

Attachment E

**Summary of
Public Comments
&
Department Responses Related to
the:**

**DRAFT 2008
Impaired Waters List**

**Prepared by:
Wisconsin Department of Natural Resources
Bureau of Watershed Management**

July 31, 2008

On February 19, 2008, the Wisconsin Department of Natural Resources (WDNR) announced the availability of its draft “Impaired Waters List” and invited public comment. The Impaired Waters List is submitted once each two years to the United States Environmental Protection Agency (USEPA) in fulfillment of the requirements of Section 303(d) of the federal Clean Water Act. This list, is intended to identify surface waters – lakes, rivers, and streams – in Wisconsin that are not achieving the water quality standards expressed in Chapters NR 102-105 of the Wisconsin Administrative Code.

In developing the 2008 list, WDNR solicited information from 39 different groups that may have collected or have access to water quality data for Wisconsin waters. Included in this solicitation were academia, regional planning commissions, environmental advocacy groups, WPDES permit holders, and federal agencies like the United States Geological Survey and Natural Resources Conservation Service. In addition to external data, WDNR staff compiled available and representative data from recent monitoring efforts to make the recommendations for the 2008 draft.

In announcing the availability of the draft 2008 list, WDNR directed interested parties to a website that provided the following materials:

- 2006 Final Impaired Waters List
- 2008 Listing Methodology
- 2008 Additions to the List
- 2008 De-listing recommendations
- 2008 Technical Changes (to previous lists)

Shortly before the original comment deadline of March 19, 2008, a formal request was received for extension of the comment period for want of specific data to evaluate certain WDNR recommendations. WDNR public noticed a one-week extension in response to that request and extended the comment period to March 26, 2008.

In all, comments were received from 16 different individuals or groups (See Attachment). The following pages are a summary of those comments and WDNR responses indicating what changes, if any, have been made in response to the comment received.

This document is being submitted to USEPA – Region 5 staff along with the resulting draft 303(d) list. After USEPA staff has reviewed this document and the associated list, additional changes may be made to ensure compliance with federal requirements.

Any questions or concerns regarding this information should be directed to:

Bob Masnado – WT/3
Bureau of Watershed Management
Wisconsin Department of Natural Resources
101 S. Webster Street
Madison, Wisconsin 53707-7921
E-mail: Robert.masnado@wisconsin.gov

1. **COMMENT:** Ted Peters (Director, Geneva Lake Environmental Agency) provided information to clarify the actual location of samples collected and used to add a “beach” to the 2006 Impaired Waters List (Linn/Robinson Public Beach Creek – Geneva L.) as well as a proposed addition to the 2008 list (HR1 Robinson Hillside Beach). The comment documents that both sites are likely one and the same – both being the creek that is tributary to Lake Geneva and Robinson Public Beach.

RESPONSE: The Geneva Lake Environmental Agency provided WDNR with detailed descriptions of the sampling locations for this waterbody. It is apparent from that information that the data from all sampling sites was combined and used collectively to determine if the beach was impaired or not when it was added to the 303(d) List in 2006. In retrospect, samples collected from HR1 reflect an upstream location in the flowing portion of Robinson Hillside Creek and do not represent the conditions at the beach on Lake Geneva. Samples from Sites HR2 and HR3 reflect the East and West boundaries of the beach area and are the most appropriate sites to characterize whether or not the recreational use of the beach is impacted. Neither of these sites has a minimum of 15 samples per year for each calendar year 2005-2008 which suggests that there are insufficient data to draw a conclusion on whether or not the recreational use is being achieved. Regardless, the limited data that are available do not identify any exceedences of the 235 cfu/100 mLs threshold for *E. coli*.

This updated and clarified information necessitates a change in the 2008 proposal as well as the 2006 inclusion of Robinson Hillside Beach. Instead, this beach should be “de-listed” for the reasons described above.

Final Action: **De-list** this waterbody.

2. **COMMENT:** Mike Kakuska (Senior Planner, Capital Area Regional Planning Commission) submitted a comment that suggested that dissolved oxygen levels in Black Earth Creek (WBIC # 1248600) above the Village of Black Earth are not acceptable. He has suggested that management actions need to be taken to prevent further degradation of the stream.

RESPONSE: WDNR does not believe Black Earth Creek should be included on the Impaired Waters List. Black Earth Creek has its headwaters near Middleton in Dane County, and confluence with the Wisconsin River in Sauk County north of Arena. Black Earth Creek has a designated Fish & Aquatic Life use of Coldwater Community beginning near the headwaters and extending to where Vermont Creek enters it, just downstream of the community of Black Earth. The USGS sampling station upstream of the community of Black Earth and cited by the commenter is within this stream reach.

Black Earth Creek contains a naturally reproducing population of brown trout, and is highly popular destination for trout anglers. WDNR Fisheries Management staff have conducted annual fish surveys and population estimates on Black Earth Creek since 1989, and have long-term datasets extending back to the 1950’s. Since a runoff-induced fish kill of 2001, WDNR management efforts have included work with Dane County and others partners to address pollutant inputs to Black Earth Creek and stream bank stabilization. Recent fish surveys show

that Black Earth Creek continues to have one of the highest densities of naturally-reproducing brown trout of any stream in the region.

Documented low dissolved oxygen events in Black Earth Creek have been associated with a variety of factors, most notably low flow (discharge) conditions. Low water levels coupled with available nutrients in the system have resulted in the establishment of dense aquatic plant beds in some stream reaches. Cycles of photosynthesis and respiration in the plants drive diurnal swings in dissolved oxygen, and peak summer temperatures also contribute to a reduced potential to concentrate dissolved oxygen in the water column. Any time a stream is experiencing low water levels, dense aquatic plant growth and solar inputs, diurnal swings in dissolved oxygen can be anticipated.

Similar to many streams in southern Wisconsin, Black Earth Creek is vulnerable to impacts of increasing urban development and experiences seasonal challenges as described above. However, Black Earth Creek in this reach continues to meet all of the following the minimum coldwater stream community expectations:

- Naturally reproducing salmonid community containing more than one age group above the age of 1 year
- Year-to-year salmonid survival
- Will typically maintain good water quality and habitat
- Generally continuous stream flow
- More than 2 individual salmonids per 100 meters
- Maximum daily mean temperature approximate 22°C (77°F)

Furthermore, Black Earth Creek supports a trout fishery that is used by many recreational anglers. A single measured dissolved oxygen sag below 6.0 mg/L and apparent declining trends in dissolved oxygen do not appear to be impairing the fish and aquatic life use or recreational use of Black Earth Creek, so a recommendation to list the waterway as impaired is not appropriate.

Final Action: **Refrain** from including this waterbody on the 2008 list.

