr.wi.gov/topic/impairedwaters/2012IR\\_Yahara.html](http://dnr.wi.gov/topic/impairedwaters/2012IR_Yahara.html)):

## Updated Clean Water Act Reporting: Yahara Chain of Lakes



In accordance with the requirements of Section 303(d) of the Federal Clean Water Act, the Wisconsin Department of Natural Resources (WDNR) updates biennially the list of waterbodies requiring the development of Total Maximum Daily Load (TMDL) studies, which are plans to restore water quality for waters that are not meeting water quality standards. This list, also known as the Impaired Waters List, is updated to reflect waters that are newly added or removed based on new information or changes in waterbody status. Recent phosphorus data from Lakes Mendota, Monona, Waubesa, and Kegonsa indicate that these waters do not meet phosphorus water quality criteria. This information compels the WDNR to propose a change to the Clean Water Act reporting status for these lakes from "meeting criteria" to "not meeting criteria but restoration plan exists."

### Public Meeting

WDNR will hold a public meeting on **December 19, 2013 at 4:00 PM at the WDNR Service Center in Fitchburg, WI** (3911 Fish Hatchery Rd.) to provide an opportunity for public input on WDNR's proposal to place the Yahara Lakes (Lakes Mendota, Monona, Waubesa, and Kegonsa), a chain of lakes along the Yahara River, into listing category 4A - waterbodies with EPA-approved TMDLs. During this meeting, WDNR will explain how interpretation of monitoring data compel this listing decision and the implementation of the Rock River TMDL along with other watershed initiatives will address the phosphorus-related water quality impairments in the Yahara Lakes.

### Public Comment Period

In addition to the public meeting, a 30-day comment period will be held from **December 12, 2013 to January 13, 2014** for the public to provide written comments on WDNR's proposal to change the listing category for the Yahara Lakes. Comments received during that period, and WDNR responses, will be forwarded to EPA as supplemental documentation for their review and approval of Wisconsin's 2012 Impaired Waters List. Email is the preferred comment format, but letters by mail are also accepted. Comments can be emailed to WDNR at [DNRImpairedWaters@wisconsin.gov](mailto:DNRImpairedWaters@wisconsin.gov) or sent by U.S. mail to Aaron Larson, WDNR, Water Evaluation Section (WY/3), P.O. Box 7921, Madison, WI 53707.

### Supporting Documents

- [Current EPA-approved Rock River TMDL document \[PDF\]](#)
- [Category 4A listing justification document \[PDF\]](#)
- [Phosphorus Loading and Lake Response Analyses for the Yahara Lakes \(Lathrop and Carpenter, 2011\) \[PDF\]](#)

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### **Ongoing Water Quality Improvement Efforts**

Efforts to reduce phosphorus pollution in the Yahara Lakes are already underway. The Clean Lakes Alliance Strategic Action Plan for Reducing Phosphorus outlines pollution reduction strategies that aim to achieve the water quality goals for the Yahara Lakes.

- [Yahara CLEAN \(Capital Lakes Environmental Assessment and Needs\) Strategic Action Plan for Reducing Phosphorus](#) [PDF]

Last revised: Monday December 16 2013

**The following message was distributed via DNR's GovDelivery service to 2,591 subscribers of the Impaired Waters topic:**

In accordance with the requirements of Section 303(d) of the Federal Clean Water Act, the Wisconsin Department of Natural Resources (WDNR) updates biennially the list of waterbodies requiring the development of Total Maximum Daily Load (TMDL) studies, which are plans to restore water quality for waters that are not meeting water quality standards. This list, also known as the Impaired Waters List, is updated to reflect waters that are newly added or removed based on new information or changes in waterbody status.

You are invited to attend an informational public meeting hosted by Wisconsin Department of Environment and Natural Resources (WDNR) on December 19, 2013 at 4:00 PM at the WDNR Service Center in Fitchburg, WI (3911 Fish Hatchery Rd.) to provide an opportunity for public input on WDNR's proposal to place the Yahara Lakes (Lakes Mendota, Monona, Waubesa, and Kegonsa), a chain of lakes along the Yahara River, into listing category 4A - waterbodies with EPA-approved TMDLs. During this meeting, WDNR will explain how interpretation of monitoring data compel this listing decision and the implementation of the Rock River TMDL along with other watershed initiatives will address the phosphorus-related water quality impairments in the Yahara Lakes.

