Attachment D. Public Data Submittals for 2012 Integrated Report

In response to a comment received in 2010 requesting improvements to the public data submittal period, DNR committed to and implemented several improvements to our data solicitation process for the 2012 reporting cycle.

- The data solicitation period was extended from the federally-required one month to three months, to allow citizens and partners more time to format and submit their data to us. The data solicitation period ran from Oct. 1 through Dec, 31, 2010.
- A GovDelivery listserve was created to allow all citizens interested in Impaired Waters to receive email bulletins related to water quality issues. This enabled us to notify over 580 interested parties of the opportunity to submit their data during the data solicitation period, as compared to the 85 entities that were notified for the 2010 cycle. Since then, the GovDelivery list has grown to 1,500 people, enabling us to continually improve our service and outreach to citizens. We also issued a traditional press release for newspapers around the state.
- A protocol was implemented requiring data submittals to be sent to us in a specific Excel file format to improve consistency of submittals and increase the usability of the data. This format enables citizens to know exactly what data are needed, and allows DNR staff to more efficiently analyze the data that we receive from the public.
- DNR staff worked with the Madison Long Term Ecological Research program to assess their total phosphorus and chlorophyll data.
- DNR staff initiated conversations with USGS to discuss the feasibility of transferring their data to DNR's SWIMS database in the future, to allow assessment of those data in future listing cycles.

A total of 10 entities submitted data; these are attached here and listed online at the following website: http://dnr.wi.gov/org/water/condition/impaired/comment.htm. All data received from the public were checked to make sure quality assurance procedures were followed, and if so, these monitoring data were reviewed by regional staff for 303(d) listing purposes. In addition, all (Level 2) citizen-based monitoring data are entered into WDNR's SWIMS database, so these citizen-collected data are automatically used in the assessment of waterbodies statewide.

GOV DELIVERY EMAIL and REMINDER EMAIL

From: Wisconsin Department of Natural Resources [mailto:widnr@service.govdelivery.com]
Sent: Friday, October 01, 2010 2:10 PM
To: Minahan, Kristi L - DNR
Subject: Submit your surface water data for WDNR Assessments & Impaired Waters List

This bulletin was sent to the following groups of people:
Subscribers of Impaired Waters (398 recipients)

Begin E-mail Bulletin:

Do you have data on Wisconsin's lakes, streams, or rivers?
If so, the Wisconsin Department of Natural Resources would like to hear from you.

Every two years, the WDNR requests that citizens and partner groups submit their surface water data (biological, chemical, and physical). Data meeting specified requirements will be evaluated, along with Department data, to assess the quality of the state's water resources and to pinpoint problem areas. In accordance with the Clean Water Act, the WDNR uses these assessments to prepare a statewide Water Quality Report (also known as the 305(b) report) and a list of Impaired Waters (303(d) List).

Data will be accepted from the public from today, October 1, through December 31. This year, the submittal period has been extended from one month to three months, in response to public request last year for a longer submittal period.

To enable the WDNR to efficiently process the data, a new data submittal system is also being used this year. Data must be submitted electronically, and they must be submitted in specific Excel spreadsheet formats, along with quality assurance documentation. Data received as .PDF files or in other hard copy formats will not be entered into the Excel spreadsheets by WDNR staff. Instructions for preparation of your data are found at http://dnr.wi.gov/org/water/condition/2012_IR/submitdata.htm.

Required elements include:

- A quality assurance plan
- Data in specified Excel spreadsheet format (template provided)
- Locational information in specified spreadsheet format (template provided)
- General information about the submitter, entered in an online form

Guidance on minimum data requirements and how WDNR evaluates the data is available in the *Wisconsin Consolidated Assessment and Listing Methodology* (WisCALM). This guidance is currently undergoing revisions for the 2012 reporting cycle, but the 2010 version may be accessed at http://dnr.wi.gov/org/water/condition/wiscalm.htm.

Thank you for your interest in Wisconsin's water resources. Feel free to contact WDNR staff with any questions at dnrimpairedwaters@wisconsin.gov.

Kristi Minahan (608) 266-7055; Lisa Helmuth (608) 266-7768

GOV DELIVERY REMINDER EMAIL

The following reminder was sent on 12/10/2010, along with a copy of the original email, above:

From: Wisconsin Department of Natural Resources [mailto:widnr@service.govdelivery.com]
Sent: Friday, December 10, 2010 3:18 PM
To: Minahan, Kristi L - DNR
Subject: Reminder: Submit your surface water data by Dec. 31

This bulletin was sent to the following groups of people:
Subscribers of Impaired Waters (584 recipients)

Begin E-mail Bulletin:

This is a reminder that the Wisconsin DNR is accepting public data on surface water quality through the end of December. **The three-month public data submittal period will close on Dec. 31.** The information collected will be considered for our 2012 Waterbody Assessment and Impaired Waters List. The original announcment with instructions on how to submit your data is below. Please feel free to contact us if you have any questions. -- The DNR Impaired Waters Team

(original email, shown above, was attached)

PRESS RELEASE FOR DATA SOLICITATION PERIOD

Published October 1, 2012

Public invited to submit water quality data

Used to determine list of impaired lakes and rivers

MADISON - Citizens around Wisconsin are invited to submit information they've collected about streams, rivers, and lakes to feed into the state's biennial process for determining which waters do not meet water quality standards.

The Department of Natural Resources will use the citizen data they receive by the close of business Dec. 31, 2010, to help assess the condition of Wisconsin's waterbodies and to inform Wisconsin's list of impaired waters and the biennial water quality report it must submit to the U.S. Congress.

"More citizens and partner groups than ever before are collecting data on Wisconsin's waters, and that information can help make sure the DNR's got the most accurate picture possible of the condition of our streams, lakes and rivers," says Kristi Minahan, a DNR water quality specialist involved in the process.

Almost 1,000 lake volunteers and almost 2,000 stream volunteers participate in citizen-based monitoring programs, and many universities and state or local agencies collect water quality data as well.

Every two years, people have the opportunity to submit their data to the DNR for use in developing assessment reports that can help steer scarce state resources to clean up lakes and rivers. DNR considers that information along with internal DNR monitoring data and other assessments.

Data submitted by citizens by Dec. 31, 2010 that meets specific quality control requirements will be considered for use in developing the 2012 Water Quality Report to Congress and Impaired Waters List, both required under the 1972 Clean Water Act.

That landmark federal legislation establishes the goal that every water body should be able to maintain healthy aquatic communities, provide safe habitat for wildlife, and provide citizens opportunities for fishing and swimming. Every two years, each state is required to assess the condition of its water bodies to determine if they are meeting these goals.

Minahan says that Wisconsin DNR is interested in receiving all types of water quality data and information for lakes and rivers -- so-called surface waters -- for the 2012 Report, particularly data collected between the years of 2005-2010. Data must be submitted in a specific format to allow for efficient analysis, and meet the quality assurance and regulatory decision-making needs associated with these programs.

More information about data quality requirements and how to submit data can be found online at: http://dnr.wi.gov/org/water/condition/2012_IR/submitdata.htm.

FOR MORE INFORMATION CONTACT: Kristi Minahan (608) 266-7055; Lisa Helmuth (608) 266-7768

Public Data submittals

WDNR biennially seeks water quality information from external groups and members of the public for use in the assessment of Wisconsin waterbodies. On October 1, 2010 WDNR published a news release soliciting government agencies, academic institutions, and member of the public for water quality data. Guidance for the submittal of external data and information on data requirements was also provided. Agencies and individuals submitting data for Clean Water Act (CWA) assessment purposes must document the nature of the study, demonstrate that sample collection occurred at appropriate sites, and that certified laboratories or EPA approved methods were used to analyze samples.

Water quality data was submitted from eight different entities. Department staff reviewed all submitted data and the procedures used to collect and analyze the data. In cases where methodological or quality assurance issues arose, the data was not used for assessment purposes but staff used the information to initiate further investigations by the Department. When methodological and quality assurance procedures were adequate, WDNR used this data to assess the waters for possible impairments.

The following is a summary of the data submitted to WDNR and the rationale for inclusion or exclusion of the data in the 2012 Water Quality Report to Congress.

The Alliance for Great Lakes

The Alliance for the Great Lakes submitted *E.coli* data for 28 Lake Michigan beaches from 2008 through 2010 (attached), as well as a QA/QC plan. No water quality assessments were made from this data because there were insufficient samples collected from any beach to apply the recreational assessment criteria as outlined in the *2012 WisCALM*. There are also methodological issues that would prevent WDNR from using these data for assessment purposes. The Alliance for the Great Lakes QA/QC documentation indicates that there are potential inconsistencies in the length and temperature of the incubation period for collected *E. coli* samples that need to be resolved if these data are to be used for CWA assessment purposes.

> "*Plates are stored in a sealable bag in a dark area and incubated (35C or 95F) in a horizontal position with the clear side up for 24+ hours. If temperature cannot be controlled, the Petrifilm is sealed in a bag at room temperature or warmer, out of direct sunlight, for 48 hours.*" pg. 7, Adopt-a-Beach Quality Assurance Project Study Plan, Alliance for Great Lakes, 7-17-2009

North Temperate Lakes Long-Term Ecological Research Program

For the 2012 Water Quality Report WDNR received access to water quality data collected by the North Temperate Lakes Long-Term Ecological Research program (NTL-LTER) on the Madison area lakes (Mendota, Monona, Waubesa, Kegonsa, and Wingra). The Department reviewed the QA/QC procedures of the NTL-LTER and determined that the data were suitable for use in water quality assessments. WDNR used the following

data collected by the NTL-LTER for assessment purposes: chloride, unfiltered total phosphorus, and corrected chlorophyll *a* (attached).

Silver Lake Management District

During the 2010 listing cycle, it was determined that Silver Lake in Waushara County was listed as impaired because of chronic aquatic toxicity with an unknown responsible pollutant but WDNR did not have the data to support this impairment listing. To resolve this issue WDNR worked with local residents to collect water for two ambient toxicity tests in 2010. Wisconsin's State Lab of Hygiene conducted the toxicity tests on ambient water collected from Silver Lake on 8/10/10 and 10/27/10 and no aquatic toxicity was observed. The results of the toxicity tests were entered into the WDNR's Surface Water Integrated Monitoring System (SWIMS) database and were considered when conducting the 2012 water quality assessment of Silver Lake.