3. **Comment:** Lyman Welch (Manager, Water Quality Programs - Alliance for the Great Lakes) submitted comments requesting that WDNR:
 - a) ... must set stringent nutrient budgets and phosphorus limits to control algae growth and include algae-impaired waterbodies on the state's Category 5 list of impaired waters so these serious problems get the attention they deserve;
 - b) ... must go beyond the presence of *E. coli* bacteria as a pollution indicator by evaluating damages to recreational uses that are caused by algae-infested waters and shores; and
 - c) ... list Lake Michigan and Lake Superior as impaired by mercury.

Response: Each bullet is addressed independently.

- a) WDNR is actively pursuing the development of numeric water quality criteria for phosphorus for inland water bodies as well as the near shore environment of Lakes Michigan and Superior. When that effort is complete, appropriate phosphorus limitations may be considered when addressing discharges of phosphorus-laden water.
- b) Wisconsin's 2008 303(d) Listing Methodology does not include specific language related to the determination of impaired waters caused by the presence of algae. While this does not preclude WDNR from considering the impact of these organisms on water quality, no waterbodies have been proposed for inclusion on the 2008 list. WDNR has not developed an assessment protocol to consistently weigh the impacts of these organisms to the recreational uses of our inland or Great Lakes waters. As resources allow, WDNR will continue to refine its surface water monitoring program to ensure that data collection efforts by both staff and trained volunteers will help with assessing the impact of algae.

Further, WDNR will be working to develop more quantitative protocols to allow consistent decision making on use assessments for many types of pollutants and possibly even blue-green algae. To be compliant with Wisconsin's Administrative Rules Procedures (see Chapter 227, Wis. Stats.), any routine assessment protocol will need to be adopted by the Natural Resources Board with significant input from the public and the Wisconsin Legislature. WDNR intends to work in collaboration with local public health agencies, the Department of Health Services, and U.S. EPA to ensure that our policies and procedures are as consistent as appropriate. Public outreach will be a necessary and very important aspect of those efforts.

As stated in the comment letter, WDNR has documented high densities of blue-green algae in some inland waters. This very limited sampling effort focused on lakes that were suspected of being highly eutrophic and was conducted to better understand the dynamics of blue-green algae and the presence/absence of algal toxins. Until these relationships are better understood, the mere presence of blue-green algae is not sufficient to place a water body on the impaired waters list as it is a natural component of the freshwater ecological community and is likely to be found in every inland lake throughout the state.

Furthermore, Wisconsin law specifically precludes WDNR from providing advice on beach advisories and closures, deferring instead to local health department officials. While WDNR shares data with these local agencies, there is no consistent model being used statewide to provide such health advice. Some local agencies following World Health Organization advice and others choose to make case-by-case decisions with variable factors being considered. WDNR has initiated efforts to partner with the Department of Health Services to provide local public health agencies with consistent information related to pathogen and/or algal related advisories and closures.

In summary, inclusion of a waterbody on the Impaired Waters List will be considered in the future, but will be dependent upon having quantitative data for algal density in addition to a determination of adverse impacts to recreational based upon a consistent health-based advisory model.

- c) WDNR staff has used the 2008 Listing Methodology and reviewed the fish tissue data available for Lakes Michigan and Superior as it relates to mercury. Lake Michigan is listed because of a consumption advisory based on PCB concentrations in edible portions of fish. However, including Lake Michigan on Wisconsin's Impaired Waters List for a mercury-based impairment is not warranted because the fish tissue data do not support including Lake Michigan for a specific advisory for mercury. Lake Superior and tributaries (up to the first impassible barrier) is already on Wisconsin's Impaired Waters List because of consumption advisories for both PCB and mercury.
4. **COMMENT:** Kevin Brennan (Village Trustee, Bellevue) was interested in the listing of Bowers Creek in Brown County and requested a presentation from WDNR staff to help local officials know what can be done to make Bower Creek safer.

RESPONSE: WDNR staff from the Northeast Region contacted Mr. Brennan to accommodate his request. Mr. Brennan also referred to the current efforts of WDNR to develop a Total Maximum Daily Load for Green Bay and the Lower Fox River Basin (including Bower Creek). The following link is to WDNR's web page with extensive information related to the Green Bay/Lower Fox River Basin TMDL:

<http://dnr.wi.gov/org/water/wm/wqs/303d/FoxRiverTMDL/>

Final Action: **No action** needed.

5. **Comment:** Chris Rog (Senior Project Manager, Sand Creek Consultants on behalf of Rhinelander Landfill Group) and Brenda Halminiak (Project Geologist, Sand Creek Consultants on behalf of Rhinelander Landfill Group) objected to the inclusion of Slaughterhouse Creek Backwater Areas #1 and #3 on the Impaired Waters List on the grounds that the "alleged impairments" have ceased to exist. In addition, a further objection was made related to the inclusion of Slaughterhouse Creek Backwater Area #2 on the Impaired Waters List on the grounds that the water in question is improperly classified and should not be subject to fish & aquatic life criteria.

Response: WDNR has withdrawn its proposal to de-list the main stem of Slaughterhouse Creek and re-segment the waterbody into three backwater areas adjacent to the Rhinelander Landfill. Water chemistry data as well as ambient toxicity data collected by WDNR in June and September 2007 continue to indicate a potential for adverse impacts to fish and aquatic life in the system. The Department will reconsider this listing upon completion of a formal use attainability analysis to be conducted to determine if alternative use designations should be considered for all or portions of Slaughterhouse Creek.

Final Action: **Refrain** from making any changes to the 303(d) list status of Slaughterhouse Creek.

6. **COMMENT:** Alf Sivertson (President, Courte Orielles Lakes Association) and Steven Umland (President, Victory Heights Association) jointly requested that WDNR include Musky Bay of Lac Courte Oreilles in the 2008 Impaired Waters List due to ambient concentrations of

phosphorus and related “degradation patterns.” NOTE: Comments submitted after the official comment period included survey data for Curly Leaf Pondweed – an aquatic invasive species. The commenters suggested that control of phosphorus was necessary to prevent the spread of this plant species throughout the lake system.

RESPONSE: The methodology used to assess lake condition and make recommendations for inclusion on the Impaired Waters List can be summarized as follows:

Lakes throughout the state that are part of the Self-Help Monitoring Program were divided by ecoregion, lake type and depth. “Outliers” for each of these lake classes were identified when select parameters fell outside of the 95% confidence interval for all of the lakes in a given class and season. The parameters considered when identifying outliers included spring total phosphorus, summer total phosphorus, or summer Secchi. At least 3 years of data had to be above the 95% confidence interval for a parameter to be considered "flagged" for being added to the impaired waters list.