**Supporting Documents**

- [Current EPA-approved Rock River TMDL document \[PDF\]](#)
- [Category 4A listing justification document \[PDF\]](#)
- [Phosphorus Loading and Lake Response Analyses for the Yahara Lakes \(Lathrop and Carpenter, 2011\) \[PDF\]](#)

**Ongoing Water Quality Improvement Efforts**

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- [Yahara CLEAN \(Capital Lakes Environmental Assessment and Needs\) Strategic Action Plan for Reducing Phosphorus \[PDF\]](#)

**Comment Period**

In addition to the public meeting, a 30-day comment period will be held from December 12 – January 13, 2013 for the public to provide written comments on WDNR's proposal to change the listing category for the Yahara Lakes. Comments received during that period, and WDNR responses, will be forwarded to EPA as supplemental documentation for their review and approval of Wisconsin's 2012 Impaired Waters List. Email is the preferred comment format, but letters by mail are also accepted. Comments can be emailed to WDNR at [DNRImpairedWaters@wisconsin.gov](mailto:DNRImpairedWaters@wisconsin.gov) or sent by U.S. mail to Aaron Larson, WDNR, Water Evaluation Section (WY/3), P.O. Box 7921, Madison, WI 53707.

For more information on Wisconsin's Impaired Waters List, please visit our website at <http://dnr.wi.gov/topic/impairdwaters/>.

## Additional Local Contacts Sent Public Meeting Announcement Mailings:

### **Dane County**

Office of Lakes & Watersheds  
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### **City of Madison**

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### **Yahara Pride Farms Board**

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### **Midwest Environmental Advocates**

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**Rock River Coalition**

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**Town of Dunn**

Edmond P Minihan

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Chairman  
[townhall@town.dunn.wi.us](mailto:townhall@town.dunn.wi.us)

**Municipal Environmental Group**

Paul Kent  
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[pkent@staffordlaw.com](mailto:pkent@staffordlaw.com)

The following justification document was submitted to EPA with the final draft 2012 impaired waters list on August 28, 2013:

**Justification for 4a Listing of the Yahara Lakes and Their Inclusion in the Rock River TMDL**

Prepared By:  
Wisconsin Department of Natural Resources  
Matt Diebel, PhD and Kevin Kirsch, PE

**Background:**

The Yahara Lakes (Mendota, Monona, Waubesa, and Kegonsa) are a chain of lakes along the Yahara River, which is part of the Rock River Basin. The Rock River TMDL, which was approved by EPA in September 2008, established total phosphorus (TP) and total suspended sediment (TSS) allocations for impaired stream reaches and lakes in the basin. At the time, the Yahara Lakes were not listed as impaired for TP or TSS so the TMDL analyses did not include explicit allocations for the lakes. Because of their proximity to UW-Madison, the Yahara Lakes have been extensively studied; and at the time the TMDL was written, DNR believed that the allocations contained in the TMDL would meet water quality goals for the lakes. DNR did not want to have a TMDL approved and explain allocations to stakeholders only to have to assign potentially more stringent allocations in the near future to meet lake water quality goals.

In 2008 when the TMDL was approved, EPA did not assign explicit allocations to waters that were not impaired nor did DNR have a comprehensive report available at the time summarizing historical lake data to support explicit allocations. However, separate analyses conducted and published for the Yahara CLEAN report (Lathrop and Carpenter 2011) were able to be adapted to answer the adequacy of the TMDL allocations in meeting the water quality criteria for the Yahara Lakes.

**Water Quality Targets for Yahara Lakes:**

In 2010, the DNR promulgate statewide nutrient criteria for total phosphorus for streams, rivers, and lakes. Lakes are assigned criteria values based on their natural community classification. The upper lakes (Mendota and Monona) are classified as deep lowland lakes, and have summer mean TP criteria of 0.03 mg/L. The lower lakes (Waubesa and Kegonsa) are classified as shallow lowland lakes, and have summer mean TP criteria of 0.04 mg/L.

Lathrop and Carpenter's (2011; Figure 6) analyses show that all four lakes met these criteria during the drought period of 1988-89. Unlike other TMDL analysis that are often based exclusively on computer simulations, actual lake monitoring data and loading data representing the desired water quality condition could be used. Because actual external TP loads to the lakes during this period (Table 2, load goal) produced concentrations meeting water quality criteria the loads can be considered sufficient to meet TP criteria.