The Wisconsin Resources Protection Council

The Wisconsin Resources Protection Council (WRPC) submitted Total Recoverable Copper (TRC), Total Recoverable Iron (TRI), Total Recoverable Zinc (TRZ), and total $CaCO_3$ (Hardness) surface water data from several locations on or near the Flambeau Copper Mine reclamation site. The data were collected for the Flambeau Mining Company as part of an ongoing stormwater study with a WDNR approved QA/QC plan.

Wisconsin's TRC and TRZ toxicity criteria are calculated using the $CaCO_3$ concentration of each water sample. Department staff calculated individual toxicity criteria for each sample collected using the formula found in Wisconsin administrative code NR 105 Table 2 to determine if a water quality exceedance occurred. The design of the study allowed the TRC and TRZ values to be assessed against the acute toxicity criteria but not against the chronic toxicity criteria.

Department staff determined that only the data from Stream C below Copper Park Lane would be used for CWA assessment purposes. This determination was made because Stream C clearly meets the WDNR definition of a stream below Copper Park Lane and the Department has defined assessment criteria for streams. Above Copper Park Lane Stream C becomes a headwater wetland complex and the Department does not currently have established wetland assessment criteria. All submitted data is attached.

Milwaukee Metropolitan Sewerage District

For 2012 CWA assessment purposes WDNR received access to Total Phosphorus (TP) data collected by Milwaukee Metropolitan Sewerage District (MMSD). The Department reviewed the QA/QC procedures of MMSD and determined that the data were suitable for use in making assessment decisions. The department reviewed MMSD TP data from 69 sampling stations to make assessment decisions on 16 different waterbodies. Summaries of data from each station is attached, complete dataset is available upon request.

Sucker Brook Partnership Group
Sucker Brook Partnership Group has been working in collaboration with WDNR to collect dissolved oxygen, pH, Total Phosphorus (TP), and *E. coli* data for Sucker Brook (WBIC 50100) and Sauk Creek (WBIC 49500). The Partnership Group developed an acceptable QA/QC document and worked with the Department to have their data included in WDNR's Surface Water Integrated Monitoring System (SWIMS) database. The TP data collected by the Sucker Brook Partnership Group were used to make assessment decisions for both Sucker Brook and Sauk Creek.

Washington County Planning and Parks Department
Washington County Planning and Parks Department submitted runoff data from nine streams as well as inlet and outlet data for Friess Lake; however no formal QA/QC documentation was provided with the submittal. WDNR sent a request for QA/QC documentation but received no reply; therefore the data were not used for making water quality assessment decisions. This data is available for review by request.

The Centerville Citizens for Air, River, and Environmental Solutions
The Centerville Citizens for Air, River, and Environmental Solutions (Centerville CARES) organization submitted Total Phosphorus (TP), soluble reactive phosphorus, total kjedahl nitrogen, nitrate-nitrite, ammonia, chloride, and total suspended solids data for Fischer Creek (WBIC 65800) and Point Creek (WBIC 66000) as well as a quality assurance project plan. Department staff reviewed the quality assurance document and concluded that the data could be used for assessment purposes. The TP data collected by Centerville CARES were used to make assessment decisions for both Fischer and Point Creeks. All submitted data is attached.

Alliance for the Great Lakes Recreation Season (May - September) E. coli data

Sample Date	Beach Name	County	City	e.coli (cfu/100ml)	e.coli (cfu/100ml)
05/23/2008	Shoop Park	Racine	Racine	200	0
06/06/2008	Bradford Beach	Milwaukee	Milwaukee	100	0
06/11/2008	Samuel Meyers Park Beach	Racine	Racine	200	100
06/13/2008	Red Arrow Park	Marinette	Marinette	0	0
06/20/2008	Bradford Beach	Milwaukee	Milwaukee	0	0
06/25/2008	Grant Park Beach	Milwaukee	Milwaukee	0	0
06/29/2008	Whitefish Bay Beach, Big Bay & Butler Beaches	Door	Whitefish Bay	0	0
07/10/2008	North Beach	Racine	Racine	0	200
07/10/2008	Sand Bay Point Beach 1	Door	Sturgeon Bay	0	
07/15/2008	Red Arrow Park	Marinette	Marinette	100	0
08/12/2008	Sandy Point Beach #1	Door	Sturgeon Bay	0	0
09/05/2008	North Red Arrow Beach	Manitowac	Manitowac	0	0
09/16/2008	Sand Bay Point Beach 1	Door	Sturgeon Bay	0	0
09/26/2008	Bradford Beach	Milwaukee	Milwaukee	0	0
05/05/2009	McKinley Park Beach	Milwaukee	Milwaukee	100	100
05/14/2009	Sam Meyers Park Beach	Racine	Racine	0	0
07/02/2009	Red Arrow Park Beach - North of train tracks	Manitowoc	Manitowac	0	0
05/01/2010	Bender Park Beach	Milwaukee	Oak Creek	0	0
05/01/2010	Grant Park Beach - North of playground to rock wall jetty	Milwaukee	South Milwaukee	0	1
05/02/2010	Atwater Park Beach	Milwaukee	Shorewood	0	
05/04/2010	Grant Park Beach - Entire Beach	Milwaukee	South Milwaukee	0	0
05/06/2010	Atwater Park Beach	Milwaukee	Shorewood	1	
05/07/2010	North Beach	Racine	Racine	3	3
05/07/2010	Silver Creek Park Beach	Manitowoc	Manitowoc	0	
05/14/2010	Bender Park Beach	Milwaukee	Oak Creek	0	0
05/19/2010	Bay View Park Beach - South of wooden stairs	Milwaukee	St. Francis	0	0
05/19/2010	Racine Zoo Beach - South of Goold Street to Erie St. Outflow	Racine	Racine	0	0
05/22/2010	Bay View Park Beach - Entire Beach	Milwaukee	St. Francis	0	0
05/26/2010	Michigan Boulevard Beach - Augusta St. to Wolf St.	Racine	Racine	8	7
06/01/2010	Grant Park Beach - South of playground to Oak Creek jetty	Milwaukee	South Milwaukee	0	1
06/03/2010	Bender Park Beach	Milwaukee	Oak Creek	5	6
06/03/2010	Bradford Beach- South of the beach house	Milwaukee	Milwaukee	1	

06/03/2010	McKinley Park Beach	Milwaukee	Milwaukee	0	0
06/04/2010	Grant Park Beach - Entire Beach	Milwaukee	South Milwaukee	7	6
06/15/2010	Sand Bay Beach 1	Door	Sturgeon Bay	5	4
06/18/2010	Grant Park Beach - South of playground to Oak Creek jetty	Milwaukee	South Milwaukee	2	1
06/23/2010	Bender Park Beach	Milwaukee	Oak Creek	1	1
06/24/2010	Bradford Beach- South of the beach house	Milwaukee	Milwaukee	0	
06/25/2010	Grant Park Beach - South of playground to Oak Creek jetty	Milwaukee	South Milwaukee	2	2
07/02/2010	Grant Park Beach - South of playground to Oak Creek jetty	Milwaukee	South Milwaukee	3	7
07/07/2010	Michigan Boulevard Beach - Augusta St. to Wolf St.	Racine	Racine	0	0
07/20/2010	Sand Bay Beach 1	Door	Sturgeon Bay	0	3
07/23/2010	Grant Park Beach - South of playground to Oak Creek jetty	Milwaukee	South Milwaukee	0	1
07/24/2010	Michigan Boulevard Beach - Augusta St. to Wolf St.	Racine	Racine	0	4
08/19/2010	Bay View Park Beach - Entire Beach	Milwaukee	St. Francis	0	
08/19/2010	Sand Bay Beach 1	Door	Sturgeon Bay	12	13
08/22/2010	Bradford Park Beach - Entire Beach	Milwaukee	Milwaukee	69	70
09/09/2010	Sand Bay Beach 1	Door	Sturgeon Bay	0	0
09/12/2010	South Shore Park Beach	Milwaukee	Milwaukee	0	
09/22/2010	Sam Meyers Park Beach	Racine	Racine	0	0
09/23/2010	Racine Zoo Beach - South of Goold Street to Erie St. Outflow	Racine	Racine	10	
09/24/2010	Sheridan Park Beach	Milwaukee	Cudahy	0	0
09/24/2010	Silver Creek Park Beach	Manitowoc	Manitowoc	0	4
09/24/2010	Wind Point Lighthouse Beach	Racine	Wind Point	0	0
09/25/2010	5 1/2 Mile Road Beach-Private Beach	Racine	Caledonia	1	0
09/25/2010	Carre-Hogle Park	Racine	Racine	3	1
09/25/2010	Racine Zoo Beach - North of Goold Street	Racine	Racine	13	6
09/25/2010	South Shore Park Beach	Milwaukee	Milwaukee	0	0

North Temperate Lakes Long-Term Ecological Research Total Phosphorus (TP), corrected Chlorophyll a (Chl. a), and Chloride (Cl) data

NTL-LTER - Lake Mendota TP data (deep hole station)

Date	Depth	TP (mg/l)	season average (mg/l)	season average (ug/l)
06/12/2006	0	0.078		
06/26/2006	0	0.058		
07/10/2006	0	0.042		
07/24/2006	0	0.036	0.041	40.7
08/07/2006	0	0.027		
08/21/2006	0	0.018		
09/06/2006	0	0.026		
06/11/2007	0	0.074		
06/25/2007	0	0.067		
07/09/2007	0	0.026		
07/23/2007	0	0.031	0.039	38.9
08/06/2007	0	0.023		
08/20/2007	0	0.026		
09/04/2007	0	0.025		
06/09/2008	0	0.075		
06/23/2008	0	0.13		
07/07/2008	0	0.152		
07/21/2008	0	0.053	0.075	75.3
08/04/2008	0	0.05		
08/18/2008	0	0.038		
09/05/2008	0	0.029		
06/09/2009	0	0.11		
06/23/2009	0	0.155		
07/06/2009	0	0.125		
07/20/2009	0	0.106	0.095	94.7
08/05/2009	0	0.07		
08/19/2009	0	0.044		
09/02/2009	0	0.053		
06/07/2010	0	0.043		
06/21/2010	0	0.034		
07/05/2010	0	0.046		
07/19/2010	0	0.038	0.037	36.6
08/03/2010	0	0.032		
08/16/2010	0	0.034		
08/30/2010	0	0.029		

