



Water Quality Monitoring Data Summary Statistics 2011



Compiled by the Water Quality Research Department
Milwaukee Metropolitan Sewerage District

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD)

SURFACE WATER QUALITY MONITORING PROGRAM DATA

SUMMARY STATISTICS REPORT - SURVEY DESCRIPTIONS

Overview

The goal of the Milwaukee Metropolitan Sewerage District (MMSD) water quality monitoring program is to document long term beneficial water quality improvements as a direct result of the facilities and watercourse improvement projects, nonpoint pollution prevention programs, and stormwater management plans. The monitoring strategies developed by the District support and substantiate the District's goals and policies of improved water quality and environmental protection.

In 1979 the District began its surface water quality-monitoring program to comply with the spirit of the Federal Water Pollution Control Act objectives and State water quality standards. Since the completion of the Inline Storage System (ISS) in 1993, the District has substantially reduced overflows helping to significantly improve Milwaukee-area water quality. Another component to the District's mission is to protect and manage the area's water resources through flood management planning/implementation. Both the reductions of CSO's and improvements made in managing floods are further justification to document long term, surface water quality trends within the District's service area.

In order to afford the MMSD greater spatial coverage, the 2011 Water Quality Monitoring program includes thirteen different surveys. Three surveys monitor Lake Michigan conditions near our wastewater treatment plants (Outer Harbor and South Shore surveys) and background Lake conditions (Nearshore survey). The District also conducts ten other surveys to monitor the effects of our operations and improvements made to our facilities and from our flood management efforts. These surveys include Rivers (Milwaukee, Menomonee, and Kinnickinnic), Little Menomonee River, Root River, Lincoln, Oak, Southbranch, Indian, Fish, Underwood, and Honey Creeks.

The information that follows lists additional details about this program, the rationale for monitoring area surface waters and the related laboratory variable names and detection limits used to assist with data interpretation. Data analysis for this report includes two parts, statistical summaries of the physical, chemical and biological analytical data from each monitoring site and box plots showing trends in the summarized data dating back to 1980 where available. Due to the extent of box plot trend analysis for 105 sites and 44 variables, it was decided to select some key indicator variables and show trends of select sites that would spatially represent the surveys. The box plots show a comparison of the median and percentile values for up to 14 years prior to the ISS completion, 18 years after ISS completion, the past three years (2009-2011) and the current year of analysis (2011). Due to a laboratory analytical problem some sites do not have any copper or lead results to report for 2011. Results that are below the laboratory method detection limit are included as a zero value.

Monitoring Seasonal Time Frame/Frequency

Water quality monitoring of the local area rivers occurs year round. Winter sampling frequency is dependent on ice conditions on the waterways. As ice conditions recede more surveys are added to the schedule. The District's water quality monitoring program survey schedule is generally conducted on a biweekly basis. Due to sampling logistics and safety concerns, the Nearshore Lake survey is conducted four to seven times in a sampling season, approximately three weeks between collection dates. The biweekly monitoring program will address by random design both dry and wet weather-sampling periods.

Monitoring Depth

The District's routine water quality monitoring program provides for sampling the water column at various depths depending on the specific depth of a particular monitoring location. Exact sampling depths at any location may vary from year to year or week to week depending on lake levels, seiches, dam operation and precipitation. Generally, three samples are collected at sites greater than four meters in depth (one meter below the surface, one meter above the bottom, and mid-depth point). Locations less than four meters in depth are generally sampled at either two depths (one meter below the surface and one meter above the bottom) or one depth (mid-depth) depending on site conditions. Samples are collected from mid-channel or where the predominance of flow is occurring at each location. Samples for metals tests are collected at mid-depth at sites greater than four meters depth and at the surface for shallower monitoring sites.

Monitoring Variables

In all, there are 44 types of water quality analyses (some are calculated results) listed in this data summary report. Each sample's tests may vary by survey type and depth due to method specifications, scientific judgment and costs. Where feasible the variables analyzed for each survey are kept consistent for data assessment purposes.

Types of Surveys

The District's surface water quality monitoring program is presently engaged in both Lake Michigan and River/Creek surveys including the following:

Outer Harbor (East of Jones Island Water Reclamation Facility)
Major Rivers (Milwaukee, Menomonee, Kinnickinnic Rivers)
Fish Creek
Southbranch Creek
Indian Creek
Lincoln Creek
Underwood Creek
Little Menomonee River
Honey Creek
South Shore (East of the South Shore Water Reclamation Facility)
Oak Creek
Root River
Nearshore (Nearshore zone of Lake Michigan)

The sampling rationale for the various monitoring surveys is briefly explained below.

Outer Harbor

Data collected from this area (Figure 1) on a biweekly basis are utilized to evaluate the impact that the Jones Island and river discharges are having on the quality of this part of the Lake that is intensively used for recreational boating and fishing. Sampling sites for this effort were selected based upon their position relative to the effluent outfall at Jones Island and the movement of water (or currents) found in the area. Samples are collected at 15 different locations. The point identified as OH-02 is the existing outfall for the Jones Island Water Reclamation Facility. As a point of reference the distance from Outer Harbor sampling point OH-7 to Outer Harbor sampling point OH-14 is one mile.

Rivers

Extensive monitoring of the three major river systems (Figure 2) within the District's sewer service boundaries provides baseline data for measuring and documenting potential sources of pollution both inside and outside the District boundaries. Water quality improvements as a direct result of facility and watercourse planning and systems operations can also be measured through the use of this survey's sampling results. There are 28 sites that are routinely monitored for this survey (designated "RI" and a site number). There are several additional sites listed in Figure 2 that have either been monitored in the past or are associated with specific event monitoring projects.

- Milwaukee River - The Milwaukee River is the largest river within the District's Service area and is currently recognized by community leaders as an important recreational water resource within the metropolitan area. This River enters the District at Pioneer Road (County Trunk C) from the north after passing through 86% of its drainage area. This monitoring effort was started in 1980 to provide baseline data for the Water Pollution Abatement Plan (WPAP) and will enable the District to assess its positive effects on water quality over time. In addition, recent plans for flood management improvements by MMSD on tributaries to this river will also be evaluated by utilizing current and historical water quality monitoring databases.
- Menomonee and Kinnickinnic River Surveys - Basically these two rivers have all of their respective watersheds within the boundaries of the District's service area. Water Quality improvement may result through the control of Combined Sewer Overflows (CSO) discharges and by the elimination of various discharge points which represent relief bypasses. Significant improvements in water quality due to the WPAP may be noted in these two rivers. However, uncontrolled, nonpoint sources of pollution may continue to have impacts. Also, evaluation of current and future flood management improvements, as part of MMSD's Watercourse Management Plan, will rely heavily on water quality data for these waters. Data collected will be useful to evaluate all of these factors.

The Menomonee River Valley has also been recently cited as having a promising potential for economic development. Continued water quality monitoring could help in planning that development.

Fish Creek

Fish Creek (Figure 3) is mainly located along the border between Milwaukee and Ozaukee counties in the Village of Bayside and the City of Mequon. The stream emerges from a storm sewer outfall at the south side of Donges Bay Road just west of Port Washington Road in the City of Mequon. Fish Creek drains directly into Lake Michigan 3.43 miles downstream from the source. Major precipitation events result in rapid surface runoff to Fish Creek, thereby causing a flashy response in this stream. This further results in significant flooding in the Village of Bayside. The District is in the process of evaluating options to reduce flooding as well as decreasing erosion along Fish Creek.

This survey is conducted 8 times per year (once a month, April - November) and has two sampling sites (FC-01 and FC-02). The Fish Creek survey was added to the District's monitoring program in 2002 in order to collect baseline data. If construction type improvements are chosen as a means to manage flooding problems in this watershed, then the water quality monitoring data will help in documenting and planning this process.

Southbranch Creek

This creek, (Figure 4) approximately 1.5 miles long, drains a 2.95 square mile area within the Villages of Brown Deer, River Hills and the City of Milwaukee before it enters into the Milwaukee River. The entire watershed lies in an urban setting and drains by means of a storm sewer system. Southbranch Creek has a long history of flooding. Residential neighborhoods along the creek periodically flood during significant storms. In response to this recurring problem the MMSD along with other concerned parties have developed

a flood management plan intended to minimize flooding. Highlights include the installation of four stormwater detention basins, the replacement of some culverts and deepening a section of the creek. Water quality monitoring in this watershed was added to the District's sampling program in 1999 to obtain data before, during and after the implementation of the flood management and environmental restoration project. This survey is conducted 10 times per year, once per month in the spring and autumn and twice per month during the summer of each year. The four sampling sites are designated with a "SB" and a site number.

Indian Creek

Indian Creek (Figure 5) is a major tributary of the Milwaukee River located in northern Milwaukee County. The creek, 2.6 miles in length, originates in the Village of Bayside near the intersection of East Brown Deer Road and North Rexleigh Drive. The Creek flows in a generally southwest direction through the Village of Fox Point, crosses Interstate 43 at the boundary of Fox Point and the Village of River Hills, and has its confluence with the Milwaukee River just south of Bradley Road in River Hills. Large storms typically cause flooding in this watershed.

This survey is conducted eight times per year (once a month, April - November) and has four sampling sites (IC-01 through IC-04). The Indian Creek survey was added to the District's monitoring program in 2002 prior to implementation of the MMSD watercourse management plan for this stream. Continued monitoring will assist in documenting changes in water quality due to the completion of this plan.

Lincoln Creek

This creek (Figure 6) enters the Milwaukee River downstream Silver Spring Drive (RI-03) and is north of our Port Washington Road sampling site (R1-04). Lincoln Creek is approximately nine miles in length and drains a 21-square mile watershed. There is a history of this creek having poor water quality and flooding problems due to urbanization within its watershed. In response to these problems the District along with other concerned parties have developed and implemented a flood management plan which involves environmental restoration, creation of wetland stormwater detention areas, changes in creek channel morphology, streambank erosion controls and improvement in creek bed substrate. Water quality monitoring in this watershed was added to the District's sampling program in 1997 to obtain data before, during and after the implementation of this plan. This survey is sampled once per month; April through November. The five sampling sites (designated "LC" and a site number) cover nearly 90% of the creek, from the headwaters to within a half mile of its confluence with the Milwaukee River.

Underwood Creek

Underwood Creek (Figure 7) originates in the City of Brookfield and flows approximately 8 miles, in a southeasterly direction, to its confluence with the Menomonee River. The Underwood Creek subwatershed encompasses approximately 19.8 square miles and includes portions of the communities of Brookfield, Elm Grove and Wauwatosa. The Underwood Creek subwatershed is comprised of the Underwood Creek mainstem, Dousman Ditch, and the South Branch of Underwood Creek. The majority of Underwood Creek (UC) and the South Branch of UC are in a concrete lined channel. The South Branch of UC flows 1.6 miles in a northerly direction from its origin at West Greenfield Avenue to its confluence with Underwood Creek near West Bluemound Road. The South Branch of UC flows through the cities of Milwaukee, West Allis, Brookfield, and New Berlin. Flooding problems have occurred in the UC subwatershed and sections of this creek are undergoing flood management improvements.

Underwood Creek was added to the MMSD sampling program in 2003 and includes two sites on the South Branch of UC and five sites on the Underwood Creek mainstem. Surveys are scheduled once a month from April – November. The monitoring plan is to collect data for several years prior to any stream improvement projects, during construction and for several years after construction is completed to compare and document water quality changes in this watershed.

Little Menomonee River

The Little Menomonee River (Figure 8) originates in southern Ozaukee County near Freistadt Rd. and flows in a mostly southerly direction for a distance of approximately 10 miles to its confluence with the Menomonee River near Highway 100 and Hampton Avenue (Timmerman Field airport area). The Little Menomonee River subwatershed encompasses approximately 21.8 square miles, or nearly 16 percent of the Menomonee River watershed and includes portions of the communities of Mequon, Germantown and Milwaukee. It is entirely confined within the borders of Ozaukee and Milwaukee counties.

The Little Menomonee River was added to the MMSD monitoring program in 2007 and includes two sites (ML-01 and ML-02). Surveys are scheduled to be sampled biweekly, year round and are completed concurrently with the Rivers survey. The monitoring plan is to collect data from this subwatershed in order to assess water quality impacts stemming from the Little Menomonee River.

Honey Creek

Honey Creek (Figure 9) originates at the S. 43rd Street storm sewer outfall in the City of Greenfield and flows in a northerly direction for approximately 8.8 miles until its confluence with the Menomonee River in the City of Wauwatosa. The Honey Creek subwatershed encompasses 11 square miles and includes portions of the communities of Greenfield, Milwaukee, Wauwatosa, and West Allis. Channel modifications such as deepening, straightening, and lining with concrete have been made to 7.1 miles of Honey Creek. The Creek flows under State Fair Park in an enclosed channel that consists of 3 – 10 foot by 15 foot pipes. The Honey Creek subwatershed has experienced minor flooding problems, but the biggest problem with this Creek has been the ecological degradation and habitat loss due to channel modifications.

Honey Creek was added to the MMSD sampling program in 2003 and includes five sampling sites (HC-01 - HC-05). This survey is conducted eight times per year (once a month, April - November). Baseline monitoring data is being collected to assist with future flood management planning efforts.

South Shore

Data collected from this area (Figure 10) on a biweekly basis is used to assess the impact of the discharge of the South Shore Water Reclamation Facility on the local environs of Lake Michigan. The point identified as SS-01 is the point of discharge from this facility. A major drinking water plant intake (Oak Creek) is located approximately one-mile southeast of SS-01.

As with the Outer Harbor Survey, sample locations were based upon the Lake currents found in the area and relative position of a selected sampling site to the outfall. Samples are collected at three depths at each site in a scheme similar to the Outer Harbor effort. The distance from SS-1 to SS-3 is 1,000 feet; the distance from SS-1 to SS-11 is 3,000 feet.

Oak Creek

This stream (Figure 11) lies completely within the District boundaries (except for a portion of this creek that flows through South Milwaukee). Oak Creek flows into Lake Michigan about two miles north of the MMSD's South Shore Water Reclamation Facility. Knowledge of its water quality is helpful in determining impacts to the Lake's nearshore area. When monitoring began for the Oak Creek survey in 1985 the area was primarily rural drainage basin. Since then it has undergone significant development. Urbanization will increase the flows that the stream will be required to handle. The objective of the District is to monitor the resulting water quality changes over time. Oak Creek is a part of the District's facility and watercourse management planning initiatives. This survey is sampled once per month; April through November. There are seven sampling sites monitored for this survey and are designated with "OC" and a site number.

Root River

This river (Figure 12) drains approximately 197 square miles within Milwaukee, Waukesha, Racine and Kenosha counties. There is a history of low storm sewers within this river's watershed (potential for water back up) and flooding problems due to increasing urbanization within its watershed. In response to these problems, the District along with other concerned parties, are working on a watershed restoration plan that may involve environmental restoration, creation of wetland stormwater detention areas, changes in creek channel morphology, streambank erosion controls and improvement in riverbed substrate. Water quality monitoring in this watershed was added to the District's sampling program to obtain data before, during and after the implementation of this plan.

This survey is conducted 10 times per year, once per month in the spring and autumn and twice per month during the summer of each year. The six sampling sites (designated "RR" and a site number) cover the upper 72 square miles of the watershed located within the District's service area.

Nearshore Lake Michigan

The purpose of this effort is to provide a data base for the District to assess the impact of MMSD discharges as well as all other sources of pollution, including stormwater runoff, on overall nearshore water quality. The scope of this effort overlaps those efforts being undertaken in the Outer Harbor and at South Shore and is conducted once every three weeks (weather dependent). Some of this survey's sites are located at a distance from shore to provide data for determining Lake background levels. Lake background information has been useful in developing some of the District's effluent limitations and permit discharge fees. Sites located a distance from shore and are not one of the sites that overlap our Outer Harbor or South Shore efforts have a reduced list of variables tested. This is due to historical results that show values less than the method detection limit or very low concentrations for that test and were consequently removed from the list of tests requested for Lab analysis. The 14 points (Figure 13) sampled during this survey cover the area of the nearshore environs of Lake Michigan from Fox Point on the north to Wind Point on the south and from the western shore of Lake Michigan to a point ten miles east of the western shore. Sample sites are designated as "NS" and a site number. The total area of lake covered by this survey is over 300 square miles.

Data Usage

The data generated by the District's surface water quality and other related environmental monitoring programs have been utilized extensively in-house as well as by other agencies and/or organizations and individual citizens.

Also, this data has allowed other public agencies to make informed, defensible decisions regarding Milwaukee's valuable surface water resources. Examples of uses for this data include the MMSD 2020 Facilities Plan (developed by multi-agency and citizen stakeholder committees) and the Regional Water Quality Management Plan (required under the Clean Water Act) that has been recently updated by the Southeastern Wisconsin Regional Planning Commission. This type of long-term, comprehensive information has provided a service to the community by eliminating the need for smaller, more expensive piecemeal projects that would be required each time a specific need for information arises.

The District's comprehensive and aggressive surface water quality monitoring program reflects the District's commitment to the improvement and preservation of the community's surface water resources and it should be continued for use in future water resource decisions for the Milwaukee metropolitan area.

Abbreviations Legend for MMSD Water Quality Data – 2011

<u>Variable Abbr. & name</u>	<u>Units of Measure</u>
pH	Std. Units
TEMP - Temperature	Degrees Celsius
DO - Dissolved Oxygen	mg/L
CHLA - Chlorophyll "a"	mg/m ³
NITRATE - Nitrate Nitrogen	mg/L
NITRITE - Nitrite Nitrogen	mg/L
NO ₂ – Nitrite + Nitrate Nitrogen	mg/L
AMMONIA - Ammonia Nitrogen	mg/L
TKN - Total Kjeldahl Nitrogen	mg/L
PHOS – Phosphorus	mg/L
SOLPHOS - Soluble Phosphorus	mg/L
SOLSIL -Soluble Silica	mg/L
SCHII - Sechii Disk	meters
IXLITE - 1% Light Level (measured with a Photometer)	meters
TS - Total Solids	mg/L
DS - Dissolved Solids	mg/L
VSS - Volatile Suspended Solids	mg/L
SS - Suspended Solids	mg/L
TURB – Turbidity	NTU
SPEC - Specific Conductivity	umhos/cm
CHLOR – Chloride	mg/L
FECAL - Fecal Coliform Bacteria	CFU/100 mL
LFC - Log ₁₀ Fecal Coliform Bacteria	CFU/100 mL
ECOLIQT - Escherichia coli Bacteria	MPN/100 mL
CA - Total Calcium	mg/L
MG - Total Magnesium	mg/L
CD - Total Cadmium	ug/L
CR - Total Chromium	ug/L
CU - Total Copper	ug/L
NI - Total Nickel	ug/L
PB - Total Lead	ug/L
ZN - Total Zinc	ug/L
AG - Total Silver	ug/L
AS - Total Arsenic	ug/L
SE - Total Selenium	ug/L
HG - Mercury	ug/L
HARD – Hardness	mg/L
TALK - Total Alkalinity	mg/L
BOD5/20 - Biochemical Oxygen Demand 5 and 20 day	mg/L
TC - Total Carbon	mg/L
TNIC - Total Nonpurgeable Inorganic Carbon	mg/L
TNOC - Total Nonpurgeable Organic Carbon	mg/L
TNDOC - Total Nonpurgeable Dissolved Organic Carbon	mg/L

Water Quality Standards/Criteria for MMSD Water Quality Data – 2011

Variable	Standard/Criterion	References
Dissolved Oxygen		
Creeks/Rivers/Harbor	5 mg/L	1
Open Lake	6 mg/l	1
Fecal Coliform Bacteria	200 CFU/100 ml	1
Chloride	395 mg/L	2
Chlorophyll a	5.8 mg/m ³	3*
Total Phosphorus		
Open Lake	0.007 mg/L	1
Creeks/Upstream Menomonee and Kinnickinnic Rivers	0.075 mg/L	1
Downstream Menomonee and Kinnickinnic Rivers All Milwaukee River /Harbor	0.10 mg/L	1

References

1. Wisconsin Department of Natural Resources (WDNR), Wisconsin Administrative Code, NR 102, Register, November, 2010, No. 659.
2. WDNR, Wisconsin Administrative Code, NR 105, Chronic Toxicity Criteria, Register, February, 2004, No. 578.
3. United States Environmental Protection Agency (USEPA), December, 2000. Ambient Water Quality Criteria Recommendations, Rivers and Streams in Nutrient Ecoregion VII: USEPA, Office of Water, EPA 822-B-00-018. * (These values are not standards or criterion, but are recommended criterion that are used in the box plot trend analyses for reference).

Summary of Method Detection Limits (MDLs) for 2011 Water Quality Data

<u>Analyte (units)</u>	<u>Source¹- Reference Method(s)</u>	<u>MDL²</u>
Alkalinity (mg/L as CaCO ₃)	4-310.2	6 mg/L (prior to 3/28/11) 2.4 mg/L (3/29/10 - 4/11/11, 4/13/11) 12 mg/L
Ammonia (mg/L as N)	1-4500NH ₃ G	0.009 mg/L (prior to 2/6/11) 0.012 mg/L
Arsenic (µg/L)	3-6010 C (2-200.7, 8/30/11)	3.5 µg/L (prior to 3/15/11) 8 µg/L (3/16/11 – 4/27/11, 8/30/11) 1.3 µg/L
Biochemical Oxygen Demand (BOD) – 5 day (mg/L) 20 day (mg/L)	1-5210 B 1-5210 B	2 mg/L 2 mg/L
Cadmium (µg/L)	3-6010 C (2-200.7, 8/30/11)	0.9 µg/L (prior to 3/15/11) 2.4 µg/L (3/16/11 – 4/27/11, 8/30/11) 1.1 µg/L
Calcium (mg/L)	3-6010 C (2-200.7, 8/30/11)	0.22 mg/L (prior to 3/15/11) 0.7 µg/L (3/16/11 – 4/27/11) 0.152 µg/L
Carbon (mg/L as C) Dissolved Organic Nonpurgeable	1-5310 C	0.67 mg/L
Total Inorganic Nonpurgeable	1-5310 C	0.67 mg/L
Total Organic Nonpurgeable	1-5310 C	0.67 mg/L
Total	1-5310 C	0.67 mg/L
Chloride (mg/L)	1-4500 Cl E	4.0 mg/L
Chlorophyll <i>a</i> (mg/m ³)	1-10200 H	0.11 mg/m ³
Chromium (µg/L)	3-6010 C (2-200.7, 8/30/11)	3.8 µg/L (prior to 3/15/11) 7.8 µg/L (3/16/11 – 4/27/11) 9.9 µg/L
Copper (µg/L)	3-6010 C (2-200.7, 8/30/11)	3.9 µg/L (prior to 3/15/11) 7.6 µg/L (3/16/11 – 4/27/11, 8/30/11) 2.7 µg/L
<i>E. coli</i> (MPN/100 mL)	1-9223 B	1/100 mL (1/10/11 - 5/9/11, 5/12/11- 6/14/11, 6/16/11 - 6/21/11, 7/7/11 - 7/26/11, 8/8/11 - 8/9/11, 8/15/11, 8/24/11 - 9/6/11, 9/12/11 - 9/13/11, 9/22/11 – 10/18/11, 10/24/11 – 11/2/11, 11/15/11 – 12/5/11) 1 and 100/100 mL (6/22/11, 9/19/11) 10/100 mL (5/10/11, 6/16/11, 8/10/11, 8/22/11, 9/7/11, 11/9/11 – 11/14/11) 100/100 mL (7/28/11, 10/19/11)

Summary of Method Detection Limits (MDLs) for 2011 Water Quality Data

<u>Analyte (units)</u>	<u>Source¹-</u> <u>Reference Method(s)</u>	<u>MDL²</u>
Fecal Coliform (CFU/100 mL)	1-9222 D	1 and 10/100 mL (5/23/11) 2/100 mL (5/4/11, 6/2/11, 6/29/11, 7/20/11, 8/1/11, 10/4/11) 3/100 mL (1/10/11 - 4/13/11, 4/25/11, 5/2/11, 5/3/11, 5/9/11 – 5/12/11, 6/1/11, 6/6/11 – 6/13/11, 6/20/11, 6/28/11, 6/30/11 - 7/7/11, 7/12/11, 7/18/11, 7/19/11, 7/25/11, 7/26/11, 8/2/11 - 8/9/11, 8/15/11 - 8/17/11, 8/29/11 - 9/6/11, 9/12/11, 9/13/11, 9/20/11, 9/22/11, 10/3/11, 10/5/11 – 10/18/11, 10/24/11, 11/2/11 – 11/7/11, 11/15/11 - 12/5/11) 10/100 mL (4/18/18, 4/27/11, 5/16/11, 6/16/11, 6/21/11, 6/27/11, 7/11/11, 7/13/11, 7/28/11, 8/24/11, 9/19/11, 9/26/11, 10/20/11, 10/26/11, 11/9/11, 11/14/11) 10 and 50 mL (6/22/11) 50/100 mL (8/10/11, 8/22/11, 9/7/11, 10/19/11)
Hardness (mg/L as CaCO ₃)	3-6010 C	NA (calculated)
Lead (µg/L)	3-6010 C (2-200.7, 8/30/11)	3.2 µg/L (prior to 3/15/11) 8.2 µg/L (3/16/11 – 4/27/11, 8/30/11) 2 µg/L
Magnesium (mg/L)	3-6010 C (2-200.7, 8/30/11)	0.03 mg/L (prior to 3/15/11) 0.024 mg/L (3/16/11 – 4/27/11) 0.039 mg/L
Mercury (µg/L) (Total)	3-7470 A	See Mercury Lab Report ³
Nickel (µg/L)	3-6010 C (2-200.7, 8/30/11)	3.2 µg/L (prior to 3/15/11) 3.6 µg/L (3/16/11 – 4/27/11, 8/30/11) 0.8 µg/L
Nitrate + Nitrite (mg/L as N)	5-353.2	0.018 mg/L (prior to 3/13/11) 0.017 mg/L (3/14/11 – 10/26/11, 11/9/11) 0.036 mg/L (11/2/11, 11/7/11, 11/14/11 – 12/5/11)
Nitrate (mg/L as N)	5-353.2	0.018 mg/L (prior to 3/13/11) 0.017 mg/L (3/14/11 – 10/26/11, 11/9/11) 0.036 mg/L (11/2/11, 11/7/11, 11/14/11 – 12/5/11)
Nitrite (mg/L as N)	5-353.2	0.003 mg/L (prior to 3/13/11) 0.002 mg/L (3/14/11 – 10/17/11, 11/9/11) 0.012 mg/L (10/18/11 - 11/8/11, 11/14/11 – 12/5/11)
Total Kjeldahl Nitrogen (mg/L as N)	2-351.2	0.21 mg/L (prior to 2/15/11) 0.35 mg/L
Phosphorus (mg/L as P) Soluble	2-365.1	0.009 mg/L (prior to 1/25/11) 0.0075 mg/L

Summary of Method Detection Limits (MDLs) for 2011 Water Quality Data

<u>Analyte (units)</u>	<u>Source¹- Reference Method(s)</u>	<u>MDL²</u>
Phosphorus (mg/L as P) Total	2-365.1	0.009 mg/L (prior to 1/25/11) 0.0075 mg/L
PAH (µg/L)	3-8270 C	See PAH Lab Report ³
Selenium (µg/L)	3-6010 C	9.9 µg/L (prior to 3/15/11) 14 µg/L (3/16/11 – 4/27/11) 18 µg/L (5/3/11 – 12/5/11)
Silica (mg/L as SiO ₂)	2-370.1	0.53 mg/L
Silver (µg/L)	3-6010 C	2.1 µg/L (prior to 3/15/11) 3 µg/L (3/16/11 – 4/27/11) 0.5 µg/L (5/3/11 – 12/5/11)
Solids (mg/L) Suspended	1-2540 D	1 mg/L
Volatile	1-2540 E	1 mg/L
Total	1-2540 B	1 mg/L
Dissolved	1-2540 C	1 mg/L
Turbidity (NTU)	2-180.1	0.01 NTU
Zinc (µg/L)	3-6010 C	13.0 µg/L (prior to 3/15/11) 15 µg/L (3/16/11 – 4/27/11) 6.1 µg/L

Footnotes

¹ See Method References on Page C-4.

² The MDL value listed is based on a 1:1 dilution. For differences in analyte dilution values consult LIMS (Laboratory Information Management System) Results.

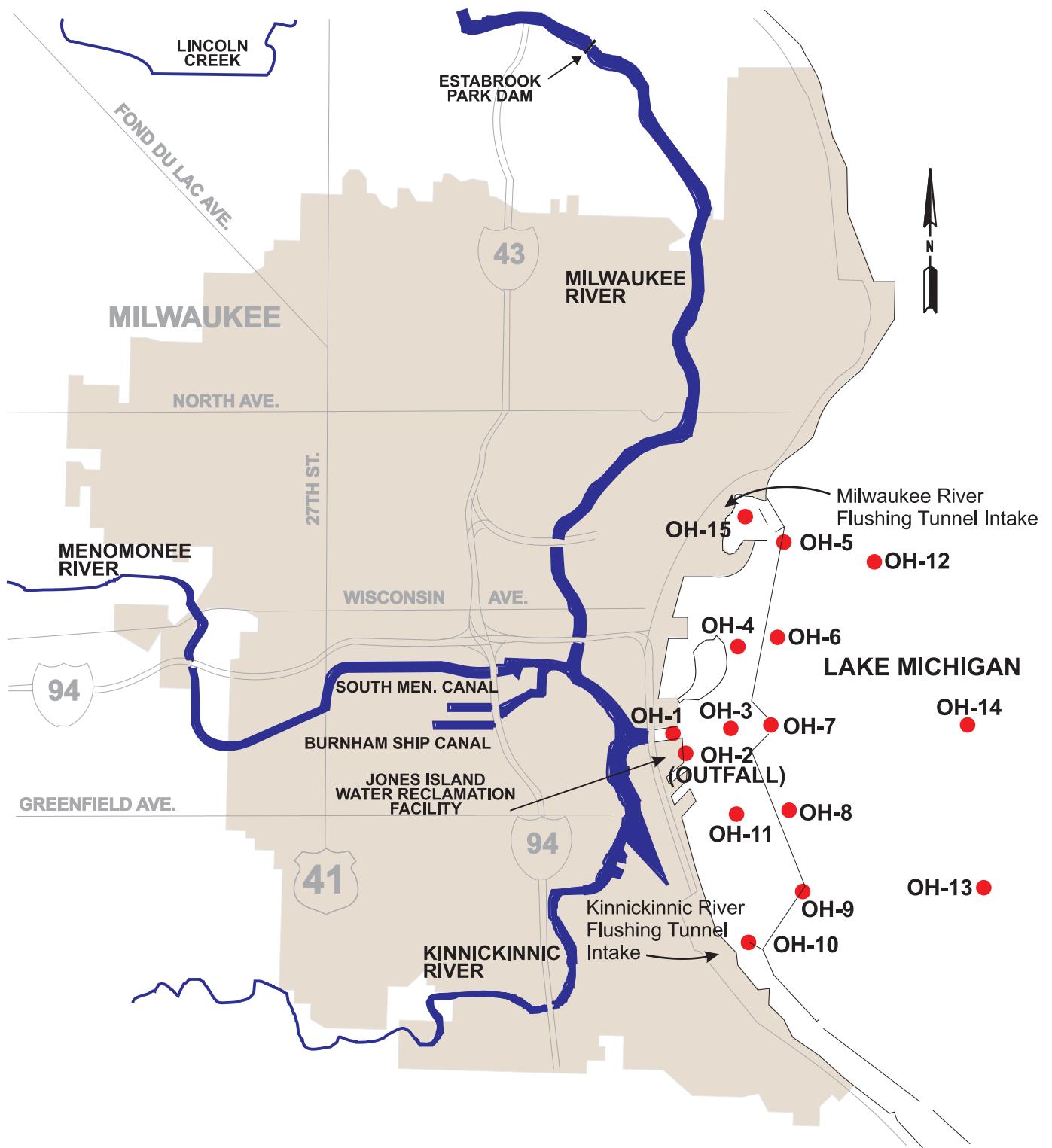
³ MDL for samples analyzed at Pace Analytical Laboratory (Green Bay).

Summary of Method Detection Limits (MDLs) for 2011 Water Quality Data

METHOD REFERENCES

1. "Standard Methods for the Examination of Water and Wastewater," 20th ed., 1998. American Public Health Association (APHA), 1015 15th Street, NW, Washington, DC 20005.
2. "Methods of Chemical Analysis of Water and Wastes," USEPA, EMSL, Cincinnati, OH 45268, March, 1983 (EPA-600/4-79-020).
3. "Test Methods for Evaluating Solid Waste," 3rd Edition. SW846. 1995. USEPA, SWER, Washington, DC 20460.
4. "Methods of Chemical Analysis of Water and Wastes," USEPA, EMSL, Cincinnati, OH 45268, March, 1974 (EPA-600/4-79-020)..
5. "Methods of Chemical Analysis of Water and Wastes," USEPA, EMSL, Cincinnati, OH 45268, March, 1993 (EPA-600/4-79-020).