WDNR staff evaluated the data available for Musky Bay and determined that it did not meet the listing thresholds. Over the past eight years (including 2007 data), the bay exceeded the outlier boundary for shallow lakes in the northern region only in the summer of 2005 for both Secchi and summer total phosphorus. It should be clearly noted that there was only one single summer total phosphorus that exceeded the threshold value.

Additional information provided to WDNR in the fall of 2007 and summer of 2008 by those requesting assignment of Musky Bay to the Impaired Waters List. None of these new data indicated an exceedence of the threshold values. In addition, in the additional information provided, two of four sites used to calculate an in-bay average for total phosphorus were at the mouths of two tributary streams that drain the adjacent wetlands and the cranberry operations. When the actual in-bay concentrations were considered, the threshold was not exceeded. Those data (from the Musky Bay deep station) indicated summer average total phosphorus concentrations and Secchi depths as follows:

Table 1. Mean Summer Total Phosphorus & Secchi Depth for Musky Bay, Lac Courte Orielles, Sawyer County, Wisconsin.

Year	Mean Summer Total Phosphorus	Mean Secchi Depth
2000	32 µg/L	11.1 ft.
2001	22 µg/L	14.4 ft.
2002	45 µg/L	8.8 ft.
2003	52 µg/L	10.1 ft.
2004	31 µg/L	9.9 ft.
2005	57 µg/L	5.2 ft.
2006	28 µg/L	6.9 ft.
2007	32 µg/L	6.7 ft.
8-Yr. Average	37 µg/L	9.1 ft.

For a shallow drainage lake in the northern ecoregion to be considered for the Impaired Waters List, the total phosphorus concentration must exceed 68 µg/L and the Secchi depth must be less than 3.3 feet. The central bay station appears to be the most appropriate for defining average water condition for Musky Bay. There is also a station near the north shore of the bay that has demonstrated better water quality than was found at the central bay station. Regardless, WDNR staff believes it is not representative to make a listing recommendation based upon the average of all four sampling stations – the two noted above and the two that reflect the drainage of the wetlands and cranberry bogs.

Recent data that are representative of both 2006 and 2007 were submitted for additional consideration and they were found to be comparable to the data from previously monitored sites. Similar to other years, the data for the deep hole are in the range of previous years and do not meet the listing criteria described above. None of the data collected in 2007 exceeded 68 µg/l total phosphorus or had a Secchi depth of less than 3.3 feet.

Additional information was submitted on July 17, 2008 indicating that a survey had been performed by a Harmony Environmental to determine the extent and distribution of an invasive plant species known as Curly Leaf Pondweed (*Potamogeton crispus*) in Musky Bay. The survey information is helpful at knowing the situation with respect to this species, but it does not assist in making a determination of impairment status simply because of its presence and its status as an aquatic invasive species. The reader is referred to the next comment from the National Wildlife Federation and the WDNR response to understand why Wisconsin has not yet attempted to include waterbodies on its 303(d) list based on aquatic invasive species.

Final Action: **No action** is warranted at this time to include Musky Bay on the 2008 303(d) list. New information will be considered during the 2010 listing cycle and this waterbody will be placed on a watch list for consideration of monitoring funds for the 2009 field season as determined appropriate.

7. **Comment:** Neil Kagan (Senior Counsel, National Wildlife Federation) requested that WDNR change its approach to dealing with exotic invasive species by:
 - a) Including waters impaired or threatened by exotic species in the category of waters requiring a TMDL,
 - b) Identifying exotic species as a cause of impairments or threats, and
 - c) Develop TMDLs to address the impairments or threats caused by exotic species.

Response: Wisconsin has opted to use the terminology *aquatic invasive species* (also referred to as “AIS”) in lieu of the more comprehensive term *exotic invasive species*. Thus, this response will refer to AIS which encompasses those water-borne species that are not indigenous to the waters of Wisconsin and have the potential to adversely impact the normal functions and/or assemblages of native species or otherwise adversely affect recreational or commercial activities associated with the affected waterbody.

Wisconsin's 2008 303(d) Listing Methodology does not include specific language related to the determination of impaired waters caused by the presence of AIS. This absence does not preclude WDNR from considering how AIS relate to the state's narrative water quality standard. However, WDNR has refrained from identifying any waterbodies as being impaired due to AIS in an effort to allow our state's AIS management program to be developed further. Currently, WDNR is engaged in many areas that will allow us to increase our effectiveness in addressing the AIS issue, including, but not limited to:

- Use of citizens to help monitor the presence of AIS
- Inspection of watercraft at launch sites.
- Education of watercraft owners.
- Sponsoring AIS Research within Academia, Sea Grant, and WDNR.
- AIS Grant Program focused on three key areas: 1) Education, Planning & Prevention; 2) Rapid Response (for local waterbodies with new documentations), and 3) AIS Control.
- Legislation to address the management of ballast water for Great Lakes/Ocean-going vessels.

It has been well documented that some of our inland and Great Lakes waters have populations of aquatic invasive species. However, WDNR has not developed any assessment protocols to consistently weigh the impacts of these organisms to the relevant designated uses. Over the course of the next few years, WDNR will continue to refine its surface water monitoring program to ensure that data collection efforts by both staff and trained volunteers will help with assessing the impact of AIS. Further, DNR will be studying the invasive issue and coordinating their approach in conjunction with EPA's 2010 projected guidance on the topic. In compliance with Wisconsin's Administrative Rules Procedures (see. Chapter 227, Wis. Stats.), any routine assessment protocol will need to be adopted by the Natural Resources Board with significant input from the public and the Wisconsin Legislature. WDNR intends to work in collaboration with U.S. EPA and other Great Lakes states to ensure that our policies and procedures are as consistent as appropriate. Public outreach will be a necessary and very important aspect of those efforts.

Final Action: **Refrain** from including any waterbodies on the 2008 303(d) list for Aquatic Invasive Species.

8. **COMMENT:** Thomas A. Bradley (Superintendent, National Park Service - St. Croix National Scenic Riverway) commented to express support for including Lake St. Croix on the Impaired Waters List.

RESPONSE: Comment of support noted – The recommendation to include Lake St. Croix will not be modified.

Final Action: **No action** needed.

9. **COMMENT:** Randy Ferrin (Coordinator, St. Croix Basin Water Resources Planning Team) commented to express support for including Lake St. Croix on the Impaired Waters List.

RESPONSE: Comment of support noted – The recommendation to include Lake St. Croix will not be modified.

Final Action: **No action** needed.

10. Comment: Dr. Thomas L. Schlenker, MD, MPH (Director of Public Health, Madison & Dane County Public Health Department) submitted information to support a request for not including nine Madison area beaches on the 2008 303(d) list for an impairment to the recreational use due to pathogen-related beach closures. The reasons cited included:

a) **WATER QUALITY CRITERION:** Use of *E. coli* versus fecal coliform as the applicable water quality criterion.