NTL-LTER - Lake Mendota Chl. a data (deep hole station)

Date	Depth	Chl. a (ug/l)	daily average (ug/l)	seasonal average (ug/l)
07/10/2006	0	4		

07/10/2006	2	4.7	4.4	
07/10/2006	0-2	4.6		
07/10/2006	0-2	4.3		
07/24/2006	0-2	4.6	4.3	
07/24/2006	0-2	3.9		
08/07/2006	0	3.9		
08/07/2006	2	4.1		4.5
08/07/2006	0-2	6.1	4.6	
08/07/2006	0-2	4.3		
08/21/2006	0-2	3.7	4.0	
08/21/2006	0-2	4.2		
09/06/2006	0	4.9		
09/06/2006	2	4.1		
09/06/2006	0-2	6.2	5.2	
09/06/2006	0-2	5.5		
07/09/2007	0	4.4		
07/09/2007	2	5	4.8	
07/09/2007	0-2	2.6		
07/09/2007	0-2	7.2		
07/23/2007	0-2	4.9		
07/23/2007	0-2	6	5.5	
08/06/2007	0	8.1		
08/06/2007	2	7.2		
08/06/2007	0-2	6.6	7.5	5.5
08/06/2007	0-2	7.9		
08/20/2007	0-2	5		
08/20/2007	0-2	4	4.5	
09/04/2007	0	4.3		
09/04/2007	2	5.5		
09/04/2007	0-2	5.9	5.1	
09/04/2007	0-2	4.6		
07/07/2008	0	21.5		
07/07/2008	2	12.7	15.4	
07/07/2008	0-2	15.3		
07/07/2008	0-2	11.9		
07/21/2008	0-2	12		
07/21/2008	0-2	13.2	12.6	
08/04/2008	0	12.4		
08/04/2008	2	11.7		
08/04/2008	0-2	5.3	10.4	11.5
08/04/2008	0-2	12.1		
08/18/2008	0-2	11.9		
08/18/2008	0-2	14.5	13.2	
09/05/2008	0	4.9		
09/05/2008	2	6.1		
09/05/2008	0-2	7.3	6.1	
09/05/2008	0-2	6.2		
07/06/2009	2	10	9.6	
07/06/2009	0-2	14		

07/06/2009	0-2	4.9		
07/20/2009	0-2	31.3	29.9	
07/20/2009	0-2	28.5		
08/05/2009	0	24.5		
08/05/2009	2	4	14.6	15.1
08/05/2009	0-2	16.3		
08/05/2009	0-2	13.4		
08/19/2009	0-2	8.4	10.5	
08/19/2009	0-2	12.6		
09/02/2009	0	13.9		
09/02/2009	2	7.3	11.2	
09/02/2009	0-2	8.9		
09/02/2009	0-2	14.5		
07/05/2010	0	26.8	24.8	
07/05/2010	2	23.9		
07/05/2010	0-2	28.2		
07/05/2010	0-2	25.1		
07/05/2010	0-8	20.1	19.2	
07/19/2010	0-2	18.5		
07/19/2010	0-2	19.9		
08/03/2010	0	10.1	10.1	16.5
08/03/2010	2	10.7		
08/03/2010	0-2	9.8		
08/03/2010	0-2	10.4	13.6	
08/03/2010	0-8	9.4		
08/16/2010	0-2	15		
08/16/2010	0-2	12.1	15.0	
08/30/2010	0	14.1		
08/30/2010	2	16.7		
08/30/2010	0-2	13.3		
08/30/2010	0-2	15.9		

NTL-LTER - Lake Monona TP data (deep hole station)

Date	Depth	TP (mg/l)	season average (mg/l)	season average (ug/l)
06/13/2006	0	0.045		
06/27/2006	0	0.046		
07/12/2006	0	0.041		
07/25/2006	0	0.033	0.037	36.7
08/08/2006	0	0.022		
08/21/2006	0	0.046		
09/07/2006	0	0.024		
06/11/2007	0	0.041		
06/25/2007	0	0.027		
07/09/2007	0	0.029		
07/23/2007	0	0.026	0.027	27.4
08/07/2007	0	0.024		
08/20/2007	0	0.021		

09/04/2007	0	0.024		
06/10/2008	0	0.075		
06/24/2008	0	0.067		
07/08/2008	0	0.060		
07/21/2008	0	0.040	0.049	49.3
08/05/2008	0	0.041		
08/18/2008	0	0.032		
09/05/2008	0	0.030		
06/10/2009	0	0.108		
06/23/2009	0	0.080		
07/09/2009	0	0.057		
07/20/2009	0	0.084	0.073	72.6
08/04/2009	0	0.071		
08/20/2009	0	0.052		
09/04/2009	0	0.056		
06/09/2010	0	0.048		
06/21/2010	0	0.064		
07/06/2010	0	0.048		
07/20/2010	0	0.042	0.042	42.3
08/04/2010	0	0.032		
08/16/2010	0	0.031		
08/30/2010	0	0.031		

NTL-LTER - Lake Monona Chl. a data (deep hole station)

Date	Depth	Chl. a (ug/l)	daily average (ug/l)	season average (ug/l)
07/12/2006	0	5.1		
07/12/2006	2	6.5		
07/12/2006	0-2	4.4	5.2	
07/12/2006	0-2	4.9		
07/25/2006	0-2	8.7		
07/25/2006	0-2	8.8	8.8	
08/08/2006	0	5.5		
08/08/2006	2	6.9		
08/08/2006	0-2	5.0	6.0	6.9
08/08/2006	0-2	6.6		
08/21/2006	0-2	6.9		
08/21/2006	0-2	7.3	7.1	
09/07/2006	0	7.4		
09/07/2006	2	7.3		
09/07/2006	0-2	8.7	7.5	
09/07/2006	0-2	6.6		
07/09/2007	0	6.7		
07/09/2007	2	10.6		
07/09/2007	0-2	7.8	8.9	
07/09/2007	0-2	10.5		

07/23/2007	0-2	5.9		
07/23/2007	0-2	6.7	6.3	
08/07/2007	0	5.6		
08/07/2007	2	6.5		
08/07/2007	0-2	6.7	6.2	7.1
08/07/2007	0-2	6.1		
08/20/2007	0-2	8.2		
08/20/2007	0-2	7.6	7.9	
09/04/2007	0	6.9		
09/04/2007	2	7.3		
09/04/2007	0-2	5.8	6.4	
09/04/2007	0-2	5.5		
07/08/2008	0	13.0		
07/08/2008	2	13.0		
07/08/2008	0-2	12.8	12.6	
07/08/2008	0-2	11.5		
07/21/2008	0-2	11.5		
07/21/2008	0-2	17.6	14.6	
08/05/2008	0	12.3		
08/05/2008	2	13.9		
08/05/2008	0-2	9.7	11.9	11.7
08/05/2008	0-2	11.6		
08/18/2008	0-2	9.4		
08/18/2008	0-2	9.7	9.6	
09/05/2008	0	7.8		
09/05/2008	2	11.1		
09/05/2008	0-2	11.7	9.8	
09/05/2008	0-2	8.5		
07/09/2009	0	8.2		
07/09/2009	2	10.3		
07/09/2009	0-2	12.3	10.3	
07/09/2009	0-2	10.4		
07/20/2009	0-2	16.8		
07/20/2009	0-2	7.1	12.0	
08/04/2009	0	11.8		
08/04/2009	2	22.2		
08/04/2009	0-2	11.6	13.2	13.6
08/04/2009	0-2	7.3		
08/20/2009	0-2	13.1		
08/20/2009	0-2	14.4	13.8	
09/04/2009	0	14.9		
09/04/2009	2	22.1		
09/04/2009	0-2	20.2	19.0	
09/04/2009	0-2	18.6		
07/06/2010	0	22.5		
07/06/2010	2	20.6		
07/06/2010	0-2	23.9	22.4	
07/06/2010	0-2	22.4		
07/20/2010	0-2	19.8		

07/20/2010	0-2	18.3	19.1	
08/04/2010	0	9.2		
08/04/2010	2	12.3		
08/04/2010	0-2	15.1	12.5	17.1
08/04/2010	0-2	13.4		
08/16/2010	0-2	13.2		
08/16/2010	0-2	13.0	13.1	
08/30/2010	0	24.8		
08/30/2010	2	19.2		
08/30/2010	0-2	16.5	18.7	
08/30/2010	0-2	14.1		

NTL-LTER - Lake Monona chloride data (deep hole station)

Date	Depth	Cl (mg/l)
01/15/2001	8	38.11
01/15/2001	8	37.96
01/15/2001	0	37.91
04/25/2001	8	46.12
04/25/2001	20	46.22
04/25/2001	0	46.12
04/25/2001	0	46.3
07/30/2001	0	44.1
07/30/2001	4	43.66
07/30/2001	8	43.98
07/30/2001	21.9	45.14
07/30/2001	0	43.7
07/30/2001	20	45.66
07/30/2001	12	45.07
07/30/2001	16	45.45
07/30/2001	6	43.69
10/22/2001	0	40.33
10/22/2001	20	40.65
10/22/2001	0	40.28
10/22/2001	4	40.33
04/23/2002	8	41.04
04/23/2002	0	40.98
04/23/2002	0	41.08
04/23/2002	20	40.99
07/16/2002	14	41.07
07/16/2002	6	40.1
07/16/2002	12	40.91
07/16/2002	20	41.3
07/16/2002	16	41.15
07/16/2002	4	40.4
07/16/2002	0	40.35
07/16/2002	8	40.26
10/22/2002	4	32.94
10/22/2002	20	46.01
10/22/2002	20	43.12
10/22/2002	0	45.95
02/13/2003	8	47.75
02/13/2003	0	48.35