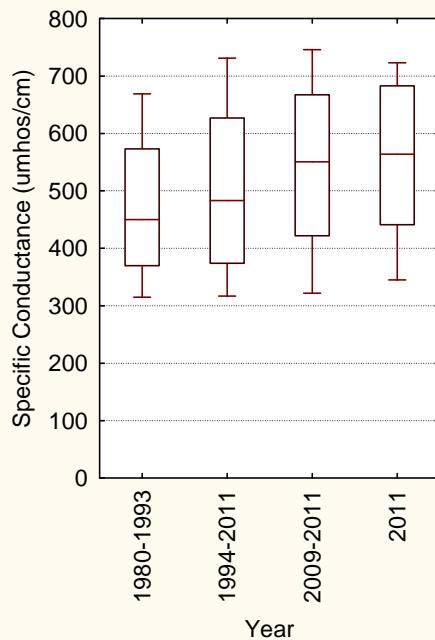
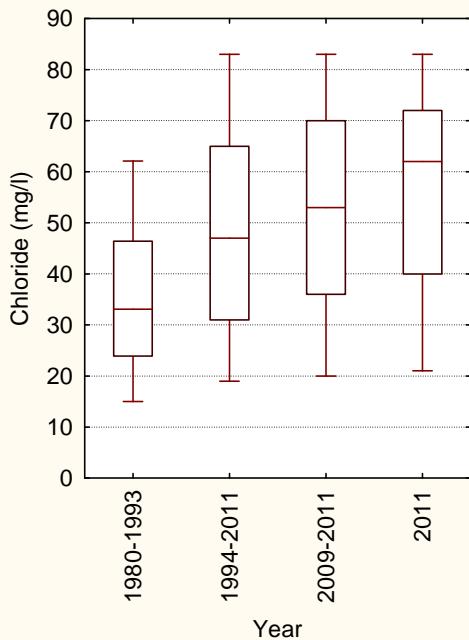
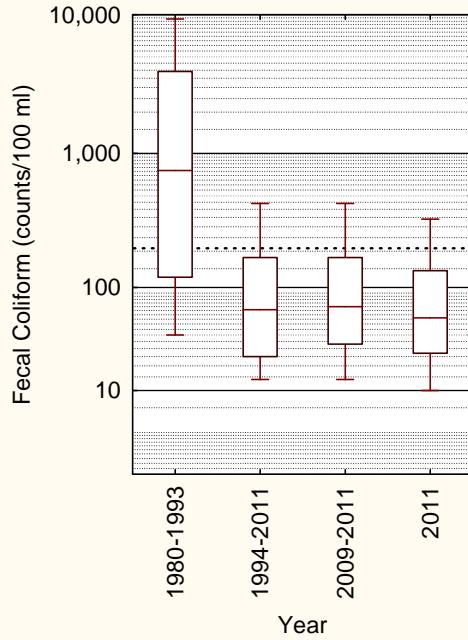
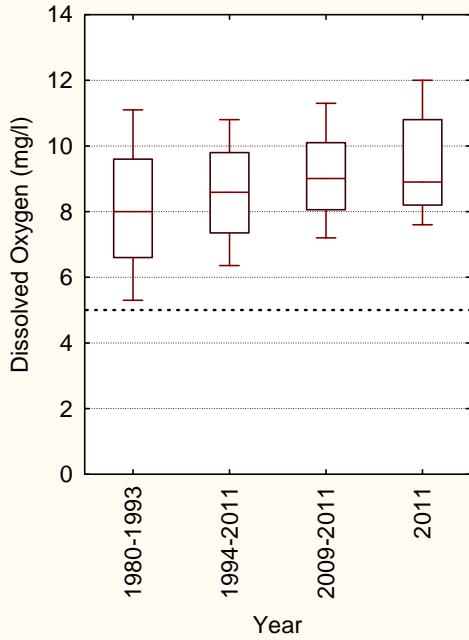
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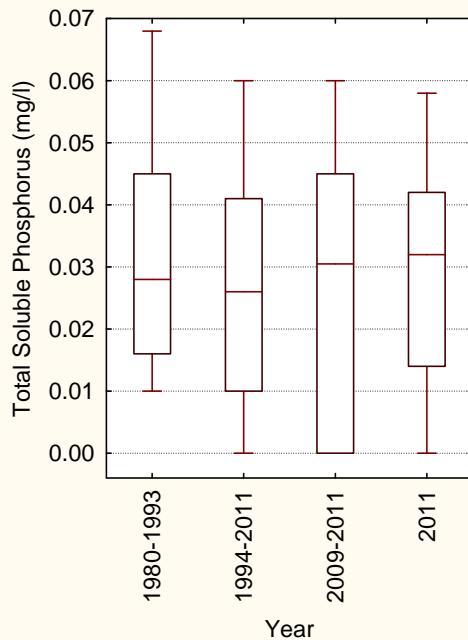
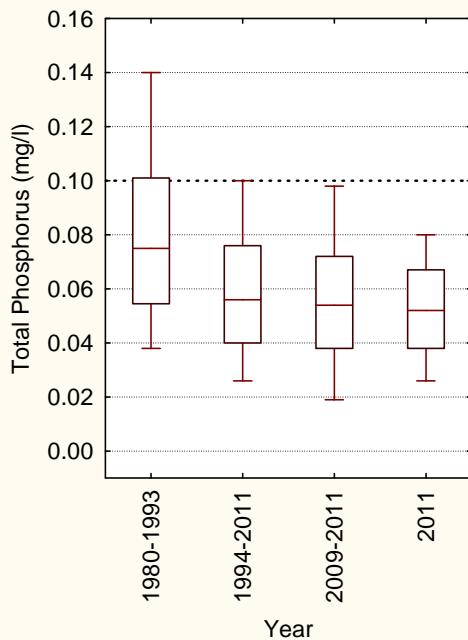
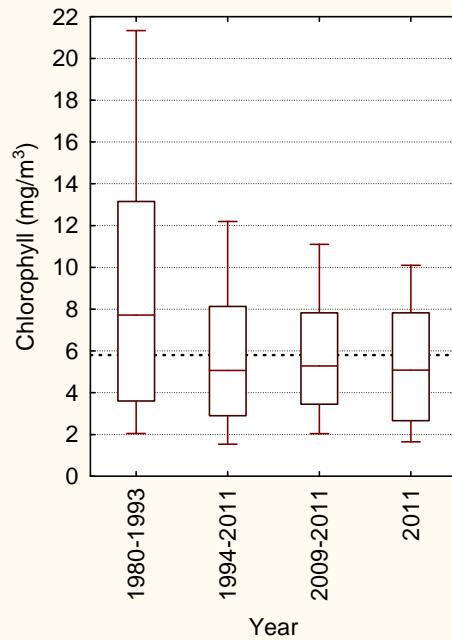
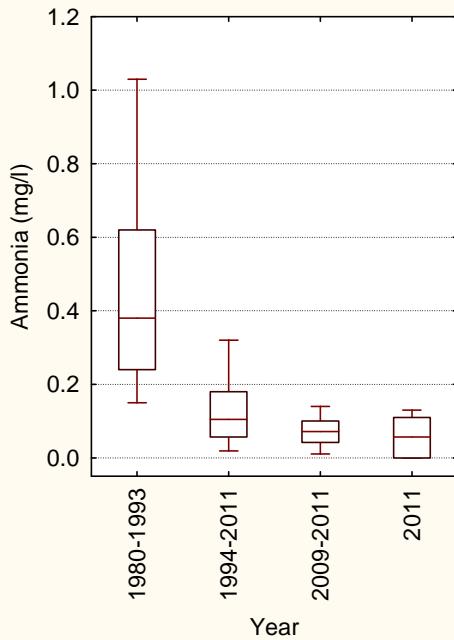
- WATER QUALITY SAMPLING LOCATIONS
- COMBINED SEWER SERVICE AREA

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-01



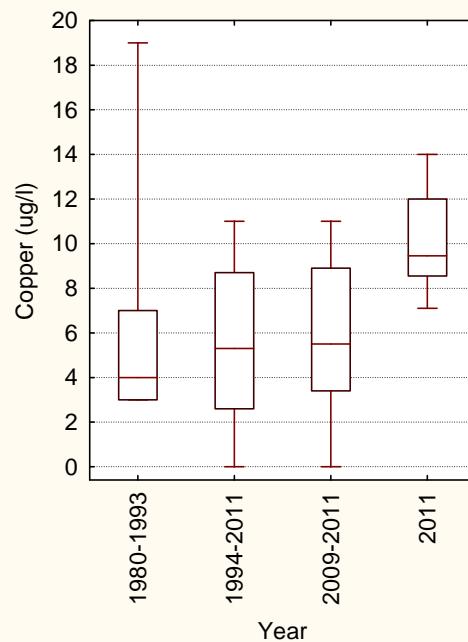
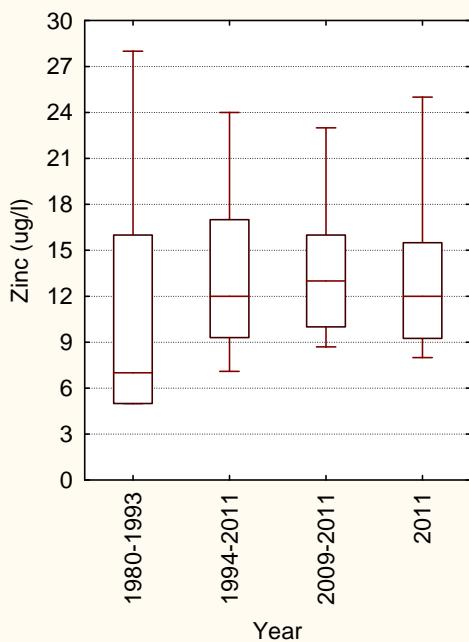
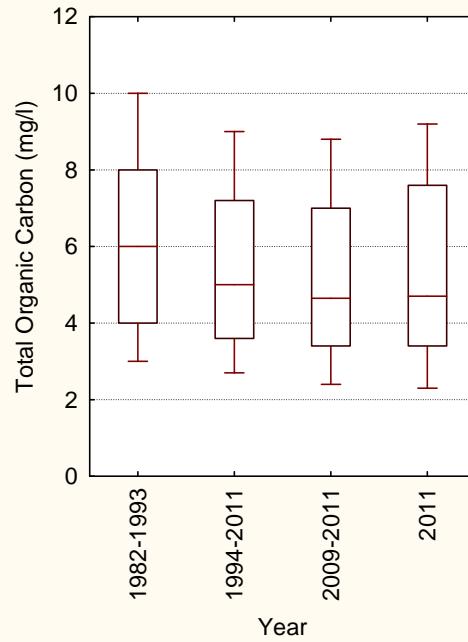
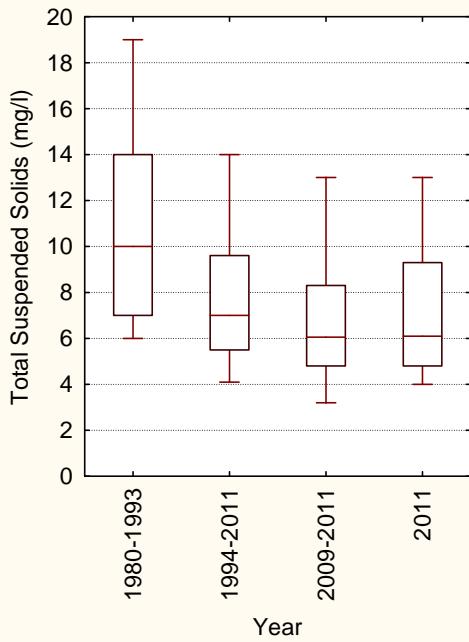
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-01



— Median □ 25%-75% ─ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-01



— Median □ 25%-75% ┤ 10%-90%

OUTER HARBOR - SITE 1
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.3	9.4	5.58	0.90	0.015	0.91	0.059	0.54	0.056	0.030	4.46
Standard Error	0.0	0.7	0.2	0.44	0.05	0.001	0.05	0.006	0.04	0.004	0.003	0.27
Median	7.9	13.7	8.9	5.08	0.85	0.014	0.87	0.057	0.58	0.052	0.032	3.80
Mode	8.0	12.0	8.2	9.35	1.40	0.013	1.40	0.000	0.00	0.048	0.000	3.60
Standard Deviation	0.2	5.8	1.8	3.45	0.43	0.006	0.43	0.051	0.31	0.031	0.021	2.13
Sample Variance	0.0	33.7	3.2	11.93	0.19	0.000	0.19	0.003	0.09	0.001	0.000	4.54
Kurtosis	-0.6	-0.4	-0.6	0.85	-0.38	3.679	-0.48	-1.290	0.51	5.586	-0.466	-0.55
Skewness	0.0	-0.3	0.6	0.95	0.67	1.449	0.62	0.315	-0.24	1.925	0.243	0.65
Range	0.8	23.8	6.9	15.72	1.60	0.033	1.60	0.150	1.30	0.166	0.079	7.90
Minimum	7.5	1.2	6.5	0.68	0.30	0.003	0.30	0.000	0.00	0.014	0.000	1.40
Maximum	8.3	25.0	13.4	16.40	1.90	0.036	1.90	0.150	1.30	0.180	0.079	9.30
Count	63	63	63	63	63	63	63	63	63	63	63	63
Confidence Level(95.0%)	0.0	1.5	0.4	0.87	0.11	0.002	0.11	0.013	0.08	0.008	0.005	0.54

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.2	3.5	353.6	346.0	2.4	7.6	8.2	575	60.1	396	1.8	540
Standard Error	0.1	0.2	21.5	21.1	0.4	1.1	1.1	24	4.9	306	0.2	439
Median	1.3	3.7	350.0	339.7	2.2	6.1	5.5	564	62.0	57	1.8	66
Mode	1.4	4.1	420.0	ND	2.0	ND	4.5	675	71.0	ND	ND	19
Standard Deviation	0.3	1.1	80.4	78.9	1.4	4.3	9.0	191	39.0	1370	0.8	1584
Sample Variance	0.1	1.2	6470.9	6227.2	1.9	18.1	80.2	36630	1520.2	1876949	0.6	2509873
Kurtosis	2.0	0.6	-0.9	-1.0	2.9	3.3	14.5	7	23.1	20	2.7	13
Skewness	-1.3	-0.2	0.0	0.0	1.1	1.7	3.7	2	3.9	4	0.3	4
Range	1.4	4.8	260.0	251.6	5.9	16.2	49.2	1178	288.0	6200	3.8	5796
Minimum	0.3	1.0	220.0	214.3	0.0	2.8	2.8	282	12.0	0	0.0	4
Maximum	1.7	5.8	480.0	465.9	5.9	19.0	52.0	1460	300.0	6200	3.8	5800
Count	20	20	14	14	14	14	63	63	63	20	20	13
Confidence Level(95.0%)	0.2	0.5	46.4	45.6	0.8	2.5	2.3	48	9.8	641	0.4	957

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 1
WATER QUALITY DATA - 2011

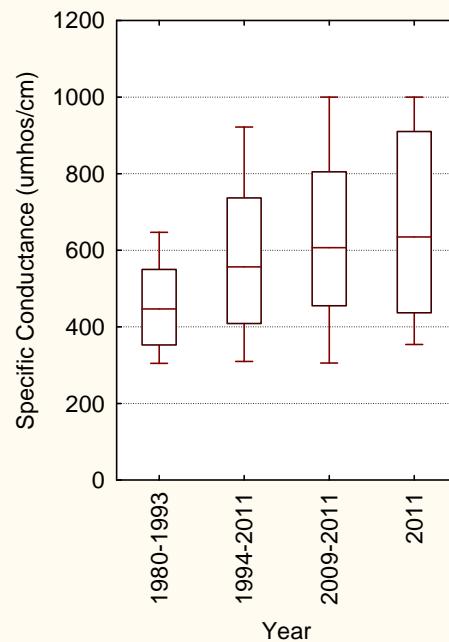
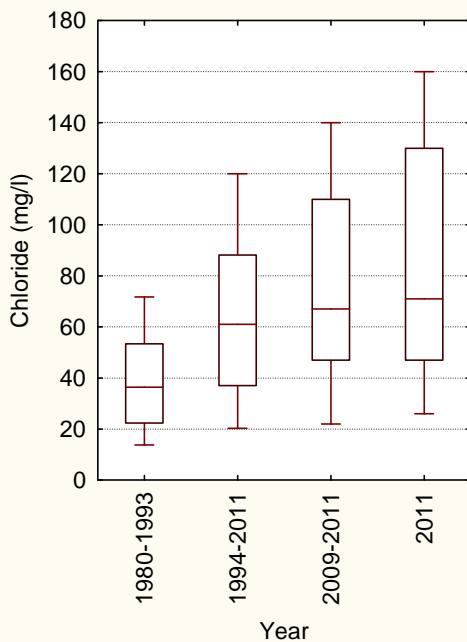
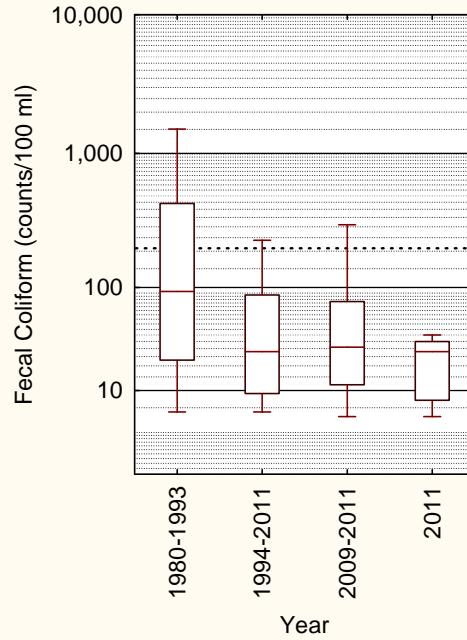
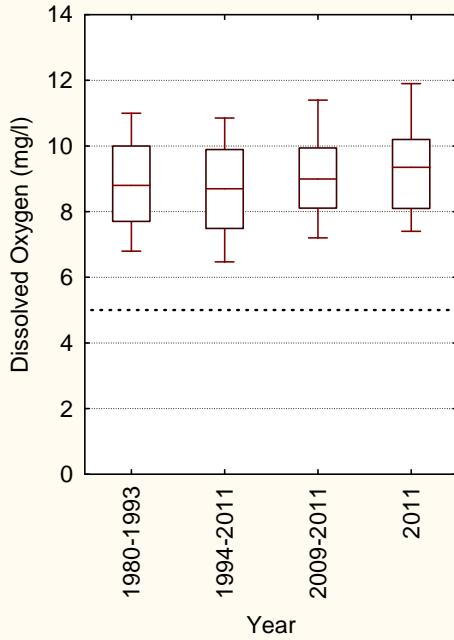
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	49.10	23.67	0.0	2.1	10.1	1.7	3.7	13.8	0.1	1.1	0.0	ND
Standard Error	1.47	0.96	0.0	0.6	0.4	0.1	0.5	1.0	0.0	0.2	0.0	ND
Median	45.00	24.00	0.0	0.0	9.5	1.6	3.9	12.0	0.0	1.0	0.0	ND
Mode	44.00	24.00	0.0	0.0	12.0	1.8	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	10.30	6.73	0.2	4.2	2.6	0.9	2.8	7.2	0.2	1.3	0.0	ND
Sample Variance	106.01	45.35	0.0	17.8	6.8	0.7	7.6	52.2	0.1	1.6	0.0	ND
Kurtosis	-0.52	-0.92	49.0	2.8	0.8	1.0	-1.3	1.3	1.4	10.0	ND	ND
Skewness	0.68	0.27	7.0	1.9	0.7	0.2	-0.2	1.0	1.6	2.6	ND	ND
Range	39.00	25.00	1.2	16.0	13.2	4.0	7.7	34.0	0.8	7.1	0.0	0.0
Minimum	36.00	13.00	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	75.00	38.00	1.2	16.0	18.0	4.0	7.7	34.0	0.8	7.1	0.0	0.0
Count	49	49	49	49	44	49	35	48	49	48	49	0
Confidence Level(95.0%)	2.96	1.93	0.0	1.2	0.8	0.2	0.9	2.1	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	220	177	ND	ND	46.8	41.3	5.3	ND
Standard Error	7	9	ND	ND	2.0	1.7	0.4	ND
Median	210	170	ND	ND	45.5	40.0	4.7	ND
Mode	220	220	ND	ND	61.0	32.0	3.5	ND
Standard Deviation	52	45	ND	ND	13.1	10.8	2.7	ND
Sample Variance	2715	2023	ND	ND	172.6	117.5	7.2	ND
Kurtosis	-1	-2	ND	ND	-1.0	-0.9	-0.3	ND
Skewness	0	0	ND	ND	0.3	0.3	0.5	ND
Range	180	140	0.0	0.0	44.0	39.0	12.0	0.0
Minimum	140	110	0.0	0.0	27.0	24.0	0.0	0.0
Maximum	320	250	0.0	0.0	71.0	63.0	12.0	0.0
Count	49	27	0	0	42	42	42	0
Confidence Level(95.0%)	15	18	ND	ND	4.1	3.4	0.8	ND

ND = No Data

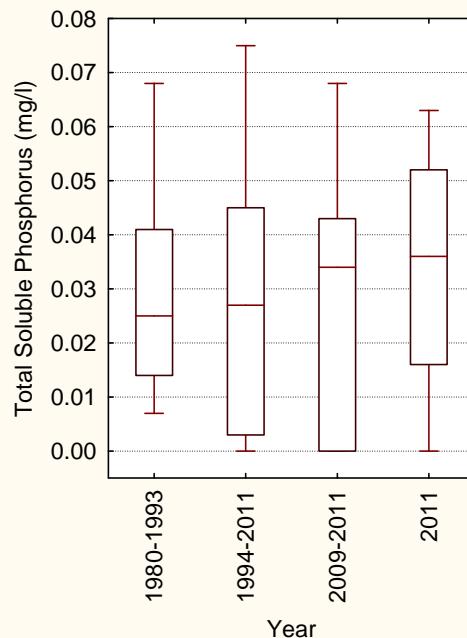
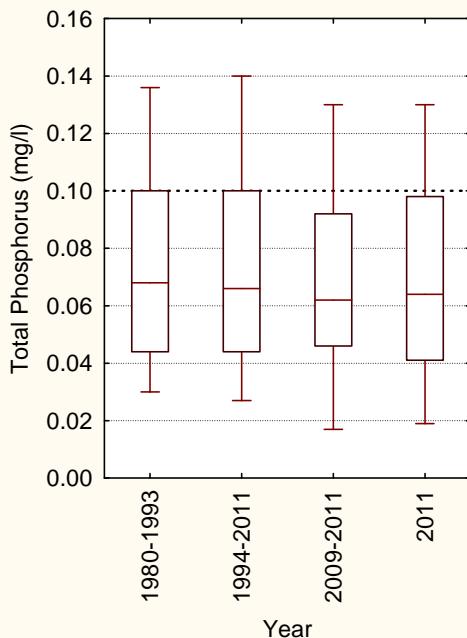
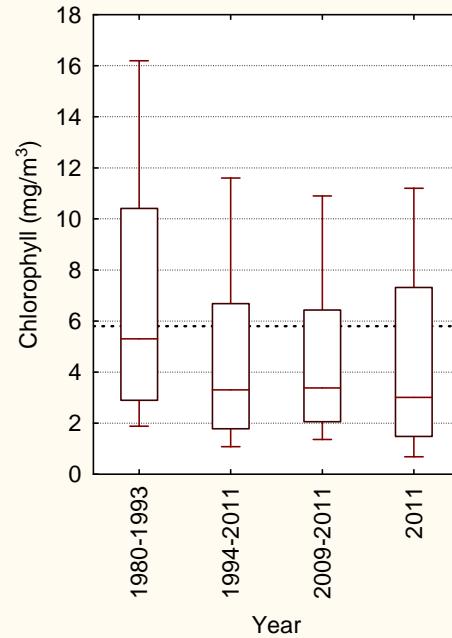
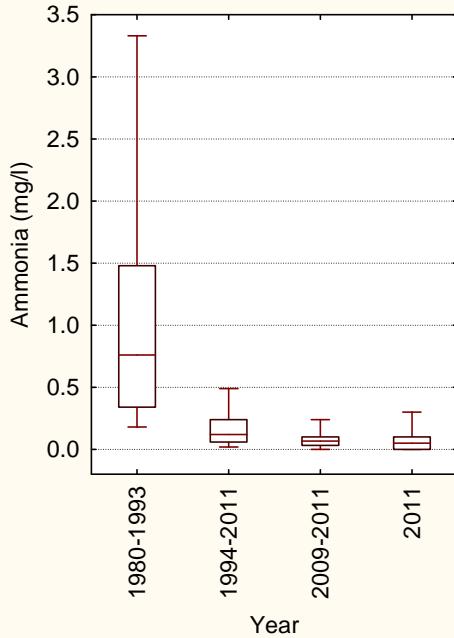
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-02



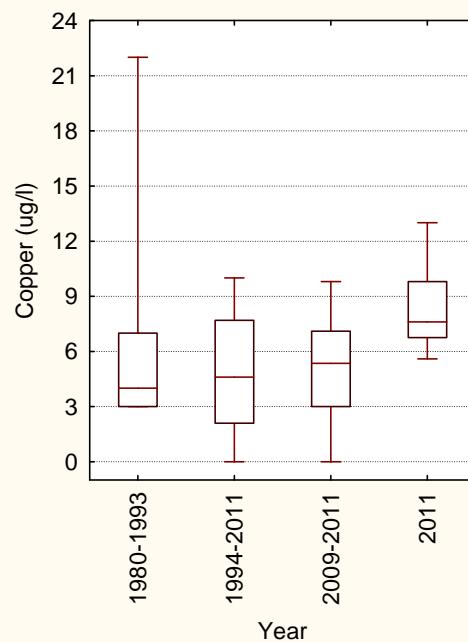
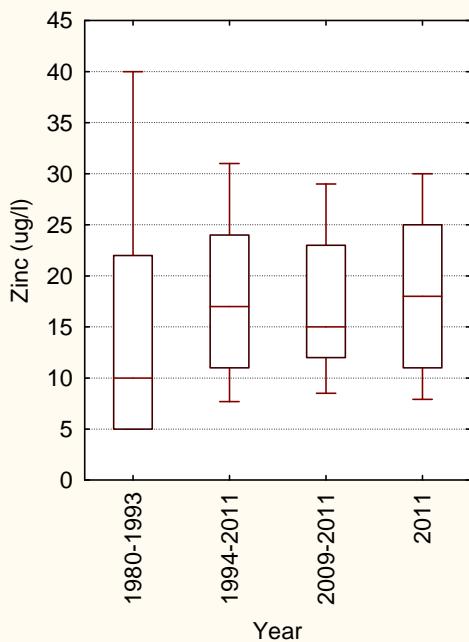
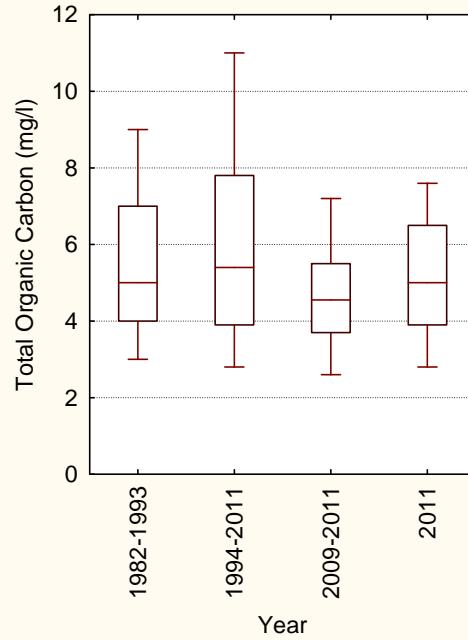
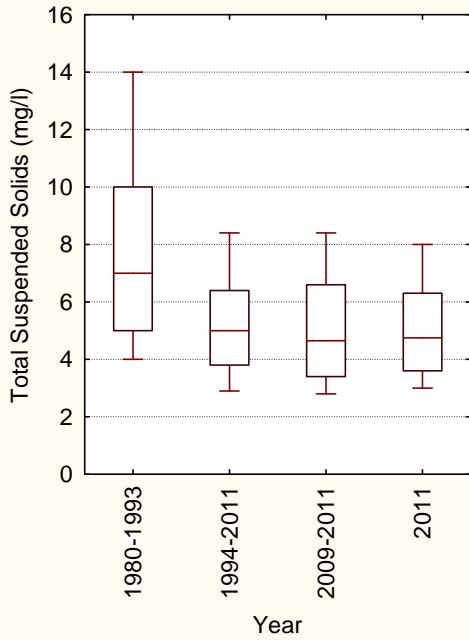
— Median □ 25%-75% ─ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-02



— Median □ 25%-75% □ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-02



— Median □ 25%-75% □ 10%-90%

OUTER HARBOR - SITE 2
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	13.0	9.4	4.84	2.73	0.047	2.78	0.098	0.78	0.072	0.040	3.94
Standard Error	0.1	0.9	0.3	0.71	0.34	0.008	0.35	0.022	0.08	0.007	0.005	0.23
Median	7.6	13.1	9.4	3.01	1.80	0.018	1.80	0.050	0.71	0.064	0.036	3.75
Mode	8.0	10.5	8.2	3.63	1.00	0.011	1.00	0.000	0.00	0.100	0.000	3.10
Standard Deviation	0.4	5.7	1.9	4.58	2.20	0.053	2.23	0.141	0.54	0.046	0.033	1.52
Sample Variance	0.2	32.7	3.6	20.99	4.86	0.003	4.98	0.020	0.30	0.002	0.001	2.31
Kurtosis	-1.1	-0.3	-0.1	1.26	-0.16	0.168	-0.16	4.002	-0.88	2.151	4.153	-0.41
Skewness	0.0	-0.4	0.6	1.35	0.93	1.275	0.92	2.126	0.13	1.162	1.641	0.26
Range	1.3	21.5	7.8	17.76	8.09	0.180	8.18	0.580	1.80	0.220	0.160	6.50
Minimum	7.0	1.2	5.6	0.34	0.41	0.000	0.42	0.000	0.00	0.010	0.000	1.20
Maximum	8.3	22.7	13.4	18.10	8.50	0.180	8.60	0.580	1.80	0.230	0.160	7.70
Count	42	42	42	42	41	42	41	42	42	42	42	42
Confidence Level(95.0%)	0.1	1.8	0.6	1.43	0.70	0.016	0.70	0.044	0.17	0.014	0.010	0.47

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.5	4.4	357.9	352.4	2.1	5.4	5.1	661	91.5	96	1.3	175
Standard Error	0.1	0.4	31.1	31.1	0.2	0.7	0.6	40	9.8	75	0.2	110
Median	1.6	3.9	330.0	322.5	2.3	4.8	3.5	635	71.0	28	1.4	42
Mode	1.7	3.1	400.0	ND	2.0	ND	13.2	1000	140.0	28	1.4	11
Standard Deviation	0.5	1.5	116.4	116.2	0.9	2.5	3.6	260	63.3	272	0.7	396
Sample Variance	0.2	2.4	13541.2	13501.7	0.8	6.1	12.9	67449	4012.4	73978	0.5	156583
Kurtosis	-0.4	-1.3	-0.1	-0.1	1.3	3.0	1.3	-1	1.6	13	2.4	9
Skewness	-0.1	0.6	0.8	0.8	-0.9	1.5	1.5	0	1.2	4	0.7	3
Range	1.6	4.6	380.0	377.6	3.4	9.4	12.5	869	283.0	1000	3.0	1396
Minimum	0.7	2.5	220.0	216.4	0.0	2.6	1.7	291	17.0	0	0.0	4
Maximum	2.3	7.1	600.0	594.0	3.4	12.0	14.2	1160	300.0	1000	3.0	1400
Count	14	13	14	14	14	14	42	42	42	13	13	13
Confidence Level(95.0%)	0.3	0.9	67.2	67.1	0.5	1.4	1.1	81	19.7	164	0.4	239

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 2
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	48.38	20.74	0.1	1.9	8.3	2.0	3.8	18.3	0.1	0.9	0.0	ND
Standard Error	1.45	0.78	0.1	0.5	0.5	0.2	0.5	1.4	0.0	0.2	0.0	ND
Median	46.00	20.00	0.0	0.0	7.6	2.0	4.8	18.0	0.0	0.8	0.0	ND
Mode	40.00	20.00	0.0	0.0	7.8	0.0	0.0	15.0	0.0	0.0	0.0	ND
Standard Deviation	9.41	5.06	0.3	3.5	2.9	1.0	2.9	9.1	0.3	1.1	0.0	ND
Sample Variance	88.63	25.61	0.1	12.2	8.6	1.0	8.4	83.3	0.1	1.1	0.0	ND
Kurtosis	-0.56	-0.21	31.7	0.9	0.9	-0.2	-1.6	-0.5	1.9	2.9	ND	ND
Skewness	0.67	0.69	5.5	1.5	0.1	-0.3	-0.2	0.1	1.8	1.5	ND	ND
Range	36.00	20.00	2.1	12.0	15.0	3.7	7.9	37.0	0.9	4.5	0.0	0.0
Minimum	34.00	14.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	70.00	34.00	2.1	12.0	15.0	3.7	7.9	37.0	0.9	4.5	0.0	0.0
Count	42	42	42	42	40	42	29	41	42	40	42	0
Confidence Level(95.0%)	2.93	1.58	0.1	1.1	0.9	0.3	1.1	2.9	0.1	0.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	206	172	ND	ND	42.0	37.0	5.1	ND
Standard Error	6	11	ND	ND	1.5	1.2	0.3	ND
Median	200	180	ND	ND	41.0	36.0	5.0	ND
Mode	170	190	ND	ND	41.0	33.0	5.0	ND
Standard Deviation	42	36	ND	ND	9.4	7.8	1.9	ND
Sample Variance	1755	1324	ND	ND	88.3	60.1	3.5	ND
Kurtosis	-1	-1	ND	ND	-0.5	-0.6	0.1	ND
Skewness	0	0	ND	ND	0.4	0.5	0.3	ND
Range	150	100	0.0	0.0	35.0	30.0	8.9	0.0
Minimum	140	120	0.0	0.0	27.0	24.0	1.1	0.0
Maximum	290	220	0.0	0.0	62.0	54.0	10.0	0.0
Count	42	12	0	0	42	42	42	0
Confidence Level(95.0%)	13	23	ND	ND	2.9	2.4	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 3
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	12.9	10.4	6.20	0.87	0.012	0.89	0.028	0.36	0.035	0.015	3.04
Standard Error	0.0	0.6	0.2	0.62	0.05	0.001	0.05	0.004	0.03	0.003	0.002	0.15
Median	8.0	13.6	10.1	4.20	0.81	0.012	0.82	0.016	0.44	0.033	0.014	2.75
Mode	8.1	14.8	13.3	1.56	1.40	0.014	1.40	0.000	0.00	0.016	0.000	4.20
Standard Deviation	0.2	5.5	1.6	5.25	0.45	0.005	0.45	0.034	0.26	0.023	0.016	1.29
Sample Variance	0.1	30.3	2.6	27.60	0.21	0.000	0.21	0.001	0.07	0.001	0.000	1.67
Kurtosis	0.2	-0.3	-1.0	2.13	1.01	1.848	0.94	1.185	-1.15	2.494	0.810	-0.30
Skewness	0.0	-0.4	0.2	1.28	1.08	1.095	1.06	1.255	-0.32	1.250	1.053	0.66
Range	1.1	21.9	5.8	25.80	2.10	0.027	2.09	0.130	0.86	0.110	0.062	5.00
Minimum	7.5	1.2	7.5	0.60	0.30	0.003	0.31	0.000	0.00	0.000	0.000	1.20
Maximum	8.6	23.1	13.3	26.40	2.40	0.029	2.40	0.130	0.86	0.110	0.062	6.20
Count	72	72	72	72	72	72	72	72	72	72	72	72
Confidence Level(95.0%)	0.1	1.3	0.4	1.23	0.11	0.001	0.11	0.008	0.06	0.005	0.004	0.30

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.6	5.2	265.9	260.3	1.6	5.6	6.5	444	39.1	269	1.3	911
Standard Error	0.1	0.6	11.9	11.9	0.3	1.0	0.8	12	2.3	224	0.2	894
Median	1.6	4.6	260.0	252.8	1.6	3.4	4.2	433	36.0	20	1.3	30
Mode	1.4	3.3	260.0	ND	0.0	3.1	4.4	458	17.0	0	0.0	ND
Standard Deviation	0.7	2.9	49.3	49.0	1.1	4.3	6.7	104	19.4	1096	0.9	1549
Sample Variance	0.5	8.3	2425.7	2397.1	1.2	18.3	44.7	10751	376.4	1200860	0.8	2399665
Kurtosis	0.2	1.6	1.8	2.0	2.0	5.6	5.1	-1	1.3	24	1.3	ND
Skewness	0.2	1.3	0.9	1.1	0.6	2.2	2.3	0	0.9	5	0.6	2
Range	2.9	11.1	200.0	198.7	4.4	17.0	29.7	432	98.0	5400	3.7	2696
Minimum	0.4	1.4	190.0	188.0	0.0	2.0	1.1	282	12.0	0	0.0	4
Maximum	3.3	12.5	390.0	386.7	4.4	19.0	30.8	714	110.0	5400	3.7	2700
Count	24	23	17	17	17	17	72	72	72	24	24	3
Confidence Level(95.0%)	0.3	1.2	25.3	25.2	0.6	2.2	1.6	24	4.6	463	0.4	3848

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 3
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	41.08	17.83	0.1	1.2	7.8	1.5	4.0	11.3	0.2	1.0	0.0	ND
Standard Error	1.26	0.80	0.1	0.6	0.6	0.1	0.6	1.1	0.1	0.2	0.0	ND
Median	39.00	17.00	0.0	0.0	7.7	1.6	5.2	10.0	0.0	1.1	0.0	ND
Mode	36.00	15.00	0.0	0.0	7.3	1.6	0.0	14.0	0.0	0.0	0.0	ND
Standard Deviation	6.17	3.92	0.5	2.9	2.7	0.7	2.7	5.2	0.3	0.7	0.0	ND
Sample Variance	38.08	15.36	0.2	8.3	7.1	0.5	7.1	27.3	0.1	0.5	0.0	ND
Kurtosis	1.64	1.40	24.0	3.1	1.3	0.8	-1.3	3.2	-0.1	-0.7	ND	ND
Skewness	1.46	1.39	4.9	2.1	0.9	-0.5	-0.6	1.0	1.1	0.1	ND	ND
Range	24.00	14.00	2.3	9.7	11.1	2.8	7.1	27.0	0.8	2.3	0.0	0.0
Minimum	34.00	14.00	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	58.00	28.00	2.3	9.7	15.0	2.8	7.1	27.0	0.8	2.3	0.0	0.0
Count	24	24	24	24	22	24	17	23	24	22	24	0
Confidence Level(95.0%)	2.61	1.66	0.2	1.2	1.2	0.3	1.4	2.3	0.1	0.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	175	135	0.1	4.6	36.4	32.8	3.5	ND
Standard Error	6	3	0.1	0.2	1.0	0.8	0.2	ND
Median	170	130	0.0	4.4	35.0	32.0	3.3	ND
Mode	150	120	0.0	4.0	29.0	28.0	2.6	ND
Standard Deviation	31	20	0.5	0.9	6.8	5.5	1.6	ND
Sample Variance	948	403	0.3	0.8	46.6	30.6	2.6	ND
Kurtosis	2	0	17.0	-0.4	-0.3	-0.5	0.6	ND
Skewness	2	1	4.1	-0.1	0.7	0.6	0.7	ND
Range	110	70	2.2	3.3	24.0	20.0	6.9	0.0
Minimum	150	110	0.0	2.7	28.0	24.0	0.7	0.0
Maximum	260	180	2.2	6.0	52.0	44.0	7.6	0.0
Count	24	36	17	17	51	51	51	0
Confidence Level(95.0%)	13	7	0.3	0.5	1.9	1.6	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 4
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	13.2	10.6	7.50	0.60	0.009	0.61	0.007	0.13	0.019	0.006	2.20
Standard Error	0.0	1.0	0.3	1.17	0.04	0.001	0.04	0.002	0.03	0.002	0.002	0.12
Median	8.1	14.3	10.4	3.94	0.60	0.009	0.62	0.000	0.00	0.018	0.000	2.10
Mode	8.1	6.3	12.0	0.63	0.49	0.012	0.28	0.000	0.00	0.000	0.000	3.10
Standard Deviation	0.2	6.1	1.6	6.80	0.23	0.004	0.23	0.014	0.19	0.012	0.009	0.72
Sample Variance	0.0	37.3	2.7	46.24	0.05	0.000	0.05	0.000	0.04	0.000	0.000	0.52
Kurtosis	-0.5	-0.5	-1.0	-0.42	-0.65	-0.352	-0.66	3.966	-1.16	-0.320	0.459	-0.71
Skewness	-0.5	-0.5	0.3	0.83	0.25	-0.378	0.22	2.187	0.87	0.277	1.249	0.25
Range	0.8	21.4	5.4	23.65	0.84	0.015	0.84	0.053	0.54	0.047	0.030	2.60
Minimum	7.6	1.1	8.2	0.45	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.00
Maximum	8.4	22.5	13.6	24.10	1.10	0.015	1.10	0.053	0.54	0.047	0.030	3.60
Count	34	34	34	34	34	34	34	34	34	34	34	34
Confidence Level(95.0%)	0.1	2.1	0.6	2.37	0.08	0.001	0.08	0.005	0.07	0.004	0.003	0.25