Response: The commenter correctly described how fecal coliform – not *E. coli* – is the legally applicable numeric water quality criterion for Wisconsin’s inland waterbodies. That being said, however, the Public Health Department of Madison and Dane County (PHMDC) has used *E. coli* to guide beach use advisories for several years. PHMDC has used a different daily maximum threshold for closure. PHMDC uses a threshold of 1,000 cfu/100 mL for *E. coli* versus a threshold of 235 cfu/100 mLs recommended by U.S. EPA. In doing so, PHMDC asserts that the alternative closure threshold is based on differences in the depth of samples collected when compared to U.S. EPA methods as well, lack of point source discharges, as lack of local clinical evidence to correlate illness in beach users with *E. coli* counts less than 1,000 cfu/100 mL.

PHMDC is comprised of highly trained public health professionals and is one of many health departments around the nation to be critical of the thresholds specified by U.S. EPA or the methodology used to derive those thresholds. In response to many of these types of challenges, U.S. EPA is actively researching this issue and has indicated that water quality criteria revisions are underway and may be available by 2012. In the interim, WDNR has been using the 235 cfu/100 mLs threshold for samples collected at knee-depth which is more conservative than PHMDC’s threshold value. WDNR believes this lower threshold is appropriate and will be protective of the most susceptible population of beach users – namely young children and infants who play in the water very near to shore.

WDNR agrees with PHMDC that *E. coli* is the legally applicable indicator species for the open waters of the Great Lakes. This was due to U.S. EPA’s over-promulgation of the state standard that was initiated to bring Wisconsin into compliance with the requirements of the federal Beaches Environmental Assessment & Coastal Health Act passed in October 2000. While Chapter NR 102 of the Wisconsin Administrative Code identifies fecal coliform as the indicator organism to assess recreational uses in the state, WDNR is not prohibited from using another indicator species or endpoint when determining if the narrative standard outlined in s. NR 102.04(1)(d) is met. In this case, *E. coli* was the driver used by PHMDC to advise beach users of elevated risks and/or to close beaches to swimming. Thus, WDNR believes the narrative criterion is inclusive of pathogen

indicators and their relationship to public health and believes the *E. coli*-based advisories warrant the same consideration as if they were based on fecal coliform.

The following summary is provided to document the history of water quality exceedences at the Madison-area beaches where testing occurs on a regular basis:

Table 2. *E. coli* Monitoring: 2005-2007 Beach Seasons (Highlighted Cells = “Impaired”)

Beach	# of Samples (05-07)	# Samples >235 ⁺	# Years w/ ≥15 Results*	# of Geomeans (GM)	# of GM>126 ⁺	% of GM>126 ⁺	# of GM>235 ⁺	% of GM>235 ⁺
B.B. Clarke	50	7	2	28	3	10.7	0	0.0
Bernies	54	12	2	32	10	31.3	10	31.3
Brittingham	62	30	2	40	32	80.0	24	60.0
Esther	57	19	2	35	18	51.4	9	25.7
Hudson	61	18	3	49	12	24.5	1	2.0
James Madison	67	22	3	55	23	41.8	14	25.5
Marshall	58	17	3	46	15	32.6	11	23.9
Olbrich	73	33	3	62	35	56.5	12	19.4
Olin-Turville	80	32	3	68	41	61.8	26	38.2
Spring Harbor	64	22	3	52	21	40.4	13	25.0
Tenney	54	8	3	42	1	2.4	0	0.0
Vilas	66	21	3	54	17	31.5	13	24.1
Warner	60	17	3	48	12	25.0	2	4.2

+ All bacteria counts expressed as number of *Colony Forming Units* per 100 mLs of water or cfu/100 mLs.

* Impairment Status Thresholds are dependent upon the number of years with at least 15 results.

- 2 Years - % Geomeans > 25% is “impaired.”
- 3 Years - % Geomeans > 15% is “impaired.”

b) EVIDENCE OF UNRELIABILITY OF *E. COLI* AS AN INDICATOR FROM EMPACT STUDY: Contentions on the use of *E. coli* based on local studies.

Response: PHMDC provided a synopsis of studies conducted during the 2002 and 2003 swimming seasons. One of the key findings of those studies suggests that there was no linear correlation between the presence of *E. coli* and specific pathogens such as *E. coli* O157:H7, *Salmonella*, *Cryptosporidium*, and *Giardia*. Although no correlation was established, the fact remains that these important pathogens were determined to be present even when *E. coli* counts were low. Details of the studies are available through PHMDC.

Furthermore, PHMDC regularly used the information from the *E. coli* testing to post advisories and/or closures to several of the beaches included in Table 2, above. This in itself is perceived as a statement that local public health officials believed there was a reasonable potential for water quality standards to be exceeded. By this nexus, it is further assumed that local officials believed there to be a risk to humans recreating in or on the water which would suggest an impairment to be addressed.

c) WATER QUALITY AND HEALTH OUTCOMES: No evidence of enteric illness related to pathogens in local waterbodies.

Response: PHMDC cited a cooperative relationship with local health care providers who have not documented any correlation between illness and swimming at local beaches. The

resulting assertion is that public health protection measures, even with a higher *E. coli* threshold, is effective at protecting human health. PHMDC also suggested that non-fecal sources (e.g., decomposing aquatic weeds and filamentous algae) may be responsible for the bacterial detections. Lastly, PHMDC cites a number of issues with testing and sampling protocols that raise questions about the effectiveness of the beach health advisory program.

As noted above, U.S. EPA has acknowledged the challenges to the water quality criteria and the testing methodologies and is working to improve both. In the interim, however, the use of *E. coli* as a pathogen indicator and the associated methods for detecting it are the best available. With the passage of the Clean Water Act in the early 1970's, those responsible for regulating water quality have been authorized to act in a "preventative" mode for the protection of human health as well as fish and other aquatic life. Doing so responsibly requires state and local regulatory agencies to use credible science.

U.S. EPA and WDNR both believe the science used to establish the water quality criteria and the beach testing methods is reasonable and based on credible science. Just like any other pollutant being tested, there will inevitably be improvements in the management of risk associated with water recreation as more is learned about indicator organisms and as rapid test methods are perfected. In the meantime, federal, state, and local health agencies do not have to wait until there is an enteric illness to be proactive in advising the public. Beach closures and advisories are that proactive and when they are used, it is a clear acknowledgement that there is a reasonable potential for health impacts. While the PHMDC may use a different threshold for implementing beach closures and advisories than used by WDNR, the fact remains that the several of the beaches associated with Lakes Mendota, Monona, and Wingra are regularly closed as a result of bacterial indicators or blue-green algae blooms. This in itself is seen as a statement that the recreational use is not being met and the beach should be considered impaired.

d) QUESTIONS ABOUT THE METHODOLOGY AS IT APPLIES TO THE MADISON BEACHES:

Response: Similar to the comment 10.a) above, PHMDC raised the question again regarding the use of fecal coliform vs. *E. coli* as the indicator species of choice of proposing inland beaches for the impaired waters list. The response to this comment is stated in response to comment 10.a).