02/13/2003	0	48.36
04/15/2003	8	49.37
04/15/2003	0	49.67
04/15/2003	8	49.58
08/05/2003	0	49.12
08/05/2003	4	48.48
08/05/2003	8	48.98
08/05/2003	12	48.68
08/05/2003	20	48.88
08/05/2003	6	48.96
08/05/2003	16	48.87
08/05/2003	0	48.96
10/29/2003	20	49.21
10/29/2003	0	49.45
10/29/2003	4	49.31
10/29/2003	20	49.33
02/17/2004	8	48.8
02/17/2004	8	49.3
02/17/2004	0	47
04/13/2004	0	50.81
04/13/2004	8	50.87
04/13/2004	8	51.48
04/13/2004	20	80.73
08/05/2004	12	3.62
08/05/2004	16	12.47
08/05/2004	6	28.56
08/05/2004	8	7.37
08/05/2004	0	4.58
08/05/2004	16	7.05
08/05/2004	4	45.3
08/05/2004	20	25.48
11/04/2004	20	45.37
11/04/2004	4	45.64
11/04/2004	8	45.37
11/04/2004	0	45.68
02/03/2005	8	46.98
02/03/2005	0	46.04
02/03/2005	20	147.38
02/03/2005	20	144.38
04/18/2005	20	62.09
04/18/2005	8	60.02
04/18/2005	0	59.46
04/18/2005	8	59.69
08/03/2005	8	55.79
08/03/2005	12	54.14
08/03/2005	16	54.1
08/03/2005	20	54.42
08/03/2005	6	56.66
08/03/2005	22	54.04
08/03/2005	8	55.45
08/03/2005	0	56.51
08/03/2005	4	56.46

11/03/2005	0	57.91
11/03/2005	20	58.2
11/03/2005	0	57.82
11/03/2005	4	57.87
04/19/2006	8	63.92
04/19/2006	0	64.08
04/19/2006	20	64.61
04/19/2006	20	64.2
08/08/2006	20	57.41
08/08/2006	4	53.64
08/08/2006	4	55.07
08/08/2006	6	54.43
08/08/2006	22	56.86
08/08/2006	8	55.29
08/08/2006	0	54.29
08/08/2006	12	57.04
08/08/2006	16	56.83
10/30/2006	20	53.64
10/30/2006	0	53.71
10/30/2006	4	53.71
10/30/2006	20	53.71
01/05/2007	8	52.4
01/05/2007	20	52.51
01/05/2007	20	52.65
01/05/2007	0	52.36
02/26/2007	0	50.57
02/26/2007	8	53.04
02/26/2007	20	84.89
02/26/2007	0	50.53
04/17/2007	20	55.24
04/17/2007	0	54.82
04/17/2007	0	54.91
04/17/2007	8	54.36
08/07/2007	0	49.59
08/07/2007	12	54.79
08/07/2007	16	54.2
08/07/2007	20	54.19
08/07/2007	4	55.15
08/07/2007	16	54.73
08/07/2007	6	55.24
08/07/2007	8	55.9
10/29/2007	4	48.09
10/29/2007	4	48.44
10/29/2007	20	48.71
10/29/2007	0	49.06
03/03/2008	0	52.45
03/03/2008	8	56.56
03/03/2008	0	52.58
03/03/2008	20	87.7
04/17/2008	0	67.17
04/17/2008	0	67.12
04/17/2008	8	67.27

04/17/2008	20	67.29
08/05/2008	6	5.42
08/05/2008	8	52.68
08/05/2008	16	28.22
08/05/2008	20	25.78
08/05/2008	0	50.57
08/05/2008	12	1.78
08/05/2008	4	26.3
08/05/2008	12	56.62
10/31/2008	0	51.03
10/31/2008	0	50.04
10/31/2008	4	49.56
10/31/2008	20	50.73
02/05/2009	20	152.27
02/05/2009	20	152.18
02/05/2009	0	52.61
02/05/2009	8	55
04/17/2009	8	62.44
04/17/2009	20	62.69
04/17/2009	20	62.23
04/17/2009	0	62.9
08/04/2009	0	58.35
08/04/2009	8	58.72
08/04/2009	12	59.6
08/04/2009	6	58.68
08/04/2009	4	58.73
08/04/2009	20	60.59
08/04/2009	22	59.92
08/04/2009	4	58.61
10/30/2009	0	58.62
10/30/2009	4	57.98
10/30/2009	20	57.94
10/30/2009	0	58.15

NTL-LTER - Lake Waubesa Chl. a data (deep hole station)

Date	Station	Chl. a (ug/l)	season average (ug/l)
07/13/2006	Lake Waubesa - Deep Hole	18.6	
07/26/2006	Lake Waubesa - Deep Hole	17.9	16.2
08/09/2006	Lake Waubesa - Deep Hole	12.5	
08/22/2006	Lake Waubesa - Deep Hole	14.2	
09/14/2006	Lake Waubesa - Deep Hole	17.7	
07/11/2007	Lake Waubesa - Deep Hole	14.8	
07/24/2007	Lake Waubesa - Deep Hole	17	18.6
08/08/2007	Lake Waubesa - Deep Hole	22.1	
08/21/2007	Lake Waubesa - Deep Hole	15.1	
09/05/2007	Lake Waubesa - Deep Hole	24.1	
07/09/2008	Lake Waubesa - Deep Hole	26.3	

07/22/2008	Lake Waubesa - Deep Hole	19.1	22.4
08/06/2008	Lake Waubesa - Deep Hole	32.7	
08/19/2008	Lake Waubesa - Deep Hole	14.8	
09/08/2008	Lake Waubesa - Deep Hole	19.1	
07/07/2009	Lake Waubesa - Deep Hole	19.4	
07/21/2009	Lake Waubesa - Deep Hole	22.6	28.4
08/03/2009	Lake Waubesa - Deep Hole	23.7	
08/17/2009	Lake Waubesa - Deep Hole	42.2	
08/31/2009	Lake Waubesa - Deep Hole	34.3	
07/07/2010	Lake Waubesa - Deep Hole	38.3	
07/21/2010	Lake Waubesa - Deep Hole	36.4	35.3
08/05/2010	Lake Waubesa - Deep Hole	27.8	
08/17/2010	Lake Waubesa - Deep Hole	27.4	
08/31/2010	Lake Waubesa - Deep Hole	46.7	

NTL-LTER - Lake Kegonsa Chl. a data (deep hole station)

Date	Station	Chl. a (ug/l)	season average (ug/l)
07/13/2006	Lake Kegonsa - Deep Hole	26	
07/26/2006	Lake Kegonsa - Deep Hole	29.6	26.2
08/09/2006	Lake Kegonsa - Deep Hole	14.1	
08/22/2006	Lake Kegonsa - Deep Hole	31	
09/14/2006	Lake Kegonsa - Deep Hole	30.5	
07/11/2007	Lake Kegonsa - Deep Hole	10.9	
07/24/2007	Lake Kegonsa - Deep Hole	13.6	18.6
08/08/2007	Lake Kegonsa - Deep Hole	22.5	
08/21/2007	Lake Kegonsa - Deep Hole	20	
09/06/2007	Lake Kegonsa - Deep Hole	26.1	
07/22/2008	Lake Kegonsa - Deep Hole	21.1	
08/06/2008	Lake Kegonsa - Deep Hole	25.9	26.2
08/19/2008	Lake Kegonsa - Deep Hole	36.9	
09/08/2008	Lake Kegonsa - Deep Hole	20.9	
07/07/2009	Lake Kegonsa - Deep Hole	15	
07/21/2009	Lake Kegonsa - Deep Hole	5.4	26.9
08/03/2009	Lake Kegonsa - Deep Hole	15.3	
08/17/2009	Lake Kegonsa - Deep Hole	39.8	
08/31/2009	Lake Kegonsa - Deep Hole	59.1	
07/07/2010	Lake Kegonsa - Deep Hole	57	
07/21/2010	Lake Kegonsa - Deep Hole	49.9	49.7
08/05/2010	Lake Kegonsa - Deep Hole	35.8	
08/17/2010	Lake Kegonsa - Deep Hole	48.6	
08/31/2010	Lake Kegonsa - Deep Hole	57.4	

NTL-LTER - Lake Wingra TP data (deep hole station)

Date	Depth	TP (mg/l)	season average (mg/l)	season average (ug/l)
06/01/2006	0	0.019		
06/14/2006	0	0.462		
06/28/2006	0	0.069	0.114	114.1
07/12/2006	0	0.081		
07/26/2006	0	0.086		
08/09/2006	0	0.091		
08/22/2006	0	0.045		
09/14/2006	0	0.06		
06/13/2007	0	0.027		
06/26/2007	0	0.036		
07/11/2007	0	0.064	0.044	43.9
07/24/2007	0	0.051		
08/08/2007	0	0.038		
08/21/2007	0	0.056		
09/05/2007	0	0.035		
06/11/2008	0	0.055		
06/25/2008	0	0.041		
07/09/2008	0	0.034	0.040	39.6
07/22/2008	0	0.026		
08/06/2008	0	0.037		
08/19/2008	0	0.039		
09/08/2008	0	0.045		
06/11/2009	0	0.038		
06/22/2009	0	0.031		
07/07/2009	0	0.034	0.033	32.7
07/21/2009	0	0.033		
08/03/2009	0	0.04		
08/17/2009	0	0.029		
08/31/2009	0	0.024		

NTL-LTER - Lake Wingra Chl. a data (deep hole station)

Date	Depth	Chl. a (ug/l)	daily average (ug/l)	season average (ug/l)
07/22/2005	0-2	16.7		
07/22/2005	0-2	15.5	16.1	
08/04/2005	0-2	10.4		
08/04/2005	0-2	9.9		
08/04/2005	0	9.8	11.1	
08/04/2005	1	14.2		
08/04/2005	2	11.2		10.1
08/16/2005	0-2	11.4		
08/16/2005	0-2	3.2	7.3	
08/31/2005	0-2	3.8		