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.9	6.7	229.4	225.0	1.2	4.4	4.4	376	24.7	127	0.6	324
Standard Error	0.2	0.7	10.0	10.0	0.2	0.6	0.5	10	1.6	123	0.2	313
Median	1.8	9.0	230.0	221.8	1.2	3.6	2.6	381	26.0	3	0.5	20
Mode	2.5	9.0	220.0	ND	0.0	ND	2.3	381	30.0	0	0.0	ND
Standard Deviation	0.7	2.8	41.3	41.1	0.9	2.6	3.1	56	9.2	508	0.8	542
Sample Variance	0.5	8.0	1705.9	1690.1	0.8	6.5	9.8	3179	84.3	258525	0.7	293988
Kurtosis	-0.5	-1.8	4.0	4.5	-1.2	-0.3	0.2	3	2.5	17	7.5	ND
Skewness	0.4	-0.4	1.3	1.5	-0.2	0.9	1.2	1	0.9	4	2.4	2
Range	2.6	6.9	190.0	190.6	2.6	8.4	10.4	271	45.0	2100	3.3	948
Minimum	0.8	2.5	160.0	157.1	0.0	1.5	1.5	300	11.0	0	0.0	2
Maximum	3.4	9.4	350.0	347.7	2.6	9.9	11.9	571	56.0	2100	3.3	950
Count	17	16	17	17	17	17	34	34	34	17	17	3
Confidence Level(95.0%)	0.4	1.5	21.2	21.1	0.5	1.3	1.1	20	3.2	261	0.4	1347

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 4
WATER QUALITY DATA - 2011

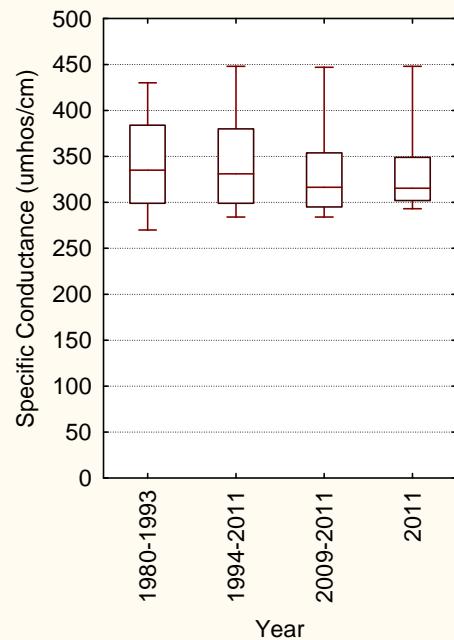
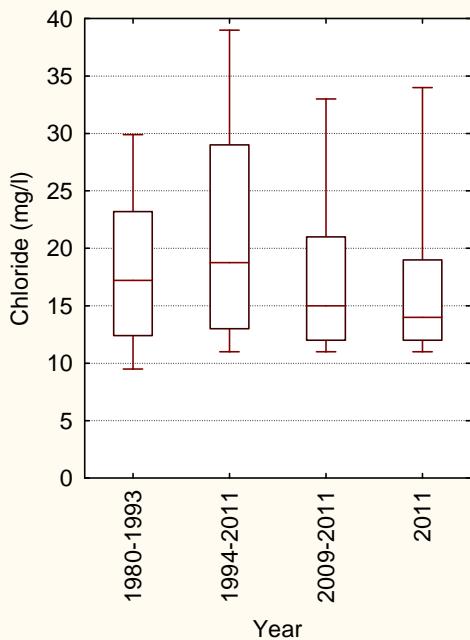
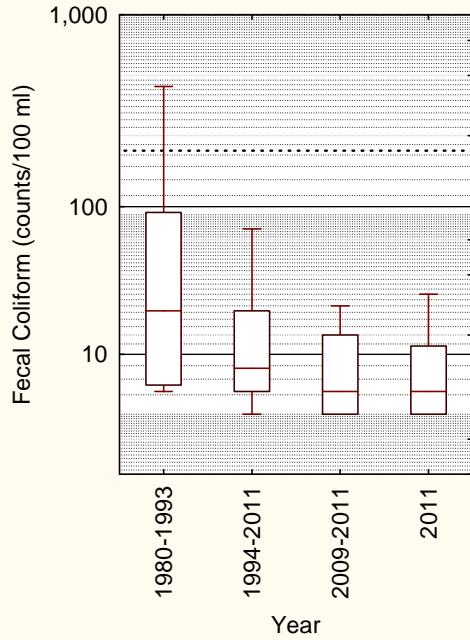
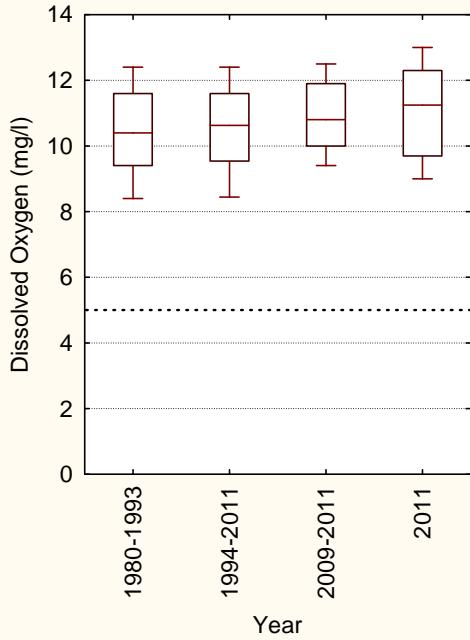
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	38.12	15.94	0.0	1.1	6.7	1.2	3.6	8.7	0.1	1.1	0.0	ND
Standard Error	1.07	0.65	0.0	0.6	0.5	0.2	0.8	1.1	0.1	0.2	0.0	ND
Median	37.00	16.00	0.0	0.0	6.5	1.2	4.4	8.4	0.0	1.2	0.0	ND
Mode	40.00	14.00	0.0	0.0	ND	0.0	0.0	8.8	0.0	0.0	0.0	ND
Standard Deviation	4.43	2.68	0.0	2.6	1.8	0.7	2.7	4.4	0.3	0.8	0.0	ND
Sample Variance	19.61	7.18	0.0	6.8	3.3	0.4	7.0	19.5	0.1	0.6	0.0	ND
Kurtosis	3.84	4.34	ND	4.3	-0.7	-0.1	-1.5	2.1	9.7	0.2	ND	ND
Skewness	1.39	1.77	ND	2.3	0.1	-0.5	-0.4	0.8	3.0	0.4	ND	ND
Range	20.00	11.00	0.0	8.8	6.3	2.3	6.6	19.0	1.0	2.7	0.0	0.0
Minimum	31.00	13.00	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	51.00	24.00	0.0	8.8	10.0	2.3	6.6	19.0	1.0	2.7	0.0	0.0
Count	17	17	17	17	15	17	11	16	17	16	17	0
Confidence Level(95.0%)	2.28	1.38	0.0	1.3	1.0	0.3	1.8	2.4	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	159	128	0.0	ND	32.6	29.7	2.8	ND
Standard Error	5	5	0.0	ND	0.7	0.6	0.2	ND
Median	160	120	0.0	ND	33.0	30.0	3.0	ND
Mode	160	120	0.0	ND	33.0	30.0	3.2	ND
Standard Deviation	20	18	0.0	ND	4.3	3.7	1.1	ND
Sample Variance	418	326	0.0	ND	18.6	13.9	1.2	ND
Kurtosis	4	5	ND	ND	3.7	4.1	0.7	ND
Skewness	2	2	ND	ND	1.2	1.0	-0.3	ND
Range	80	70	0.0	0.0	22.0	21.0	5.3	0.0
Minimum	140	110	0.0	0.0	26.0	22.0	0.0	0.0
Maximum	220	180	0.0	0.0	48.0	43.0	5.3	0.0
Count	17	14	3	0	34	34	34	0
Confidence Level(95.0%)	11	10	0.0	ND	1.5	1.3	0.4	ND

ND = No Data

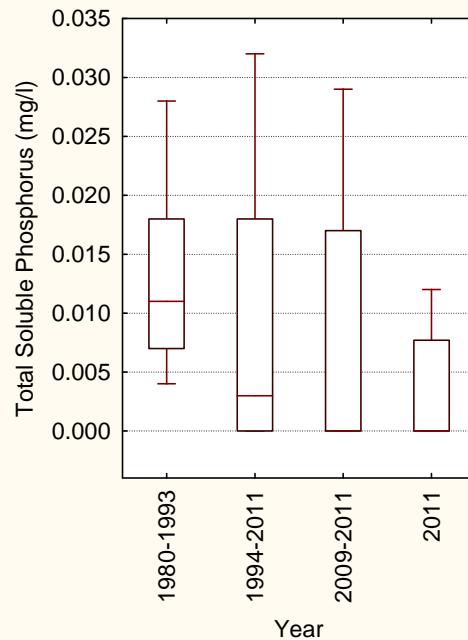
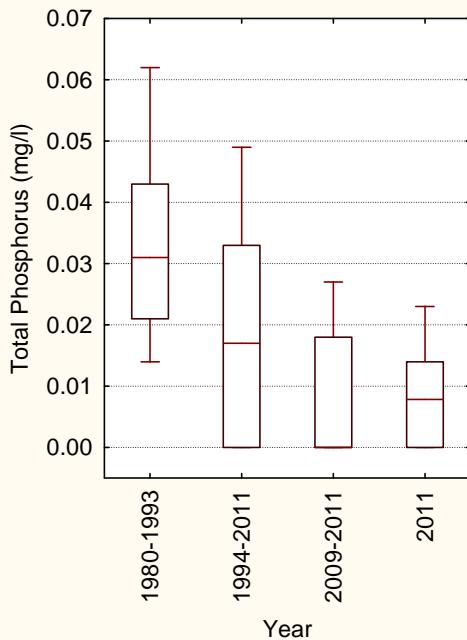
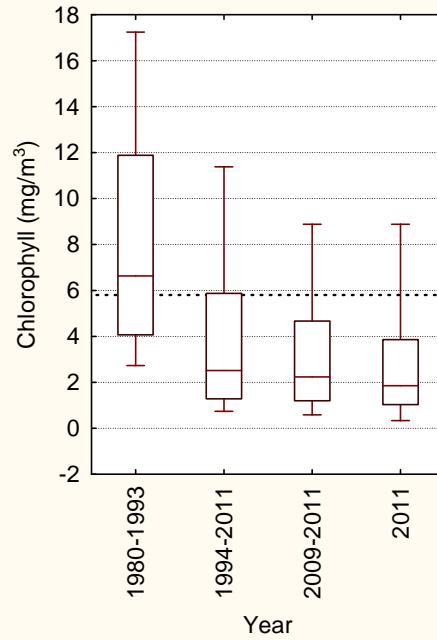
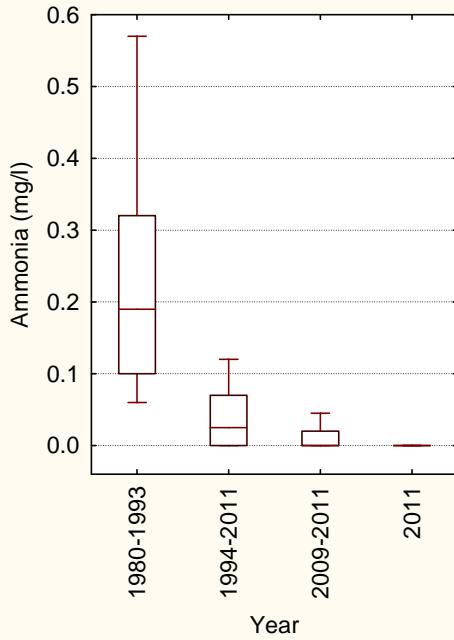
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-05



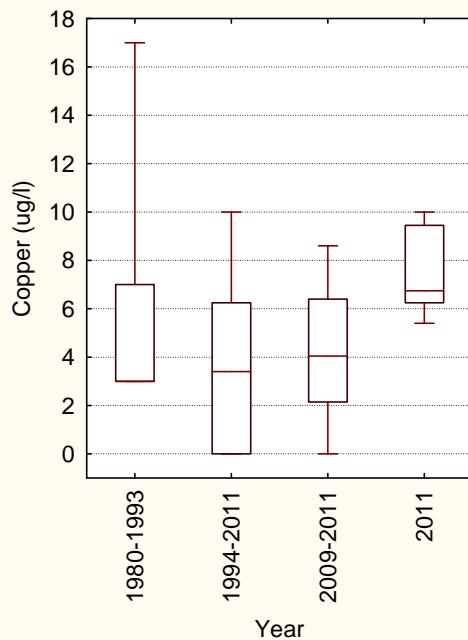
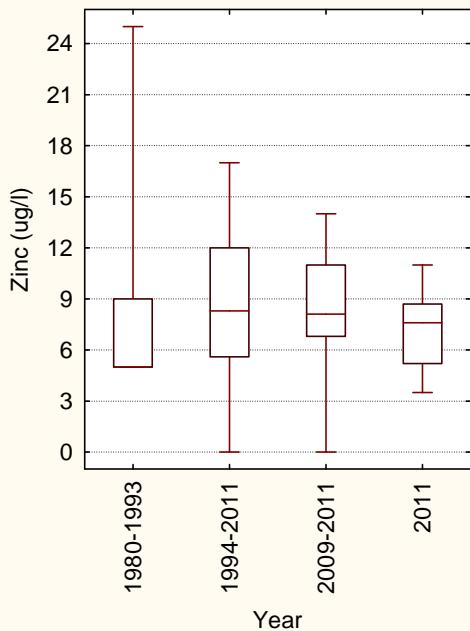
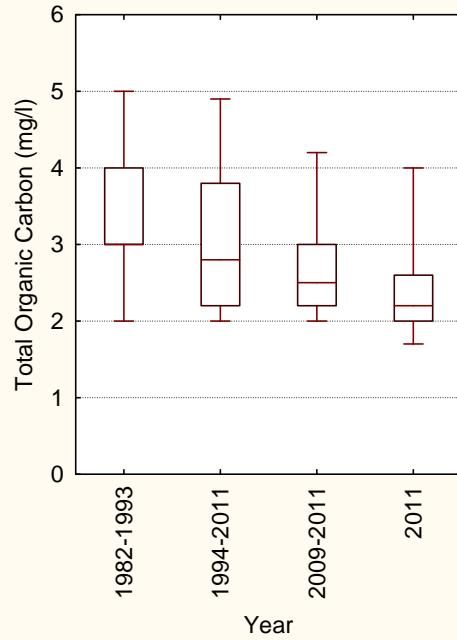
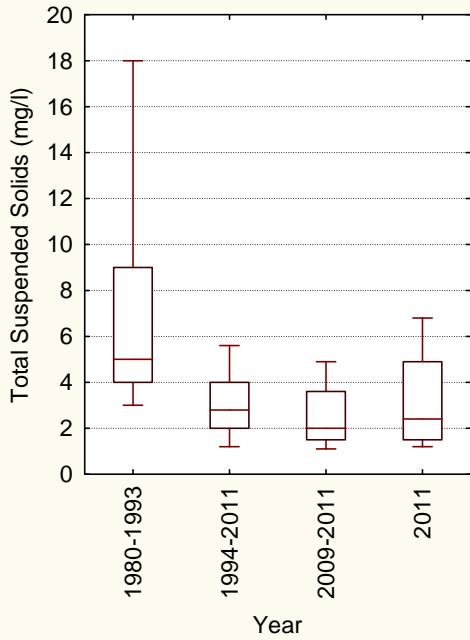
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-05



— Median □ 25%-75% ━ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-05



— Median □ 25%-75% █ 10%-90%

OUTER HARBOR - SITE 5
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.1	11.1	3.42	0.46	0.005	0.47	0.001	0.05	0.008	0.003	2.01
Standard Error	0.0	0.9	0.2	0.65	0.03	0.001	0.03	0.001	0.02	0.001	0.001	0.13
Median	8.0	11.8	11.3	1.86	0.43	0.006	0.44	0.000	0.00	0.008	0.000	1.80
Mode	8.0	14.1	10.8	1.13	0.28	0.000	0.47	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	5.7	1.5	4.23	0.21	0.004	0.21	0.005	0.13	0.009	0.005	0.85
Sample Variance	0.0	32.6	2.2	17.89	0.04	0.000	0.04	0.000	0.02	0.000	0.000	0.73
Kurtosis	-0.8	-0.5	-1.2	9.58	3.26	-0.742	3.14	42.000	2.76	-0.647	-0.037	3.41
Skewness	-0.4	0.0	-0.2	2.71	1.72	0.344	1.70	6.481	2.14	0.709	1.263	1.74
Range	0.7	20.9	4.8	22.60	0.97	0.012	0.96	0.035	0.43	0.027	0.015	3.90
Minimum	7.6	1.3	8.7	0.00	0.23	0.000	0.24	0.000	0.00	0.000	0.000	1.10
Maximum	8.3	22.2	13.5	22.60	1.20	0.012	1.20	0.035	0.43	0.027	0.015	5.00
Count	42	42	42	42	42	42	42	42	42	42	42	42
Confidence Level(95.0%)	0.1	1.8	0.5	1.32	0.07	0.001	0.07	0.002	0.04	0.003	0.002	0.27

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	2.9	8.0	200.0	196.9	1.0	3.1	3.6	342	19.8	16	0.6	ND
Standard Error	0.5	1.2	8.3	8.1	0.2	0.6	0.6	12	2.5	10	0.2	ND
Median	2.8	7.6	190.0	188.5	1.1	2.4	1.6	316	14.0	3	0.5	ND
Mode	3.5	ND	190.0	188.5	0.0	1.5	1.5	299	12.0	0	0.0	ND
Standard Deviation	2.1	4.2	31.1	30.3	0.7	2.1	3.6	75	16.1	37	0.7	ND
Sample Variance	4.2	18.0	969.2	916.6	0.5	4.6	12.9	5611	258.5	1370	0.5	ND
Kurtosis	1.7	-1.3	2.7	2.7	-1.2	-0.6	0.3	6	15.1	12	0.2	ND
Skewness	1.3	0.4	1.6	1.6	-0.5	0.9	1.3	2	3.5	3	1.0	ND
Range	7.3	12.3	120.0	117.1	1.9	6.2	12.0	360	90.2	140	2.1	0
Minimum	0.7	2.7	160.0	158.0	0.0	1.0	0.7	282	9.8	0	0.0	0
Maximum	8.0	15.0	280.0	275.1	1.9	7.2	12.7	642	100.0	140	2.1	0
Count	14	13	14	14	14	14	42	42	42	14	14	0
Confidence Level(95.0%)	1.2	2.6	18.0	17.5	0.4	1.2	1.1	23	5.0	21	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 5
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.86	14.21	0.0	1.2	7.2	1.1	3.5	7.8	0.1	1.2	0.0	ND
Standard Error	0.86	0.33	0.0	0.6	0.7	0.2	0.8	1.4	0.0	0.3	0.0	ND
Median	35.50	14.00	0.0	0.0	6.8	1.1	4.5	7.6	0.0	1.0	0.0	ND
Mode	36.00	13.00	0.0	0.0	6.3	0.0	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	3.23	1.25	0.0	2.4	2.3	0.6	2.8	4.9	0.2	1.0	0.0	ND
Sample Variance	10.44	1.57	0.0	5.6	5.3	0.4	7.8	24.1	0.0	1.0	0.0	ND
Kurtosis	0.78	-1.61	ND	0.9	0.8	-0.1	-1.7	4.4	4.3	0.6	ND	ND
Skewness	0.95	0.36	ND	1.6	-0.7	-0.5	-0.1	1.5	2.2	0.9	ND	ND
Range	12.00	3.00	0.0	6.3	7.9	1.9	7.2	21.0	0.6	3.4	0.0	0.0
Minimum	31.00	13.00	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	43.00	16.00	0.0	6.3	10.0	1.9	7.2	21.0	0.6	3.4	0.0	0.0
Count	14	14	14	14	12	14	11	13	14	14	14	0
Confidence Level(95.0%)	1.87	0.72	0.0	1.4	1.5	0.3	1.9	3.0	0.1	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	148	129	ND	ND	30.5	28.0	2.5	ND
Standard Error	3	3	ND	ND	0.5	0.5	0.2	ND
Median	140	130	ND	ND	30.0	28.0	2.2	ND
Mode	140	130	ND	ND	28.0	26.0	2.1	ND
Standard Deviation	11	12	ND	ND	3.4	3.0	1.1	ND
Sample Variance	126	136	ND	ND	11.7	8.8	1.1	ND
Kurtosis	0	0	ND	ND	3.7	1.1	2.9	ND
Skewness	1	0	ND	ND	1.6	0.7	1.1	ND
Range	30	40	0.0	0.0	17.0	14.0	6.1	0.0
Minimum	140	110	0.0	0.0	26.0	23.0	0.0	0.0
Maximum	170	150	0.0	0.0	43.0	37.0	6.1	0.0
Count	14	12	0	0	42	42	42	0
Confidence Level(95.0%)	6	7	ND	ND	1.1	0.9	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 6
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.4	11.2	ND	0.35	0.003	0.36	0.000	0.00	0.004	0.002	1.71
Standard Error	0.0	0.8	0.2	ND	0.02	0.000	0.02	0.000	0.00	0.001	0.001	0.08
Median	8.1	11.6	11.3	ND	0.30	0.003	0.30	0.000	0.00	0.000	0.000	1.80
Mode	8.1	14.4	12.4	ND	0.28	0.000	0.28	0.000	0.00	0.000	0.000	2.10
Standard Deviation	0.2	5.3	1.4	ND	0.11	0.003	0.11	0.003	0.00	0.006	0.006	0.47
Sample Variance	0.0	27.9	2.0	ND	0.01	0.000	0.01	0.000	0.00	0.000	0.000	0.22
Kurtosis	-0.4	-0.3	-0.7	ND	-1.46	4.067	-1.45	39.000	ND	-0.015	6.383	-1.37
Skewness	-0.6	0.2	-0.2	ND	0.49	1.522	0.50	6.245	ND	1.271	2.642	-0.19
Range	0.7	19.9	5.1	0.00	0.32	0.013	0.32	0.016	0.00	0.019	0.023	1.54
Minimum	7.6	1.4	8.6	0.00	0.22	0.000	0.22	0.000	0.00	0.000	0.000	0.96
Maximum	8.3	21.2	13.7	0.00	0.54	0.013	0.54	0.016	0.00	0.019	0.023	2.50
Count	39	39	39	0	39	39	39	39	39	39	39	39
Confidence Level(95.0%)	0.1	1.7	0.5	ND	0.04	0.001	0.04	0.001	0.00	0.002	0.002	0.15

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	4.7	10.6	181.5	180.0	0.4	1.6	2.5	302	12.4	9	0.4	ND
Standard Error	0.8	1.2	4.5	4.6	0.2	0.6	0.5	3	0.5	6	0.2	ND
Median	5.5	12.2	180.0	178.9	0.0	1.0	1.0	293	11.0	3	0.5	ND
Mode	1.0	14.0	180.0	180.0	0.0	0.0	1.1	287	10.0	0	0.0	ND
Standard Deviation	2.7	4.1	16.3	16.7	0.7	2.0	3.4	22	3.0	22	0.6	ND
Sample Variance	7.5	16.7	264.1	280.1	0.5	4.2	11.6	465	9.1	484	0.3	ND
Kurtosis	-0.3	-1.1	1.6	1.9	0.2	0.4	3.6	0	0.3	11	2.3	ND
Skewness	0.2	-0.7	0.9	1.0	1.3	1.2	2.1	1	1.1	3	1.6	ND
Range	9.0	10.2	60.0	65.3	1.9	5.7	13.0	85	10.3	80	1.9	0
Minimum	1.0	4.0	160.0	154.7	0.0	0.0	0.4	277	9.7	0	0.0	0
Maximum	10.0	14.2	220.0	220.0	1.9	5.7	13.4	362	20.0	80	1.9	0
Count	13	12	13	13	13	13	39	39	39	13	13	0
Confidence Level(95.0%)	1.7	2.6	9.8	10.1	0.4	1.2	1.1	7	1.0	13	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 6
WATER QUALITY DATA - 2011

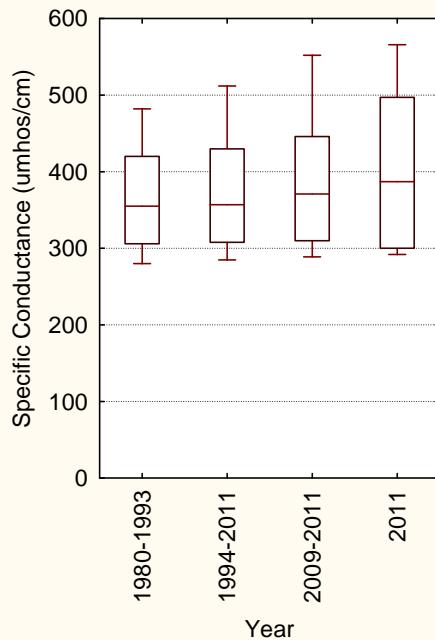
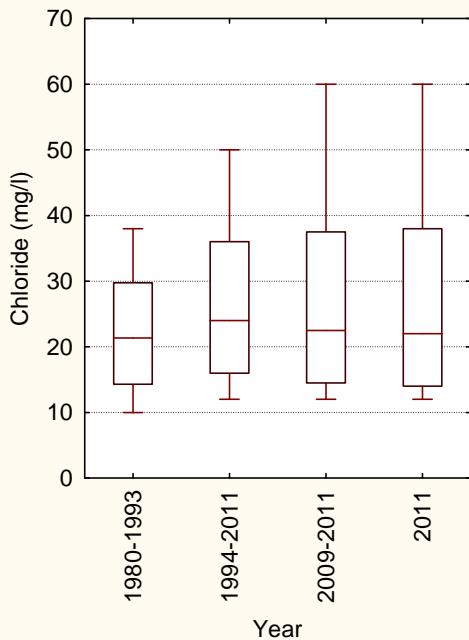
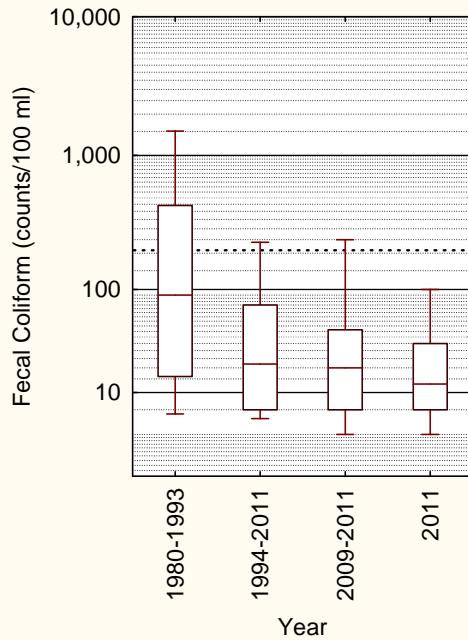
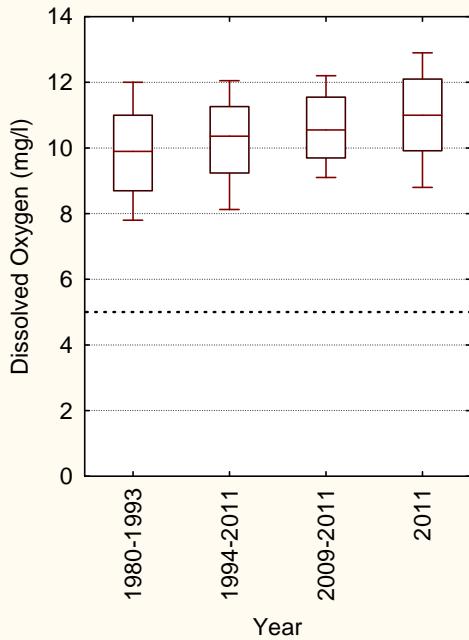
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.77	13.31	0.0	0.8	6.1	1.0	4.0	9.4	0.5	1.0	0.0	ND
Standard Error	0.44	0.33	0.0	0.5	0.8	0.2	0.9	1.5	0.1	0.3	0.0	ND
Median	35.00	13.00	0.0	0.0	6.5	1.1	3.6	8.3	0.7	1.1	0.0	ND
Mode	35.00	12.00	0.0	0.0	ND	1.2	0.0	19.0	0.0	0.0	0.0	ND
Standard Deviation	1.59	1.18	0.0	1.9	2.4	0.6	3.0	5.3	0.5	0.9	0.0	ND
Sample Variance	2.53	1.40	0.0	3.7	5.6	0.4	8.9	27.6	0.2	0.9	0.0	ND
Kurtosis	0.29	-1.33	ND	3.3	-1.4	2.6	-1.6	-0.1	-2.0	-0.2	ND	ND
Skewness	0.15	0.37	ND	2.2	-0.2	0.4	0.0	1.0	0.0	0.6	ND	ND
Range	6.00	3.00	0.0	5.3	6.2	2.5	8.0	15.8	1.2	3.0	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
Maximum	38.00	15.00	0.0	5.3	9.2	2.5	8.0	19.0	1.2	3.0	0.0	0.0
Count	13	13	13	13	8	13	11	13	13	13	13	0
Confidence Level(95.0%)	0.96	0.71	0.0	1.2	2.0	0.4	2.0	3.2	0.3	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	140	116	ND	ND	29.3	27.1	2.0	ND
Standard Error	2	3	ND	ND	0.3	0.4	0.1	ND
Median	140	120	ND	ND	28.0	26.0	2.2	ND
Mode	140	120	ND	ND	28.0	26.0	2.0	ND
Standard Deviation	7	9	ND	ND	2.2	2.4	0.6	ND
Sample Variance	50	78	ND	ND	4.7	5.7	0.4	ND
Kurtosis	-1	0	ND	ND	1.7	0.8	3.9	ND
Skewness	0	0	ND	ND	1.4	1.1	-1.9	ND
Range	20	30	0.0	0.0	8.0	9.0	2.8	0.0
Minimum	130	100	0.0	0.0	27.0	24.0	0.0	0.0
Maximum	150	130	0.0	0.0	35.0	33.0	2.8	0.0
Count	13	9	0	0	39	39	39	0
Confidence Level(95.0%)	4	7	ND	ND	0.7	0.8	0.2	ND

ND = No Data

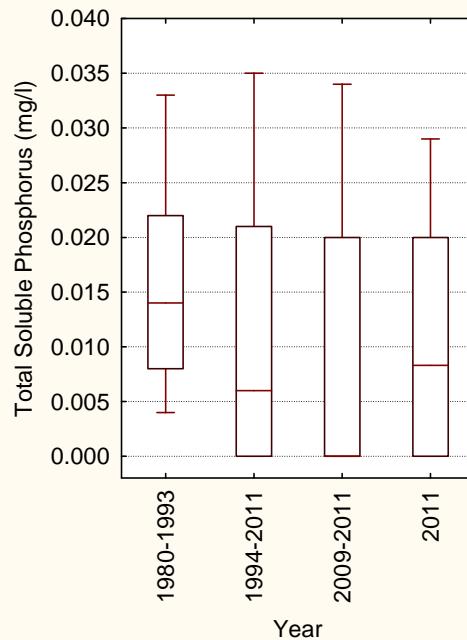
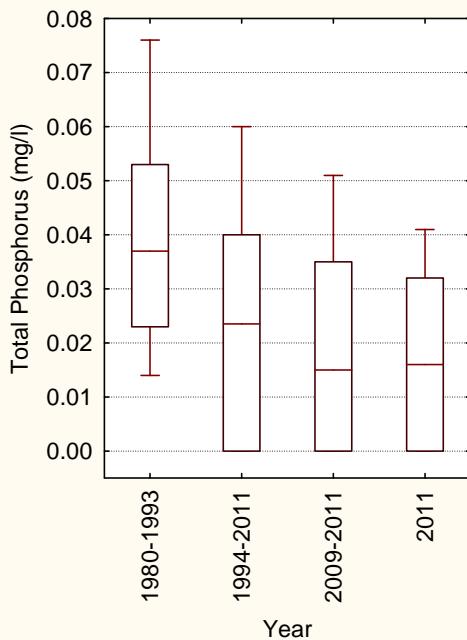
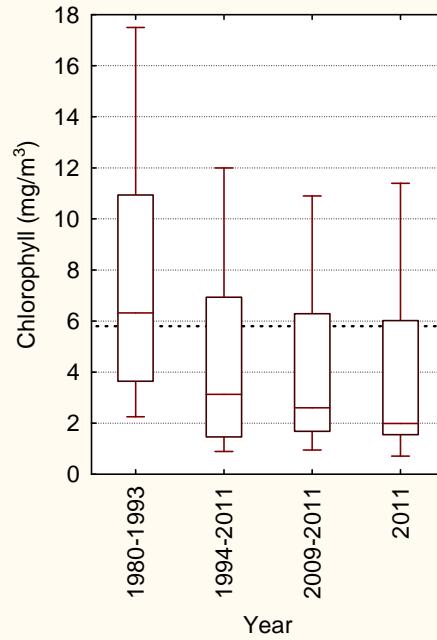
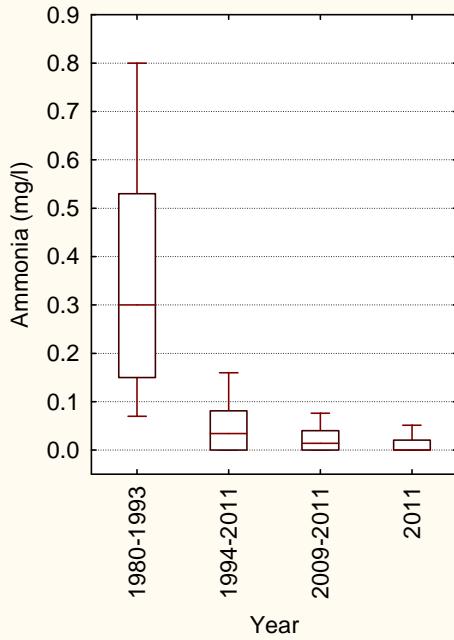
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-07



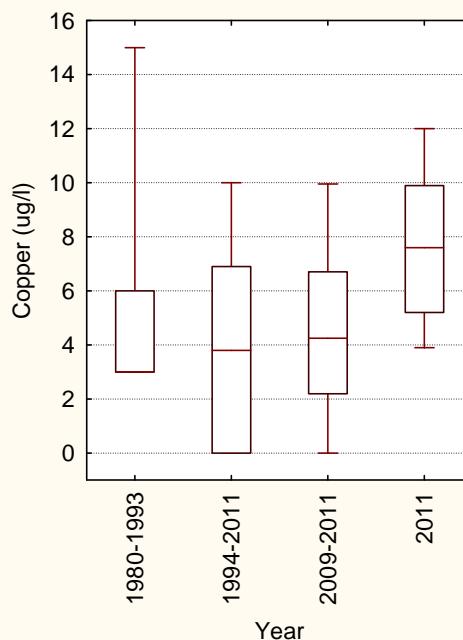
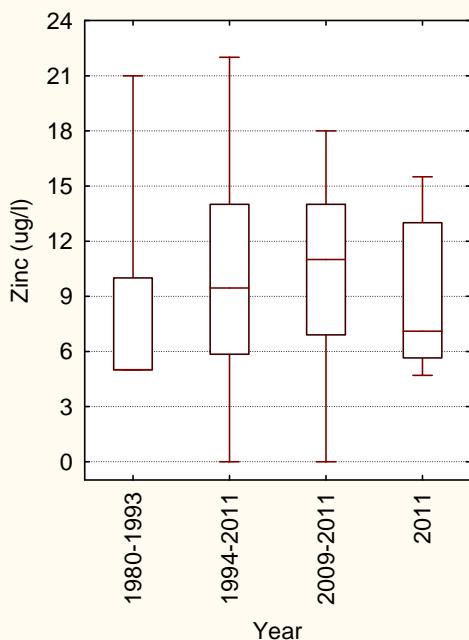
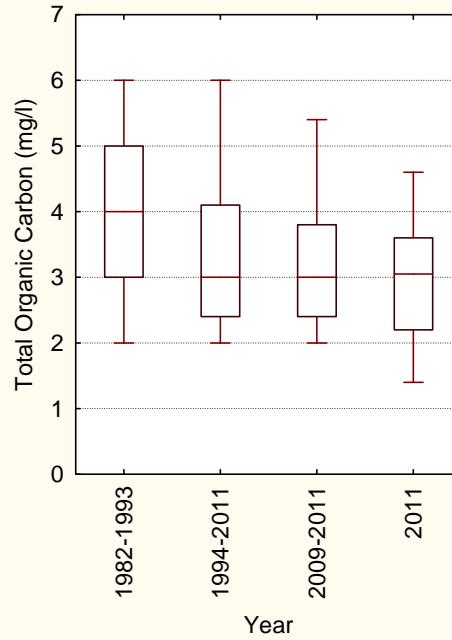
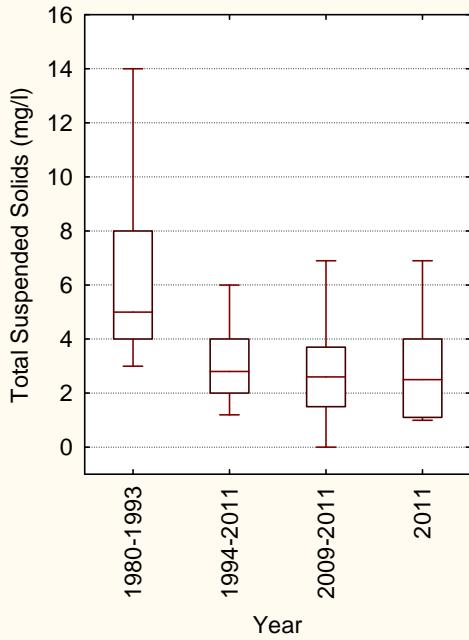
— Median □ 25%-75% ─ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-07