In addition, PHMDC requested a re-evaluation of the data for each of the beaches considered for the 2008 303(d) list. In particular, PHMDC questioned why WDNR did not differentiate between weekly vs. daily samples collected in the wake of a heavy precipitation event.

In the absence of a standardized national or regional method for making impairment decisions in response to *E. coli* data, WDNR developed a conservative approach to use all representative data collected in up to a three year period. By setting a minimum of 15 samples per year, WDNR recognized that most beaches are only sampled once each week over the typical beach season which lasts from Memorial Day through Labor Day

weekend. By using the geometric mean of the available data, WDNR was attempting to censor the affect of a few values that may be significantly greater or less than the mean value of a representative dataset.

In response to the request for a re-evaluation, the 2005-2007 data were once again enumerated, analyzed and summarized (Table 2). The results were not weighted differentially for precipitation. Based on that evaluation and using the methodology described in the 2008 Methodology for Placing Waters on the Impaired Waters List, the following beaches warrant being included on the 2008 303(d) list:

- 1) Lake Mendota
 - (a) James Madison Park Beach
 - (b) Marshall Park Beach
 - (c) Spring Harbor Beach

- 2) Lake Monona:
 - (a) Bernies Beach
 - (b) Brittingham Park Beach
 - (c) Esther Park Beach
 - (d) Olbrich Park Beach
 - (e) Olin-Turville Park Beach

- 3) Lake Wingra: Vilas Park Beach

11. **Comment:** Dr. Jim Lorman, Ph.D (Chair, Board of Friends of Lake Wingra) indicated that the group is not prepared at this time to take a position with respect to the proposed 303(d) listing of Vilas Beach. However, the Group believes that all of Lake Wingra can and should be safe for swimming at all times and that a number of specific actions can and should be taken to reduce potential health hazards in Lake Wingra; including 1) reducing the populations of waterfowl, particularly geese, in Vilas Park, 2) reducing the carp population in the lake, 3) reducing the input of nutrients entering the lake from stormwater, 4) protecting and enhancing the ecological functions of wetlands surrounding the lake.

Response: Comments noted and suggestions for specific actions to be considered for reducing potential risks will be shared with local health officials via this response to comments.

12. **COMMENT:** Dan Ziegler (Ozaukee County Public Health Department) commented as follows:

- a) Both the process of determining 303(d) listing and procedures for public notification need to be more public,
- b) Priorities in the beach monitoring program should align with 303(d) priorities,
- c) Coastal Management needs to be in the loop for both beach and 303(d) list.

RESPONSE: Department staff received a number of comments – verbal & written – requesting better communication with the public as well as local government officials that may be

affected by having a water body included on the Impaired Waters List. Modifications to the listing process, including enhancements to the public participation process, will be implemented for the 2010 listing effort.

Regarding alignment of beach monitoring with impaired waters, WDNR continues to accept federal BEACH Act funds and must meet the associated grant conditions to remain eligible for those funds. The grant conditions require the collection of data at public beaches with an emphasis on those used most frequently by swimmers. These conditions are required to support the two primary goals of the BEACH Act: 1) increased monitoring; and 2) enhanced public notification of beach water quality. Both of these goals require a broad distribution of effort and do not support focusing monitoring activities on beaches where impairments have been documented. Since the use of the BEACH Act funds is restricted as noted above, any attempt to *prioritize monitoring based on the “impaired” status of a beach* would be a breach of the grant conditions. Proposed amendments to the federal BEACH Act could allow additional flexibility in the use of the funds and could allow states to use some of the money for source identification and remediation. However, these amendments have not been approved at this time.

The comment to include the Wisconsin Coastal Management Program more formally is a good suggestion that applies to both the Great Lakes Beach Program and the Impaired Waters Program. Efforts will be made by WDNR to communicate more directly with the staff of the Wisconsin Coastal Management Program.

13. **COMMENT:** Jim Powell (Madison Environmental Justice Organization) objected to the removal of Lake Monona (Dane County) from the Impaired Waters List due to small sample size used for removing consumption advisory for fish with mercury in their edible tissue.

RESPONSE: WDNR staff responsible for the annual fish consumption advisory has reviewed the data available for Lake Monona. That staff concluded that average mercury values do not exceed the criteria articulated in the 2008 Impaired Waters Listing Methodology (0.21 ppm for panfish and 1 ppm for gamefish). None of the panfish samples (9 black crappie, 7 bluegill, and 4 yellow perch), exceed the threshold value of 0.21 ppm total mercury. Of the total walleye samples (13 from 1997-2006 and 23 from pre-1997), only 1 of 35 exceed 1 ppm total mercury. The mercury data from the 1997-2006 period confirm that Lake Monona does not need to be listed as an impaired water due to mercury-based fish consumption advice. However, Lake Monona remains listed for other impairments including PCB-based fish consumption advice.

Final Action: **De-list** mercury as a cause for impairment.

14. **COMMENT:** Pat Clark (Resident, Beaver Dam Lake) would like to see Beaver Dam Lake added to the Impaired Waters List due to in-lake problems (“huge problems with carp” and “terrible water quality”) alleged to have resulted from the presence of a dam.

RESPONSE: WDNR recommends additional evaluation of the condition of this water body occurs in preparation for a re-consideration during the 2010 listing cycle.

Beaver Dam Lake (WBIC # 835100) is located in northwestern Dodge County. The lake is created by a dam located in the City of Beaver Dam on the Beaver Dam River. This 6,542-acre impoundment is shallow, with a maximum depth of 8 feet. The Department's 2002 Upper Rock River Watershed Management Plan identifies Beaver Dam Lake as hypereutrophic, with polluted runoff and a dominance of rough fish contributing to poor water quality. The fishery is currently managed for crappies and walleye, using a combination of commercial carp removal and stocking of game species.

WDNR undertook a rough fish eradication projects on Beaver Dam Lake in 1968 and 1987. After the 1987 treatment, water quality conditions improved the following year; turbidity, suspended solids and chlorophyll A levels were all reduced and clarity increased. In recent years blue-green algae blooms have again occurred and have affected aquatic plant growth. Water quality data collected by citizen volunteers from the deep hole of Beaver Dam Lake over the last 5 years indicates that water clarity has been consistently poor. Total phosphorus and chlorophyll-*a* concentrations are trending higher, further indication of declining water quality.