08/31/2005	0-2	3.2		
08/31/2005	0	3.7	5.8	
08/31/2005	1	9.5		
08/31/2005	2	8.7		
07/12/2006	0-2	30.5		
07/12/2006	0-2	26.2		
07/12/2006	1	28.9		
07/12/2006	0	28.5	27.4	
07/12/2006	2	23.1		
07/26/2006	0-2	26.5		
07/26/2006	0-2	24.3	25.4	
08/09/2006	0-2	26		
08/09/2006	0-2	33		
08/09/2006	2	30.8		
08/09/2006	0	61.7	35.3	25.5
08/09/2006	1	25.2		
08/22/2006	0-2	15		
08/22/2006	0-2	14.4	14.7	
09/14/2006	0-2	35.2		
09/14/2006	0-2	26.2		
09/14/2006	0	23.4		
09/14/2006	2	19.7	24.6	
09/14/2006	1	18.7		
07/11/2007	0-2	17		
07/11/2007	0-2	16.5		
07/11/2007	0	16.5		
07/11/2007	2	17.1	16.7	
07/11/2007	1	16.3		
07/24/2007	0-2	12.6		
07/24/2007	0-2	13	12.8	
08/08/2007	0-2	11.8		
08/08/2007	0-2	12.3		
08/08/2007	2	12.2		
08/08/2007	0	13.3	12.2	12.4
08/08/2007	1	11.4		
08/21/2007	0-2	12.5		
08/21/2007	0-2	13.3	12.9	
09/05/2007	0-2	7.9		
09/05/2007	0-2	7.7		
09/05/2007	0	5.6		
09/05/2007	2	7.8	7.4	
09/05/2007	1	8		
07/09/2008	0-2	7.5		
07/09/2008	0-2	6.8		
07/09/2008	0	7.9		
07/09/2008	1	10.1	8.4	
07/09/2008	2	9.5		
07/22/2008	0-2	2.5		
07/22/2008	0-2	4.5	3.5	

08/06/2008	0-2	6.5		
08/06/2008	0-2	4.6		
08/06/2008	0	8.9		
08/06/2008	1	5.5	6.8	6.6
08/06/2008	2	8.5		
08/19/2008	0-2	4.3		
08/19/2008	0-2	4	4.2	
09/08/2008	0-2	7.6		
09/08/2008	2	12.1		
09/08/2008	0	9.5		
09/08/2008	1	10.5	10.1	
09/08/2008	0-2	10.7		
07/07/2009	0	10		
07/07/2009	1	10.1		
07/07/2009	2	11.3		
07/07/2009	0-2	9.8	10.1	
07/07/2009	0-2	9.1		
07/21/2009	0-2	11.3		
07/21/2009	0-2	17.7	14.5	
08/03/2009	2	10		
08/03/2009	0	10.2		
08/03/2009	1	14.4		
08/03/2009	0-2	10	10.9	11.0
08/03/2009	0-2	10.1		
08/17/2009	0-2	14.6		
08/17/2009	0-2	9.5	12.1	
08/31/2009	0	6.3		
08/31/2009	2	7.5		
08/31/2009	1	7.6		
08/31/2009	0-2	7.2	7.4	
08/31/2009	0-2	8.4		

NTL-LTER - Lake Wingra Chloride data (deep hole station)

Date	Depth	Cl (mg/l)
01/08/2001	0	67.48
01/08/2001	0	68.18
04/23/2001	0	94.14
04/23/2001	0	94.11
08/01/2001	0	88.87
08/01/2001	0	86.88
10/25/2001	0	60.64
10/25/2001	0	62.72
04/22/2002	0	77.47
04/22/2002	0	77.65
07/18/2002	0	81.57
07/18/2002	0	82.05
10/24/2002	0	37.1
10/24/2002	0	82.35
01/28/2003	0	96.38

01/28/2003	0	96.7
04/17/2003	0	91.61
04/17/2003	0	93.41
08/07/2003	0	86.05
08/07/2003	0	93.5
11/06/2003	0	83.61
11/06/2003	0	83.88
02/09/2004	0	87.96
02/09/2004	0	88.24
04/15/2004	0	92.18
04/15/2004	0	92.37
08/04/2004	0	66.17
08/04/2004	0	66.03
11/08/2004	0	73.64
11/08/2004	0	9.21
02/09/2005	0	104.79
02/09/2005	0	95.28
04/11/2005	0	110.48
04/11/2005	0	109.1
08/04/2005	0	113.24
08/04/2005	0	113.72
10/26/2005	0	112.43
10/26/2005	0	112.49
02/22/2006	0	112.57
02/22/2006	0	111.22
04/19/2006	0	105.85
04/19/2006	0	105.84
08/09/2006	0	85.68
08/09/2006	0	85.42
11/02/2006	0	76.1
11/02/2006	0	76.15
03/08/2007	0	76.93
03/08/2007	0	78.1
04/18/2007	0	84.75
04/18/2007	0	83.2
08/08/2007	0	89.26
08/08/2007	0	90.41
10/31/2007	0	70.82
10/31/2007	0	69.99
02/18/2008	0	91.87
02/18/2008	0	92.02
04/15/2008	0	101.22
04/15/2008	0	101.32
08/06/2008	0	78.25
08/06/2008	0	74.79
11/03/2008	0	79.93
11/03/2008	0	80.63
02/16/2009	0	0
02/16/2009	0	19.89
04/13/2009	0	106.88
04/13/2009	0	107.25
08/03/2009	0	99.88

08/03/2009	0	99.27
11/04/2009	0	26.57
11/04/2009	0	88.94

Wisconsin Resources Protection Council's submitted Total Recoverable Copper, Total Recoverable Zinc, and CaCO3 Hardness data

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032162	7/26/06	Biofilter Inlet	60	ug/L	COPPER TOTAL REC	52	mg/L	HARDNESS TOTAL CACO3	8.37
10032162	8/3/06	Biofilter Inlet	140	ug/L	COPPER TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	4.51
10032162	10/4/06	Biofilter Inlet	95	ug/L	COPPER TOTAL REC	37	mg/L	HARDNESS TOTAL CACO3	6.07
10032162	11/28/06	Biofilter Inlet	80	ug/L	COPPER TOTAL REC	26	mg/L	HARDNESS TOTAL CACO3	4.35
10032162	5/24/07	Biofilter Inlet	58	ug/L	COPPER TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	3.24
10032162	8/14/07	Biofilter Inlet	22	ug/L	COPPER TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	3.08
10032162	8/21/07	Biofilter Inlet	130	ug/L	COPPER TOTAL REC	31	mg/L	HARDNESS TOTAL CACO3	5.14
10032162	9/21/07	Biofilter Inlet	270	ug/L	COPPER TOTAL REC	73	mg/L	HARDNESS TOTAL CACO3	11.53
10032162	4/25/08	Biofilter Inlet	80	ug/L	COPPER TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	4.98
10032162	6/8/08	Biofilter Inlet	61	ug/L	COPPER TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	4.98
10032162	10/24/08	Biofilter Inlet	70	ug/L	COPPER TOTAL REC	250	mg/L	HARDNESS TOTAL CACO3	36.84
10032162	4/25/09	Biofilter Inlet	62	ug/L	COPPER TOTAL REC	67	mg/L	HARDNESS TOTAL CACO3	10.63
10032162	10/2/09	Biofilter Inlet	15	ug/L	COPPER TOTAL REC	*12*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032162	4/16/10	Biofilter Inlet	63	ug/L	COPPER TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	4.98
10032162	9/16/10	Biofilter Inlet	22	ug/L	COPPER TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	3.40

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032163	4/18/06	Biofilter Outlet	35	ug/L	COPPER TOTAL REC	25.4	mg/L	HARDNESS TOTAL CACO3	4.26
10032163	8/3/06	Biofilter Outlet	33	ug/L	COPPER TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	4.19
10032163	10/4/06	Biofilter Outlet	16	ug/L	COPPER TOTAL REC	21	mg/L	HARDNESS TOTAL CACO3	3.56
10032163	11/28/06	Biofilter Outlet	34	ug/L	COPPER TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	3.88
10032163	5/24/07	Biofilter Outlet	13	ug/L	COPPER TOTAL REC	28	mg/L	HARDNESS TOTAL CACO3	4.67
10032163	8/21/07	Biofilter Outlet	3.9	ug/L	COPPER TOTAL REC	22	mg/L	HARDNESS TOTAL CACO3	3.72
10032163	9/21/07	Biofilter Outlet	15	ug/L	COPPER TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	2.26
10032163	4/25/08	Biofilter Outlet	22	ug/L	COPPER TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	4.51
10032163	6/8/08	Biofilter Outlet	8.8	ug/L	COPPER TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	3.24
10032163	10/27/08	Biofilter Outlet	16	ug/L	COPPER TOTAL REC	17	mg/L	HARDNESS TOTAL CACO3	2.91
10032163	4/25/09	Biofilter Outlet	15	ug/L	COPPER TOTAL REC	29	mg/L	HARDNESS TOTAL CACO3	4.82
10032163	10/3/09	Biofilter Outlet	18	ug/L	COPPER TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	2.59
10032163	4/16/10	Biofilter Outlet	11	ug/L	COPPER TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	4.51
10032163	9/17/10	Biofilter Outlet	5.3	ug/L	COPPER TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	3.24

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032152	6/1/02	Stream C	30	ug/L	COPPER TOTAL REC	22	mg/L	HARDNESS TOTAL CACO2	3.72

10032152	9/21/07	Stream C	47	ug/L	COPPER TOTAL REC	14	mg/L	HARDNESS TOTAL CACO3	2.43
10032152	4/25/08	Stream C	27	ug/L	COPPER TOTAL REC	21	mg/L	HARDNESS TOTAL CACO3	3.56
10032152	6/8/08	Stream C	32	ug/L	COPPER TOTAL REC	16	mg/L	HARDNESS TOTAL CACO3	2.75
10032152	10/27/08	Stream C	77	ug/L	COPPER TOTAL REC	26	mg/L	HARDNESS TOTAL CACO3	4.35
10032152	4/25/09	Stream C	22	ug/L	COPPER TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	4.98
10032152	10/3/09	Stream C	24	ug/L	COPPER TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	3.08
10032152	4/16/10	Stream C	19	ug/L	COPPER TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	3.88