**Supporting Analysis:**

To compare the TMDL load allocations to these load goals, Matt Diebel (originally part of the EPA consultant team that developed the Rock River TMDL and current DNR researcher) conducted a three-step analysis. First, Matt assumed that the TP allocations to reaches 64 and 66 (Table 1) would be split between the lakes in approximate proportion to their relative direct drainage areas (Table 2, % of lumped allocation). Second, Matt added TP from atmospheric and

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groundwater to the allocated load. And third, Matt used Lathrop and Carpenter's "pass-through" factors for each lake (outflow/inflow TP load) to simulate how loads to the upper lakes would move down the chain of lakes.

The results of this analysis show that the TMDL allocations are well below the load goals for Mendota, Monona, and Waubesa (Table 2), which means those three lakes would likely have even lower summer TP concentrations than during the 1988-89 drought. The TMDL allocation is 16% more than the observed load to Lake Kegonsa during the drought, but the TP concentration in Kegonsa during the drought was approximately 25% less than the criterion, so meeting the allocation would result in meeting the criterion.

### **Margin of Safety:**

In addition to the margin of safety already contained in the Rock River TMDL analysis, the analysis conducted above includes additional safety factors through the inclusion of both atmospheric and groundwater contributions of total phosphorus to the Yahara Lakes.

### **Reasonable Assurance:**

Since the completion of the Rock River TMDL additional implementation planning and activities have been occurring in the Yahara River Basin including Madison Metropolitan Sewerage District's adaptive management plan to reduce phosphorus loads in the basin through a combination of point and nonpoint sources reductions and Yahara Clean Initiative (A CLEAN Future for the Yahara Lakes: Solutions for Tomorrow, Starting Today; September 2010). The report identified 70 actions to help clean up the lakes and have them meet nutrient criteria targets. The actions include recommendations for reducing sediment and nutrient input into the lakes from rural areas and farmlands and urban areas, and for improving beach water quality through stormwater management and waterfowl control measures.

In November 2012, an additional two years of work focused in on specific management options and targeting and was summarized in the "Yahara CLEAN Strategic Action Plan". The plan includes a list of 14 actions, with phosphorus reductions calculated for each action based on models, assumptions, and more than 30 years of monitoring data. The combination of actions is tailored for each lake in the Yahara River chain and focuses on reductions in the direct drainage sources of phosphorus to each lake. The actions are further divided into rural and urban actions.

As with any TMDL, if after implementation of these practices it is found that water quality goals are not being achieved, the TMDL will be re-visited and allocations adjusted accordingly. DNR does not yet have a timetable for when approved TMDLs are re-visited; however, at that time newly listed water previously not addressed in the Rock River TMDL will be added and the implicit allocations for the Yahara Lakes can be explicitly clarified within the TMDL.

Lathrop, R.C. and S.R. Carpenter. 2011. Phosphorus Loading and Lake Response Analyses for the Yahara Lakes. Unpublished report prepared for the Yahara CLEAN project.

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Table 1.

Lake	TMDL Reach	TP Allocation (lb)	TP Allocation (kg)
Mendota (Pheasant Branch)	62	969	439
Mendota (Dom Creek)	63	866	392
Mendota and Monona	64	17,331	7,846
Waubesa (Nine Springs Creek)	65	1,469	665
Waubesa and Kegonsa	66	7,177	3,249

Table 2.

Lake	TP pass through factor <sup>1</sup>	Other TP sources (atmospheric and groundwater, kg) <sup>1</sup>	% of Lumped Allocation	Load goal (kg) <sup>1</sup>	Projected load with TMDL implemented (kg) <sup>2</sup>	Difference between projected load and load goal
Mendota	26.5%	3,800	90%	17,400	11,692	-33%
Monona	58.6%	1,100	10%	11,700	4,983	-57%
Waubesa	93.5%	700	40%	6,800	5,584	-18%
Kegonsa	77.9%	1,100	60%	7,100	8,271	+16%

<sup>1</sup>From Lathrop and Carpenter (2011, Table 1)

<sup>2</sup>Projected load with TMDL implemented for lake A =  
 projected load with TMDL implemented for next upstream lake × TP pass through factor for next upstream lake  
 + other TP sources to lake A  
 + TP allocation to lake A only from table 1  
 + lumped TP allocation to lake A and another lake from table 1 × % of lumped allocation to lake A