Department fisheries staff has conducted numerous fishery surveys on Beaver Dam Lake over the years, and the history of the fishery is well documented. The most recent surveys included comprehensive fisheries surveys in 1998-1999 and 2004-2005. Recent fishery surveys indicate that walleye and crappie populations have improved since the 1987 chemical treatment. However, both species are tolerant of turbid water conditions, do not require submerged aquatic plants for spawning habitat, and in the case of walleye, populations have been bolstered by intensive stocking and restrictive harvest regulations. Other species, including northern pike have not responded as expected, most likely from lack of available submerged aquatic plants necessary for spawning habitat.

Although the commenter's general concerns are warranted, a more detailed evaluation is appropriate before a definitive listing recommendation is made. If, after further analysis, an impaired water listing is warranted, WDNR will provide opportunity for additional public input before making a final listing decision. This waterbody will be targeted for additional evaluation and will be reconsidered during the 2010 Impaired Waters Listing process.

Final Action: **No action** at this time. This waterbody will be re-evaluation for the 2010 listing cycle.

15. **COMMENT:** Dianne Veres (Resident, Grand View, Wisconsin) expressed frustrations over a Ashland Daily Press newspaper story quoting WDNR staff asserting that waterfowl and pet feces were the causes of beach closings on Lake Superior shoreline. Ms. Veres would like to see WDNR implicate sewage treatment plant bypassing and overflows as the cause of the beach closures.

RESPONSE: During the summer of 2007, WDNR collaborated with microbiologists from the University of Wisconsin-Oshkosh and the City of Racine Health Department to conduct Beach Sanitary Surveys at 18 beaches along the coastlines of Lakes Michigan and Superior. The purpose of these Beach Sanitary Surveys was to help local officials and citizens determine the sources of pollution at beaches with variable *E. coli* concentrations.

While determining the exact sources of contamination at many beaches is difficult for a number of reasons, including variability in bacteria counts within and between days, the information provided by the sanitary survey can begin to rule out unlikely sources. Where resources are available, local health officials can use the information from these surveys along with several more sophisticated analytical tools such as DNA “fingerprinting” to identify where the bacteria came from (i.e., human, dog, cow, gull, etc...). In the case of the 2007 study, scientists were able to identify the following general sources of beach contamination for the Lake Superior beaches:

- Poor beach maintenance
- Beach sand
- Parking lot runoff
- Animal fecal material (pets/wildlife)
- Stormwater outfall pipe

The Beach Sanitary Survey report concluded that many of the observed potential sources of bacteria along the Lake Superior coastline could be addressed without have to rely on large-scale and costly remediation measures. For example, sources such as animal feces, could be addressed by increasing public awareness of the threats posed by allowing feces to wash into the lake. Beach visitors could be encouraged to clean-up after their pets and to refrain from feeding wildlife on or near beaches which would directly affect how much reaches the beach. Also, stormwater runoff from parking lots may be diverted from flowing directly into a storm sewer or the lake by increasing infiltration. This can be done by diverting the runoff to vegetated areas or installing swales or rain gardens between parking lots and beach areas. Similarly, stormwater outfall pipes may also be diverted or encouraged to output into areas where infiltration is greater. In some communities with smaller budgets and limited staff, volunteers may be able to help by removing garbage and debris on a daily basis.

Final Action: **No action** at this time.

16. Comment: Damian Stutz (Law Clerk, Midwest Environmental Advocates) and Betsy Lawton (Attorney, Midwest Environmental Advocates, Madison) submitted multiple comments as summarized below:

- a) WDNR has failed to provide adequate information necessary for meaningful public comment on the proposed 2008 303(d) list. The commenters requested an extension of the comment period to 60 days from the original 30 days: The commenters also requested that WDNR provide specific data, either online or in print for each proposed change to the 303(d) list.

Response: WDNR extended the comment period by one week from March 19, 2008 to March 26, 2008 in response to requests for more time. In addition, WDNR provided the

commenters with electronic files and access to paper files of all requested data after retrieving those data from central data systems. These mainframe-based data systems are the main repository of water quality data and are not available online for several technical reasons as well as the need to protect certain types of information (i.e., locations of threatened and endangered species) from being misused.

In addition, WDNR has data documentation sheets for each 2008 listing update/change as compiled by water quality biologists. These documents are available to the public upon request. Future improvements in the listing process may include linking these data documentation sheets to the WDNR website. This will require changes to existing data systems and quality control/assurances will need to be incorporated more than they are now before making the primary data directly available on a statewide basis. Lastly, all Wisconsin data submitted through the Water Quality Exchange is available on an EPA website that can be found using this link:

<http://epa.gov/storet/wqx.html>

WDNR is also actively reviewing its decision criteria for including or removing waterbodies from the state's 303(d) list. An effort is underway by WDNR staff to revise listing guidance and that effort will be deployed in time for the 2010 listing cycle. To that end, it has not been determined yet whether or not the refined guidance will need to be codified in the Wisconsin Administrative Code. Regardless, public input will be sought on the proposed revisions to the listing/de-listing guidance upon completion of a working draft document.

- b) WDNR's monitoring program and procedures are inadequate to identify the most polluted waters in the state.

Response: WDNR has a monitoring program that has been described in its Water Division Monitoring Strategy that can be reviewed online at the following address: (<http://dnr.wi.gov/org/water/monitoring/MonitoringStrategyV2.pdf>). This comprehensive strategy has been analyzed extensively and refined during intergovernmental reviews between the U.S. EPA and WDNR.

This strategy provides the basic framework for monitoring the 15,000+ lakes and nearly 13,000 rivers, and streams in Wisconsin. In recognition of the vast water resources, the strategy incorporates multiple approaches to data collection – from broad temporal/spatial sampling to targeted, intensive site-specific sampling - to answer many varied management questions. This program also incorporates a tiered approach to effectively utilize the available resources. Tier 1 monitoring is designed to collect base-level water condition data on a small number of waterbodies annually in a manner that allows generalizations about quality to be determined for other waterbodies of a similar nature. Additional detailed monitoring is scheduled under Tier 2 for those waterbodies with outstanding questions as determined by the initial Tier I monitoring. Lastly, Tier 3 sampling focuses on collecting samples to ensure compliance with environmental regulations is occurring as well as to help determine the effectiveness of management actions to address water pollution.