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-07



— Median □ 25%-75% ─ 10%-90%

OUTER HARBOR - SITE 7
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.5	11.0	4.64	0.63	0.008	0.64	0.016	0.20	0.022	0.012	2.78
Standard Error	0.0	0.7	0.2	0.79	0.04	0.001	0.04	0.004	0.04	0.003	0.002	0.18
Median	8.0	11.5	11.0	1.99	0.52	0.006	0.53	0.000	0.00	0.016	0.008	2.40
Mode	8.0	14.4	12.0	1.81	0.28	0.010	0.29	0.000	0.00	0.000	0.000	1.60
Standard Deviation	0.2	5.3	1.5	6.26	0.33	0.006	0.34	0.031	0.31	0.024	0.015	1.47
Sample Variance	0.0	27.6	2.3	39.20	0.11	0.000	0.11	0.001	0.09	0.001	0.000	2.15
Kurtosis	1.4	-0.4	-0.9	8.36	0.01	4.643	0.05	8.213	1.94	6.931	2.607	1.66
Skewness	0.4	0.0	-0.2	2.72	0.89	1.821	0.91	2.773	1.50	2.334	1.612	1.26
Range	1.1	21.7	5.7	33.45	1.24	0.033	1.24	0.150	1.30	0.120	0.063	6.80
Minimum	7.5	1.1	7.9	0.35	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.10
Maximum	8.6	22.8	13.6	33.80	1.50	0.033	1.50	0.150	1.30	0.120	0.063	7.90
Count	63	63	63	63	63	63	63	60	60	63	63	63
Confidence Level(95.0%)	0.1	1.3	0.4	1.58	0.08	0.002	0.08	0.008	0.08	0.006	0.004	0.37

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	2.6	7.2	239.3	236.4	0.6	2.9	4.5	410	33.4	48	1.1	34
Standard Error	0.4	0.9	17.6	17.5	0.2	0.6	0.9	20	4.8	20	0.2	19
Median	2.4	5.7	230.0	227.4	0.0	2.5	2.3	387	22.0	13	1.1	6
Mode	1.6	14.0	230.0	ND	0.0	1.1	5.3	296	17.0	0	0.0	2
Standard Deviation	1.8	4.0	65.8	65.4	0.8	2.2	6.9	157	37.8	91	0.8	70
Sample Variance	3.2	15.8	4330.2	4274.8	0.6	5.0	47.0	24687	1425.3	8368	0.6	4848
Kurtosis	2.4	-0.4	5.2	5.4	-1.8	-0.3	12.7	17	25.3	7	-0.6	12
Skewness	1.6	0.8	2.0	2.0	0.5	0.9	3.5	3	4.5	3	0.1	3
Range	6.6	13.2	260.0	258.3	1.9	7.0	35.8	1043	260.2	350	2.5	260
Minimum	0.5	1.4	170.0	169.0	0.0	0.0	0.5	277	9.8	0	0.0	0
Maximum	7.1	14.6	430.0	427.3	1.9	7.0	36.3	1320	270.0	350	2.5	260
Count	20	20	14	14	14	14	63	63	63	21	21	13
Confidence Level(95.0%)	0.8	1.9	38.0	37.8	0.4	1.3	1.7	40	9.5	42	0.3	42

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 7
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	39.05	16.00	0.1	1.1	7.7	1.2	3.0	9.0	0.3	1.1	0.0	ND
Standard Error	1.31	0.70	0.1	0.5	0.6	0.1	0.6	1.1	0.1	0.3	0.0	ND
Median	38.00	15.00	0.0	0.0	7.6	1.2	3.6	7.1	0.0	1.0	0.0	ND
Mode	40.00	13.00	0.0	0.0	5.0	1.1	0.0	13.0	0.0	0.0	0.0	ND
Standard Deviation	5.99	3.21	0.5	2.4	2.7	0.6	2.5	4.8	0.3	1.5	0.0	ND
Sample Variance	35.85	10.30	0.2	6.0	7.3	0.4	6.4	23.3	0.1	2.3	0.0	ND
Kurtosis	1.17	-0.38	21.0	1.4	-0.7	0.2	-1.4	-0.8	-0.3	10.1	ND	ND
Skewness	1.33	0.88	4.6	1.8	0.3	-0.5	0.1	0.3	0.9	2.8	ND	ND
Range	21.00	10.00	2.1	6.8	9.4	2.2	7.3	18.0	1.0	6.7	0.0	0.0
Minimum	33.00	13.00	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	54.00	23.00	2.1	6.8	13.0	2.2	7.3	18.0	1.0	6.7	0.0	0.0
Count	21	21	21	21	19	21	17	20	21	20	21	0
Confidence Level(95.0%)	2.73	1.46	0.2	1.1	1.3	0.3	1.3	2.3	0.2	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	163	133	0.0	3.7	33.7	30.7	3.1	ND
Standard Error	6	5	0.0	0.2	0.9	0.7	0.2	ND
Median	160	130	0.0	3.6	31.5	30.0	3.1	ND
Mode	140	110	0.0	3.6	29.0	27.0	3.4	ND
Standard Deviation	28	26	0.0	0.7	6.0	4.7	1.5	ND
Sample Variance	761	669	0.0	0.5	35.7	22.3	2.3	ND
Kurtosis	0	4	ND	0.2	1.6	1.0	2.9	ND
Skewness	1	2	ND	0.5	1.3	1.1	1.2	ND
Range	90	110	0.0	2.6	25.0	21.0	8.1	0.0
Minimum	130	110	0.0	2.5	26.0	23.0	0.0	0.0
Maximum	220	220	0.0	5.1	51.0	44.0	8.1	0.0
Count	21	27	14	14	42	42	42	0
Confidence Level(95.0%)	13	10	0.0	0.4	1.9	1.5	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 8
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.6	11.0	ND	0.38	0.003	0.38	0.006	0.02	0.004	0.002	1.83
Standard Error	0.0	0.8	0.2	ND	0.02	0.000	0.02	0.006	0.02	0.001	0.001	0.09
Median	8.0	11.7	11.1	ND	0.31	0.003	0.31	0.000	0.00	0.000	0.000	1.80
Mode	8.0	14.3	12.0	ND	0.26	0.000	0.26	0.000	0.00	0.000	0.000	2.20
Standard Deviation	0.2	5.3	1.4	ND	0.15	0.002	0.15	0.037	0.09	0.006	0.005	0.56
Sample Variance	0.0	27.9	2.1	ND	0.02	0.000	0.02	0.001	0.01	0.000	0.000	0.31
Kurtosis	-0.3	0.1	-0.6	ND	-0.31	-1.115	-0.27	38.688	39.00	-0.807	7.017	-0.53
Skewness	-0.4	0.2	-0.2	ND	1.05	-0.186	1.05	6.210	6.24	0.935	2.790	0.54
Range	0.7	20.9	5.7	0.00	0.49	0.007	0.50	0.230	0.59	0.017	0.019	2.00
Minimum	7.6	1.4	7.9	0.00	0.22	0.000	0.22	0.000	0.00	0.000	0.000	1.10
Maximum	8.3	22.3	13.6	0.00	0.71	0.007	0.72	0.230	0.59	0.017	0.019	3.10
Count	39	39	39	0	39	39	39	39	39	39	39	39
Confidence Level(95.0%)	0.1	1.7	0.5	ND	0.05	0.001	0.05	0.012	0.03	0.002	0.001	0.18

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	4.9	9.9	182.3	172.5	0.2	1.7	1.9	312	13.9	4	0.4	ND
Standard Error	0.8	1.2	9.3	5.1	0.2	0.6	0.3	7	1.0	2	0.1	ND
Median	4.7	8.7	170.0	169.5	0.0	1.1	0.9	292	11.0	3	0.5	ND
Mode	0.9	8.3	170.0	ND	0.0	0.0	1.3	290	10.0	0	0.0	ND
Standard Deviation	2.9	4.2	33.7	17.6	0.6	2.0	2.0	41	6.0	7	0.5	ND
Sample Variance	8.6	17.4	1135.9	309.6	0.3	4.1	3.8	1664	36.5	52	0.2	ND
Kurtosis	-0.9	-1.9	6.1	0.4	2.7	2.0	0.2	2	2.5	6	-0.1	ND
Skewness	0.3	0.0	2.3	0.9	2.1	1.5	1.3	2	1.9	2	0.9	ND
Range	9.1	10.6	130.0	60.9	1.5	6.5	6.1	145	21.4	25	1.4	0
Minimum	0.9	4.4	150.0	147.2	0.0	0.0	0.3	277	9.6	0	0.0	0
Maximum	10.0	15.0	280.0	208.1	1.5	6.5	6.4	422	31.0	25	1.4	0
Count	13	12	13	12	12	12	39	39	39	13	13	0
Confidence Level(95.0%)	1.8	2.7	20.4	11.2	0.4	1.3	0.6	13	2.0	4	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 8
WATER QUALITY DATA - 2011

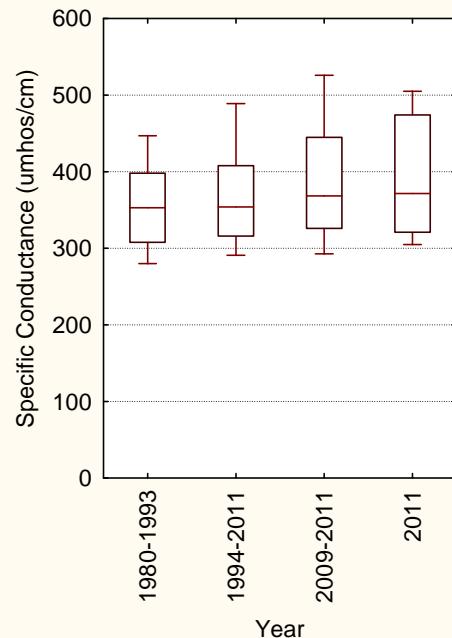
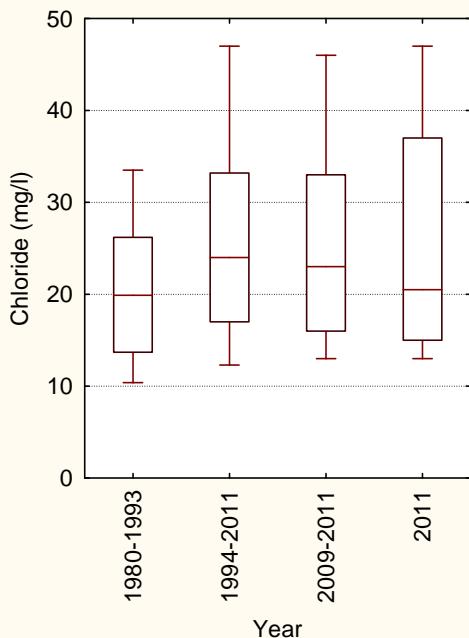
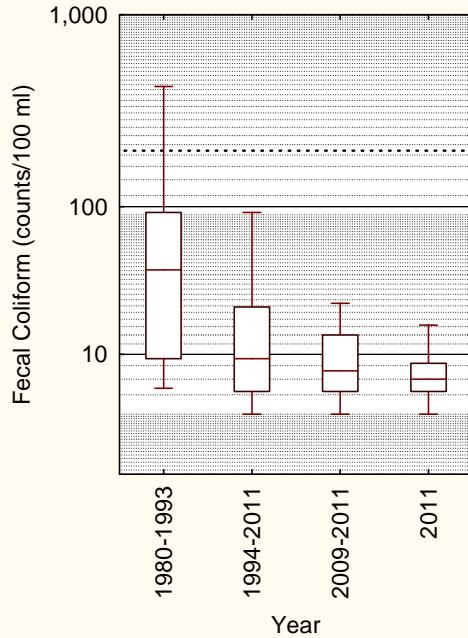
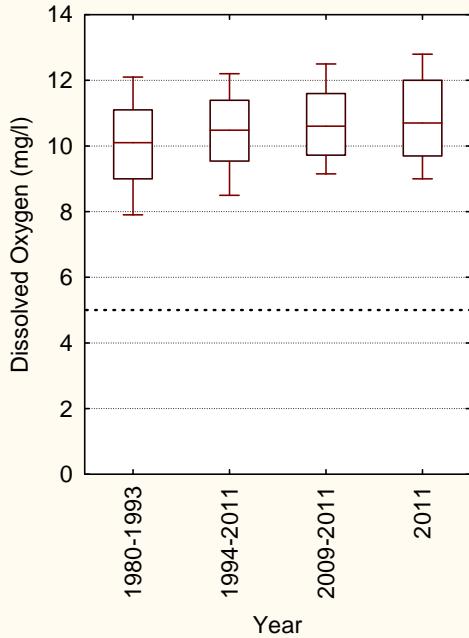
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.69	13.62	0.0	1.0	5.4	1.2	3.7	8.5	0.2	1.5	0.0	ND
Standard Error	0.88	0.51	0.0	0.7	0.6	0.2	0.9	1.0	0.1	0.5	0.0	ND
Median	34.00	13.00	0.0	0.0	4.4	1.1	3.1	6.9	0.0	1.2	0.0	ND
Mode	34.00	13.00	0.0	0.0	4.4	0.0	0.0	6.9	0.0	0.0	0.0	ND
Standard Deviation	3.17	1.85	0.0	2.4	1.7	0.8	2.7	3.7	0.3	1.9	0.0	ND
Sample Variance	10.06	3.42	0.0	5.7	2.9	0.7	7.5	13.5	0.1	3.6	0.0	ND
Kurtosis	0.97	1.22	ND	4.9	-1.8	0.5	-1.1	-0.9	1.2	10.8	ND	ND
Skewness	1.28	1.32	ND	2.4	0.6	0.6	0.2	0.5	1.5	3.1	ND	ND
Range	11.00	6.00	0.0	7.5	4.2	3.0	7.7	11.0	1.0	7.6	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.7	0.0	0.0	4.0	0.0	0.0	0.0	0.0
Maximum	43.00	18.00	0.0	7.5	7.9	3.0	7.7	15.0	1.0	7.6	0.0	0.0
Count	13	13	13	13	9	13	10	13	13	13	13	0
Confidence Level(95.0%)	1.92	1.12	0.0	1.4	1.3	0.5	2.0	2.2	0.2	1.1	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	146	127	ND	ND	29.3	27.0	2.1	ND
Standard Error	4	5	ND	ND	0.7	0.6	0.1	ND
Median	140	130	ND	ND	28.0	26.0	2.2	ND
Mode	140	130	ND	ND	28.0	26.0	2.0	ND
Standard Deviation	14	14	ND	ND	4.1	3.7	0.8	ND
Sample Variance	209	200	ND	ND	17.2	13.4	0.7	ND
Kurtosis	1	0	ND	ND	1.5	1.6	1.7	ND
Skewness	1	-1	ND	ND	1.6	1.5	-1.0	ND
Range	50	40	0.0	0.0	16.0	15.0	3.5	0.0
Minimum	130	100	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	180	140	0.0	0.0	40.0	37.0	3.5	0.0
Count	13	9	0	0	39	39	39	0
Confidence Level(95.0%)	9	11	ND	ND	1.3	1.2	0.3	ND

ND = No Data

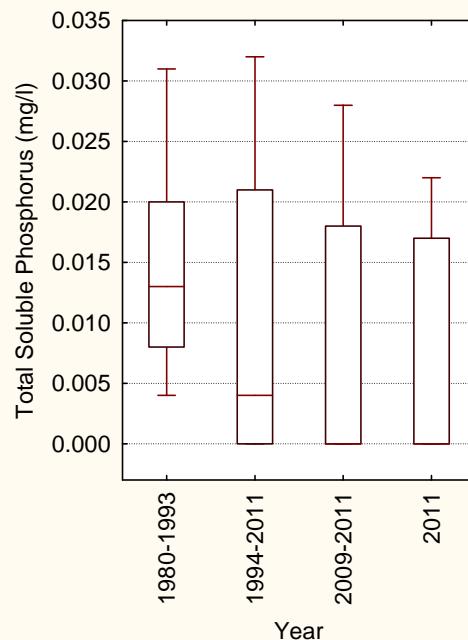
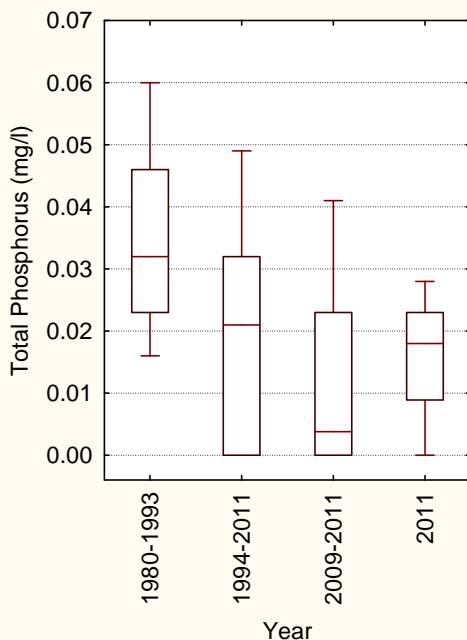
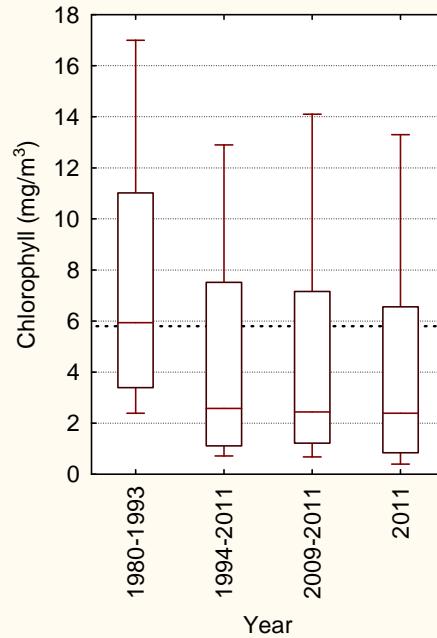
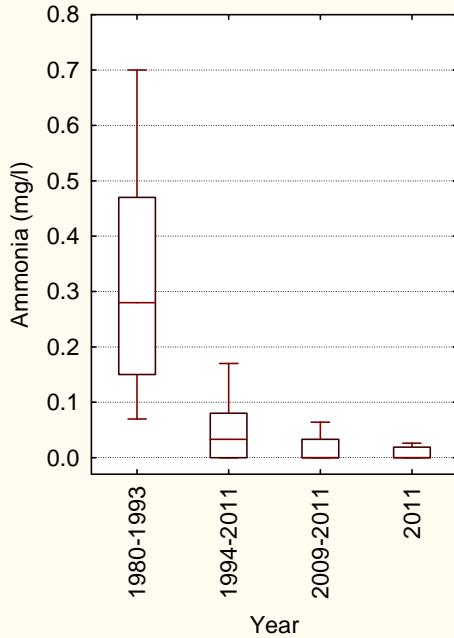
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-09



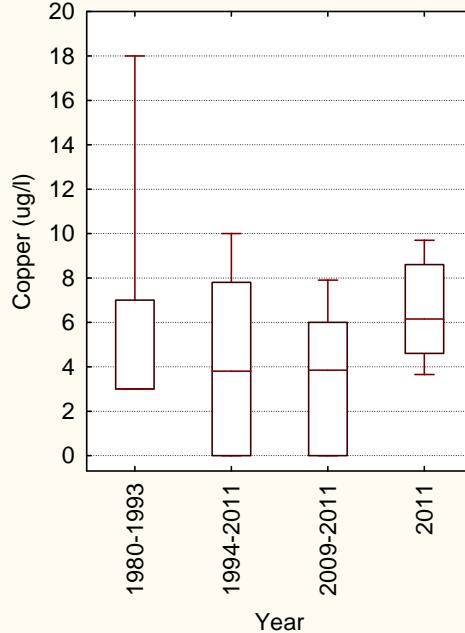
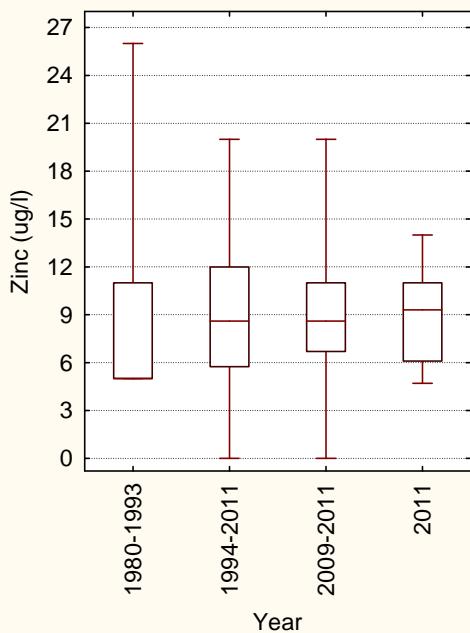
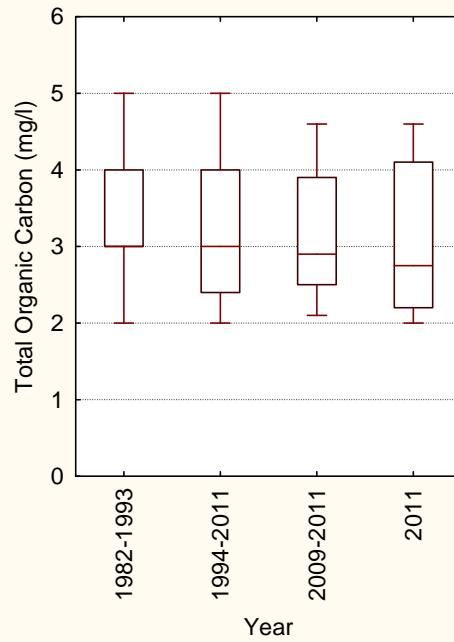
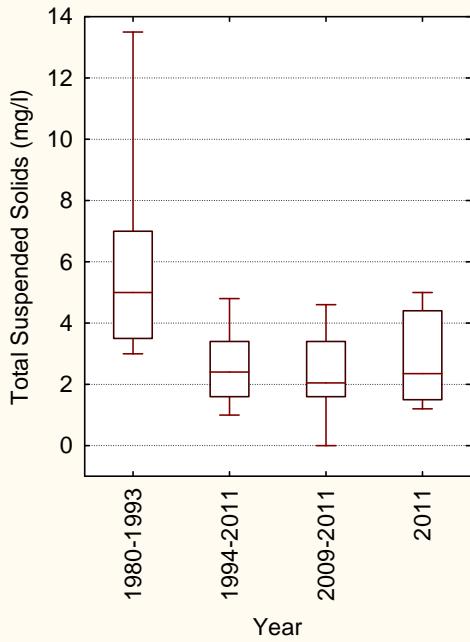
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-09



— Median □ 25%-75% ─ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-09



— Median □ 25%-75% ━ 10%-90%

OUTER HARBOR - SITE 9
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	11.5	10.8	4.51	0.62	0.007	0.63	0.018	0.09	0.017	0.008	2.50
Standard Error	0.0	0.9	0.2	0.77	0.05	0.001	0.05	0.009	0.03	0.002	0.001	0.18
Median	8.0	11.7	10.7	2.39	0.51	0.007	0.52	0.000	0.00	0.018	0.000	2.00
Mode	7.9	14.3	9.6	0.84	0.32	0.000	0.33	0.000	0.00	0.000	0.000	3.80
Standard Deviation	0.3	5.6	1.5	4.98	0.33	0.004	0.34	0.061	0.18	0.011	0.009	1.18
Sample Variance	0.1	31.2	2.2	24.77	0.11	0.000	0.11	0.004	0.03	0.000	0.000	1.38
Kurtosis	0.3	-0.6	-0.2	0.40	5.57	-0.207	5.14	35.949	0.46	-0.265	-0.758	1.26
Skewness	-0.8	-0.1	-0.3	1.28	1.83	-0.030	1.77	5.832	1.52	0.071	0.774	1.07
Range	1.3	20.2	6.4	16.31	1.72	0.016	1.72	0.390	0.56	0.043	0.031	5.30
Minimum	7.1	1.4	7.0	0.29	0.28	0.000	0.28	0.000	0.00	0.000	0.000	1.10
Maximum	8.4	21.6	13.4	16.60	2.00	0.016	2.00	0.390	0.56	0.043	0.031	6.40
Count	42	42	42	42	42	42	42	42	42	42	42	42
Confidence Level(95.0%)	0.1	1.7	0.5	1.55	0.10	0.001	0.11	0.019	0.06	0.003	0.003	0.37

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	2.4	7.2	234.3	231.5	0.9	2.8	3.2	419	32.9	7	0.7	10
Standard Error	0.2	1.0	14.2	14.3	0.3	0.4	0.4	26	6.2	2	0.1	2
Median	2.5	6.0	210.0	207.5	0.6	2.4	1.9	372	20.5	5	0.7	10
Mode	2.6	ND	190.0	ND	0.0	1.9	ND	ND	14.0	3	0.5	6
Standard Deviation	0.8	3.6	53.3	53.5	1.0	1.7	2.7	167	40.0	7	0.4	7
Sample Variance	0.7	12.7	2841.8	2859.5	1.0	2.7	7.2	27980	1596.7	52	0.2	43
Kurtosis	0.1	0.2	0.5	0.4	-1.6	-1.3	0.3	19	26.4	3	-0.2	-1
Skewness	0.0	1.0	1.3	1.2	0.4	0.0	1.3	4	4.8	2	0.0	0
Range	3.1	11.7	160.0	160.6	2.4	5.2	9.6	1023	249.0	26	1.4	19
Minimum	0.9	3.3	190.0	185.0	0.0	0.0	0.9	277	11.0	0	0.0	1
Maximum	4.0	15.0	350.0	345.6	2.4	5.2	10.5	1300	260.0	26	1.4	20
Count	14	13	14	14	14	14	42	42	42	14	14	13
Confidence Level(95.0%)	0.5	2.2	30.8	30.9	0.6	1.0	0.8	52	12.5	4	0.2	4

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 9
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	39.00	15.79	0.0	2.1	6.6	1.8	3.3	8.4	0.2	1.3	0.0	ND
Standard Error	1.23	0.66	0.0	1.3	0.7	0.5	0.9	1.2	0.1	0.4	0.0	ND
Median	37.00	15.00	0.0	0.0	6.2	1.3	3.1	9.3	0.0	1.1	0.0	ND
Mode	37.00	15.00	0.0	0.0	6.0	1.3	0.0	4.7	0.0	0.0	0.0	ND
Standard Deviation	4.59	2.49	0.0	4.8	2.3	1.9	3.0	4.2	0.2	1.4	0.0	ND
Sample Variance	21.08	6.18	0.0	23.4	5.3	3.5	8.7	17.3	0.1	1.9	0.0	ND
Kurtosis	-0.57	1.36	ND	7.3	-1.3	7.0	-1.5	0.0	0.9	4.7	ND	ND
Skewness	0.72	1.34	ND	2.7	0.1	2.6	0.2	-0.3	1.3	1.8	ND	ND
Range	15.00	8.00	0.0	17.0	6.5	7.5	7.8	15.0	0.7	5.1	0.0	0.0
Minimum	33.00	13.00	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	48.00	21.00	0.0	17.0	10.0	7.5	7.8	15.0	0.7	5.1	0.0	0.0
Count	14	14	14	14	10	14	10	13	14	13	14	0
Confidence Level(95.0%)	2.65	1.44	0.0	2.8	1.6	1.1	2.1	2.5	0.1	0.8	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	161	147	ND	ND	33.0	30.0	3.1	ND
Standard Error	5	6	ND	ND	0.9	0.7	0.2	ND
Median	150	140	ND	ND	30.0	28.0	2.8	ND
Mode	150	140	ND	ND	28.0	28.0	2.3	ND
Standard Deviation	19	20	ND	ND	5.6	4.6	1.3	ND
Sample Variance	352	388	ND	ND	31.2	21.4	1.8	ND
Kurtosis	0	5	ND	ND	-0.7	-0.4	0.2	ND
Skewness	1	2	ND	ND	0.9	1.0	0.4	ND
Range	60	70	0.0	0.0	17.0	16.0	6.7	0.0
Minimum	140	130	0.0	0.0	28.0	24.0	0.0	0.0
Maximum	200	200	0.0	0.0	45.0	40.0	6.7	0.0
Count	14	12	0	0	42	42	42	0
Confidence Level(95.0%)	11	13	ND	ND	1.7	1.4	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 10
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	12.4	10.7	6.46	0.66	0.009	0.68	0.015	0.14	0.023	0.010	2.54
Standard Error	0.0	0.9	0.3	0.97	0.04	0.001	0.04	0.003	0.04	0.003	0.002	0.15
Median	8.0	14.2	10.6	5.32	0.66	0.009	0.67	0.000	0.00	0.020	0.000	2.35
Mode	7.8	11.6	9.2	16.00	0.66	0.011	0.67	0.000	0.00	0.000	0.000	4.20
Standard Deviation	0.2	6.1	1.7	6.28	0.26	0.004	0.26	0.022	0.23	0.016	0.014	0.98
Sample Variance	0.1	37.5	2.9	39.47	0.07	0.000	0.07	0.000	0.05	0.000	0.000	0.96
Kurtosis	-0.6	-0.7	-1.3	0.45	0.99	1.145	1.13	-0.766	0.12	0.343	10.449	-0.59
Skewness	0.1	-0.3	0.3	1.09	0.84	-0.695	0.91	0.987	1.27	0.767	2.688	0.44
Range	0.9	21.0	5.4	24.52	1.03	0.016	1.13	0.062	0.76	0.064	0.076	3.62
Minimum	7.5	1.5	8.2	0.38	0.27	0.000	0.27	0.000	0.00	0.000	0.000	0.98
Maximum	8.4	22.5	13.6	24.90	1.30	0.016	1.40	0.062	0.76	0.064	0.076	4.60
Count	42	42	42	42	42	42	42	42	42	42	42	42
Confidence Level(95.0%)	0.1	1.9	0.5	1.96	0.08	0.001	0.08	0.007	0.07	0.005	0.004	0.31

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.8	5.9	257.9	251.8	1.6	6.1	5.7	427	34.5	69	1.2	57
Standard Error	0.2	0.8	14.8	14.2	0.3	2.2	1.1	14	2.7	50	0.2	39
Median	1.8	5.4	230.0	227.1	1.7	3.2	3.2	380	28.0	15	1.2	11
Mode	1.7	3.6	230.0	ND	0.0	3.0	4.1	358	23.0	0	0.0	1
Standard Deviation	0.7	3.1	55.4	53.3	1.2	8.2	6.9	90	17.4	188	0.7	140
Sample Variance	0.5	9.3	3064.3	2836.8	1.5	67.7	47.1	8186	302.9	35437	0.5	19736
Kurtosis	-1.1	-1.2	0.9	1.4	2.6	12.4	12.8	0	-0.1	14	2.0	12
Skewness	-0.2	0.6	1.1	1.2	0.9	3.5	3.4	1	0.9	4	0.4	3
Range	2.3	9.0	200.0	199.3	4.7	32.9	36.5	316	61.0	720	2.9	519
Minimum	0.6	2.0	190.0	183.9	0.0	1.1	1.6	318	13.0	0	0.0	1
Maximum	2.9	11.0	390.0	383.2	4.7	34.0	38.1	634	74.0	720	2.9	520
Count	14	13	14	14	14	14	42	42	42	14	14	13
Confidence Level(95.0%)	0.4	1.8	32.0	30.8	0.7	4.8	2.1	28	5.4	109	0.4	85

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 10
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	40.21	16.64	0.2	1.3	7.5	1.2	4.2	9.4	0.1	1.2	0.0	ND
Standard Error	1.47	0.89	0.2	0.7	0.7	0.2	0.8	1.1	0.1	0.3	0.0	ND
Median	39.50	15.00	0.0	0.0	8.4	1.3	5.0	8.9	0.0	1.1	0.0	ND
Mode	36.00	14.00	0.0	0.0	10.0	1.2	0.0	16.0	0.0	0.0	0.0	ND
Standard Deviation	5.49	3.34	0.7	2.7	2.5	0.6	2.8	4.1	0.2	1.3	0.0	ND
Sample Variance	30.18	11.17	0.4	7.1	6.4	0.4	7.8	16.5	0.1	1.6	0.0	ND
Kurtosis	-0.07	0.93	14.0	1.0	-1.5	1.1	-1.5	1.5	5.2	0.9	ND	ND
Skewness	0.86	1.36	3.7	1.7	-0.3	-1.0	-0.4	-0.3	2.2	1.0	ND	ND
Range	18.00	10.00	2.5	7.2	7.1	2.1	7.6	16.0	0.8	4.2	0.0	0.0
Minimum	34.00	14.00	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	52.00	24.00	2.5	7.2	11.0	2.1	7.6	16.0	0.8	4.2	0.0	0.0
Count	14	14	14	14	13	14	11	14	14	14	14	0
Confidence Level(95.0%)	3.17	1.93	0.4	1.5	1.5	0.4	1.9	2.3	0.1	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	170	145	ND	ND	34.1	30.8	3.3	ND
Standard Error	7	7	ND	ND	1.0	0.9	0.2	ND
Median	160	140	ND	ND	31.0	29.0	3.0	ND
Mode	150	130	ND	ND	30.0	27.0	2.4	ND
Standard Deviation	26	24	ND	ND	6.7	5.9	1.3	ND
Sample Variance	692	573	ND	ND	44.8	35.2	1.6	ND
Kurtosis	1	-1	ND	ND	-0.4	-0.2	-0.7	ND
Skewness	1	1	ND	ND	1.0	0.9	0.1	ND
Range	80	60	0.0	0.0	21.0	22.0	4.8	0.0
Minimum	150	120	0.0	0.0	26.0	21.0	0.9	0.0
Maximum	230	180	0.0	0.0	47.0	43.0	5.7	0.0
Count	14	12	0	0	42	42	42	0
Confidence Level(95.0%)	15	15	ND	ND	2.1	1.8	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 11
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.2	10.4	7.84	0.80	0.012	0.82	0.019	0.33	0.028	0.011	2.72
Standard Error	0.0	0.8	0.2	0.87	0.04	0.001	0.04	0.005	0.04	0.002	0.002	0.17
Median	8.0	14.4	10.3	6.46	0.77	0.012	0.79	0.000	0.38	0.029	0.009	2.50
Mode	8.0	11.4	10.5	10.80	1.20	0.012	1.20	0.000	0.00	0.035	0.000	3.40
Standard Deviation	0.2	5.8	1.4	6.23	0.30	0.007	0.31	0.033	0.32	0.013	0.012	1.20
Sample Variance	0.1	33.6	1.9	38.76	0.09	0.000	0.09	0.001	0.10	0.000	0.000	1.43
Kurtosis	-0.4	-0.4	0.0	-0.93	-1.06	7.980	-1.04	4.119	-0.32	-0.329	-1.455	-0.71
Skewness	0.1	-0.6	0.4	0.46	0.16	2.108	0.16	2.004	0.56	-0.227	0.378	0.64
Range	1.0	21.0	6.1	22.75	1.09	0.044	1.08	0.140	1.20	0.055	0.034	4.00
Minimum	7.5	1.4	7.2	0.45	0.31	0.000	0.32	0.000	0.00	0.000	0.000	1.10
Maximum	8.5	22.4	13.3	23.20	1.40	0.044	1.40	0.140	1.20	0.055	0.034	5.10
Count	51	51	51	51	51	51	51	51	51	51	51	51
Confidence Level(95.0%)	0.1	1.6	0.4	1.75	0.09	0.002	0.09	0.009	0.09	0.004	0.003	0.34

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.8	4.7	261.8	257.9	1.4	3.9	4.6	442	36.8	101	1.1	355
Standard Error	0.2	0.5	15.1	15.0	0.2	0.6	0.5	16	2.6	81	0.2	313
Median	1.7	4.1	240.0	236.6	1.6	3.4	2.8	388	31.0	12	1.1	84
Mode	1.9	ND	240.0	ND	0.0	3.4	2.6	550	26.0	10	1.0	ND
Standard Deviation	0.7	2.0	62.1	62.0	0.9	2.3	3.7	114	18.3	336	0.7	543
Sample Variance	0.5	4.0	3852.9	3843.9	0.8	5.3	13.6	13033	333.1	112792	0.6	294337
Kurtosis	-0.4	-0.5	0.9	1.0	-1.0	2.1	1.4	4	-0.1	17	2.5	ND
Skewness	0.1	0.9	1.1	1.1	-0.5	1.3	1.5	2	0.8	4	1.0	2
Range	2.7	6.1	230.0	229.2	2.6	9.0	13.5	602	77.0	1400	3.1	978
Minimum	0.5	2.3	190.0	187.3	0.0	1.0	1.3	293	11.0	0	0.0	2
Maximum	3.2	8.4	420.0	416.5	2.6	10.0	14.8	895	88.0	1400	3.1	980
Count	17	16	17	17	17	17	51	51	51	17	17	3
Confidence Level(95.0%)	0.4	1.1	31.9	31.9	0.5	1.2	1.0	32	5.1	173	0.4	1348