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032153	5/5/03	Stream C	12	ug/L	COPPER TOTAL REC	*12*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032153	4/19/04	Stream C	12	ug/L	COPPER TOTAL REC	*9.1*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032154	4/19/04	Stream C	18	ug/L	COPPER TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	2.26
10032154	9/16/04	Stream C	13	ug/L	COPPER TOTAL REC	24	mg/L	HARDNESS TOTAL CACO3	4.04
10032154	10/23/04	Stream C	12	ug/L	COPPER TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	4.51
10032154	10/24/04	Stream C	11	ug/L	COPPER TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	4.51

10032154	4/26/05	Stream C	11	ug/L	COPPER TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	2.26
10032154	6/8/05	Stream C	15	ug/L	COPPER TOTAL REC	24	mg/L	HARDNESS TOTAL CACO3	4.04
10032154	6/8/05	Stream C	15	ug/L	COPPER TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	2.59
10032154	4/25/08	Stream C	6.9	ug/L	COPPER TOTAL REC	*11*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032154	6/8/08	Stream C	9	ug/L	COPPER TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	2.26
10032154	4/25/09	Stream C	11	ug/L	COPPER TOTAL REC	17	mg/L	HARDNESS TOTAL CACO3	2.91
10032154	4/15/10	Stream C	9.6	ug/L	COPPER TOTAL REC	16	mg/L	HARDNESS TOTAL CACO3	2.75

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032155	4/6/05	Unnamed Stream	5.7	ug/L	COPPER TOTAL REC	*9.2*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032155	4/26/05	Unnamed Stream	3.1	ug/L	COPPER TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	3.40
10032155	6/8/05	Unnamed Stream	8.7	ug/L	COPPER TOTAL REC	22	mg/L	HARDNESS TOTAL CACO3	3.72

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032156	4/19/04	Stream C	18	ug/L	COPPER TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	2.59
10032156	9/15/04	Stream C	44	ug/L	COPPER TOTAL REC	21	mg/L	HARDNESS TOTAL CACO3	3.56
10032156	10/23/04	Stream C	26	ug/L	COPPER TOTAL REC	22	mg/L	HARDNESS TOTAL CACO3	3.72

10032156	4/26/05	Stream C	24	ug/L	COPPER TOTAL REC	26	mg/L	HARDNESS TOTAL CACO3	4.35
10032156	6/9/05	Stream C	52	ug/L	COPPER TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	3.40
10032156	8/3/06	Stream C	74	ug/L	COPPER TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	3.88
10032156	10/4/06	Stream C	23	ug/L	COPPER TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	3.08
10032156	11/28/06	Stream C	46	ug/L	COPPER TOTAL REC	31	mg/L	HARDNESS TOTAL CACO3	5.14
10032156	5/24/07	Stream C	30	ug/L	COPPER TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	3.88
10032156	8/21/07	Stream C	11	ug/L	COPPER TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	3.24
10032156	9/21/07	Stream C	42	ug/L	COPPER TOTAL REC	*12*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032156	4/25/08	Stream C	14	ug/L	COPPER TOTAL REC	*11*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032156	6/8/08	Stream C	23	ug/L	COPPER TOTAL REC	*11*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032156	10/27/08	Stream C	18	ug/L	COPPER TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	3.08
10032156	4/25/09	Stream C	21	ug/L	COPPER TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	4.51
10032156	10/3/09	Stream C	17	ug/L	COPPER TOTAL REC	14	mg/L	HARDNESS TOTAL CACO3	2.43
10032156	4/16/10	Stream C	17	ug/L	COPPER TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	3.40
10032156	9/17/10	Stream C	22	ug/L	COPPER TOTAL REC	*9.9*	mg/L	HARDNESS TOTAL CACO3	1.75
SWIMS Station ID	**Date**	**Waterbody**	**Copper Concentration**	**Units**	**Parameter**	**Hardness Concentration**	**Units**	**Parameter**	**Acute toxicity criteria**

10032157	6/1/02	Stream C	22	ug/L	COPPER TOTAL REC	39	mg/L	HARDNESS TOTAL CACO3	6.38
10032157	9/15/04	Stream C	34	ug/L	COPPER TOTAL REC	35	mg/L	HARDNESS TOTAL CACO3	5.76
10032157	10/23/04	Stream C	15	ug/L	COPPER TOTAL REC	82	mg/L	HARDNESS TOTAL CACO3	12.87
10032157	4/26/05	Stream C	14	ug/L	COPPER TOTAL REC	39	mg/L	HARDNESS TOTAL CACO3	6.38
10032157	6/9/05	Stream C	36	ug/L	COPPER TOTAL REC	31	mg/L	HARDNESS TOTAL CACO3	5.14

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032158	9/15/04	Stream C	29	ug/L	COPPER TOTAL REC	39	mg/L	HARDNESS TOTAL CACO3	6.38
10032158	10/23/04	Stream C	19	ug/L	COPPER TOTAL REC	24	mg/L	HARDNESS TOTAL CACO3	4.04
10032158	4/26/05	Stream C	14	ug/L	COPPER TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	3.40
10032158	6/9/05	Stream C	41	ug/L	COPPER TOTAL REC	17	mg/L	HARDNESS TOTAL CACO3	2.91

SWIMS Station ID	Date	Waterbody	Copper Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032159	9/15/04	Stream C	140	ug/L	COPPER TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	2.26
10032159	10/23/04	Stream C	200	ug/L	COPPER TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	4.19
10032159	4/26/05	Stream C	38	ug/L	COPPER TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	4.19
10032159	6/9/05	Stream C	170	ug/L	COPPER TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	2.59
10032159	8/3/06	Stream C	160	ug/L	COPPER TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	2.26

10032159	10/4/06	Stream C	390	ug/L	COPPER TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	3.24
10032159	5/24/07	Stream C	61	ug/L	COPPER TOTAL REC	29	mg/L	HARDNESS TOTAL CACO3	4.82
10032159	8/21/07	Stream C	80	ug/L	COPPER TOTAL REC	*10*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032159	9/21/07	Stream C	86	ug/L	COPPER TOTAL REC	*10*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032159	4/25/08	Stream C	33	ug/L	COPPER TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	4.19
10032159	6/8/08	Stream C	100	ug/L	COPPER TOTAL REC	*12*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032159	4/25/09	Stream C	26	ug/L	COPPER TOTAL REC	41	mg/L	HARDNESS TOTAL CACO3	6.69
10032159	4/16/10	Stream C	31	ug/L	COPPER TOTAL REC	46	mg/L	HARDNESS TOTAL CACO3	7.46
10032159	9/17/10	Stream C	65	ug/L	COPPER TOTAL REC	7.6	mg/L	HARDNESS TOTAL CACO3	2.26

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032162	7/26/06	Biofilter Inlet	31	ug/L	ZINC TOTAL REC	52	mg/L	HARDNESS TOTAL CACO3	67.95
10032162	8/3/06	Biofilter Inlet	20	ug/L	ZINC TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	38.31
10032162	10/4/06	Biofilter Inlet	30	ug/L	ZINC TOTAL REC	37	mg/L	HARDNESS TOTAL CACO3	50.46
10032162	11/28/06	Biofilter Inlet	19	ug/L	ZINC TOTAL REC	26	mg/L	HARDNESS TOTAL CACO3	37.06
10032162	5/24/07	Biofilter Inlet	17	ug/L	ZINC TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	28.17

10032162	8/14/07	Biofilter Inlet	14	ug/L	ZINC TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	26.87
10032162	8/21/07	Biofilter Inlet	23	ug/L	ZINC TOTAL REC	31	mg/L	HARDNESS TOTAL CACO3	43.23
10032162	9/21/07	Biofilter Inlet	26	ug/L	ZINC TOTAL REC	73	mg/L	HARDNESS TOTAL CACO3	91.41
10032162	4/25/08	Biofilter Inlet	25	ug/L	ZINC TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	42.00
10032162	6/8/08	Biofilter Inlet	24	ug/L	ZINC TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	42.00
10032162	10/24/08	Biofilter Inlet	57	ug/L	ZINC TOTAL REC	250	mg/L	HARDNESS TOTAL CACO3	268.25
10032162	4/25/09	Biofilter Inlet	63	ug/L	ZINC TOTAL REC	67	mg/L	HARDNESS TOTAL CACO3	84.81
10032162	10/2/09	Biofilter Inlet	4.7	ug/L	ZINC TOTAL REC	12	mg/L	HARDNESS TOTAL CACO3	18.85
10032162	4/16/10	Biofilter Inlet	17	ug/L	ZINC TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	42.00
10032162	9/16/10	Biofilter Inlet	15	ug/L	ZINC TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	29.46

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032163	4/18/06	Biofilter Outlet	7	ug/L	ZINC TOTAL REC	25.4	mg/L	HARDNESS TOTAL CACO3	36.31
10032163	8/3/06	Biofilter Outlet	9.7	ug/L	ZINC TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	35.81
10032163	10/4/06	Biofilter Outlet	6.9	ug/L	ZINC TOTAL REC	21	mg/L	HARDNESS TOTAL CACO3	30.75
10032163	11/28/06	Biofilter Outlet	8.2	ug/L	ZINC TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	33.29
10032163	5/24/07	Biofilter Outlet	5.4	ug/L	ZINC TOTAL REC	28	mg/L	HARDNESS TOTAL CACO3	39.54
10032163	9/21/07	Biofilter Outlet	9	ug/L	ZINC TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	20.22

10032163	4/25/08	Biofilter Outlet	7.3	ug/L	ZINC TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	38.31
10032163	10/27/08	Biofilter Outlet	8.5	ug/L	ZINC TOTAL REC	17	mg/L	HARDNESS TOTAL CACO3	25.56
10032163	4/25/09	Biofilter Outlet	7	ug/L	ZINC TOTAL REC	29	mg/L	HARDNESS TOTAL CACO3	40.78
10032163	10/3/09	Biofilter Outlet	8.3	ug/L	ZINC TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	22.91
10032163	9/17/10	Biofilter Outlet	8	ug/L	ZINC TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	28.17