WDNR's strategy has been adapted annually to reflect resource realignment and budget availability. It reflects the Water Program's best effort to be efficient and effective while addressing multiple needs inherent in stewarding the states varied resources. In a state with as water rich as Wisconsin is, it goes without saying that there are insufficient staff and financial resources to sample all waterbodies at a pace that will allow data-driven decisions to be made for each waterbody during each listing cycle. In light of this, WDNR continues to try to find efficiencies in its monitoring efforts to expand the number of waterbodies sampled. Further, WDNR has worked cooperatively with the River Alliance of Wisconsin to pilot a Citizen-Based Monitoring program and will continue to explore opportunities to expand this program to help augment the efforts of WDNR staff.

- c) WDNR's proposed 2008 303(d) list fails to include all impaired waters. The commenters requested WDNR to include all "partially meeting" designated uses and "threatened" waters on the list. The commenters also requested utilization of fish consumption advisory guidance developed by EPA in 2000 in lieu of its current approach.

Response: The two themes in the comment are addressed independently:

- 1) In 2002, the WDNR began a quality evaluation process of its assessment data, which continues today. During the course of migrating the state's waterbody assessment data into an enterprise data system, the state began focusing additional resources to evaluate and update how assessment decisions, including determinations of threatened and partially supporting fish and aquatic life use, were made. The technical study group determined the state's dataset was dated - the majority of the partially or threatened determinations had been carried forward without monitoring for multiple years (15 to 20 years) due to an overwhelming demand on resources and staff shortages. The study group confirmed that quantitative guidelines were needed. Because most of the data were based on qualitative decisions carried forward multiple report cycles, technical experts recommended avoiding use of these flags unless additional monitoring was conducted to confirm the status - these critical flags include data "threatened" or "partially meeting" and for water quality trend -- "improving/stable/declining". The team also recommended a fresh approach to evaluating these waters based on contemporary scientific protocols in practice nationally. At the time of this response, efforts are underway to establish more robust assessment methodology guidance that may allow threatened waters to be identified and considered for the 2010 listing cycle – especially where adequate data are available.
- 2) In 1997, the State of Wisconsin adopted a protocol for providing fish consumption advice related to PCBs that was developed by the Great Lakes Consortium. This effort was a significant, multi-year effort involving public health officials, toxicologists, and other experts from the Great Lakes states who reviewed the toxicological information for PCBs, studies related to fish consumption, as well as fish consumption advice from the Great Lakes states and other regional information. This effort resulted in consistency within the Great Lakes region with respect to consumption advice intended to protect the health of people who choose to eat fish from the Great Lakes. For dioxin

and furan congeners, WDNR uses the recommendation of the Wisconsin Department of Health Services' chief medical officer – recommendations that were also developed in consultation with the other Great Lakes states.

Conversely, EPA's 2000 guidance is generic national guidance that can be tailored to local or regional needs. WDNR is not aware of any other Great Lakes state having adopted the PCB and dioxin values recommended in the EPA guidance. Furthermore, EPA considers the Great Lakes PCB protocol acceptable and responsive to the recommendations of the EPA guidance.

In summary, Wisconsin believes its current approach to advising the public on fish consumption is appropriate. As new information is made available in the toxicological literature, advisory protocols for PCB, dioxins, furans, and other pollutants may be revised as appropriate in connection with the Great Lakes Consortium.

- d) WDNR has not provided adequate data to de-list or delete many waterbodies. The commenters requested that the following waterbodies not be removed from the state's 2006 303(d) list due to fish consumption advisory concerns:

Waterbody Name	WBIC	Pollutant
1) Chippewa River @ Lake Wissota	2152800	Hg

Response: WDNR has proposed de-listing the Chippewa River for mercury only and has retained the listing for PCB. The Chippewa River at Lake Wissota (and several other sites) was originally listed for mercury using the pre-2000 advice. This site-specific advice was no longer necessary with adoption of the 2000 general statewide advisory. Therefore, there is and was no special mercury advice for Lake Wissota for 5 species. WDNR provided the commenters with an electronic file with the Chippewa River data. Data for samples collected between 1996-2005 verify that that the advisory reach (Holcombe Dam to Mississippi River) does not require special mercury-based fish consumption advice because panfish tissue concentrations did not exceed 0.22 ppm and other species did not exceed 1 ppm (exception was 1 musky sample which is covered by the general advisory and is only 1 result).

Final Action:

- (a) **Retain** PCB as a cause for impairment.
- (b) **De-list** mercury as a cause for impairment.

2) Menominee River	609000	Hg, PCB
--------------------	--------	---------

Response: In 2006, WDNR identified four (4) separate segments on its 303(d) list. Staff has thoroughly evaluated the listing of the various segments for this waterbody in response to the comment received. The following changes have been made to the draft 2008 303(d) list as justified below:

Response: WDNR proposed to de-list the Black River from Lake Arbutus downstream to the mouth at the Mississippi River (Miles 0-60.78) for mercury as a cause for impairment. Since the original recommendation was made by staff to de-list this segment, new fish tissue samples have been collected and submitted to the laboratory for analysis. Accordingly, WDNR believes it is prudent to wait until these data are available before making any decisions on whether or not to de-list. No changes were proposed for this segment as it relates to the PCB.

Final Action: **Retain**.listing as is on the 2006 303(d) list for both mercury and PCB.

- 5) Clark Lake 97700 PCB

Response: This waterbody was originally listed in 1998 due to PCB fish consumption advice based on pre-2000 advisory protocols. Carp samples (n=3) were collected in 1986 and PCB concentrations ranged from <0.2-1.5 ppm. Three carp samples collected in 1992 and had PCB concentrations ranging from 0.058-0.092 ppm. Fish consumption advice was provided in 1997 and 1998 for carp (1 meal per week) with the adoption of the Great Lakes Uniform Protocol for PCB-based fish consumption advice. With the adoption of the statewide advisory in 2000, the site-specific advice was dropped because the statewide advisory was more stringent. In 2005, 3 additional carp samples were collected with PCB concentrations ranging from 0.078-0.091 ppm. This concentration range equates to a 1 meal per week advisory for all people. These data verify that the statewide advisory remains is more stringent therefore special advice is not necessary.

Final Action: **De-list** PCB as a cause for impairment.

- 6) Jackson Park Pond 15800 PCB

Response: This waterbody is a small pond with no inlet or outlet that is prone to winterkill. Because of these limitations, the pond habitat it is not conducive to supporting a sustainable recreational or subsistence fishery. Based on stocking records, this pond received bullheads from nearby waters (field transfer stocking) – a practice common for these ponds in the 1970 and early 1980s – and other species from hatcheries and holding ponds until the 1990s. Three samples representing 3 different species collected in 1988 had PCB concentrations ranging from 0.21-0.41 ppm and fish consumption advice was provided (1 meal per month) in 1997 with the adoption of the Great Lakes Uniform Protocol for PCB-based fish consumption advice. The PCB concentrations found in these early samples may have represented the source of the fish if the fish were transferred from another location. Five samples were collected in 1996 representing 4 species, including 2 carp, and PCB concentrations ranged from <0.04-0.67 ppm. In recent years, attempts were made to collect fish from this pond in two different years. Sampling in 2003 yielded only bullheads which were not analyzed. A second attempt in 2004 yielded 5 black bullhead and 1 goldfish. PCB concentrations in these samples ranged from <0.04-0.06 ppm equating to a 1 meal per week advisory for

all people. Because the statewide advisory is more stringent, a special advisory is not necessary and the de-listing of this waterbody is warranted.