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 11
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	41.06	17.29	0.0	1.3	7.4	1.8	3.3	10.4	0.1	1.4	0.0	ND
Standard Error	1.42	0.87	0.0	0.7	0.6	0.3	0.7	1.4	0.1	0.4	0.0	ND
Median	40.00	16.00	0.0	0.0	6.5	1.4	2.9	9.0	0.0	1.1	0.0	ND
Mode	36.00	16.00	0.0	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	5.84	3.58	0.0	2.9	2.5	1.3	2.5	5.8	0.2	1.8	0.0	ND
Sample Variance	34.06	12.85	0.0	8.7	6.5	1.8	6.5	34.1	0.0	3.2	0.0	ND
Kurtosis	1.07	2.30	ND	4.4	-0.9	2.4	-1.2	2.5	7.3	10.5	ND	ND
Skewness	1.11	1.48	ND	2.3	0.5	1.3	0.1	1.1	2.7	3.0	ND	ND
Range	21.00	14.00	0.0	10.0	8.5	5.4	7.2	26.0	0.8	7.6	0.0	0.0
Minimum	35.00	13.00	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	56.00	27.00	0.0	10.0	12.0	5.4	7.2	26.0	0.8	7.6	0.0	0.0
Count	17	17	17	17	16	17	12	17	17	16	17	0
Confidence Level(95.0%)	3.00	1.84	0.0	1.5	1.4	0.7	1.6	3.0	0.1	1.0	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	174	144	0.0	ND	36.3	32.8	3.4	ND
Standard Error	7	7	0.0	ND	1.2	1.1	0.2	ND
Median	170	130	0.0	ND	33.0	30.0	3.0	ND
Mode	150	130	0.0	ND	31.0	28.0	2.6	ND
Standard Deviation	29	32	0.0	ND	8.7	7.6	1.6	ND
Sample Variance	837	1043	0.0	ND	75.0	58.0	2.6	ND
Kurtosis	2	0	ND	ND	0.8	1.8	-0.4	ND
Skewness	1	1	ND	ND	1.3	1.4	0.4	ND
Range	110	126	0.0	0.0	35.0	35.0	6.9	0.0
Minimum	140	94	0.0	0.0	26.0	23.0	0.0	0.0
Maximum	250	220	0.0	0.0	61.0	58.0	6.9	0.0
Count	17	21	3	0	51	51	51	0
Confidence Level(95.0%)	15	15	0.0	ND	2.4	2.1	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 12
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.4	11.2	1.42	0.32	0.002	0.32	0.000	0.05	0.001	0.001	1.69
Standard Error	0.0	0.9	0.2	0.28	0.01	0.000	0.01	0.000	0.03	0.000	0.001	0.05
Median	8.0	12.2	11.5	1.20	0.28	0.003	0.29	0.000	0.00	0.000	0.000	1.80
Mode	8.0	12.2	12.3	0.00	0.28	0.000	0.28	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	5.7	1.4	1.74	0.07	0.002	0.07	0.000	0.21	0.003	0.005	0.34
Sample Variance	0.0	32.3	2.1	3.04	0.01	0.000	0.00	0.000	0.05	0.000	0.000	0.12
Kurtosis	-0.6	-0.5	-1.2	26.16	-0.56	-0.759	-0.59	ND	23.72	10.156	12.759	-1.22
Skewness	-0.1	0.1	-0.1	4.69	0.84	-0.010	0.82	ND	4.70	3.381	3.684	-0.16
Range	0.7	21.0	4.8	11.10	0.23	0.007	0.23	0.000	1.20	0.013	0.022	1.10
Minimum	7.6	1.4	8.8	0.00	0.23	0.000	0.23	0.000	0.00	0.000	0.000	1.20
Maximum	8.3	22.4	13.6	11.10	0.46	0.007	0.46	0.000	1.20	0.013	0.022	2.30
Count	39	39	39	39	39	39	39	38	38	39	39	39
Confidence Level(95.0%)	0.1	1.8	0.5	0.57	0.02	0.001	0.02	0.000	0.07	0.001	0.002	0.11

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	5.5	14.0	173.8	172.6	0.1	1.3	1.4	290	11.0	1	0.1	ND
Standard Error	0.8	1.0	5.1	5.2	0.1	0.4	0.2	2	0.3	1	0.1	ND
Median	7.2	15.5	170.0	168.8	0.0	1.2	0.7	287	11.0	0	0.0	ND
Mode	ND	16.0	170.0	200.0	0.0	0.0	0.5	285	11.0	0	0.0	ND
Standard Deviation	2.7	3.5	18.5	18.8	0.5	1.6	1.5	15	1.7	3	0.3	ND
Sample Variance	7.5	12.4	342.3	352.6	0.2	2.6	2.2	224	2.8	8	0.1	ND
Kurtosis	-1.6	5.5	-0.3	-0.4	13.0	2.5	1.2	20	13.9	10	7.3	ND
Skewness	-0.6	-2.3	0.0	0.2	3.6	1.5	1.6	4	3.2	3	2.7	ND
Range	7.3	11.8	60.0	60.0	1.8	5.4	5.3	93	9.8	10	1.0	0
Minimum	1.0	4.2	140.0	140.0	0.0	0.0	0.3	276	9.2	0	0.0	0
Maximum	8.3	16.0	200.0	200.0	1.8	5.4	5.6	369	19.0	10	1.0	0
Count	13	12	13	13	13	13	39	39	39	13	13	0
Confidence Level(95.0%)	1.7	2.2	11.2	11.3	0.3	1.0	0.5	5	0.5	2	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 12
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.46	12.85	0.0	0.7	5.4	0.9	3.6	7.0	0.1	1.3	0.0	ND
Standard Error	0.35	0.25	0.0	0.5	0.5	0.1	0.9	1.3	0.1	0.4	0.0	ND
Median	35.00	13.00	0.0	0.0	5.3	0.9	4.3	5.9	0.0	1.1	0.0	ND
Mode	35.00	13.00	0.0	0.0	ND	0.8	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	1.27	0.90	0.0	1.7	1.8	0.5	2.7	4.4	0.2	1.3	0.0	ND
Sample Variance	1.60	0.81	0.0	3.1	3.2	0.2	7.5	19.5	0.1	1.7	0.0	ND
Kurtosis	-0.54	1.54	ND	3.3	-1.1	1.4	-0.9	1.8	4.9	5.7	ND	ND
Skewness	-0.48	1.16	ND	2.2	0.2	-0.5	-0.2	1.1	2.3	2.1	ND	ND
Range	4.00	3.00	0.0	4.8	5.4	1.8	8.0	17.0	0.8	5.0	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	36.00	15.00	0.0	4.8	8.4	1.8	8.0	17.0	0.8	5.0	0.0	0.0
Count	13	13	13	13	11	13	10	12	13	13	13	0
Confidence Level(95.0%)	0.76	0.54	0.0	1.1	1.2	0.3	2.0	2.8	0.1	0.8	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	139	112	ND	ND	28.3	26.3	1.9	ND
Standard Error	1	1	ND	ND	0.3	0.3	0.1	ND
Median	140	110	ND	ND	28.0	26.0	2.0	ND
Mode	140	110	ND	ND	28.0	26.0	1.9	ND
Standard Deviation	5	4	ND	ND	2.1	2.1	0.7	ND
Sample Variance	24	19	ND	ND	4.3	4.4	0.4	ND
Kurtosis	3	1	ND	ND	2.4	1.9	3.7	ND
Skewness	0	2	ND	ND	1.2	1.0	-1.8	ND
Range	20	10	0.0	0.0	10.0	10.0	2.8	0.0
Minimum	130	110	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	150	120	0.0	0.0	34.0	32.0	2.8	0.0
Count	13	9	0	0	39	39	39	0
Confidence Level(95.0%)	3	3	ND	ND	0.7	0.7	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 13
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.3	11.2	1.23	0.34	0.003	0.34	0.002	0.22	0.004	0.001	1.81
Standard Error	0.0	0.9	0.2	0.11	0.02	0.000	0.02	0.001	0.09	0.002	0.001	0.08
Median	8.0	11.5	11.3	1.09	0.28	0.003	0.29	0.000	0.00	0.000	0.000	1.80
Mode	8.0	4.4	12.6	0.79	0.27	0.000	0.28	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	5.6	1.4	0.68	0.11	0.002	0.11	0.008	0.57	0.014	0.003	0.50
Sample Variance	0.0	30.8	2.0	0.46	0.01	0.000	0.01	0.000	0.33	0.000	0.000	0.25
Kurtosis	0.4	-0.3	-1.1	0.16	0.26	-1.007	0.36	17.699	6.48	31.537	12.236	-0.53
Skewness	0.0	0.3	-0.1	0.62	1.25	-0.438	1.29	4.309	2.73	5.433	3.570	0.58
Range	0.8	21.0	5.0	2.74	0.36	0.006	0.37	0.038	2.20	0.082	0.015	1.80
Minimum	7.6	1.6	8.7	0.22	0.23	0.000	0.23	0.000	0.00	0.000	0.000	1.00
Maximum	8.4	22.6	13.7	2.96	0.59	0.006	0.60	0.038	2.20	0.082	0.015	2.80
Count	39	39	39	39	39	39	39	39	39	38	38	39
Confidence Level(95.0%)	0.1	1.8	0.5	0.22	0.04	0.001	0.04	0.003	0.19	0.004	0.001	0.16

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	5.0	13.6	180.0	178.8	0.3	1.2	1.7	301	12.3	1	0.1	1
Standard Error	0.7	1.5	7.4	7.6	0.1	0.4	0.3	5	0.7	1	0.1	0
Median	5.5	15.2	170.0	170.0	0.0	1.0	0.9	286	10.0	0	0.0	1
Mode	5.5	18.0	170.0	170.0	0.0	0.0	1.2	285	10.0	0	0.0	0
Standard Deviation	2.6	5.3	26.8	27.2	0.5	1.4	1.9	32	4.4	2	0.3	1
Sample Variance	6.8	28.6	716.7	741.8	0.3	1.9	3.7	998	19.6	6	0.1	2
Kurtosis	-1.3	-1.5	7.4	7.3	0.4	-0.7	4.1	6	7.6	6	3.2	0
Skewness	-0.2	-0.4	2.5	2.4	1.5	0.8	2.1	2	2.7	2	2.0	1
Range	7.5	14.6	110.0	111.0	1.3	3.8	8.1	144	20.4	8	0.9	4
Minimum	1.0	4.4	150.0	149.0	0.0	0.0	0.3	277	9.6	0	0.0	0
Maximum	8.5	19.0	260.0	260.0	1.3	3.8	8.4	421	30.0	8	0.9	4
Count	13	12	13	13	13	13	39	39	39	13	13	12
Confidence Level(95.0%)	1.6	3.4	16.2	16.5	0.3	0.8	0.6	10	1.4	1	0.2	1

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 13
WATER QUALITY DATA - 2011

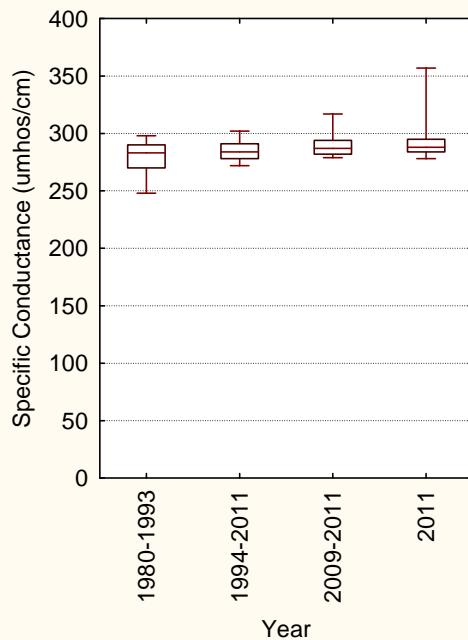
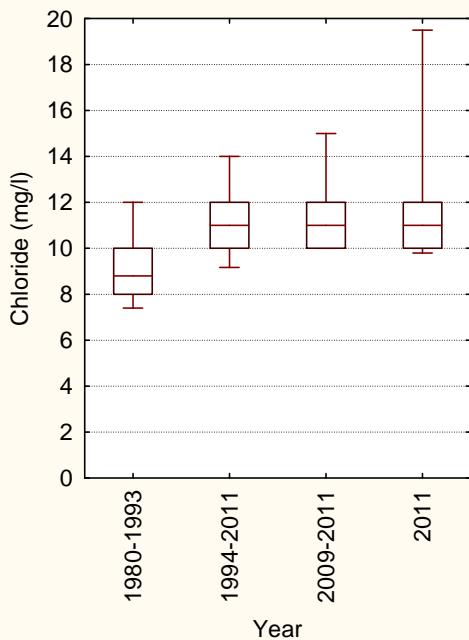
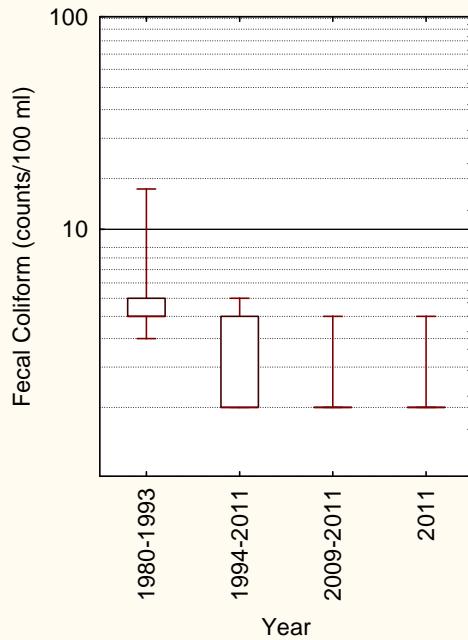
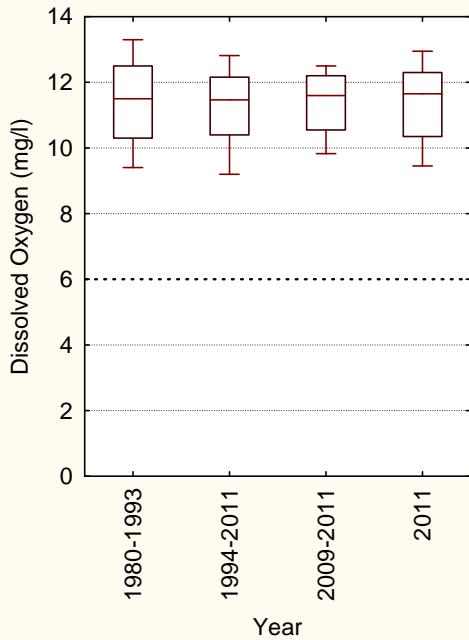
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.69	13.08	0.0	0.9	6.3	1.1	3.0	9.2	0.1	0.8	0.0	ND
Standard Error	0.61	0.35	0.0	0.6	0.5	0.2	0.9	1.7	0.1	0.2	0.0	ND
Median	34.00	13.00	0.0	0.0	6.3	1.1	3.6	6.9	0.0	0.8	0.0	ND
Mode	34.00	12.00	0.0	0.0	ND	0.0	0.0	5.5	0.0	0.0	0.0	ND
Standard Deviation	2.21	1.26	0.0	2.3	1.6	0.8	2.5	6.0	0.3	0.7	0.0	ND
Sample Variance	4.90	1.58	0.0	5.2	2.6	0.6	6.0	36.0	0.1	0.5	0.0	ND
Kurtosis	5.61	1.29	ND	5.1	-0.5	0.4	0.0	3.2	9.7	-1.2	ND	ND
Skewness	2.04	1.32	ND	2.4	-0.5	0.3	0.4	1.7	3.1	0.2	ND	ND
Range	9.00	4.00	0.0	7.2	4.9	2.7	7.3	21.4	0.9	1.9	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.4	0.0	0.0	3.6	0.0	0.0	0.0	0.0
Maximum	41.00	16.00	0.0	7.2	8.3	2.7	7.3	25.0	0.9	1.9	0.0	0.0
Count	13	13	13	13	9	13	8	13	13	13	13	0
Confidence Level(95.0%)	1.34	0.76	0.0	1.4	1.3	0.5	2.0	3.6	0.2	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	142	121	ND	ND	28.7	26.6	2.0	ND
Standard Error	3	3	ND	ND	0.5	0.5	0.1	ND
Median	140	120	ND	ND	28.0	26.0	2.1	ND
Mode	140	120	ND	ND	28.0	26.0	1.9	ND
Standard Deviation	10	9	ND	ND	3.1	3.0	0.8	ND
Sample Variance	97	86	ND	ND	9.8	8.8	0.6	ND
Kurtosis	6	1	ND	ND	1.5	1.4	2.4	ND
Skewness	2	1	ND	ND	1.2	0.8	-1.1	ND
Range	40	30	0.0	0.0	13.0	13.0	3.4	0.0
Minimum	130	110	0.0	0.0	23.0	21.0	0.0	0.0
Maximum	170	140	0.0	0.0	36.0	34.0	3.4	0.0
Count	13	9	0	0	39	39	39	0
Confidence Level(95.0%)	6	7	ND	ND	1.0	1.0	0.2	ND

ND = No Data

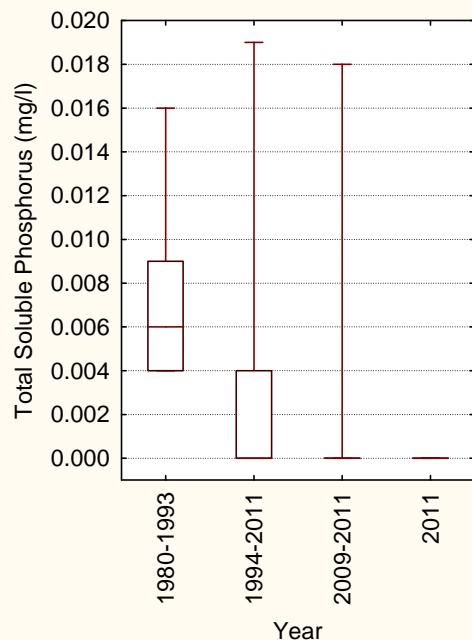
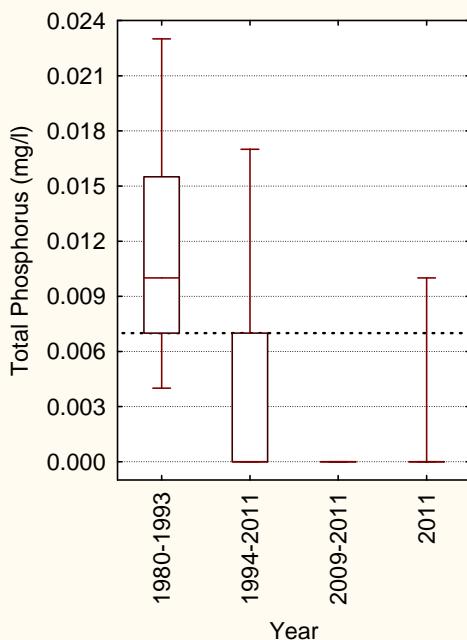
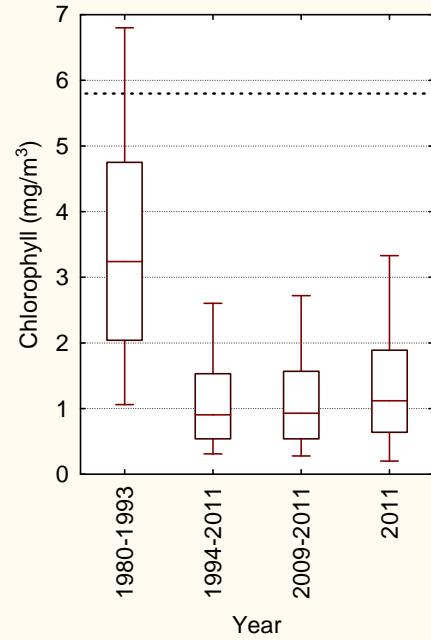
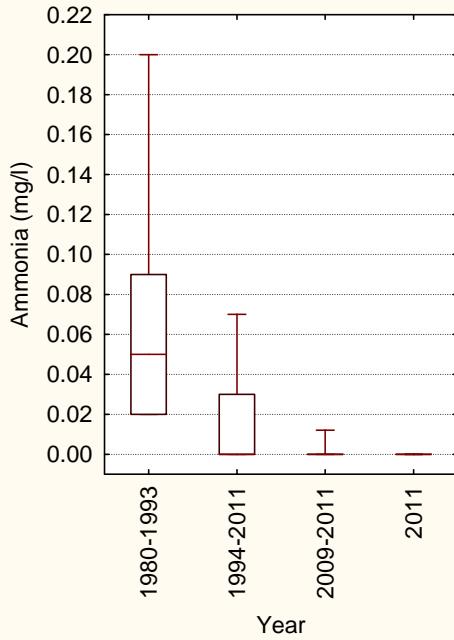
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-14



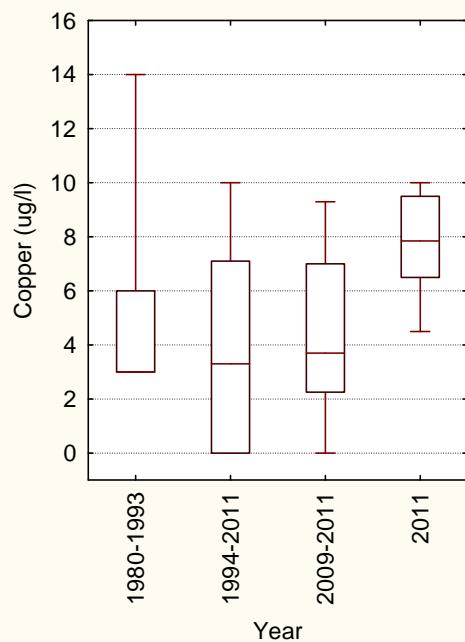
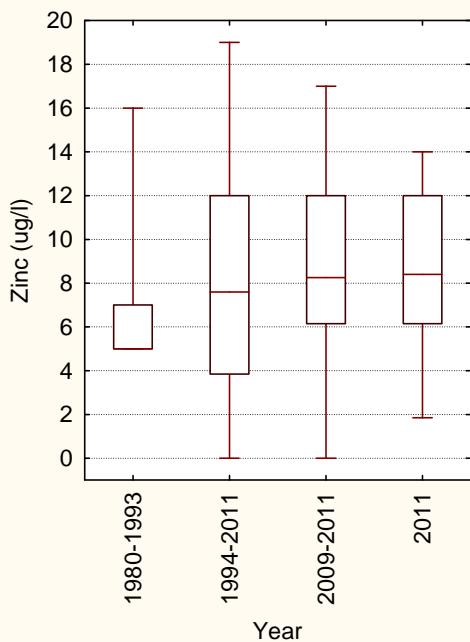
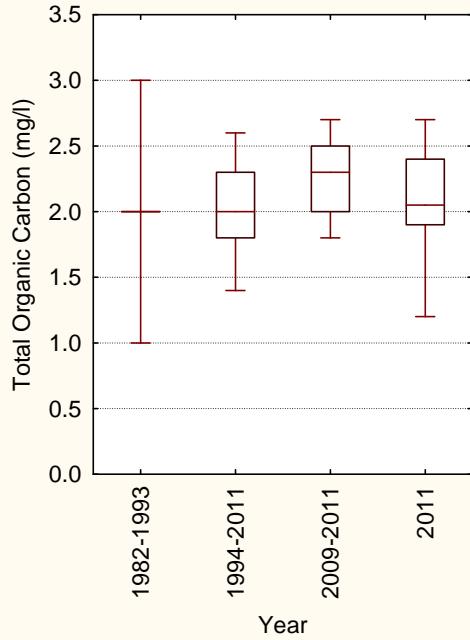
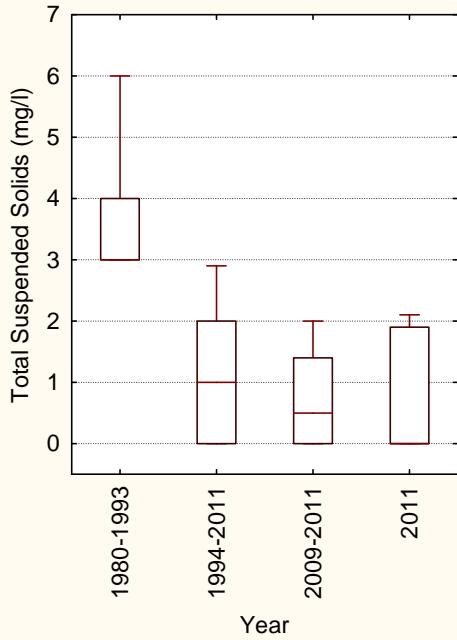
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-14



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Outer Harbor, Site OH-14



— Median □ 25%-75% ┌ 10%-90%

OUTER HARBOR - SITE 14
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	10.8	11.4	1.39	0.34	0.003	0.34	0.001	0.03	0.001	0.001	1.81
Standard Error	0.0	0.7	0.2	0.15	0.01	0.000	0.01	0.001	0.02	0.001	0.001	0.07
Median	8.0	10.1	11.7	1.12	0.28	0.003	0.28	0.000	0.00	0.000	0.000	1.80
Mode	8.2	14.3	11.5	0.94	0.26	0.000	0.28	0.000	0.00	0.000	0.000	1.40
Standard Deviation	0.3	5.1	1.3	1.13	0.11	0.002	0.11	0.005	0.12	0.004	0.004	0.51
Sample Variance	0.1	25.9	1.8	1.27	0.01	0.000	0.01	0.000	0.01	0.000	0.000	0.26
Kurtosis	0.0	-0.3	-0.7	2.19	0.35	-0.531	0.37	35.951	11.98	5.643	17.820	-0.74
Skewness	-0.7	0.3	-0.4	1.45	1.27	-0.154	1.28	5.911	3.65	2.640	4.079	0.38
Range	1.3	20.9	5.3	5.24	0.39	0.008	0.40	0.036	0.54	0.017	0.024	1.88
Minimum	7.2	1.5	8.4	0.11	0.21	0.000	0.21	0.000	0.00	0.000	0.000	0.92
Maximum	8.5	22.4	13.7	5.35	0.60	0.008	0.61	0.036	0.54	0.017	0.024	2.80
Count	60	60	60	59	60	60	60	59	59	58	59	60
Confidence Level(95.0%)	0.1	1.3	0.3	0.29	0.03	0.001	0.03	0.001	0.03	0.001	0.001	0.13

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	5.4	14.4	178.5	177.6	0.2	0.9	1.3	306	12.5	0	0.1	ND
Standard Error	0.4	1.1	8.0	8.1	0.2	0.3	0.2	6	0.5	0	0.0	ND
Median	5.5	18.0	170.0	170.0	0.0	0.0	0.8	288	11.0	0	0.0	ND
Mode	5.5	18.5	160.0	180.0	0.0	0.0	1.1	284	11.0	0	0.0	ND
Standard Deviation	1.9	4.9	28.8	29.1	0.6	1.1	1.5	44	4.2	1	0.2	ND
Sample Variance	3.8	23.8	830.8	844.1	0.4	1.2	2.3	1976	17.7	1	0.0	ND
Kurtosis	-0.7	-0.8	5.3	5.4	3.9	-0.5	31.0	6	3.9	3	2.8	ND
Skewness	-0.3	-0.8	2.2	2.2	2.3	0.9	5.0	2	2.1	2	2.1	ND
Range	6.6	13.6	110.0	110.0	1.8	3.1	10.9	218	19.7	3	0.5	0
Minimum	1.5	5.0	150.0	150.0	0.0	0.0	0.3	275	9.3	0	0.0	0
Maximum	8.1	18.6	260.0	260.0	1.8	3.1	11.2	493	29.0	3	0.5	0
Count	20	19	13	13	13	13	59	60	60	20	20	0
Confidence Level(95.0%)	0.9	2.4	17.4	17.6	0.4	0.7	0.4	11	1.1	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 14
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.60	13.00	0.2	0.9	7.8	1.0	4.4	8.6	0.1	1.2	0.0	ND
Standard Error	0.52	0.30	0.1	0.5	0.5	0.1	0.7	1.0	0.1	0.4	0.0	ND
Median	34.00	13.00	0.0	0.0	7.9	1.0	4.9	8.4	0.0	0.9	0.0	ND
Mode	34.00	12.00	0.0	0.0	10.0	0.0	0.0	12.0	0.0	0.0	0.0	ND
Standard Deviation	2.33	1.34	0.5	2.2	2.2	0.7	2.9	4.4	0.3	1.6	0.0	ND
Sample Variance	5.41	1.79	0.3	4.7	4.8	0.4	8.6	19.8	0.1	2.6	0.0	ND
Kurtosis	3.00	0.75	17.3	5.2	-0.4	4.4	-1.2	-0.3	2.0	5.4	ND	ND
Skewness	1.82	1.03	4.1	2.5	-0.6	1.4	-0.5	-0.4	1.8	2.2	ND	ND
Range	9.00	5.00	2.4	7.7	7.7	3.1	7.8	16.0	0.8	6.4	0.0	0.0
Minimum	32.00	11.00	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	41.00	16.00	2.4	7.7	11.0	3.1	7.8	16.0	0.8	6.4	0.0	0.0
Count	20	20	20	20	16	20	17	20	20	20	20	0
Confidence Level(95.0%)	1.09	0.63	0.3	1.0	1.2	0.3	1.5	2.1	0.1	0.8	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	140	112	0.0	3.1	28.5	26.5	2.0	ND
Standard Error	3	2	0.0	0.5	0.5	0.5	0.1	ND
Median	140	110	0.0	3.0	28.0	26.0	2.1	ND
Mode	140	110	0.0	3.0	28.0	25.0	1.9	ND
Standard Deviation	12	11	0.0	1.8	3.2	3.1	0.7	ND
Sample Variance	142	124	0.0	3.2	10.3	9.7	0.6	ND
Kurtosis	3	2	ND	6.6	2.0	1.7	2.4	ND
Skewness	2	1	ND	1.8	1.5	1.2	-1.3	ND
Range	40	42	0.0	8.2	14.0	14.0	3.4	0.0
Minimum	130	98	0.0	0.0	23.0	21.0	0.0	0.0
Maximum	170	140	0.0	8.2	37.0	35.0	3.4	0.0
Count	20	24	13	13	39	39	38	0
Confidence Level(95.0%)	6	5	0.0	1.1	1.0	1.0	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 15
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	14.3	10.0	3.52	0.54	0.008	0.55	0.027	0.31	0.030	0.016	3.28
Standard Error	0.1	1.6	0.5	0.82	0.07	0.001	0.07	0.008	0.06	0.003	0.003	0.28
Median	8.1	15.3	10.5	2.59	0.56	0.009	0.56	0.031	0.39	0.028	0.020	3.20
Mode	8.1	ND	8.8	ND	0.58	0.011	0.59	0.000	0.00	0.027	0.000	3.00
Standard Deviation	0.2	5.7	1.7	2.83	0.24	0.004	0.24	0.028	0.23	0.012	0.012	1.03
Sample Variance	0.1	32.8	2.8	8.03	0.06	0.000	0.06	0.001	0.05	0.000	0.000	1.06
Kurtosis	-0.1	0.1	-0.9	-0.33	-0.06	-0.326	-0.08	-1.330	-1.24	0.305	-1.377	0.18
Skewness	-0.8	-0.7	0.2	0.78	0.72	-0.644	0.71	0.405	-0.48	0.402	-0.307	0.51
Range	0.8	20.4	5.5	8.86	0.75	0.014	0.74	0.077	0.65	0.043	0.032	3.70
Minimum	7.5	2.3	7.6	0.42	0.25	0.000	0.26	0.000	0.00	0.012	0.000	1.70
Maximum	8.3	22.7	13.1	9.28	1.00	0.014	1.00	0.077	0.65	0.055	0.032	5.40
Count	13	13	13	12	13	13	13	13	13	13	13	13
Confidence Level(95.0%)	0.1	3.5	1.0	1.80	0.14	0.003	0.14	0.017	0.14	0.007	0.007	0.62

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	249.2	245.8	1.2	3.5	3.3	409	28.2	278	1.2	ND
Standard Error	ND	ND	13.6	13.5	0.2	0.4	0.5	20	2.8	184	0.3	ND
Median	ND	ND	240.0	234.8	1.5	3.0	3.7	396	24.0	10	1.0	ND
Mode	ND	ND	240.0	ND	0.0	3.0	ND	ND	42.0	0	0.0	ND
Standard Deviation	ND	ND	49.1	48.8	0.9	1.4	1.8	70	9.9	664	1.1	ND
Sample Variance	ND	ND	2407.7	2378.8	0.7	1.9	3.2	4943	98.7	441286	1.2	ND
Kurtosis	ND	ND	0.3	0.4	-1.3	-0.9	-0.6	0	-1.3	6	0.2	ND
Skewness	ND	ND	0.9	0.9	-0.5	0.4	0.0	1	0.6	3	1.0	ND
Range	0.0	0.0	170.0	170.9	2.4	4.5	6.1	236	28.0	2200	3.3	0
Minimum	0.0	0.0	180.0	175.9	0.0	1.5	0.2	329	15.0	0	0.0	0
Maximum	0.0	0.0	350.0	346.8	2.4	6.0	6.3	565	43.0	2200	3.3	0
Count	0	0	13	13	13	13	13	13	13	13	13	0
Confidence Level(95.0%)	ND	ND	29.7	29.5	0.5	0.8	1.1	42	6.0	401	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 15
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	40.08	18.23	0.0	1.1	8.1	1.0	3.4	11.4	0.1	0.9	0.0	ND
Standard Error	1.70	0.91	0.0	0.8	0.7	0.1	0.7	1.9	0.1	0.2	0.0	ND
Median	37.00	18.00	0.0	0.0	8.9	1.1	3.6	10.0	0.0	0.9	0.0	ND
Mode	36.00	18.00	0.0	0.0	9.5	0.0	0.0	10.0	0.0	0.0	0.0	ND
Standard Deviation	6.13	3.30	0.0	2.9	2.4	0.5	2.3	6.8	0.3	0.7	0.0	ND
Sample Variance	37.58	10.86	0.0	8.4	5.9	0.2	5.2	46.8	0.1	0.5	0.0	ND
Kurtosis	-0.58	-0.09	ND	5.9	0.1	1.1	-1.1	2.4	9.7	-0.3	ND	ND
Skewness	0.99	0.90	ND	2.5	-0.5	-1.3	-0.4	1.6	3.1	0.3	ND	ND
Range	17.00	10.00	0.0	9.4	8.5	1.5	6.3	24.2	0.9	2.3	0.0	0.0
Minimum	34.00	15.00	0.0	0.0	3.5	0.0	0.0	3.8	0.0	0.0	0.0	0.0
Maximum	51.00	25.00	0.0	9.4	12.0	1.5	6.3	28.0	0.9	2.3	0.0	0.0
Count	13	13	13	13	11	13	10	13	13	12	13	0
Confidence Level(95.0%)	3.70	1.99	0.0	1.8	1.6	0.3	1.6	4.1	0.2	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	174	173	0.2	4.3	37.2	33.6	3.7	ND
Standard Error	8	12	0.2	0.3	2.4	2.1	0.4	ND
Median	160	180	0.0	4.2	33.0	31.0	3.3	ND
Mode	160	ND	0.0	4.3	32.0	30.0	3.0	ND
Standard Deviation	28	21	0.6	0.9	8.8	7.5	1.5	ND
Sample Variance	809	433	0.4	0.8	78.0	55.9	2.3	ND
Kurtosis	0	ND	13.0	1.5	2.9	4.2	-0.5	ND
Skewness	1	-1	3.6	1.2	1.8	2.0	0.2	ND
Range	80	40	2.2	3.4	30.0	26.0	5.3	0.0
Minimum	150	150	0.0	3.0	30.0	28.0	1.1	0.0
Maximum	230	190	2.2	6.4	60.0	54.0	6.4	0.0
Count	13	3	13	13	13	13	13	0
Confidence Level(95.0%)	17	52	0.4	0.6	5.3	4.5	0.9	ND