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032152	6/1/02	Stream C	64	ug/L	ZINC TOTAL REC	22	mg/L	HARDNESS TOTAL CACO3	32.02
10032152	9/21/07	Stream C	52	ug/L	ZINC TOTAL REC	14	mg/L	HARDNESS TOTAL CACO3	21.57
10032152	4/25/08	Stream C	63	ug/L	ZINC TOTAL REC	21	mg/L	HARDNESS TOTAL CACO3	30.75
10032152	6/8/08	Stream C	44	ug/L	ZINC TOTAL REC	16	mg/L	HARDNESS TOTAL CACO3	24.24
10032152	10/27/08	Stream C	78	ug/L	ZINC TOTAL REC	26	mg/L	HARDNESS TOTAL CACO3	37.06
10032152	4/25/09	Stream C	67	ug/L	ZINC TOTAL REC	30	mg/L	HARDNESS TOTAL CACO3	42.00
10032152	10/3/09	Stream C	62	ug/L	ZINC TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	26.87
10032152	4/16/10	Stream C	54	ug/L	ZINC TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	33.29

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032153	5/5/03	Stream C	36	ug/L	ZINC TOTAL REC	12	mg/L	HARDNESS TOTAL CACO3	18.85

10032153	4/19/04	Stream C	58	ug/L	ZINC TOTAL REC	*9.1*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032154	4/19/04	Stream C	56	ug/L	ZINC TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	20.22
10032154	9/16/04	Stream C	29	ug/L	ZINC TOTAL REC	24	mg/L	HARDNESS TOTAL CACO3	34.56
10032154	10/23/04	Stream C	160	ug/L	ZINC TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	38.31
10032154	10/24/04	Stream C	21	ug/L	ZINC TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	38.31
10032154	4/26/05	Stream C	6.4	ug/L	ZINC TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	20.22
10032154	6/8/05	Stream C	28	ug/L	ZINC TOTAL REC	24	mg/L	HARDNESS TOTAL CACO3	34.56
10032154	6/8/05	Stream C	10	ug/L	ZINC TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	22.91
10032154	4/25/08	Stream C	9.2	ug/L	ZINC TOTAL REC	*11*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032154	6/8/08	Stream C	10	ug/L	ZINC TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	20.22
10032154	4/25/09	Stream C	12	ug/L	ZINC TOTAL REC	17	mg/L	HARDNESS TOTAL CACO3	25.56
10032154	4/15/10	Stream C	8.5	ug/L	ZINC TOTAL REC	16	mg/L	HARDNESS TOTAL CACO3	24.24

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032155	4/6/05	Unnamed Stream	15	ug/L	ZINC TOTAL REC	*9.2*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*

10032155	4/26/05	Unnamed Stream	11	ug/L	ZINC TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	29.46
10032155	6/8/05	Unnamed Stream	13	ug/L	ZINC TOTAL REC	22	mg/L	HARDNESS TOTAL CACO3	32.02

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032156	4/19/04	Stream C	73	ug/L	ZINC TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	22.91
10032156	9/15/04	Stream C	49	ug/L	ZINC TOTAL REC	21	mg/L	HARDNESS TOTAL CACO3	30.75
10032156	10/23/04	Stream C	32	ug/L	ZINC TOTAL REC	22	mg/L	HARDNESS TOTAL CACO3	32.02
10032156	4/26/05	Stream C	100	ug/L	ZINC TOTAL REC	26	mg/L	HARDNESS TOTAL CACO3	37.06
10032156	6/9/05	Stream C	70	ug/L	ZINC TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	29.46
10032156	8/3/06	Stream C	83	ug/L	ZINC TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	33.29
10032156	10/4/06	Stream C	48	ug/L	ZINC TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	26.87
10032156	11/28/06	Stream C	92	ug/L	ZINC TOTAL REC	31	mg/L	HARDNESS TOTAL CACO3	43.23
10032156	5/24/07	Stream C	51	ug/L	ZINC TOTAL REC	23	mg/L	HARDNESS TOTAL CACO3	33.29
10032156	8/21/07	Stream C	39	ug/L	ZINC TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	28.17
10032156	9/21/07	Stream C	52	ug/L	ZINC TOTAL REC	12	mg/L	HARDNESS TOTAL CACO3	18.85
10032156	4/25/08	Stream C	35	ug/L	ZINC TOTAL REC	*11*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032156	6/8/08	Stream C	41	ug/L	ZINC TOTAL REC	*11*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*

10032156	10/27/08	Stream C	46	ug/L	ZINC TOTAL REC	18	mg/L	HARDNESS TOTAL CACO3	26.87
10032156	4/25/09	Stream C	69	ug/L	ZINC TOTAL REC	27	mg/L	HARDNESS TOTAL CACO3	38.31
10032156	10/3/09	Stream C	71	ug/L	ZINC TOTAL REC	14	mg/L	HARDNESS TOTAL CACO3	21.57
10032156	4/16/10	Stream C	62	ug/L	ZINC TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	29.46
10032156	9/17/10	Stream C	36	ug/L	ZINC TOTAL REC	*9.9*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032157	6/1/02	Stream C	25	ug/L	ZINC TOTAL REC	39	mg/L	HARDNESS TOTAL CACO3	52.84
10032157	9/15/04	Stream C	31	ug/L	ZINC TOTAL REC	35	mg/L	HARDNESS TOTAL CACO3	48.06
10032157	10/23/04	Stream C	70	ug/L	ZINC TOTAL REC	82	mg/L	HARDNESS TOTAL CACO3	101.20
10032157	4/26/05	Stream C	38	ug/L	ZINC TOTAL REC	39	mg/L	HARDNESS TOTAL CACO3	52.84
10032157	6/9/05	Stream C	32	ug/L	ZINC TOTAL REC	31	mg/L	HARDNESS TOTAL CACO3	43.23

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032158	9/15/04	Stream C	600	ug/L	ZINC TOTAL REC	39	mg/L	HARDNESS TOTAL CACO3	52.84
10032158	10/23/04	Stream C	38	ug/L	ZINC TOTAL REC	24	mg/L	HARDNESS TOTAL CACO3	34.56
10032158	4/26/05	Stream C	94	ug/L	ZINC TOTAL REC	20	mg/L	HARDNESS TOTAL CACO3	29.46
10032158	6/9/05	Stream C	200	ug/L	ZINC TOTAL REC	17	mg/L	HARDNESS TOTAL CACO3	25.56

SWIMS Station ID	Date	Waterbody	Zinc Concentration	Units	Parameter	Hardness Concentration	Units	Parameter	Acute toxicity criteria
10032159	9/15/04	Stream C	66	ug/L	ZINC TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	20.22
10032159	10/23/04	Stream C	100	ug/L	ZINC TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	35.81
10032159	4/26/05	Stream C	33	ug/L	ZINC TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	35.81
10032159	6/9/05	Stream C	47	ug/L	ZINC TOTAL REC	15	mg/L	HARDNESS TOTAL CACO3	22.91
10032159	8/3/06	Stream C	60	ug/L	ZINC TOTAL REC	13	mg/L	HARDNESS TOTAL CACO3	20.22
10032159	10/4/06	Stream C	96	ug/L	ZINC TOTAL REC	19	mg/L	HARDNESS TOTAL CACO3	28.17
10032159	5/24/07	Stream C	56	ug/L	ZINC TOTAL REC	29	mg/L	HARDNESS TOTAL CACO3	40.78
10032159	8/21/07	Stream C	44	ug/L	ZINC TOTAL REC	*10*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032159	9/21/07	Stream C	41	ug/L	ZINC TOTAL REC	*10*	mg/L	HARDNESS TOTAL CACO3	*Below Hardness criteria*
10032159	4/25/08	Stream C	42	ug/L	ZINC TOTAL REC	25	mg/L	HARDNESS TOTAL CACO3	35.81
10032159	6/8/08	Stream C	36	ug/L	ZINC TOTAL REC	12	mg/L	HARDNESS TOTAL CACO3	18.85
10032159	4/25/09	Stream C	51	ug/L	ZINC TOTAL REC	41	mg/L	HARDNESS TOTAL CACO3	55.20
10032159	4/16/10	Stream C	68	ug/L	ZINC TOTAL REC	46	mg/L	HARDNESS TOTAL CACO3	61.04
10032159	9/17/10	Stream C	26	ug/L	ZINC TOTAL REC	7.6	mg/L	HARDNESS TOTAL CACO3	12.64

Milwaukee Metropolitan Sewerage District Total Phosphorus Data

(TP data presented is minimum, maximum and median values of TP data collected from May through October, 2006-2010. Minimum and maximum values were determined by calculating the 95% confidence interval around the median.)

WBIC - 44700 Fish Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
3924909	Fish Creek Station 2	0.066	0.084	0.12
3924909	Fish Creek Station 1	0.064	0.091	0.12

WBIC - 16300 Honey Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
10021	Honey Creek Station 3	0.08	0.099	0.13
10021	Honey Creek Station 2	0.089	0.11	0.18
10021	Honey Creek Station 1	0.11	0.22	0.13
10021	Honey Creek Station 5	0.06	0.13	0.17
10021	Honey Creek Station 4	0.085	0.11	0.2

WBIC - 19600 Indian Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
10005	Indian Creek Station 4	0.076	0.13	0.2
10005	Indian Creek Station 3	0.069	0.13	0.16
10005	Indian Creek Station 2	0.099	0.15	0.28
10005	Indian Creek Station 1	0.15	0.25	0.33

WBIC - 15100 Kinnickinnic River

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
9973	KK River Station 19	0.063	0.077	0.1
9973	KK River Station 18	0.056	0.072	0.1
9973	KK River Station 14	0.078	0.099	0.14
9974	KK River Station 13	0.062	0.0915	0.14
9974	KK River Station 12	0.092	0.135	0.16
3899425	KK River Station 34	0.15	0.23	0.36

WBIC - 15900 43rd Street Ditch

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
9981	KK River Station 33 (43rd St. Ditch)	0.21	0.385	0.54

WBIC - 15200 Wilson Park Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
9975	KK River Station 35 (Wilson Park Creek)	0.063	0.0965	0.14

WBIC - 19400 Lincoln Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
9999	Lincoln Creek Station 5	0.12	0.14	0.17
9999	Lincoln Creek Station 4	0.12	0.155	0.25
9999	Lincoln Creek Station 2	0.077	0.0915	0.14
9999	Lincoln Creek Station 3	0.033	0.0565	0.1
9999	Lincoln Creek Station 1	0.076	0.092	0.14