Final Action: **De-list** PCB as a cause for impairment.

- 7) Lake Winnebago 131100 PCB

Response: WDNR does not have a specific fish consumption advisory for mercury for Lake Winnebago. This warrants a removal of mercury as a cause for impairment.

Final Action: **De-list** mercury as a cause for impairment.

- 8) Sheboygan River below Franklin downstream to Sheboygan Falls 50700 PCB

Response: This reach of this waterbody was originally listed in 1998 due to pre-2000 fish consumption advice for PCB. Application of the post-2000 protocols along with more recent fish tissue data warrant the removal of the specific advisory for PCB for this segment of the Sheboygan River.

Final Action: **De-list** PCB as a cause for impairment.

- 9) Wisconsin River – Rainbow Flowage Unspecified Hg

Response: This segment of the Wisconsin River was de-listed in 2006 due to the removal of a specific advisory for mercury. WDNR has collected more recent fish tissue data which support moving these waters from the special advisory status to the general advisory. The data have been provided to the commenter. This warrants the removal of these two segments from the 303(d) list.

Final Action: **No action** to be taken. This water has already been de-listed.

- 10) Wisconsin River – Lake Alice 967600 Hg

Response: Most of the upper (northern) Wisconsin River segments were originally listed on the impaired waters list due to pre-2000 methodology for issuing fish consumption advisories for mercury and PCB. For the reaches north of Merrill, including both the Rainbow Flowage and Lake Alice, WDNR has collected more recent fish tissue data which support moving these waters from the special advisory status to the general advisory. The data have been provided to the commenter. This warrants the removal of these two segments from the 303(d) list.

Final Action: **De-list** mercury as a cause for impairment.

- 11) Wolf River 241300 Hg

Rhineland Landfill. Water chemistry data as well as ambient toxicity data collected by WDNR in June and September 2007 continue to indicate a potential for adverse impacts to fish and aquatic life in portions of Slaughterhouse Creek adjacent to the landfill property. The Department will reconsider this listing upon completion of a formal use attainability analysis to be conducted to determine if alternative use designations should be considered for all or portions of Slaughterhouse Creek.

Final Action: **Retain** listing as stated in 2006.

17. Comment: Ron Arneson (Laboratory Coordinator, Wisconsin Department of Natural Resources) identified technical errors in the description of two waterbodies proposed for listing based upon *E. coli* data. Those two waterbodies were Silver Creek – K Mart Beach and Silver Creek – Spaulding Beach. Neither of these waterbodies is sampled as a beach. Instead, they are simply creek sampling sites collected by staff from the Green Lake Sanitary District. The site descriptions were entered incorrectly into the electronic database at the State Laboratory of Hygiene.

Response: No closures or advisories are affected by the monitoring conducted at these sites because they are not designated as beaches.

Final Action: **Remove** both of these sites from the recommended additions to the 2008 list

Index of Comments on Proposed 2008 Impaired Waters List

1. Ted Peters, Director – Geneva Lake Environmental Agency
350 Constance Blvd., P.O. Box 914, Williams Bay, WI 53591
E-mail: glea@genevaonline.com
Phone: (262) 245-4532

2. Mike Kakuska, Senior Planner – Capital Area Regional Planning Commission
E-mail: MikeK@CapitalAreaRPC.org
Phone: (608) 266-9111

3. Lyman Welch, Manager, Water Quality Programs – Alliance for the Great Lakes
17 N. State Street, Suite 1390, Chicago, IL 60602
E-mail: LWelch@greatlakes.org
Phone: (312) 939-0838 x230

4. Kevin P. Brennan, Citizen
E-mail: brennan4bellevue@yahoo.com

5. Rhinelander Landfill Group, c/o Chris Rog - Sand Creek Consultants
110 S. Stevens Street, P.O. Box 1512, Rhinelander, WI 54501
E-mail: cjrog@sand-reek.com
Phone: (715) 365-1818

6. Bruce Wilson, Lac Courte Oreilles Lakes Association & Victory Heights Association
P.O. Box 702, Hayward, WI 54843-0702
E-mail: cbwilson1455@msn.com
Phone: (651) 246-9039

7. National Wildlife Federation, Neil Kagan, Senior Counsel
Great Lakes Natural Resources Center, 213 West Liberty St., Suite 200, Ann Arbor, MI 48104
E-mail: kagan@nwf.org
Phone: (734) 887-7106

8. Thomas A. Bradley (via Debi Pomeroy), Superintendent – National Park Service
St. Croix National Scenic Riverway
401 Hamilton Street, St. Croix Falls, WI 54024
E-mail: Debi_Pomeroy@nps.gov
Phone: (715) 483-2291

9. St. Croix Basin Water Resources Planning Team, Randy Ferrin, Coordinator
c/o 23290 Quentin Avenue North, Scandia, MN 55073
E-mail: rsferrin@frontiernet.net
Phone: (651-433-4929)

10. Madison & Dance County Public Health Dept., Thomas L. Schlenker, Director, MD, MPH
City/County Bldg., Room 356, 210 Martin Luther King Jr. Blvd., Room 507, Madison, WI 53703
E-mail: tschlenker@publichealthmdc.com
Phone: (608) 266-4821

11. Friends of Lake Wingra, Jim Lorman – Chair, Professor of Biology, Edgewood College, 1000 Edgewood College Drive, Madison, WI 53711
E-mail: lorman@edgewood.edu
Phone: (608) 663-6921

12. Ozaukee County Health Department, Dan Ziegler
E-mail: dziegler@co.ozaukee.wi.us

13. Madison Environmental Justice Organization, Jim Powell
E-mail: jimpowell@mejo.us
Phone: (608) 240-1485

14. Pat Clark, Citizen
E-mail: paclark@powerweb.net

15. Dianne Veres, Citizen
51885 Otto Olson Road, Grand View, WI 54839-4421

16. Midwest Environmental Advocates, Betsy Lawton, Attorney
551 W. Main Street, Suite 200, Madison, WI 53703
E-mail: intern@midwestadvocates.org
Phone: (608) 251-5047 x2
Betsy Lawton)