ND = No Data

Provisional MMSD Water Quality Data

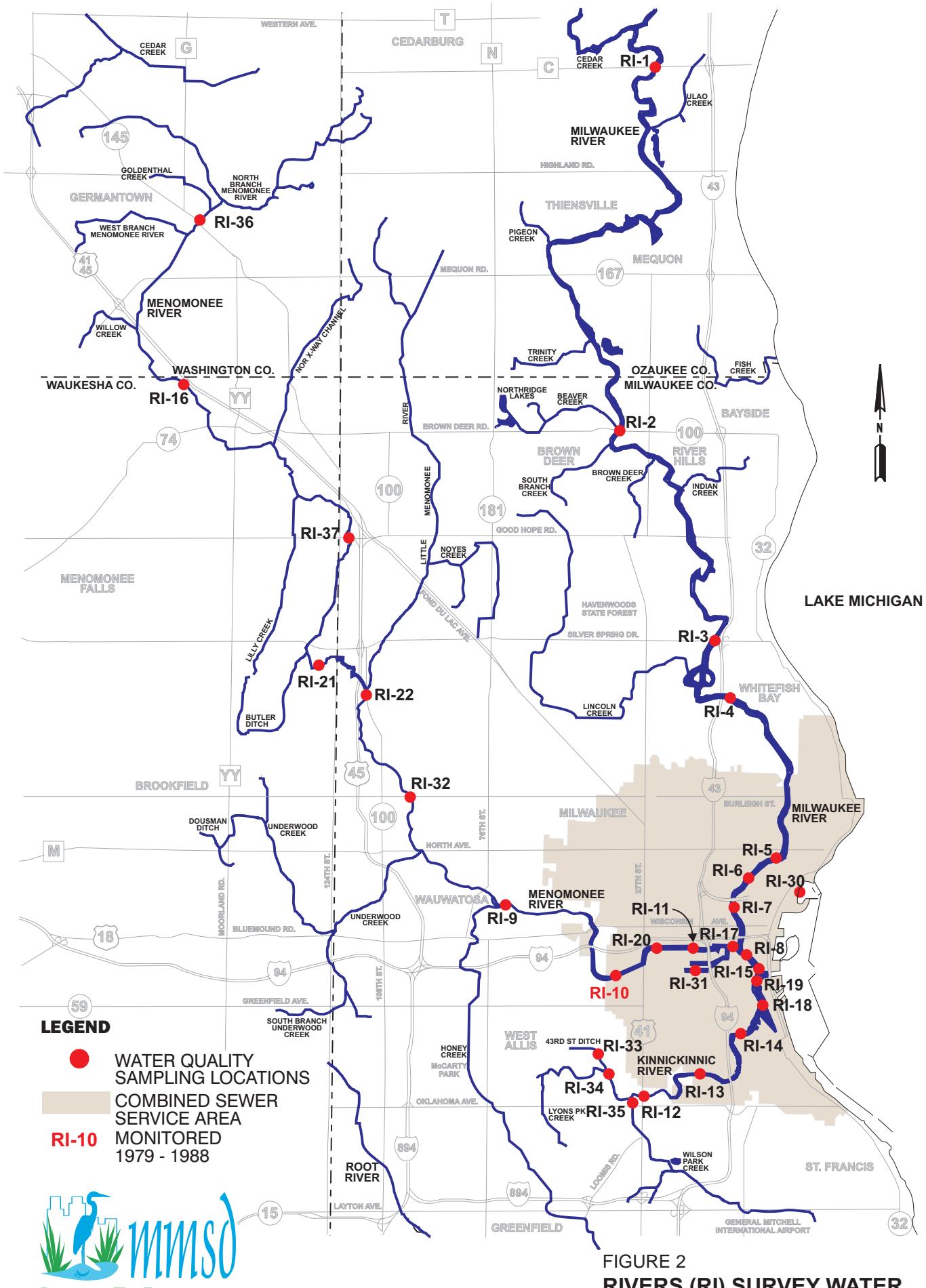


FIGURE 2
RIVERS (RI) SURVEY WATER
QUALITY SAMPLING LOCATIONS

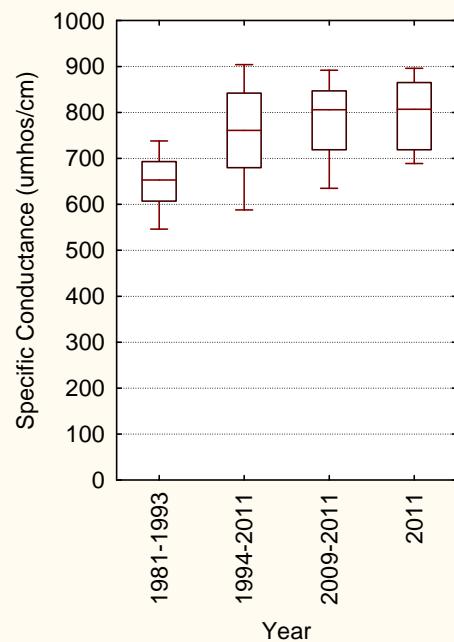
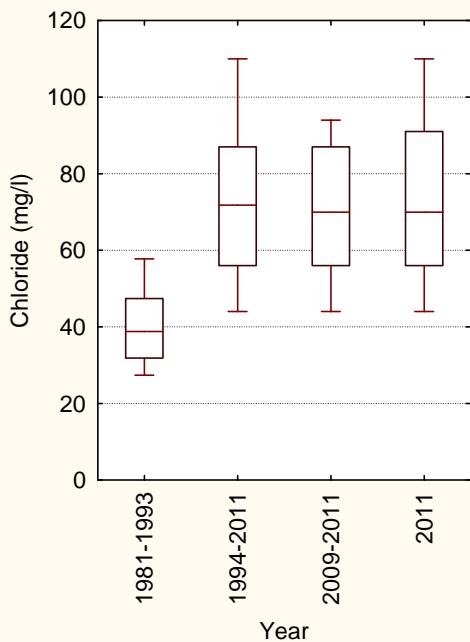
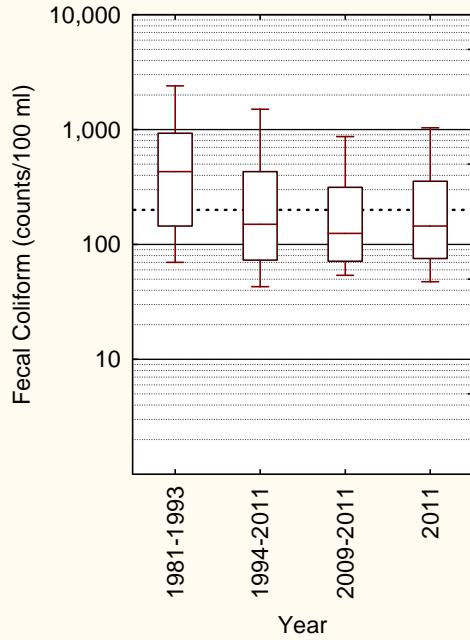
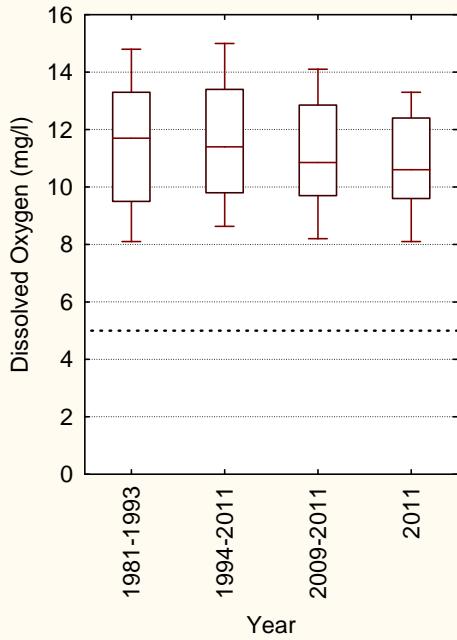
1/9/09

02-034 UWM survey



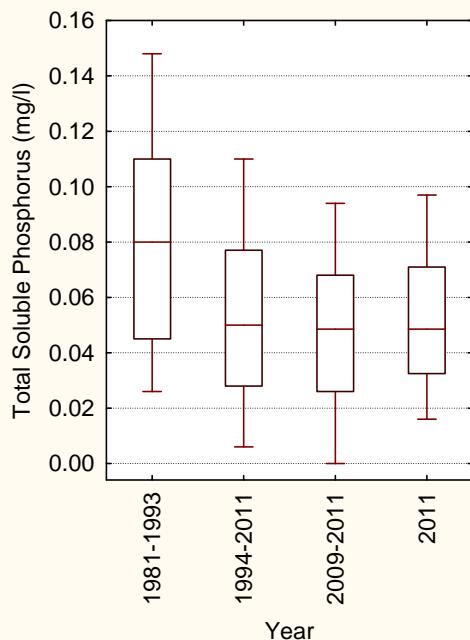
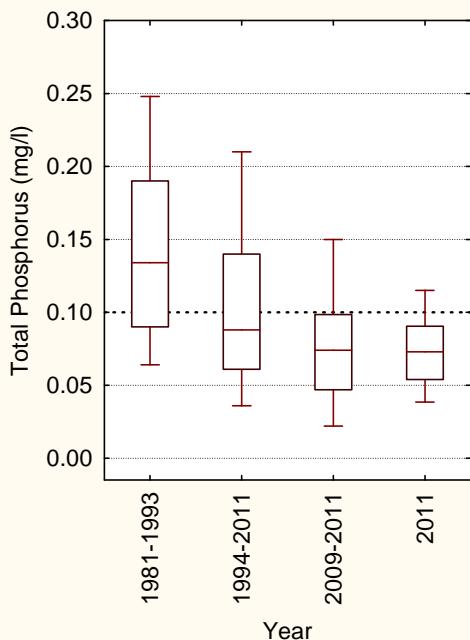
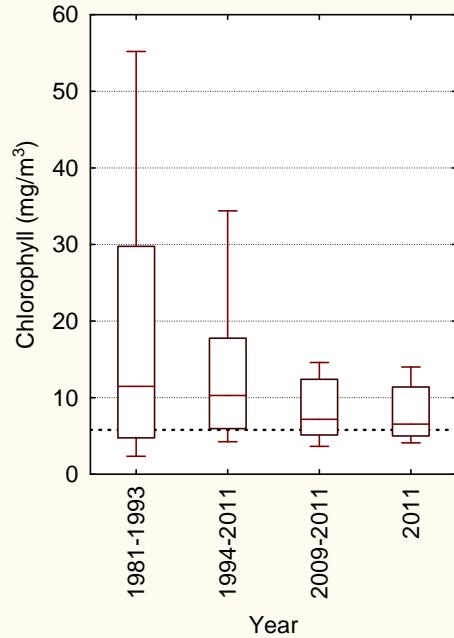
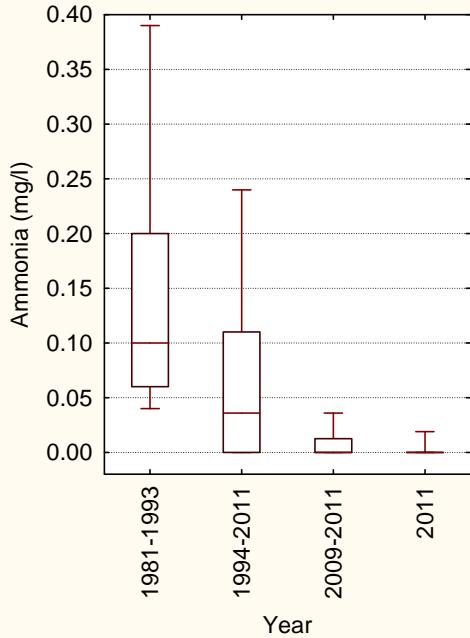
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Improving Water Quality

MMSD Water Quality Monitoring Program Data
Milwaukee River at Pioneer Road, Site RI-01



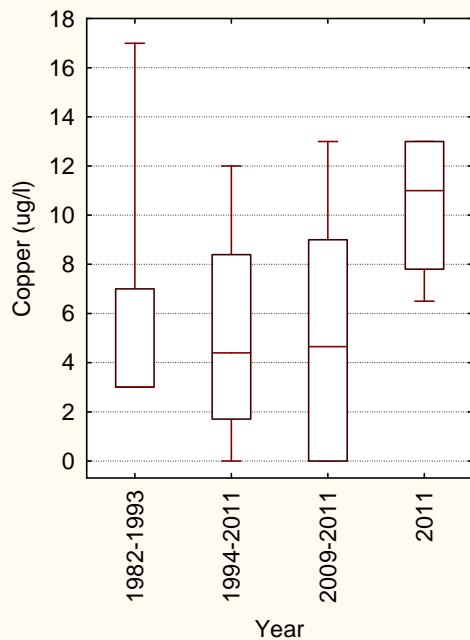
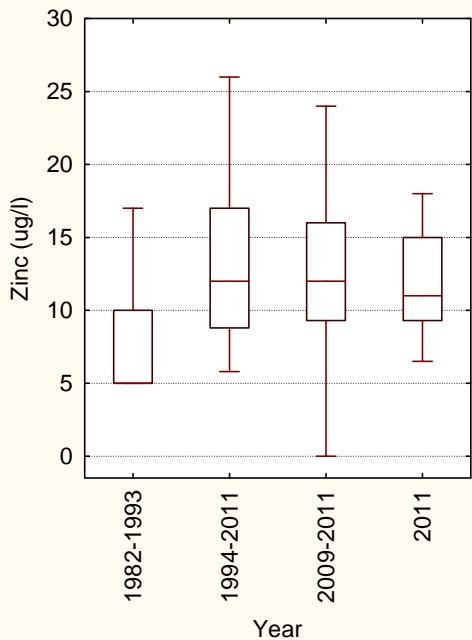
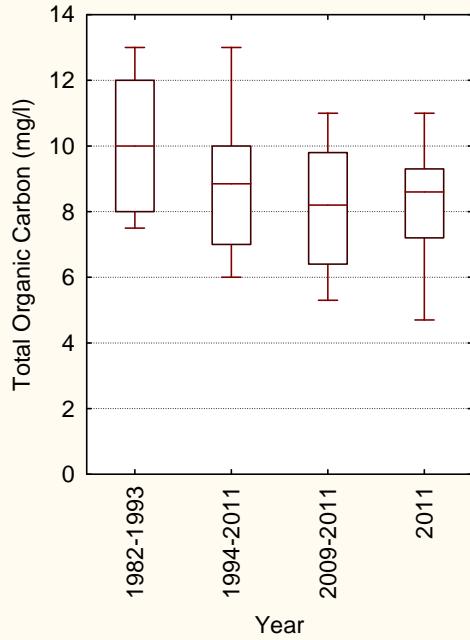
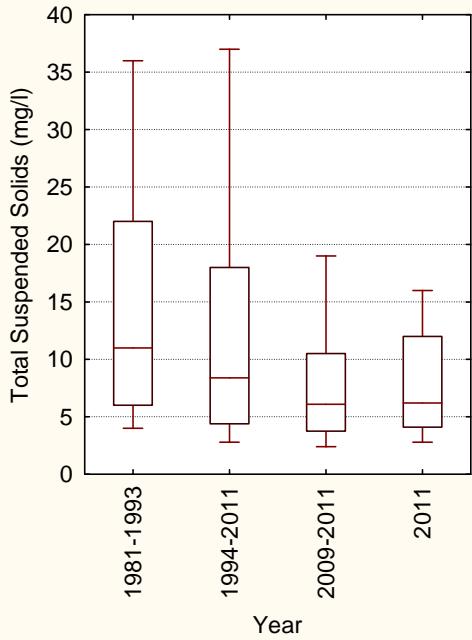
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at Pioneer Road, Site RI-01



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at Pioneer Road, Site RI-01



— Median □ 25%-75% □ 10%-90%

PIONEER ROAD - SITE 1
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.2	14.9	10.6	8.62	1.31	0.011	1.33	0.006	0.65	0.076	0.053	ND
Standard Error	0.0	1.6	0.5	1.39	0.07	0.001	0.08	0.004	0.06	0.007	0.007	ND
Median	8.2	16.6	10.6	6.54	1.20	0.012	1.30	0.000	0.71	0.073	0.049	ND
Mode	8.1	24.7	ND	ND	1.50	0.012	1.00	0.000	0.77	0.100	0.049	ND
Standard Deviation	0.2	7.5	2.1	6.37	0.34	0.006	0.35	0.020	0.29	0.033	0.029	ND
Sample Variance	0.1	56.7	4.6	40.60	0.11	0.000	0.12	0.000	0.08	0.001	0.001	ND
Kurtosis	-0.2	-0.9	0.2	6.80	-0.67	0.009	-0.42	12.649	1.50	2.303	-0.624	ND
Skewness	-0.4	-0.4	-0.3	2.36	0.53	-0.139	0.60	3.525	-0.91	1.138	0.473	ND
Range	0.8	24.6	8.6	28.51	1.16	0.024	1.25	0.082	1.20	0.145	0.102	0.00
Minimum	7.7	0.1	5.7	2.29	0.84	0.000	0.85	0.000	0.00	0.025	0.008	0.00
Maximum	8.5	24.7	14.3	30.80	2.00	0.024	2.10	0.082	1.20	0.170	0.110	0.00
Count	21	21	21	21	21	21	21	20	20	20	20	0
Confidence Level(95.0%)	0.1	3.4	1.0	2.90	0.15	0.003	0.16	0.009	0.13	0.016	0.014	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	472.4	464.3	2.6	8.1	4.6	795	73.1	335	2.2	294
Standard Error	ND	ND	12.4	13.2	0.3	1.2	0.9	22	5.1	99	0.1	73
Median	ND	ND	490.0	483.8	2.6	6.2	3.1	807	70.0	145	2.2	140
Mode	ND	ND	490.0	ND	2.9	5.8	ND	ND	110.0	130	2.1	170
Standard Deviation	ND	ND	56.9	60.3	1.3	5.6	4.3	99	23.4	441	0.5	333
Sample Variance	ND	ND	3239.0	3636.7	1.6	31.6	18.7	9776	545.8	194365	0.3	110853
Kurtosis	ND	ND	1.5	1.6	2.4	0.4	5.5	1	-0.8	4	0.1	2
Skewness	ND	ND	-1.2	-1.2	1.4	1.2	2.3	-1	0.0	2	0.0	2
Range	0.0	0.0	230.0	247.6	5.2	18.6	17.6	391	78.0	1688	2.2	1097
Minimum	0.0	0.0	320.0	300.0	1.1	2.4	1.3	523	32.0	12	1.1	3
Maximum	0.0	0.0	550.0	547.6	6.3	21.0	18.9	914	110.0	1700	3.2	1100
Count	0	0	21	21	21	21	21	21	21	20	20	21
Confidence Level(95.0%)	ND	ND	25.9	27.5	0.6	2.6	2.0	45	10.6	206	0.2	152

ND = No Data

Provisional MMSD Water Quality Data

PIONEER ROAD - SITE 1
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	67.24	39.67	0.0	1.4	10.3	1.7	4.7	14.7	0.1	1.2	0.0	ND
Standard Error	1.79	1.27	0.0	0.6	0.7	0.2	0.7	2.6	0.0	0.2	0.0	ND
Median	68.00	41.00	0.0	0.0	11.0	1.7	5.3	11.0	0.0	1.4	0.0	ND
Mode	68.00	44.00	0.0	0.0	13.0	0.0	0.0	9.8	0.0	0.0	0.0	ND
Standard Deviation	8.18	5.83	0.2	2.8	2.8	1.0	3.2	11.7	0.2	0.8	0.0	ND
Sample Variance	66.99	33.93	0.0	8.0	7.9	1.0	10.6	136.6	0.0	0.6	0.0	ND
Kurtosis	-0.50	0.75	21.0	1.1	-1.0	1.0	-1.3	8.2	-0.4	-0.8	ND	ND
Skewness	-0.40	-1.05	4.6	1.7	-0.5	0.2	-0.2	2.8	1.0	-0.3	ND	ND
Range	29.00	23.00	0.8	8.0	8.9	4.2	9.7	50.4	0.6	2.5	0.0	0.0
Minimum	52.00	25.00	0.0	0.0	5.1	0.0	0.0	5.6	0.0	0.0	0.0	0.0
Maximum	81.00	48.00	0.8	8.0	14.0	4.2	9.7	56.0	0.6	2.5	0.0	0.0
Count	21	21	21	20	14	21	19	21	21	20	21	0
Confidence Level(95.0%)	3.73	2.65	0.1	1.3	1.6	0.5	1.6	5.3	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	330	264	0.4	6.7	75.2	67.0	8.3	8.1
Standard Error	9	7	0.2	1.2	3.6	3.5	0.5	0.5
Median	330	270	0.0	4.6	74.0	65.0	8.6	8.4
Mode	330	270	0.0	0.0	74.0	67.0	9.3	8.8
Standard Deviation	39	31	1.0	5.4	16.5	16.1	2.3	2.1
Sample Variance	1560	945	0.9	29.0	272.0	257.8	5.3	4.5
Kurtosis	0	0	1.9	-1.2	12.8	12.8	-0.1	0.3
Skewness	-1	-1	1.9	0.3	3.1	3.2	-0.2	0.1
Range	150	120	3.0	16.0	86.0	84.0	8.7	8.4
Minimum	240	190	0.0	0.0	54.0	46.0	4.3	4.6
Maximum	390	310	3.0	16.0	140.0	130.0	13.0	13.0
Count	21	21	21	21	21	21	21	21
Confidence Level(95.0%)	18	14	0.4	2.5	7.5	7.3	1.0	1.0

ND = No Data

Provisional MMSD Water Quality Data

BROWN DEER ROAD - SITE 2
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	14.2	9.5	10.96	1.11	0.018	1.12	0.016	0.77	0.086	0.051	ND
Standard Error	0.0	1.7	0.5	2.09	0.09	0.006	0.09	0.008	0.05	0.008	0.006	ND
Median	8.1	15.4	9.5	7.52	1.05	0.014	1.10	0.000	0.76	0.077	0.046	ND
Mode	8.0	ND	9.8	ND	1.10	0.014	1.10	0.000	0.76	0.054	0.063	ND
Standard Deviation	0.2	8.0	2.5	9.79	0.40	0.026	0.41	0.039	0.22	0.039	0.028	ND
Sample Variance	0.1	64.7	6.0	95.92	0.16	0.001	0.17	0.001	0.05	0.002	0.001	ND
Kurtosis	0.6	-1.0	-0.8	7.13	0.86	17.954	1.14	13.618	-0.19	-0.693	0.518	ND
Skewness	-0.1	-0.4	0.3	2.39	0.60	4.063	0.69	3.514	-0.14	0.560	0.875	ND
Range	1.0	26.2	8.6	44.08	1.70	0.130	1.79	0.170	0.85	0.134	0.111	0.00
Minimum	7.6	-0.1	5.2	1.72	0.30	0.000	0.31	0.000	0.35	0.026	0.009	0.00
Maximum	8.6	26.1	13.8	45.80	2.00	0.130	2.10	0.170	1.20	0.160	0.120	0.00
Count	22	22	22	22	22	22	22	21	21	22	22	0
Confidence Level(95.0%)	0.1	3.6	1.1	4.34	0.18	0.012	0.18	0.018	0.10	0.017	0.012	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	483.6	471.5	3.6	12.1	9.3	799	83.7	1037	2.4	801
Standard Error	ND	ND	13.4	14.2	0.5	1.5	1.8	24	6.1	387	0.2	293
Median	ND	ND	490.0	481.1	3.7	11.5	7.6	819	78.5	170	2.2	170
Mode	ND	ND	530.0	ND	2.5	15.0	ND	869	120.0	170	2.2	150
Standard Deviation	ND	ND	62.7	66.7	2.1	7.0	8.5	111	28.8	1729	0.7	1372
Sample Variance	ND	ND	3929.0	4450.6	4.6	48.9	71.6	12377	827.1	2989863	0.5	1883743
Kurtosis	ND	ND	0.2	0.3	-0.7	0.1	5.7	1	-1.1	1	-0.5	2
Skewness	ND	ND	-0.8	-0.8	0.4	0.7	2.3	-1	0.2	2	0.6	2
Range	0.0	0.0	240.0	259.2	7.5	26.8	35.5	500	94.0	4979	2.4	4390
Minimum	0.0	0.0	330.0	305.0	0.0	1.2	2.1	510	36.0	21	1.3	10
Maximum	0.0	0.0	570.0	564.2	7.5	28.0	37.6	1010	130.0	5000	3.7	4400
Count	0	0	22	22	22	22	22	22	22	20	20	22
Confidence Level(95.0%)	ND	ND	27.8	29.6	0.9	3.1	3.8	49	12.8	809	0.3	609

ND = No Data

Provisional MMSD Water Quality Data

BROWN DEER ROAD - SITE 2
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

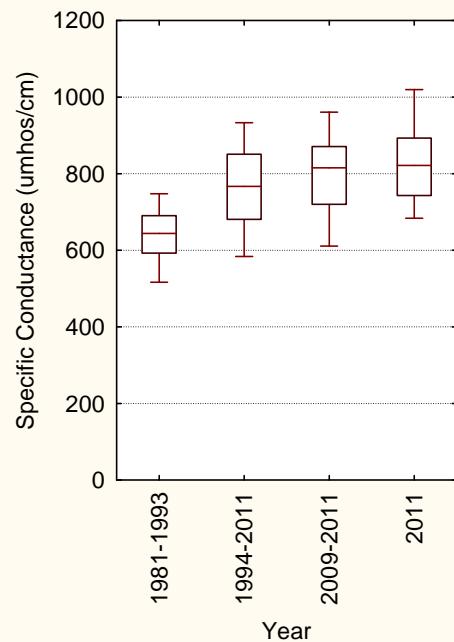
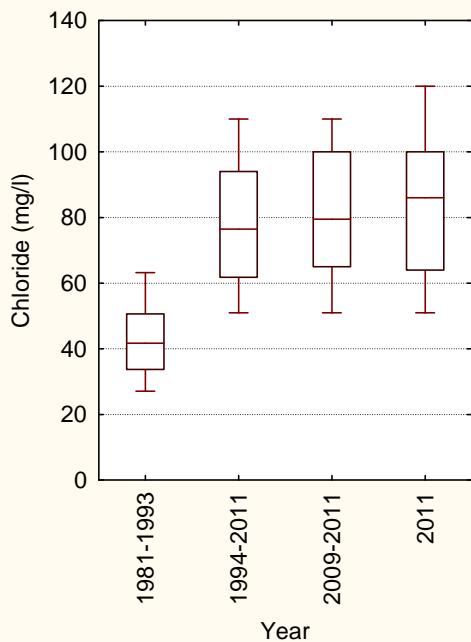
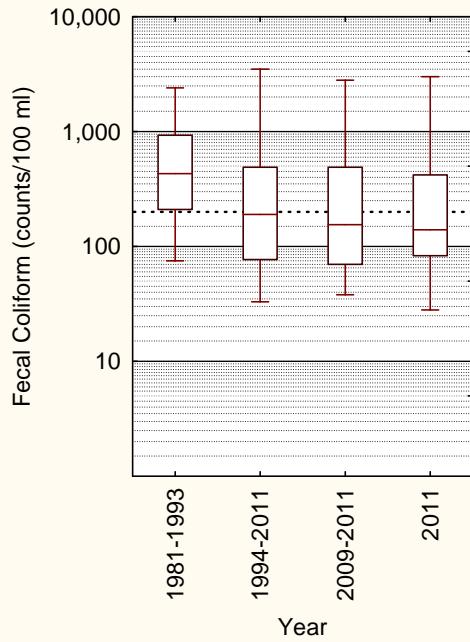
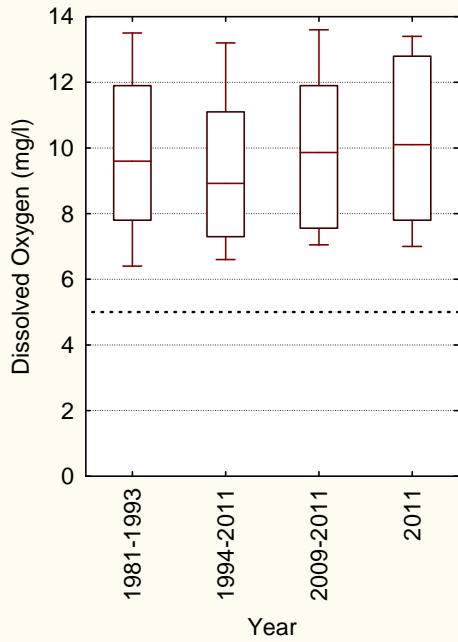
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	65.95	37.59	0.0	1.7	9.8	1.8	3.7	13.9	0.1	1.3	0.0	ND
Standard Error	2.05	1.39	0.0	0.7	0.7	0.2	0.7	1.9	0.0	0.2	0.0	ND
Median	67.50	39.50	0.0	0.0	9.3	1.7	3.7	12.0	0.0	1.3	0.0	ND
Mode	62.00	40.00	0.0	0.0	11.0	1.6	0.0	9.7	0.0	0.0	0.0	ND
Standard Deviation	9.63	6.52	0.0	3.3	3.0	1.0	3.2	9.0	0.2	0.9	0.0	ND
Sample Variance	92.81	42.54	0.0	10.6	9.1	1.0	10.2	80.1	0.0	0.8	0.0	ND
Kurtosis	-0.32	-0.69	ND	0.7	0.4	2.0	-1.3	3.9	0.0	-1.1	ND	ND
Skewness	-0.56	-0.51	ND	1.5	0.8	0.8	0.3	1.7	1.3	-0.1	ND	ND
Range	36.00	23.00	0.0	9.4	10.8	4.4	8.7	42.0	0.5	2.8	0.0	0.0
Minimum	45.00	24.00	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	81.00	47.00	0.0	9.4	16.0	4.4	8.7	42.0	0.5	2.8	0.0	0.0
Count	22	22	22	21	18	21	19	22	22	22	22	0
Confidence Level(95.0%)	4.27	2.89	0.0	1.5	1.5	0.5	1.5	4.0	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	319	255	1.1	9.5	72.3	64.1	8.4	8.1
Standard Error	10	8	0.3	1.0	3.7	3.5	0.5	0.5
Median	330	265	0.0	8.5	72.5	64.0	8.4	8.2
Mode	330	280	0.0	8.7	74.0	64.0	8.4	8.2
Standard Deviation	49	37	1.4	4.8	17.3	16.5	2.2	2.2
Sample Variance	2365	1359	2.0	22.7	298.1	273.4	4.8	4.7
Kurtosis	-1	-1	0.2	-0.3	11.8	12.8	0.3	0.4
Skewness	-1	-1	1.0	0.7	2.9	3.1	0.1	0.3
Range	160	120	4.7	16.9	88.0	86.0	8.4	8.4
Minimum	220	180	0.0	4.1	52.0	44.0	4.6	4.6
Maximum	380	300	4.7	21.0	140.0	130.0	13.0	13.0
Count	22	22	22	22	22	22	22	22
Confidence Level(95.0%)	22	16	0.6	2.1	7.7	7.3	1.0	1.0

ND = No Data

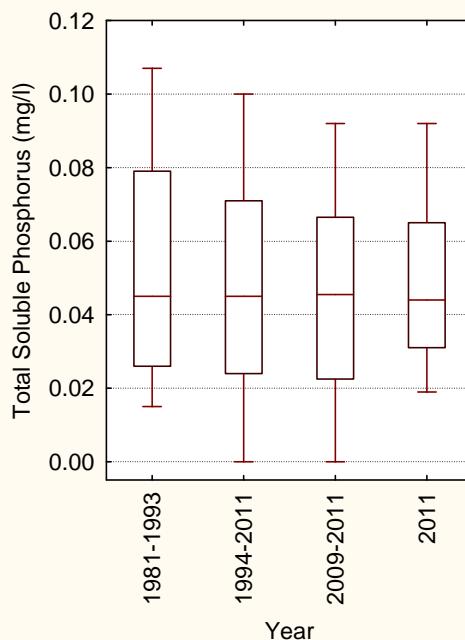
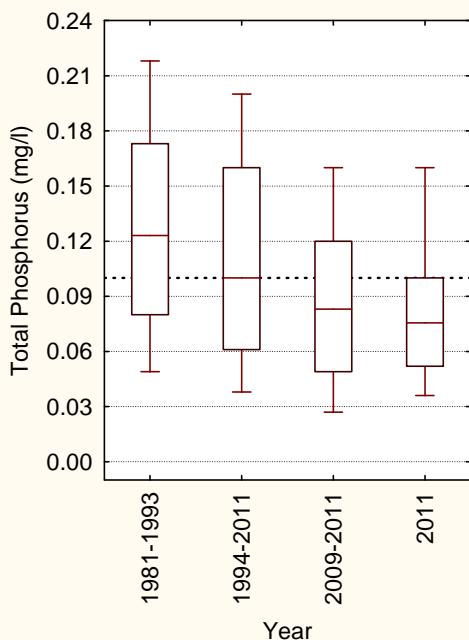
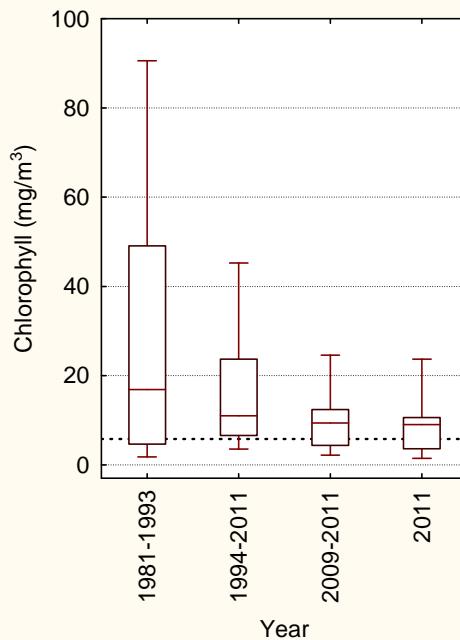
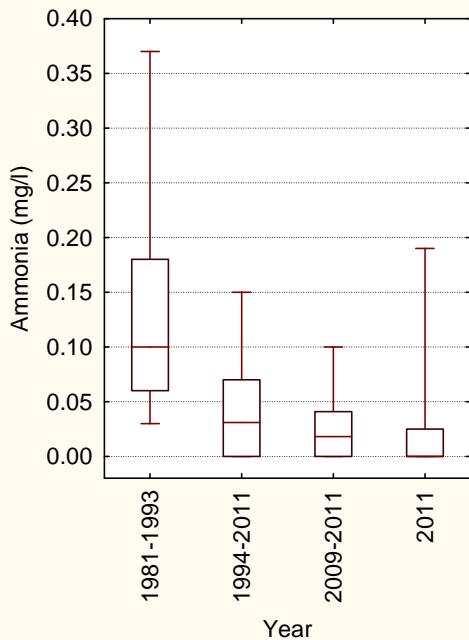
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Milwaukee River at Silver Spring Drive, Site RI-03



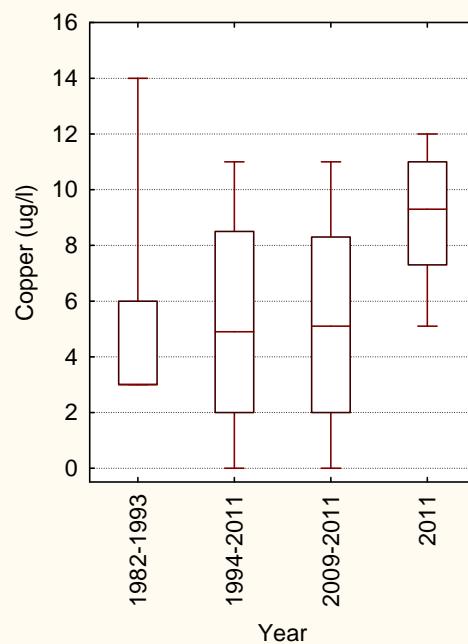
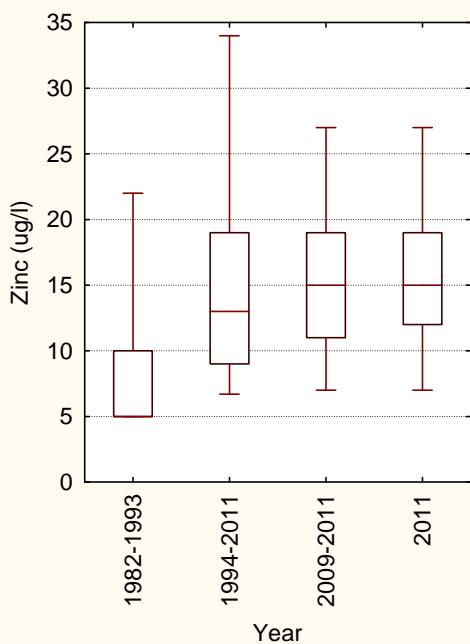
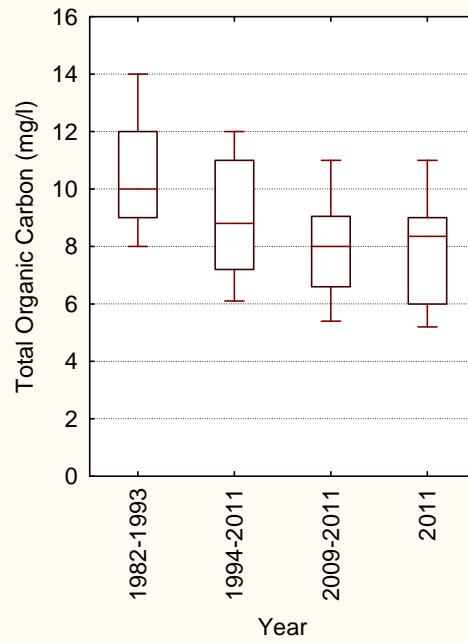
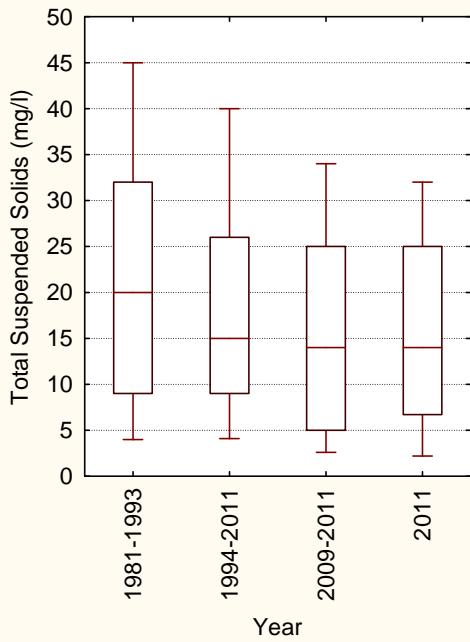
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at Silver Spring Drive, Site RI-03



— Median □ 25%-75% ┤ 10%-90%
--- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at Silver Spring Drive, Site RI-03