WBIC - 17600 Little Menomonee River

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
10038	Little Menom Station 2	0.077	0.125	0.2
10038	Little Menom Station 1	0.062	0.0895	0.14

WBIC - 16000 Menomonee River

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
426506	Menomonee Station 17	0.069	0.1	0.12
426506	Menomonee Station 11	0.074	0.0955	0.12
426506	Menomonee Station 20	0.1	0.125	0.16
10017	Menomonee Station 9	0.064	0.0865	0.13
3884139	Menomonee Station 32	0.092	0.125	0.15
3884139	Menomonee Station 22	0.08	0.115	0.15
3884139	Menomonee Station 21	0.055	0.1025	0.18
3884139	Menomonee Station 37	0.062	0.098	0.13
3884139	Menomonee Station 16	0.05	0.0975	0.11
3884139	Menomonee Station 36	0.046	0.074	0.11

WBIC - 3000042 Menomonee Canal

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
Not Defined	Menomonee Station 31 (Menomonee Canal)	0.072	0.083	0.1

WBIC - 15000 Milwaukee River

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
426339	Milwaukee River Station 15	0.073	0.082	0.093
426339	Milwaukee River Station 8	0.069	0.097	0.14
426339	Milwaukee River Station 7	0.063	0.1065	0.14
426339	Milwaukee River Station 6	0.058	0.1	0.14
426339	Milwaukee River Station 5	0.081	0.105	0.16
426381	Milwaukee River Station 4	0.075	0.1095	0.14
426381	Milwaukee River Station 3	0.06	0.0985	0.14
426381	Milwaukee River Station 2	0.092	0.1	0.14
1854856	Milwaukee River Station 1	0.071	0.0835	0.11

WBIC - 14500 Oak Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
9969	Oak Creek Station 7	0.049	0.0785	0.14

9969	Oak Creek Station 6	0.047	0.0815	0.15
9969	Oak Creek Station 5	0.063	0.079	0.15
9969	Oak Creek Station 4	0.075	0.0865	0.14
9969	Oak Creek Station 3	0.073	0.099	0.14
9969	Oak Creek Station 2	0.053	0.0695	0.083
9969	Oak Creek Station 1	0.041	0.044	0.067

WBIC - 2900 Root River

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
425682	Root River Station 6	0.096	0.125	0.19
425682	Root River Station 5	0.058	0.0845	0.1
425682	Root River Station 4	0.074	0.085	0.12
425682	Root River Station 3	0.077	0.1	0.13
425682	Root River Station 2	0.082	0.099	0.11
425682	Root River Station 1	0.054	0.0635	0.11

WBIC - 3000073 South Branch Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
3899370	South Branch Station 4	0.16	0.215	0.34
3899370	South Branch Station 3	0.21	0.36	0.46
3899370	South Branch Station 2	0.17	0.35	0.54
3899370	South Branch Station 1	0.38	0.555	0.66

WBIC - 16700 Underwood Creek

Assessment Unit	MMSD station	TP Min	TP Median	TP Max
10026	Underwood station 7	0.06	0.069	0.086
10026	Underwood station 6	0.08	0.097	0.13
10027	Underwood station 3	0.046	0.0675	0.091
10027	Underwood station 2	0.068	0.0725	0.1
10027	Underwood station 1	0.071	0.0865	0.1

WBIC 16800 South Branch Underwood Creek

AU	MMSD station	TP Min	TP Median	TP Max
10028	Underwood station 5	0.21	0.23	0.31

Centerville Cares submitted surface water quality data

WBIC	SWIMS Station	Date	Stream	NO2+NO3 (N) (mg/l)	Chloride (mg/l)	Ammonium (N) (mg/l)	Total Kjeldahl Nitrogen (mg/l)	Total Phosphorus (mg/l)	Reactive Phosphorus (mg/l)	Total Suspended Solids (mg/l)
65800	10033508	08/05/2008	Fischer Creek	3.7	35.3	0.24	1.59	0.246	0.205	6
65800	10033508	09/02/2008	Fischer Creek	4.6	47.0	<.01	1.19	0.139	0.050	3
65800	10033508	10/07/2008	Fischer Creek	4.9	49.5	<0.01	0.60	0.040	0.046	<1
65800	10033508	11/04/2008	Fischer Creek	4.3	49.4	<.01	0.33	0.015	0.016	<1
65800	10033508	12/02/2008	Fischer Creek	5.1	47.3	<0.01	0.34	0.019	0.030	<1
65800	10033508	01/06/2009	Fischer Creek	5	49.9	0.05	0.67	0.044	0.048	<1
65800	10033508	02/03/2009	Fischer Creek	5.0	45.8	<.01	0.37	0.019	0.024	<1
65800	10033508	03/03/2009	Fischer Creek	5.6	43.6	<.01	1.11	0.089	0.087	<1
65800	10033508	04/07/2009	Fischer Creek	4.1	34.1	<.01	0.99	0.049	0.026	3
65800	10033508	05/05/2009	Fischer Creek	5.3	37.0	<.01	0.75	0.063	0.060	<2
65800	10033508	06/02/2009	Fischer Creek	4.7	45.1	0.01	0.57	0.072	0.067	<2
65800	10033508	07/07/2009	Fischer Creek	4.2	47.6	0.07	0.46	0.092	0.087	3
65800	10033508	08/04/2009	Fischer Creek	3.5	47.5	<0.01	0.56	0.079	0.080	2
65800	10033508	09/01/2009	Fischer Creek	4.3	49.1	0.10	0.44	0.055	0.063	3
65800	10033508	10/06/2009	Fischer Creek	3.8	49.6	0.04	0.59	0.047	0.047	2
65800	10033508	11/03/2009	Fischer Creek	4.6	54.2	0.12	1.25	0.136	0.134	<2
65800	10033508	12/01/2009	Fischer Creek	4.8	55.6	0.04	0.97	0.094	0.091	<2
65800	10033508	01/05/2010	Fischer Creek	8.4	49.9	0.22	0.88	0.083	0.081	<2
65800	10033508	02/02/2010	Fischer Creek	7.5	43.9	0.04	0.80	0.077	0.077	<2
65800	10033508	03/02/2010	Fischer Creek	5	48.6	0.98	0.89	0.062	0.040	<2
65800	10033508	04/06/2010	Fischer Creek	3.9	45.9	0.30	0.78	0.064	0.052	17
65800	10033508	05/04/2010	Fischer Creek	5.7	36.7	0.04	1.42	0.111	0.103	4
65800	10033508	06/01/2010	Fischer Creek	4.8	46.0	0.06	0.99	0.089	0.089	3
65800	10033508	07/06/2010	Fischer Creek	3.5	39.9	0.03	0.96	0.120	0.098	4
65800	10033508	08/03/2010	Fischer Creek	3.5	26.8	0.29	1.10	0.143	0.130	<2
65800	10033508	09/07/2010	Fischer Creek	3.9	46.8	<0.01	0.82	0.092	0.089	<2
65800	10033508	10/05/2010	Fischer Creek	4.4	48.1	0.86	0.67	0.030	0.031	<2
66000	10033507	08/05/2008	Point Creek	1.2	21.4	0.11	1.01	0.213	0.170	17
66000	10033507	09/01/2008	Point Creek	1.3	17.0	<.01	0.44	0.080	0.076	<1
66000	10033507	10/07/2008	Point Creek	0.6	13.2	<0.01	0.27	0.039	0.042	<1
66000	10033507	11/04/2008	Point Creek	0.3	14.4	<.01	0.23	0.023	0.016	1

66000	10033507	12/02/2008	Point Creek	0.7	15.0	0.03	0.24	0.016	0.035	2
66000	10033507	01/06/2009	Point Creek	4.6	70.3	<0.01	0.92	0.110	0.117	<1
66000	10033507	02/03/2009	Point Creek	1.5	28.7	0.02	0.56	0.056	0.064	<1
66000	10033507	03/03/2009	Point Creek	6.3	45.4	<.01	0.87	0.070	0.077	2
66000	10033507	04/07/2009	Point Creek	4.9	38.9	<.01	0.75	0.05	0.050	1
66000	10033507	05/05/2009	Point Creek	4.7	33.8	<.01	1.17	0.059	0.054	<2
66000	10033507	06/02/2009	Point Creek	3.1	31.5	0.05	1.09	0.102	0.089	<2
66000	10033507	07/07/2009	Point Creek	1.0	17.1	0.06	0.73	0.191	0.182	<2
66000	10033507	08/04/2009	Point Creek	0.6	14.6	0.03	0.44	0.136	0.142	<2
66000	10033507	09/01/2009	Point Creek	0.8	13.6	0.18	0.34	0.101	0.092	3
66000	10033507	10/06/2009	Point Creek	0.3	17.0	0.05	0.52	0.061	0.072	<2
66000	10033507	11/03/2009	Point Creek	3.4	56.8	0.07	1.33	0.186	0.180	3
66000	10033507	12/01/2009	Point Creek	4.5	55.8	0.04	1.21	0.090	0.084	<2
66000	10033507	01/05/2010	Point Creek	10.1	49.2	0.19	1.35	0.103	0.104	3
66000	10033507	02/02/2010	Point Creek	7.4	39.3	0.04	1.44	0.078	0.077	<2
66000	10033507	03/02/2010	Point Creek	2.9	48.5	0.05	1.04	0.066	0.058	<2
66000	10033507	04/06/2010	Point Creek	2.0	34.9	0.13	1.34	0.062	0.035	10
66000	10033507	05/04/2010	Point Creek	4.6	30.5	0.02	1.68	0.099	0.080	6
66000	10033507	06/01/2010	Point Creek	3.0	31.5	0.17	1.56	0.134	0.115	5
66000	10033507	07/06/2010	Point Creek	2.1	24.4	0.06	1.02	0.190	0.172	9
66000	10033507	08/03/2010	Point Creek	2.0	26.5	0.19	1.47	0.220	0.218	2
66000	10033507	09/07/2010	Point Creek	1.2	31.5	0.14	1.12	0.213	0.201	3
66000	10033507	10/05/2010	Point Creek	0.8	16.8	0.60	0.56	0.075	0.071	2