— Median □ 25%-75% ━ 10%-90%

SILVER SPRING DRIVE - SITE 3
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.9	10.0	9.22	1.43	0.018	1.45	0.042	0.75	0.086	0.049	ND
Standard Error	0.1	1.8	0.5	1.59	0.16	0.003	0.17	0.014	0.05	0.009	0.005	ND
Median	8.1	12.4	10.1	9.02	1.15	0.013	1.15	0.000	0.73	0.076	0.044	ND
Mode	8.2	-0.2	13.2	10.60	1.20	0.000	1.20	0.000	1.10	0.052	0.031	ND
Standard Deviation	0.3	9.0	2.5	8.12	0.84	0.014	0.85	0.069	0.23	0.045	0.026	ND
Sample Variance	0.1	81.1	6.4	65.88	0.70	0.000	0.72	0.005	0.05	0.002	0.001	ND
Kurtosis	-0.7	-1.4	-1.4	3.73	0.28	-0.298	0.25	0.626	-0.41	0.086	-0.038	ND
Skewness	-0.4	-0.1	0.3	1.82	1.19	0.784	1.19	1.492	0.39	0.991	0.689	ND
Range	0.9	25.7	7.6	34.13	2.91	0.046	2.90	0.190	0.84	0.163	0.103	0.00
Minimum	7.6	-0.2	6.6	1.17	0.39	0.000	0.40	0.000	0.36	0.027	0.008	0.00
Maximum	8.5	25.5	14.2	35.30	3.30	0.046	3.30	0.190	1.20	0.190	0.110	0.00
Count	26	26	25	26	26	26	26	25	25	26	26	0
Confidence Level(95.0%)	0.1	3.6	1.0	3.28	0.34	0.006	0.34	0.028	0.09	0.018	0.011	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	505.8	489.5	4.5	16.3	12.5	832	85.8	841	2.3	448
Standard Error	ND	ND	15.0	16.5	0.6	2.5	2.4	30	5.8	427	0.1	150
Median	ND	ND	520.0	499.5	4.1	14.0	9.0	822	86.0	140	2.1	135
Mode	ND	ND	530.0	449.0	2.1	14.0	1.9	ND	110.0	120	2.1	150
Standard Deviation	ND	ND	76.3	84.2	2.9	12.6	12.2	150	29.6	2135	0.7	764
Sample Variance	ND	ND	5825.4	7086.2	8.7	158.4	148.6	22644	874.6	4557202	0.5	583015
Kurtosis	ND	ND	1.3	1.1	-0.9	0.1	2.6	1	1.2	15	1.0	4
Skewness	ND	ND	0.5	0.4	0.4	0.8	1.6	0	0.8	4	1.0	2
Range	0.0	0.0	360.0	390.1	9.7	46.4	48.6	718	133.0	9981	2.7	2666
Minimum	0.0	0.0	360.0	328.0	0.0	1.6	1.4	512	37.0	19	1.3	34
Maximum	0.0	0.0	720.0	718.1	9.7	48.0	50.0	1230	170.0	10000	4.0	2700
Count	0	0	26	26	26	26	26	26	26	25	25	26
Confidence Level(95.0%)	ND	ND	30.8	34.0	1.2	5.1	4.9	61	11.9	881	0.3	308

ND = No Data

Provisional MMSD Water Quality Data

SILVER SPRING DRIVE - SITE 3
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	68.54	38.73	0.0	2.2	8.5	2.3	3.8	16.3	0.0	1.1	0.0	ND
Standard Error	2.27	1.28	0.0	0.6	0.7	0.4	0.8	1.7	0.0	0.2	0.0	ND
Median	69.00	40.50	0.0	0.0	9.3	2.0	3.0	15.0	0.0	1.5	0.0	ND
Mode	63.00	42.00	0.0	0.0	11.0	2.3	0.0	12.0	0.0	0.0	0.0	ND
Standard Deviation	11.57	6.55	0.0	3.1	3.1	2.1	3.7	8.8	0.1	1.0	0.0	ND
Sample Variance	133.94	42.84	0.0	9.5	9.9	4.3	13.6	77.0	0.0	1.0	0.0	ND
Kurtosis	-0.32	0.50	ND	-1.5	1.6	12.9	-1.6	2.9	17.9	-1.2	ND	ND
Skewness	-0.12	-1.03	ND	0.7	-1.3	3.2	0.3	1.6	4.2	0.2	ND	ND
Range	47.00	25.00	0.0	7.7	12.0	11.0	9.9	35.0	0.7	3.0	0.0	0.0
Minimum	44.00	23.00	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
Maximum	91.00	48.00	0.0	7.7	12.0	11.0	9.9	41.0	0.7	3.0	0.0	0.0
Count	26	26	26	25	22	26	24	26	26	26	26	0
Confidence Level(95.0%)	4.67	2.64	0.0	1.3	1.4	0.8	1.6	3.5	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	331	267	0.8	8.7	74.2	66.2	8.0	7.9
Standard Error	10	9	0.3	0.8	3.3	3.2	0.4	0.4
Median	340	270	0.0	8.2	72.5	63.5	8.4	8.2
Mode	340	280	0.0	13.0	81.0	64.0	8.8	5.7
Standard Deviation	52	44	1.4	3.9	16.9	16.4	2.2	2.1
Sample Variance	2691	1904	2.0	15.5	284.1	270.5	4.9	4.3
Kurtosis	0	0	3.4	0.3	9.3	8.8	-0.1	0.0
Skewness	-1	-1	1.9	0.2	2.2	2.3	0.1	0.3
Range	220	180	5.4	18.0	96.0	90.0	9.0	8.3
Minimum	210	160	0.0	0.0	44.0	40.0	4.0	4.7
Maximum	430	340	5.4	18.0	140.0	130.0	13.0	13.0
Count	26	26	26	26	26	26	26	26
Confidence Level(95.0%)	21	18	0.6	1.6	6.8	6.6	0.8	0.8

ND = No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD - SITE 4
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	13.0	9.6	9.58	1.25	0.017	1.28	0.031	0.77	0.090	0.052	ND
Standard Error	0.1	1.8	0.5	1.23	0.14	0.003	0.15	0.012	0.04	0.008	0.005	ND
Median	8.1	13.1	9.8	9.18	1.05	0.014	1.05	0.000	0.79	0.080	0.054	ND
Mode	8.1	ND	10.2	ND	0.80	0.012	1.90	0.000	0.79	0.072	0.067	ND
Standard Deviation	0.3	8.7	2.4	6.01	0.70	0.014	0.72	0.058	0.19	0.041	0.026	ND
Sample Variance	0.1	75.5	6.0	36.09	0.50	0.000	0.52	0.003	0.04	0.002	0.001	ND
Kurtosis	0.1	-1.2	-1.1	0.21	2.04	1.957	1.74	2.686	-0.65	0.027	-0.395	ND
Skewness	-0.2	-0.2	0.5	0.73	1.48	1.326	1.43	1.993	-0.28	0.862	0.338	ND
Range	1.0	26.2	7.9	23.10	2.87	0.058	2.86	0.180	0.71	0.150	0.101	0.00
Minimum	7.6	-0.3	6.2	1.40	0.33	0.000	0.34	0.000	0.39	0.030	0.009	0.00
Maximum	8.6	25.9	14.1	24.50	3.20	0.058	3.20	0.180	1.10	0.180	0.110	0.00
Count	24	24	23	24	24	24	24	23	23	24	24	0
Confidence Level(95.0%)	0.1	3.7	1.1	2.54	0.30	0.006	0.30	0.025	0.08	0.017	0.011	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	495.0	476.0	5.2	19.0	14.6	812	84.6	1277	2.4	644
Standard Error	ND	ND	15.2	17.0	0.7	2.8	2.7	30	5.7	604	0.2	242
Median	ND	ND	505.0	484.0	4.8	15.0	10.6	810	81.5	165	2.2	135
Mode	ND	ND	560.0	484.0	0.0	25.0	17.6	ND	100.0	73	1.9	130
Standard Deviation	ND	ND	74.3	83.1	3.4	13.9	13.2	146	27.7	2833	0.8	1186
Sample Variance	ND	ND	5521.7	6897.7	11.3	192.7	175.2	21217	770.0	8024567	0.6	1406660
Kurtosis	ND	ND	-0.6	-0.3	-0.9	-0.6	2.0	1	-0.8	7	0.3	6
Skewness	ND	ND	-0.3	-0.3	0.3	0.7	1.4	0	0.2	3	0.8	3
Range	0.0	0.0	270.0	316.5	11.0	46.5	52.1	645	102.0	10988	3.0	4682
Minimum	0.0	0.0	360.0	312.0	0.0	1.5	1.6	515	38.0	12	1.1	18
Maximum	0.0	0.0	630.0	628.5	11.0	48.0	53.7	1160	140.0	11000	4.0	4700
Count	0	0	24	24	24	24	24	24	24	22	22	24
Confidence Level(95.0%)	ND	ND	31.4	35.1	1.4	5.9	5.6	62	11.7	1256	0.3	501

ND = No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD - SITE 4
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

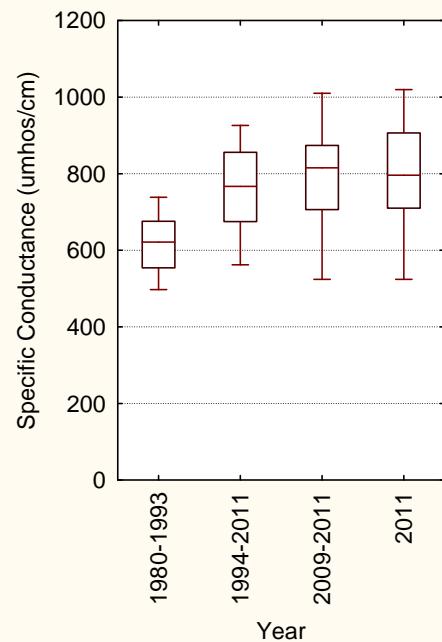
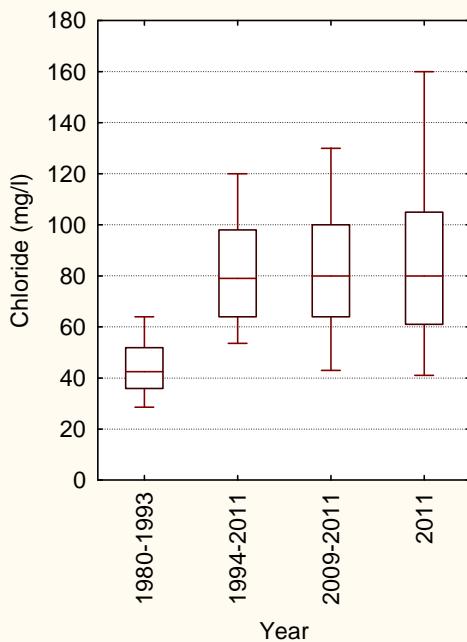
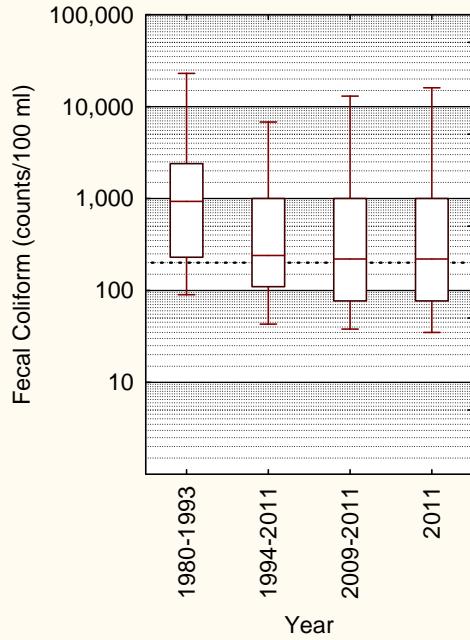
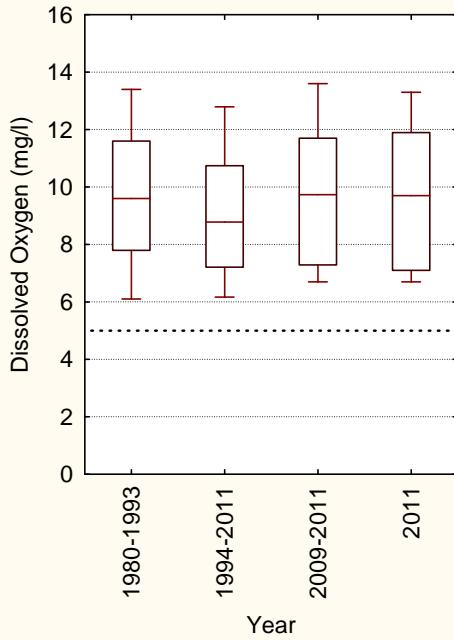
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	66.92	38.04	0.1	2.0	8.9	1.9	3.7	14.4	0.0	1.2	0.0	ND
Standard Error	2.28	1.45	0.1	0.7	0.6	0.2	0.7	1.4	0.0	0.2	0.0	ND
Median	67.50	40.00	0.0	0.0	8.4	2.1	4.0	15.0	0.0	1.3	0.0	ND
Mode	65.00	42.00	0.0	0.0	10.0	0.0	0.0	16.0	0.0	0.0	0.0	ND
Standard Deviation	11.18	7.11	0.3	3.1	2.7	1.1	3.2	6.6	0.1	1.0	0.0	ND
Sample Variance	125.04	50.56	0.1	9.8	7.3	1.3	10.0	44.0	0.0	1.0	0.0	ND
Kurtosis	0.49	0.46	9.3	-0.8	0.1	0.7	-1.5	0.4	11.4	-0.7	ND	ND
Skewness	-0.54	-1.06	3.2	1.0	0.0	0.0	0.1	0.2	3.5	0.2	ND	ND
Range	48.00	26.00	1.1	8.5	10.9	4.6	9.2	30.0	0.6	3.2	0.0	0.0
Minimum	41.00	21.00	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	89.00	47.00	1.1	8.5	14.0	4.6	9.2	30.0	0.6	3.2	0.0	0.0
Count	24	24	24	23	19	24	22	24	24	24	24	0
Confidence Level(95.0%)	4.72	3.00	0.1	1.4	1.3	0.5	1.4	2.8	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	323	259	0.7	7.4	72.5	64.5	8.1	8.0
Standard Error	11	9	0.2	0.6	3.7	3.5	0.5	0.4
Median	340	265	0.0	8.1	72.0	63.0	8.5	8.3
Mode	360	260	0.0	4.3	74.0	60.0	8.8	8.8
Standard Deviation	53	45	1.2	3.0	18.0	17.3	2.3	2.1
Sample Variance	2820	2043	1.4	8.9	324.4	300.2	5.1	4.5
Kurtosis	1	1	-1.0	0.7	8.6	8.8	0.2	0.1
Skewness	-1	-1	1.0	-0.3	2.1	2.3	0.0	0.3
Range	220	200	2.9	14.0	100.0	94.0	9.4	8.4
Minimum	190	140	0.0	0.0	40.0	36.0	3.6	4.6
Maximum	410	340	2.9	14.0	140.0	130.0	13.0	13.0
Count	24	24	24	24	24	24	24	24
Confidence Level(95.0%)	22	19	0.5	1.3	7.6	7.3	1.0	0.9

ND = No Data

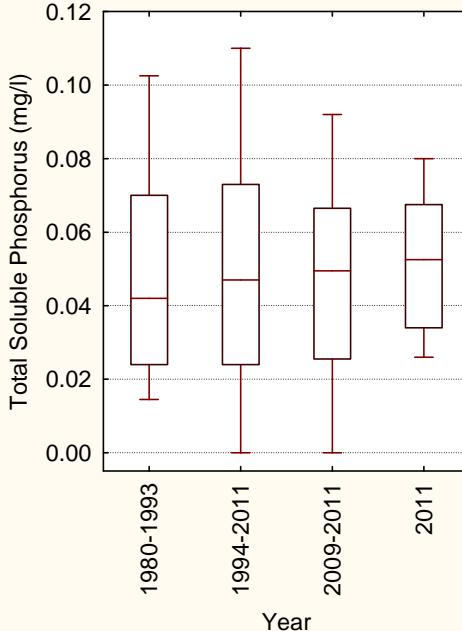
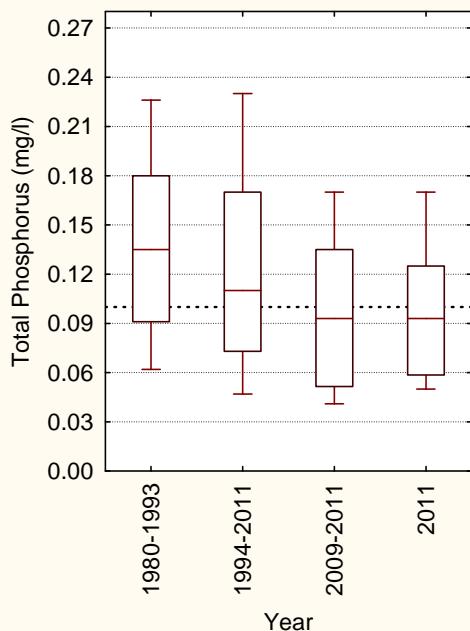
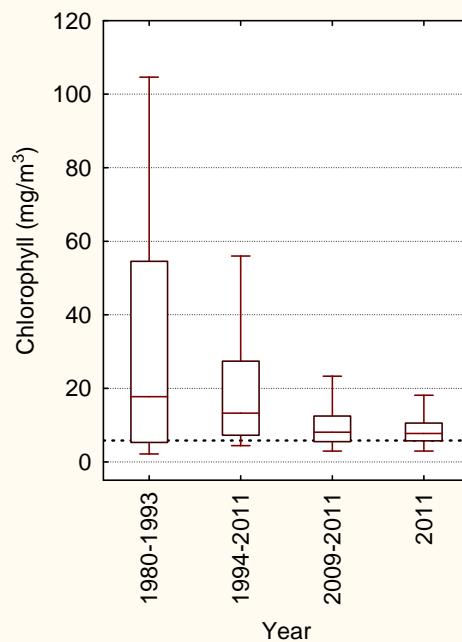
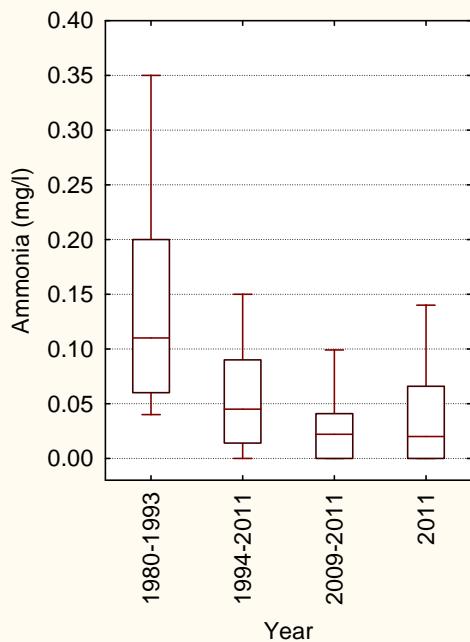
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Milwaukee River at North Avenue Dam, Site RI-05



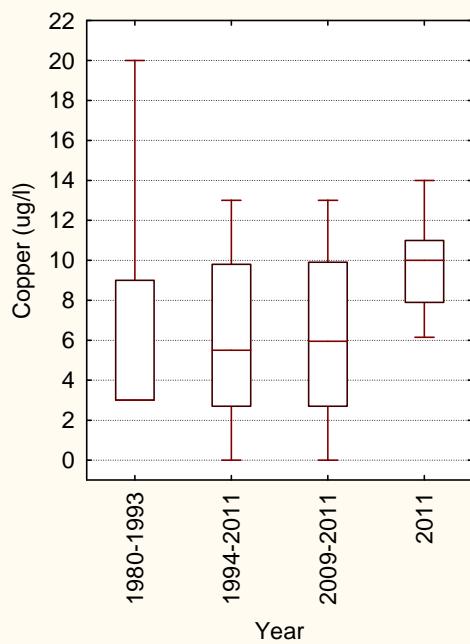
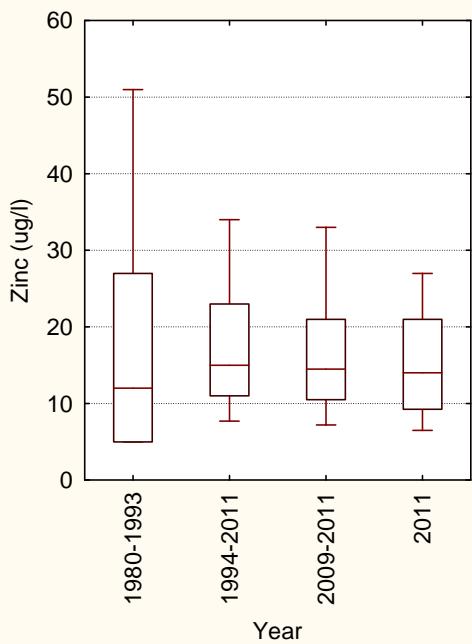
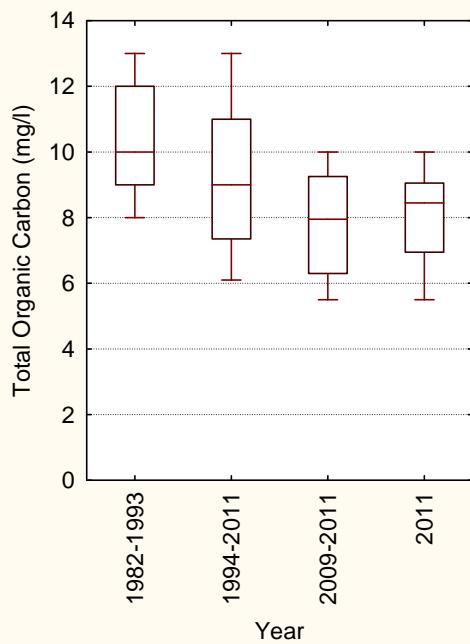
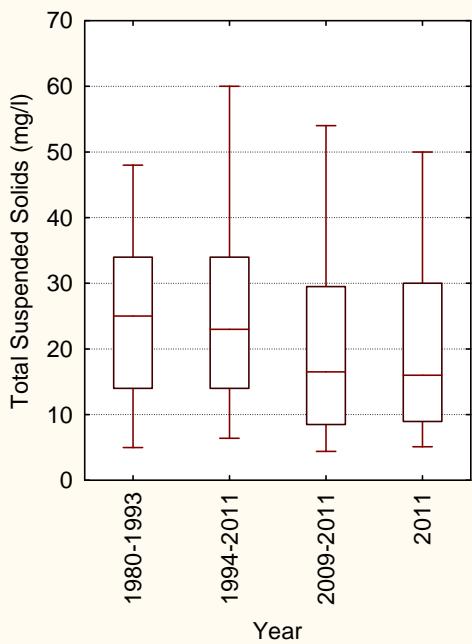
— Median □ 25%-75% ┤ 10%-90%
--- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at North Avenue Dam, Site RI-05



— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at North Avenue Dam, Site RI-05



— Median □ 25%-75% ━ 10%-90%

NORTH AVENUE - SITE 5
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	12.9	9.5	9.13	1.19	0.020	1.20	0.044	0.82	0.099	0.053	ND
Standard Error	0.0	1.8	0.6	1.20	0.15	0.004	0.15	0.013	0.05	0.010	0.005	ND
Median	8.1	13.2	9.7	7.74	1.00	0.015	1.00	0.020	0.82	0.093	0.053	ND
Mode	8.0	0.0	13.3	10.90	1.00	0.000	1.00	0.000	1.20	0.100	0.030	ND
Standard Deviation	0.2	8.6	2.7	5.89	0.72	0.020	0.72	0.062	0.26	0.047	0.023	ND
Sample Variance	0.1	74.2	7.2	34.75	0.52	0.000	0.52	0.004	0.07	0.002	0.001	ND
Kurtosis	-0.4	-1.3	-1.2	2.58	1.23	7.576	1.50	1.174	-0.72	-0.130	0.022	ND
Skewness	-0.4	-0.2	0.4	1.57	1.31	2.326	1.38	1.532	0.17	0.757	0.585	ND
Range	0.8	25.8	8.5	23.97	2.64	0.095	2.73	0.190	0.90	0.178	0.091	0.00
Minimum	7.6	-0.2	5.5	1.63	0.36	0.000	0.37	0.000	0.40	0.032	0.019	0.00
Maximum	8.4	25.6	14.0	25.60	3.00	0.095	3.10	0.190	1.30	0.210	0.110	0.00
Count	24	24	23	24	24	24	24	23	23	24	24	0
Confidence Level(95.0%)	0.1	3.6	1.2	2.49	0.30	0.009	0.31	0.027	0.11	0.020	0.010	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	508.3	484.2	6.5	24.1	19.3	816	93.0	5439	2.6	ND
Standard Error	ND	ND	24.8	28.0	1.0	4.5	4.2	50	10.3	3166	0.2	ND
Median	ND	ND	515.0	495.5	5.0	16.0	11.5	796	80.0	220	2.3	ND
Mode	ND	ND	560.0	ND	2.4	14.0	ND	ND	100.0	220	2.3	ND
Standard Deviation	ND	ND	121.6	137.2	4.8	22.0	20.7	245	50.4	14509	1.0	ND
Sample Variance	ND	ND	14788.4	18814.7	23.2	483.3	429.8	60040	2540.1	210512292	0.9	ND
Kurtosis	ND	ND	3.5	2.4	1.1	3.6	3.0	5	5.8	10	0.7	ND
Skewness	ND	ND	1.3	0.8	1.3	1.8	1.9	1	2.1	3	1.2	ND
Range	0.0	0.0	570.0	647.9	19.0	90.5	80.6	1261	230.0	58970	3.3	0
Minimum	0.0	0.0	330.0	247.0	0.0	2.5	1.6	379	40.0	30	1.5	0
Maximum	0.0	0.0	900.0	894.9	19.0	93.0	82.2	1640	270.0	59000	4.8	0
Count	0	0	24	24	24	24	24	24	24	21	21	0
Confidence Level(95.0%)	ND	ND	51.4	57.9	2.0	9.3	8.8	103	21.3	6604	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

NORTH AVENUE - SITE 5
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	65.75	36.38	0.0	3.0	9.8	3.4	4.0	15.4	0.0	1.2	0.0	ND
Standard Error	2.89	1.83	0.0	0.9	0.6	0.7	0.8	1.7	0.0	0.2	0.0	ND
Median	67.00	39.50	0.0	0.0	10.0	2.1	3.8	14.0	0.0	1.1	0.0	ND
Mode	63.00	43.00	0.0	0.0	11.0	0.0	0.0	14.0	0.0	0.0	0.0	ND
Standard Deviation	14.18	8.97	0.1	4.1	2.8	3.4	3.5	8.4	0.1	1.0	0.0	ND
Sample Variance	200.98	80.42	0.0	16.7	8.0	11.3	12.4	71.3	0.0	1.0	0.0	ND
Kurtosis	0.63	0.14	24.0	-0.7	-0.1	3.7	-1.9	0.0	12.5	-0.5	ND	ND
Skewness	-0.76	-1.03	4.9	0.9	0.0	1.9	0.0	0.6	3.6	0.3	ND	ND
Range	56.00	32.00	0.6	11.0	10.6	14.0	8.7	34.0	0.5	3.5	0.0	0.0
Minimum	34.00	15.00	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	90.00	47.00	0.6	11.0	15.0	14.0	8.7	34.0	0.5	3.5	0.0	0.0
Count	24	24	24	23	20	24	20	24	24	24	24	0
Confidence Level(95.0%)	5.99	3.79	0.1	1.8	1.3	1.4	1.6	3.6	0.0	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	313	246	1.5	10.4	69.4	61.3	8.1	8.1
Standard Error	14	13	0.4	1.0	4.2	4.1	0.4	0.4
Median	335	260	0.0	9.2	71.0	62.5	8.5	8.3
Mode	370	290	0.0	7.4	72.0	54.0	8.6	7.7
Standard Deviation	70	61	2.1	4.8	20.6	19.9	2.1	2.1
Sample Variance	4856	3760	4.5	23.0	425.0	397.1	4.4	4.4
Kurtosis	0	1	1.1	1.3	5.7	5.8	0.7	0.5
Skewness	-1	-1	1.3	1.1	1.3	1.5	0.1	0.4
Range	270	251	7.3	19.6	111.0	105.0	9.0	8.4
Minimum	150	89	0.0	4.4	29.0	25.0	4.0	4.6
Maximum	420	340	7.3	24.0	140.0	130.0	13.0	13.0
Count	24	24	24	24	24	24	24	24
Confidence Level(95.0%)	29	26	0.9	2.0	8.7	8.4	0.9	0.9

ND = No Data

Provisional MMSD Water Quality Data

WALNUT STREET - SITE 6
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	15.1	9.4	10.43	0.94	0.015	0.96	0.023	0.76	0.094	0.048	ND
Standard Error	0.0	1.2	0.4	1.41	0.07	0.002	0.07	0.005	0.05	0.008	0.003	ND
Median	8.1	17.0	8.9	8.77	0.95	0.013	0.96	0.017	0.75	0.079	0.048	ND
Mode	8.1	22.0	10.3	ND	1.00	0.000	1.10	0.000	0.48	0.061	0.063	ND
Standard Deviation	0.2	7.7	2.3	6.46	0.43	0.011	0.43	0.031	0.32	0.050	0.019	ND
Sample Variance	0.1	59.8	5.3	41.73	0.18	0.000	0.18	0.001	0.10	0.003	0.000	ND
Kurtosis	0.3	-0.9	-0.6	7.38	0.68	0.248	0.71	6.585	3.61	0.682	0.026	ND
Skewness	0.1	-0.3	0.5	2.32	0.73	0.778	0.70	2.342	0.53	1.224	0.385	ND
Range	1.0	26.7	8.4	30.96	1.78	0.040	1.88	0.140	1.90	0.192	0.081	0.00
Minimum	7.6	0.1	5.8	2.24	0.12	0.000	0.12	0.000	0.00	0.028	0.014	0.00
Maximum	8.6	26.8	14.2	33.20	1.90	0.040	2.00	0.140	1.90	0.220	0.095	0.00
Count	42	42	42	21	42	42	42	40	40	42	42	0
Confidence Level(95.0%)	0.1	2.4	0.7	2.94	0.13	0.003	0.13	0.010	0.10	0.016	0.006	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	480.5	458.4	6.2	22.1	21.2	769	82.5	3498	2.6	1256
Standard Error	ND	ND	13.2	15.8	0.8	3.5	4.0	25	5.1	1773	0.2	539
Median	ND	ND	495.0	480.5	4.4	13.5	11.6	785	74.0	150	2.2	140
Mode	ND	ND	560.0	670.0	4.9	16.0	11.5	1120	120.0	150	2.2	4800
Standard Deviation	ND	ND	85.8	102.7	5.1	23.0	25.7	163	33.1	8127	0.9	2468
Sample Variance	ND	ND	7355.9	10544.5	26.4	527.0	662.9	26544	1095.1	66046163	0.9	6089993
Kurtosis	ND	ND	-0.2	0.0	4.0	3.5	6.2	0	0.5	8	-0.4	8
Skewness	ND	ND	0.1	-0.4	2.2	2.1	2.5	0	0.9	3	0.8	3
Range	0.0	0.0	360.0	437.0	22.2	90.9	118.7	688	133.0	30984	3.3	9980
Minimum	0.0	0.0	320.0	233.0	1.8	6.1	5.3	432	37.0	16	1.2	20
Maximum	0.0	0.0	680.0	670.0	24.0	97.0	124.0	1120	170.0	31000	4.5	10000
Count	0	0	42	42	42	42	42	42	42	21	21	21
Confidence Level(95.0%)	ND	ND	26.7	32.0	1.6	7.2	8.0	51	10.3	3699	0.4	1123

ND = No Data

Provisional MMSD Water Quality Data

WALNUT STREET - SITE 6
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

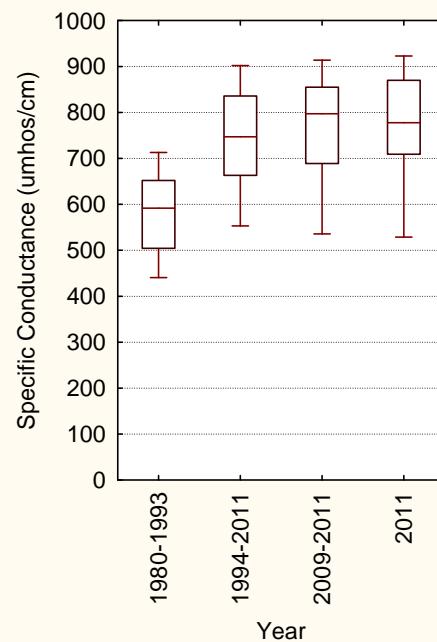
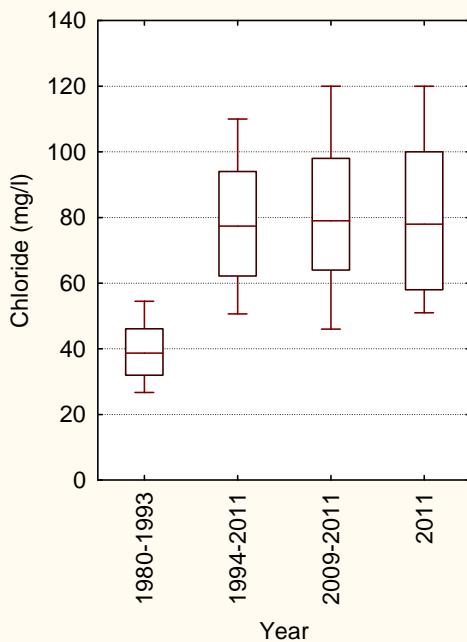
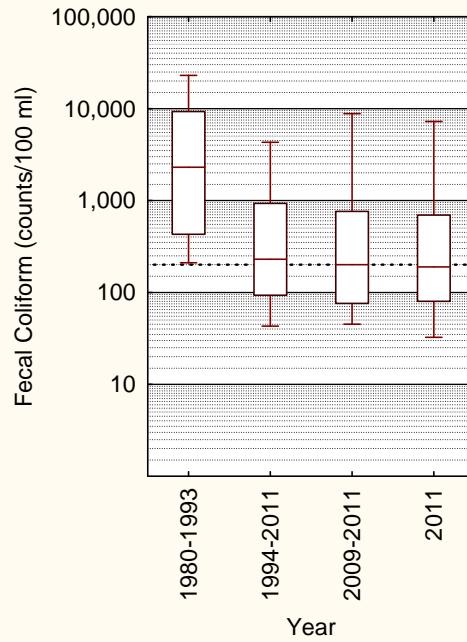
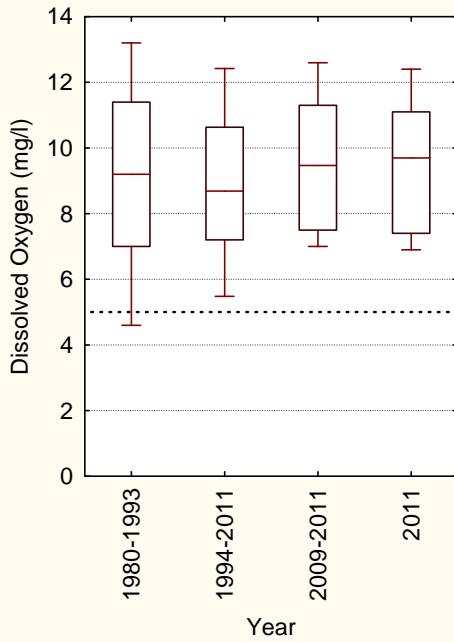
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	61.90	35.43	0.0	1.9	13.0	2.4	6.1	15.1	0.1	1.3	0.0	ND
Standard Error	2.61	1.86	0.0	0.8	0.9	0.3	0.8	1.6	0.1	0.2	0.0	ND
Median	62.00	38.00	0.0	0.0	12.5	2.2	7.3	13.0	0.0	1.3	0.0	ND
Mode	61.00	43.00	0.0	0.0	10.0	1.5	0.0	8.7	0.0	0.0	0.0	ND
Standard Deviation	11.94	8.53	0.0	3.4	3.6	1.5	3.6	7.6	0.4	0.9	0.0	ND
Sample Variance	142.59	72.76	0.0	11.6	13.1	2.1	13.1	57.1	0.2	0.8	0.0	ND
Kurtosis	0.73	0.11	ND	0.2	-1.2	0.2	-0.9	0.6	11.9	-0.7	ND	ND
Skewness	-0.77	-0.99	ND	1.4	0.1	0.6	-0.5	1.2	3.4	-0.2	ND	ND
Range	47.00	29.00	0.0	10.0	12.0	5.4	11.0	26.8	1.7	3.1	0.0	0.0
Minimum	35.00	17.00	0.0	0.0	7.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0
Maximum	82.00	46.00	0.0	10.0	19.0	5.4	11.0	34.0	1.7	3.1	0.0	0.0
Count	21	21	21	19	16	21	19	21	21	21	21	0
Confidence Level(95.0%)	5.44	3.88	0.0	1.6	1.9	0.7	1.7	3.4	0.2	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	300	241	1.3	9.2	68.0	59.7	8.2	8.0
Standard Error	14	8	0.3	0.9	3.1	2.9	0.3	0.3
Median	320	260	0.0	9.3	68.0	61.0	8.6	8.3
Mode	330	260	0.0	12.0	73.0	63.0	9.4	8.8
Standard Deviation	62	54	1.7	3.9	20.2	18.5	2.3	2.2
Sample Variance	3845	2885	2.8	15.5	407.2	342.5	5.1	4.7
Kurtosis	1	1	-0.5	-0.9	6.7	6.6	0.0	-0.1
Skewness	-1	-1	0.8	0.5	1.9	1.9	0.0	0.3
Range	210	200	5.3	12.4	107.0	101.0	9.3	8.6
Minimum	160	110	0.0	4.6	33.0	29.0	3.7	4.4
Maximum	370	310	5.3	17.0	140.0	130.0	13.0	13.0
Count	21	42	42	21	42	42	42	42
Confidence Level(95.0%)	28	17	0.5	1.8	6.3	5.8	0.7	0.7

ND = No Data

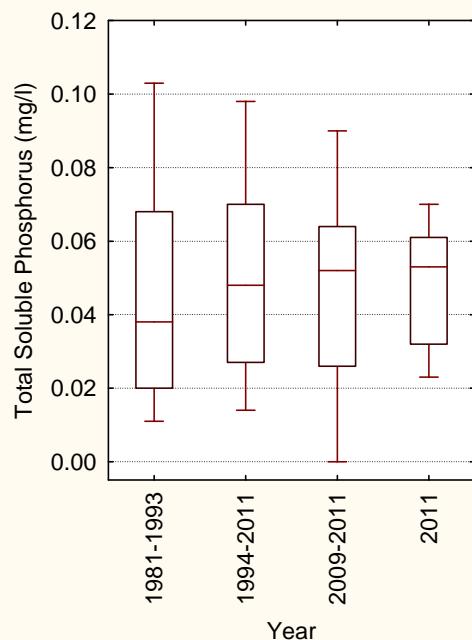
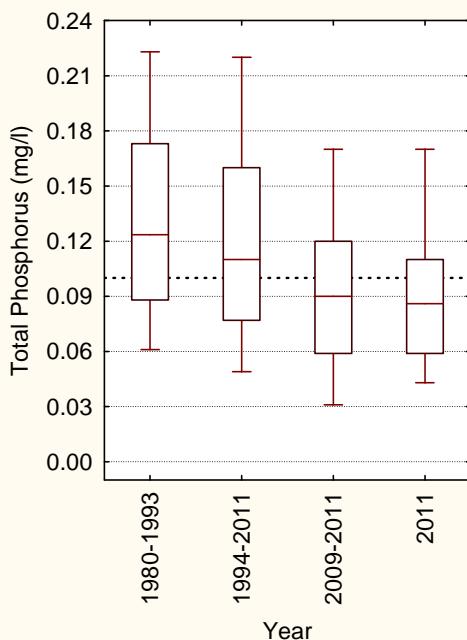
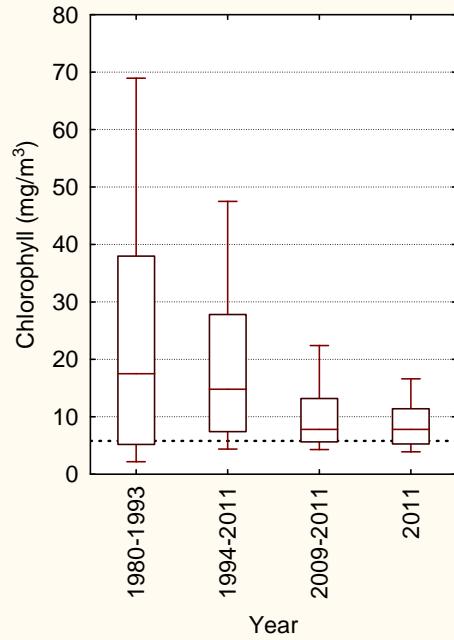
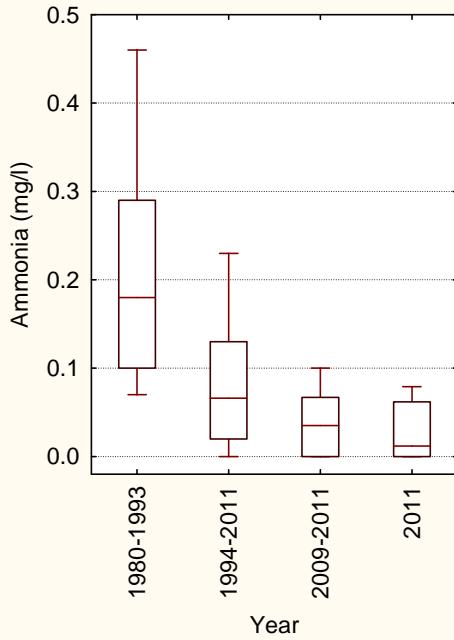
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Milwaukee River at Wells St., Site RI-07



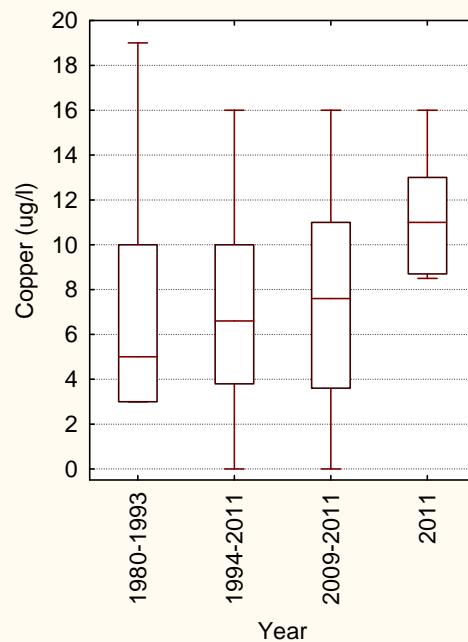
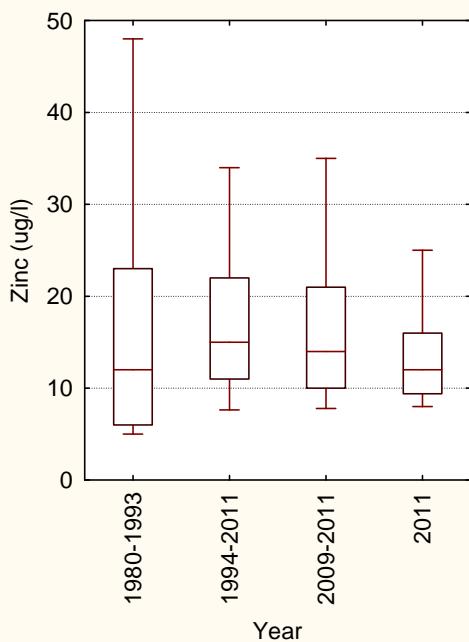
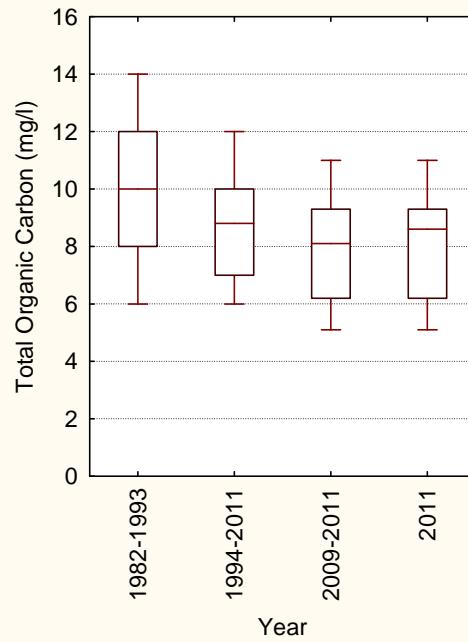
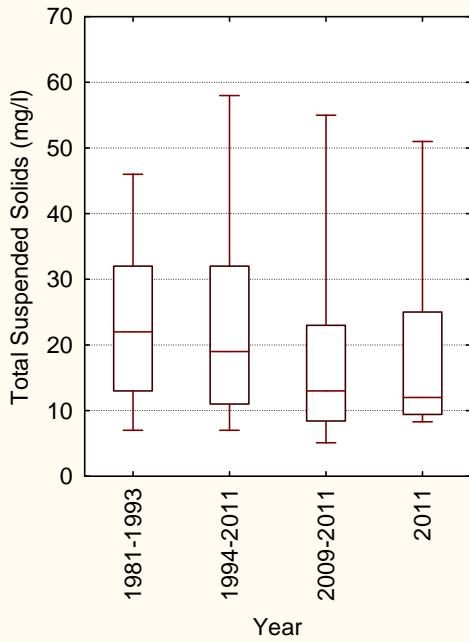
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at Wells St., Site RI-07



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at Wells St., Site RI-07



— Median □ 25%-75% ━ 10%-90%

WELLS STREET - SITE 7
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	15.3	9.4	9.90	0.96	0.016	0.98	0.031	0.73	0.095	0.049	ND
Standard Error	0.0	1.0	0.3	1.52	0.05	0.001	0.05	0.005	0.04	0.006	0.002	ND
Median	8.1	16.8	9.7	7.80	0.94	0.013	0.95	0.012	0.77	0.086	0.053	ND
Mode	8.2	19.3	9.7	ND	1.10	0.012	1.00	0.000	1.00	0.100	0.060	ND
Standard Deviation	0.2	7.7	2.3	6.97	0.43	0.011	0.43	0.041	0.29	0.051	0.019	ND
Sample Variance	0.1	59.6	5.1	48.61	0.19	0.000	0.19	0.002	0.08	0.003	0.000	ND
Kurtosis	0.4	-0.9	-0.8	5.73	-0.11	1.421	-0.09	1.568	1.15	1.909	-0.427	ND
Skewness	-0.4	-0.4	0.5	2.16	0.76	1.168	0.74	1.406	-0.72	1.389	0.162	ND
Range	1.1	27.2	7.7	30.08	1.65	0.047	1.74	0.160	1.40	0.230	0.081	0.00
Minimum	7.5	0.1	6.5	3.22	0.25	0.000	0.26	0.000	0.00	0.030	0.016	0.00
Maximum	8.6	27.3	14.2	33.30	1.90	0.047	2.00	0.160	1.40	0.260	0.097	0.00
Count	63	63	63	21	63	63	63	60	60	63	63	0
Confidence Level(95.0%)	0.1	1.9	0.6	3.17	0.11	0.003	0.11	0.011	0.07	0.013	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	479.4	457.0	5.8	22.4	18.8	769	83.3	1921	2.4	4080
Standard Error	ND	ND	10.7	12.8	0.6	3.3	2.9	21	4.2	1102	0.2	3960
Median	ND	ND	510.0	494.0	3.9	12.0	10.3	778	78.0	190	2.3	140
Mode	ND	ND	540.0	415.0	3.4	11.0	5.8	1140	120.0	210	2.3	ND
Standard Deviation	ND	ND	84.8	101.8	5.0	26.1	22.8	164	33.3	4927	0.8	6859
Sample Variance	ND	ND	7189.9	10356.9	24.7	680.1	520.3	26879	1107.5	24276299	0.6	47045200
Kurtosis	ND	ND	0.3	0.3	9.1	10.2	7.7	1	1.1	10	0.8	ND
Skewness	ND	ND	0.0	-0.4	2.7	3.1	2.8	0	1.0	3	1.1	2
Range	0.0	0.0	400.0	470.4	28.8	135.3	105.7	735	146.0	19977	2.9	11900
Minimum	0.0	0.0	300.0	220.0	1.2	4.7	5.3	405	34.0	23	1.4	100
Maximum	0.0	0.0	700.0	690.4	30.0	140.0	111.0	1140	180.0	20000	4.3	12000
Count	0	0	63	63	63	63	63	63	63	20	20	3
Confidence Level(95.0%)	ND	ND	21.4	25.6	1.3	6.6	5.7	41	8.4	2306	0.4	17039

ND = No Data

Provisional MMSD Water Quality Data

WELLS STREET - SITE 7
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	62.05	35.38	0.1	2.0	11.5	2.7	4.7	14.2	0.2	1.5	0.0	ND
Standard Error	2.69	1.91	0.1	0.8	0.8	0.5	0.8	1.9	0.1	0.2	0.0	ND
Median	64.00	38.00	0.0	0.0	11.0	2.0	6.0	12.0	0.0	1.6	0.0	ND
Mode	62.00	43.00	0.0	0.0	11.0	1.9	0.0	10.0	0.0	0.0	0.0	ND
Standard Deviation	12.31	8.77	0.4	3.7	3.3	2.3	3.1	8.7	0.4	1.1	0.0	ND
Sample Variance	151.55	76.85	0.2	13.6	10.7	5.5	9.8	75.3	0.2	1.3	0.0	ND
Kurtosis	1.29	0.41	21.0	0.7	1.5	13.4	-1.3	3.6	9.3	-0.8	ND	ND
Skewness	-1.10	-1.11	4.6	1.5	1.3	3.4	-0.6	1.6	2.9	0.0	ND	ND
Range	50.00	30.00	1.8	11.0	12.1	12.0	8.4	41.0	1.6	3.8	0.0	0.0
Minimum	31.00	15.00	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	81.00	45.00	1.8	11.0	20.0	12.0	8.4	41.0	1.6	3.8	0.0	0.0
Count	21	21	21	21	17	21	17	21	21	21	21	0
Confidence Level(95.0%)	5.60	3.99	0.2	1.7	1.7	1.1	1.6	4.0	0.2	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	300	238	1.1	8.5	67.3	59.3	8.2	7.9
Standard Error	14	7	0.2	0.9	2.6	2.5	0.3	0.3
Median	320	250	0.0	6.5	69.0	60.0	8.6	8.2
Mode	360	240	0.0	4.9	72.0	65.0	11.0	11.0
Standard Deviation	64	54	1.7	4.3	20.6	19.6	2.4	2.3
Sample Variance	4060	2874	2.7	18.6	424.9	384.4	5.7	5.3
Kurtosis	1	2	-0.7	-0.2	6.0	6.7	-0.5	-0.4
Skewness	-1	-1	1.0	1.0	1.7	1.9	0.0	0.3
Range	230	210	4.9	13.5	109.0	103.0	9.7	9.0
Minimum	140	100	0.0	4.5	31.0	27.0	3.3	4.0
Maximum	370	310	4.9	18.0	140.0	130.0	13.0	13.0
Count	21	63	63	21	63	63	63	63
Confidence Level(95.0%)	29	14	0.4	2.0	5.2	4.9	0.6	0.6

ND = No Data

Provisional MMSD Water Quality Data

WATER STREET - SITE 8
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.1	8.8	5.28	1.13	0.023	1.17	0.101	0.66	0.083	0.050	ND
Standard Error	0.0	0.9	0.3	0.77	0.07	0.002	0.07	0.010	0.03	0.004	0.002	ND
Median	7.8	14.3	9.3	3.86	0.86	0.018	0.88	0.098	0.68	0.075	0.052	ND
Mode	7.7	19.8	9.6	0.75	1.60	0.012	1.60	0.000	0.00	0.160	0.058	ND
Standard Deviation	0.3	8.1	2.5	3.87	0.63	0.016	0.65	0.084	0.27	0.033	0.021	ND
Sample Variance	0.1	65.4	6.2	14.99	0.40	0.000	0.43	0.007	0.07	0.001	0.000	ND
Kurtosis	-0.2	-1.4	-1.1	0.58	-0.68	17.492	-0.61	-0.512	1.18	1.133	1.473	ND
Skewness	0.6	0.0	0.1	1.00	0.78	3.184	0.82	0.597	-1.06	1.273	0.942	ND
Range	1.2	27.5	9.2	14.65	2.16	0.120	2.24	0.310	1.10	0.145	0.101	0.00
Minimum	7.4	0.5	4.6	0.75	0.34	0.000	0.36	0.000	0.00	0.035	0.019	0.00
Maximum	8.6	28.0	13.8	15.40	2.50	0.120	2.60	0.310	1.10	0.180	0.120	0.00
Count	77	77	77	25	78	78	78	75	74	78	77	0
Confidence Level(95.0%)	0.1	1.8	0.6	1.60	0.14	0.004	0.15	0.019	0.06	0.008	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	501.7	487.1	4.0	14.6	13.4	872	111.8	2513	2.4	793
Standard Error	ND	ND	19.5	20.3	0.3	1.6	1.7	44	8.5	1576	0.2	341
Median	ND	ND	480.0	471.1	3.2	9.6	8.5	788	81.5	165	2.2	185
Mode	ND	ND	520.0	380.0	2.4	10.0	11.5	1020	110.0	310	2.5	46
Standard Deviation	ND	ND	172.4	179.0	3.0	13.9	14.7	389	74.8	8037	0.8	1739
Sample Variance	ND	ND	29731.0	32031.3	9.1	191.9	214.8	150946	5590.6	64587232	0.6	3024958
Kurtosis	ND	ND	4.6	3.9	3.6	5.6	5.9	4	4.5	19	2.0	15
Skewness	ND	ND	1.9	1.7	1.8	2.4	2.6	2	2.1	4	1.5	4
Range	0.0	0.0	910.0	963.1	15.0	69.4	63.1	1933	377.0	38970	3.1	8284
Minimum	0.0	0.0	290.0	228.0	0.0	2.6	3.3	427	43.0	30	1.5	16
Maximum	0.0	0.0	1200.0	1191.1	15.0	72.0	66.4	2360	420.0	39000	4.6	8300
Count	0	0	78	78	78	78	78	77	78	26	26	26
Confidence Level(95.0%)	ND	ND	38.9	40.4	0.7	3.1	3.3	88	16.9	3246	0.3	702

ND = No Data

Provisional MMSD Water Quality Data

WATER STREET - SITE 8
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

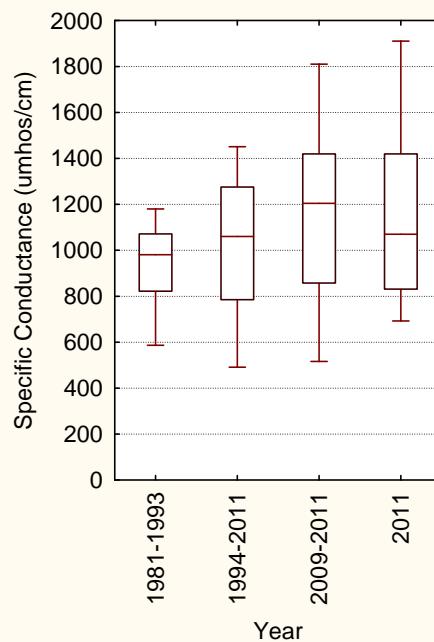
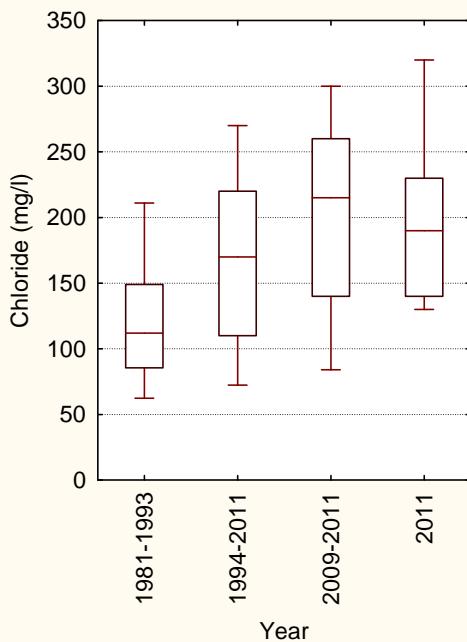
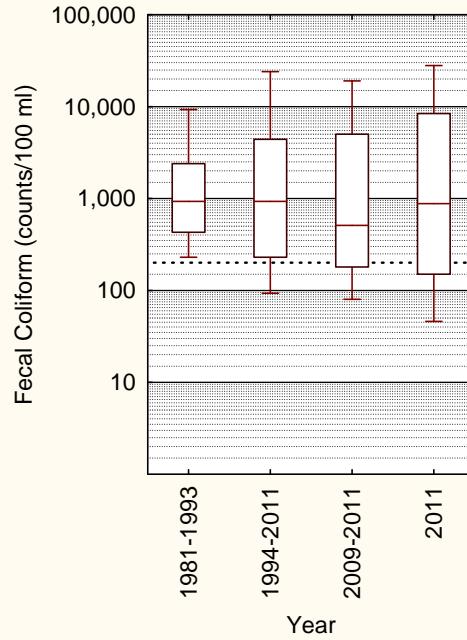
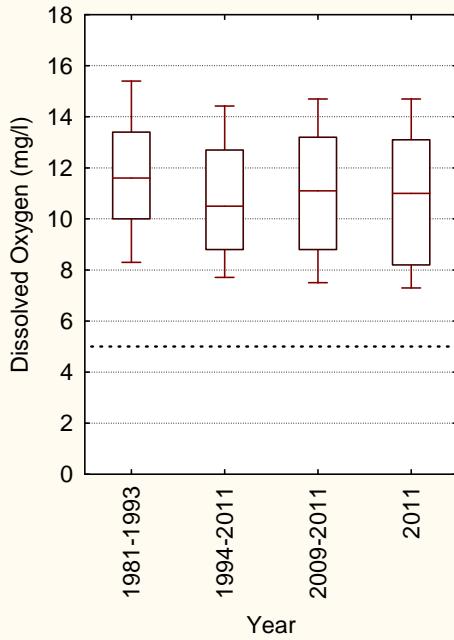
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	61.77	32.35	0.1	2.9	12.1	2.1	4.0	18.0	0.1	1.0	0.0	ND
Standard Error	2.72	1.53	0.0	0.8	1.0	0.2	0.8	2.4	0.0	0.2	0.0	ND
Median	65.50	35.00	0.0	0.0	12.0	2.0	5.0	14.0	0.0	0.8	0.0	ND
Mode	71.00	35.00	0.0	0.0	12.0	1.5	0.0	14.0	0.0	0.0	0.0	ND
Standard Deviation	13.86	7.81	0.2	4.0	4.8	1.2	3.8	12.1	0.2	1.0	0.0	ND
Sample Variance	192.10	60.96	0.1	16.0	22.7	1.4	14.5	145.7	0.0	0.9	0.0	ND
Kurtosis	0.33	0.44	5.5	0.1	-0.3	1.1	-1.9	8.8	1.5	-1.6	ND	ND
Skewness	-0.75	-1.14	2.6	1.1	0.6	0.4	0.1	2.5	1.8	0.3	ND	ND
Range	53.00	27.00	0.8	13.0	17.5	5.1	9.7	65.0	0.5	2.5	0.0	0.0
Minimum	31.00	14.00	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	84.00	41.00	0.8	13.0	22.0	5.1	9.7	65.0	0.5	2.5	0.0	0.0
Count	26	26	26	26	22	26	21	26	26	26	26	0
Confidence Level(95.0%)	5.60	3.15	0.1	1.6	2.1	0.5	1.7	4.9	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	287	224	0.7	10.1	61.5	54.4	7.0	6.9
Standard Error	13	6	0.1	0.9	2.3	2.0	0.3	0.3
Median	310	240	0.0	11.0	64.0	54.5	7.3	7.4
Mode	320	260	0.0	13.0	65.0	59.0	5.7	5.8
Standard Deviation	65	53	1.3	4.7	20.0	17.9	2.4	2.2
Sample Variance	4222	2826	1.6	22.5	402.0	320.7	5.7	5.0
Kurtosis	1	0	0.1	-0.4	7.4	7.1	-0.6	-0.4
Skewness	-1	-1	1.3	-0.7	2.0	1.9	0.3	0.3
Range	240	214	4.0	16.0	111.0	104.0	10.5	9.6
Minimum	140	96	0.0	0.0	29.0	26.0	2.5	2.4
Maximum	380	310	4.0	16.0	140.0	130.0	13.0	12.0
Count	26	78	78	26	78	78	78	77
Confidence Level(95.0%)	26	12	0.3	1.9	4.5	4.0	0.5	0.5

ND = No Data

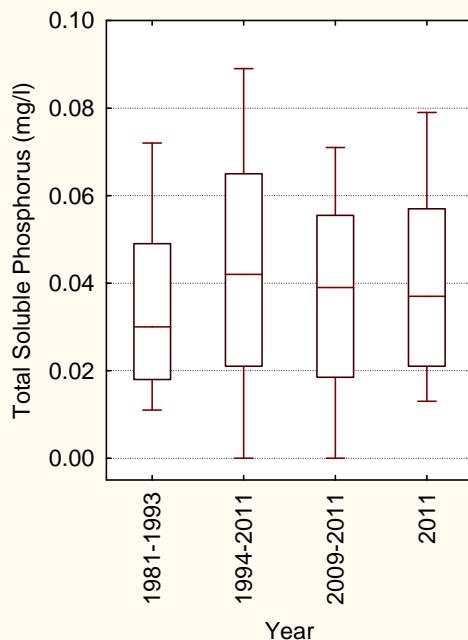
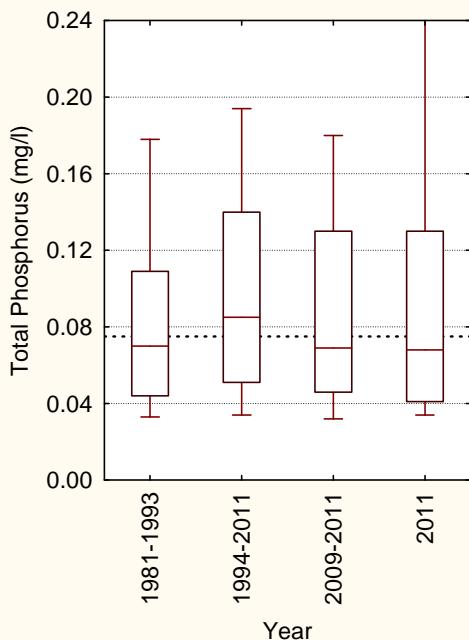
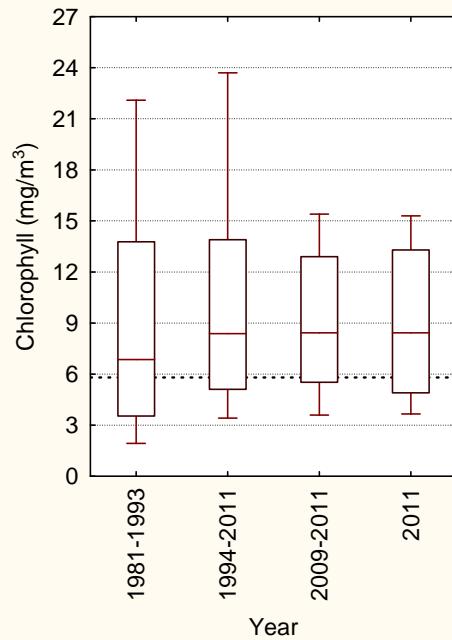
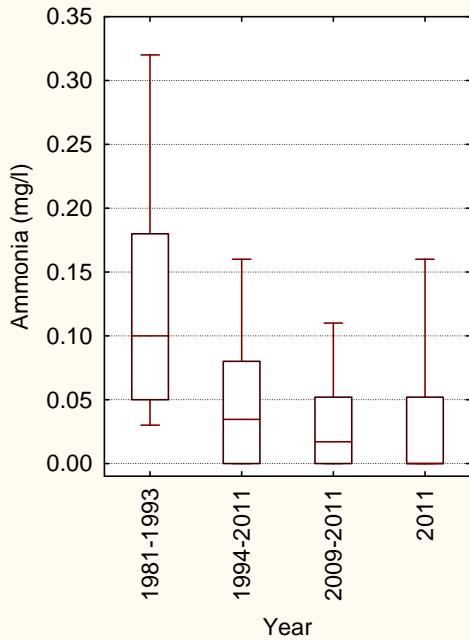
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Menomonee River at North 70th St., Site RI-09



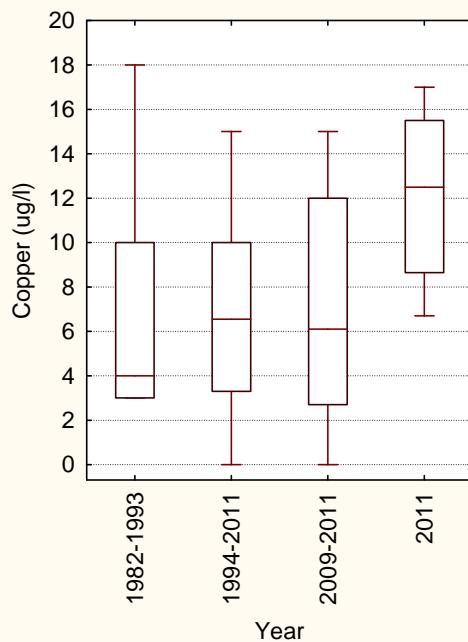
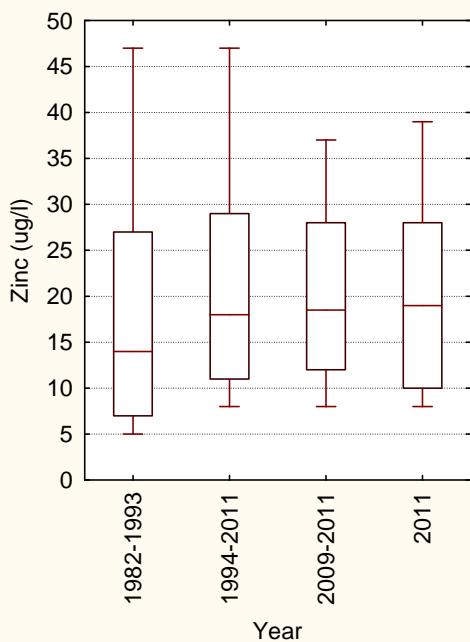
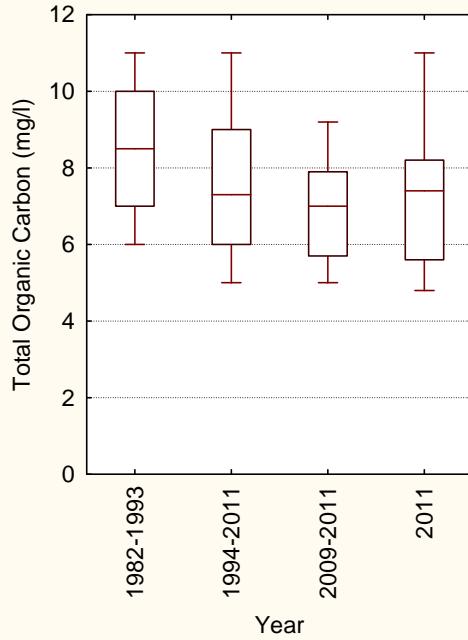
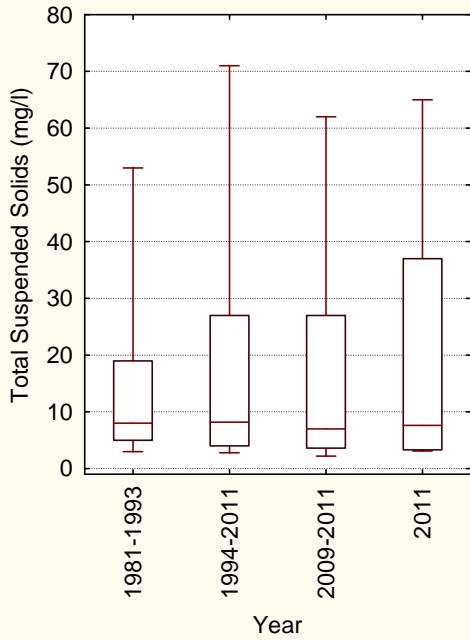
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at North 70th St., Site RI-09



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at North 70th St., Site RI-09



— Median □ 25%-75% ┤ 10%-90%

70TH STREET - SITE 9
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	13.7	11.0	13.01	0.61	0.023	0.63	0.047	0.88	0.101	0.047	ND
Standard Error	0.1	1.6	0.6	3.23	0.08	0.004	0.08	0.021	0.16	0.019	0.009	ND
Median	8.0	13.6	11.0	8.43	0.52	0.017	0.59	0.000	0.67	0.068	0.037	ND
Mode	8.0	13.6	14.7	ND	0.80	0.014	0.81	0.000	0.79	0.330	0.022	ND
Standard Deviation	0.3	7.5	2.7	15.51	0.38	0.018	0.39	0.098	0.74	0.089	0.043	ND
Sample Variance	0.1	56.7	7.3	240.53	0.15	0.000	0.15	0.010	0.54	0.008	0.002	ND
Kurtosis	-0.4	-1.1	-1.3	7.38	0.51	0.268	0.28	4.951	3.99	2.403	4.075	ND
Skewness	0.0	-0.4	-0.1	2.80	0.75	0.996	0.66	2.389	1.86	1.734	1.934	ND
Range	1.0	23.5	8.7	62.07	1.56	0.067	1.56	0.340	3.20	0.314	0.180	0.00
Minimum	7.5	0.0	6.4	1.93	0.04	0.000	0.04	0.000	0.00	0.016	0.000	0.00
Maximum	8.5	23.5	15.1	64.00	1.60	0.067	1.60	0.340	3.20	0.330	0.180	0.00
Count	23	23	23	23	23	23	23	22	22	23	23	0
Confidence Level(95.0%)	0.1	3.3	1.2	6.71	0.17	0.008	0.17	0.044	0.33	0.038	0.019	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	797.8	777.3	5.8	20.6	16.8	1346	270.5	10668	3.0	7226
Standard Error	ND	ND	123.9	125.2	1.6	5.2	4.0	233	68.1	6008	0.2	4357
Median	ND	ND	630.0	626.9	2.6	7.6	7.0	1070	190.0	880	2.9	1000
Mode	ND	ND	630.0	ND	1.6	3.1	ND	1420	220.0	880	2.9	ND
Standard Deviation	ND	ND	594.1	600.7	7.5	25.2	19.0	1120	326.8	28180	1.0	20897
Sample Variance	ND	ND	352999.6	360790.3	55.7	633.6	359.7	1253859	106773.8	794087370	1.1	436673013
Kurtosis	ND	ND	10.8	10.4	2.0	0.8	2.1	12	13.5	17	-0.7	20
Skewness	ND	ND	3.1	3.0	1.8	1.5	1.6	3	3.6	4	0.2	4
Range	0.0	0.0	2790.0	2857.0	24.0	80.5	70.6	5546	1551.0	129972	3.7	99951
Minimum	0.0	0.0	310.0	228.0	0.0	1.5	1.9	254	49.0	28	1.4	49
Maximum	0.0	0.0	3100.0	3085.0	24.0	82.0	72.5	5800	1600.0	130000	5.1	100000
Count	0	0	23	23	23	23	23	23	23	22	22	23
Confidence Level(95.0%)	ND	ND	256.9	259.7	3.2	10.9	8.2	484	141.3	12494	0.5	9036

ND = No Data

Provisional MMSD Water Quality Data

70TH STREET - SITE 9
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	71.00	31.43	0.0	2.5	12.2	4.5	3.7	20.9	0.1	0.8	0.0	ND
Standard Error	4.65	2.06	0.0	0.7	1.0	1.6	0.9	2.7	0.0	0.2	0.0	ND
Median	76.00	35.00	0.0	0.0	12.5	2.4	2.8	19.0	0.0	1.0	0.0	ND
Mode	86.00	40.00	0.0	0.0	13.0	3.4	0.0	25.0	0.0	0.0	0.0	ND
Standard Deviation	22.31	9.90	0.0	3.6	4.4	7.9	3.6	12.9	0.2	0.7	0.0	ND
Sample Variance	497.91	97.98	0.0	12.7	19.1	61.7	13.3	166.3	0.0	0.5	0.0	ND
Kurtosis	-0.31	-0.99	ND	-1.3	-0.3	21.5	-1.8	-0.4	8.4	-1.3	ND	ND
Skewness	-0.07	-0.44	ND	0.8	-0.1	4.6	0.2	0.8	2.8	0.2	ND	ND
Range	90.00	35.00	0.0	9.0	17.5	40.0	8.9	41.6	0.8	2.2	0.0	0.0
Minimum	30.00	12.00	0.0	0.0	3.5	0.0	0.0	6.4	0.0	0.0	0.0	0.0
Maximum	120.00	47.00	0.0	9.0	21.0	40.0	8.9	48.0	0.8	2.2	0.0	0.0
Count	23	23	23	23	20	23	17	23	23	22	23	0
Confidence Level(95.0%)	9.65	4.28	0.0	1.5	2.0	3.4	1.9	5.6	0.1	0.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	306	206	2.9	12.3	58.4	50.7	7.9	7.4
Standard Error	20	13	1.2	3.1	4.9	4.8	0.8	0.7
Median	340	230	0.0	7.8	58.0	51.0	7.4	7.1
Mode	370	260	0.0	0.0	66.0	45.0	7.4	7.4
Standard Deviation	94	62	5.5	14.6	23.3	23.2	3.7	3.4
Sample Variance	8789	3884	30.7	214.0	545.1	537.5	14.0	11.7
Kurtosis	-1	-1	10.2	9.6	11.0	10.1	9.1	8.3
Skewness	0	-1	3.1	2.8	2.8	2.6	2.6	2.5
Range	360	221	24.0	68.0	124.0	119.0	18.8	16.9
Minimum	120	69	0.0	0.0	26.0	21.0	3.2	3.1
Maximum	480	290	24.0	68.0	150.0	140.0	22.0	20.0
Count	23	23	23	23	23	23	23	23
Confidence Level(95.0%)	41	27	2.4	6.3	10.1	10.0	1.6	1.5

ND = No Data

Provisional MMSD Water Quality Data

MUSKEGO AVENUE - SITE 11
 MENOMONEE RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	14.4	7.0	8.59	0.87	0.027	0.90	0.173	0.74	0.089	0.048	ND
Standard Error	0.0	0.9	0.3	1.73	0.06	0.001	0.06	0.020	0.04	0.003	0.003	ND
Median	7.6	14.8	6.4	6.61	0.63	0.023	0.65	0.130	0.85	0.088	0.052	ND
Mode	7.4	19.2	4.4	ND	1.80	0.020	1.90	0.000	0.00	0.100	0.048	ND
Standard Deviation	0.3	7.6	2.7	8.83	0.56	0.012	0.57	0.175	0.32	0.030	0.022	ND
Sample Variance	0.1	57.4	7.5	78.00	0.31	0.000	0.32	0.031	0.10	0.001	0.000	ND
Kurtosis	0.0	-1.3	-1.1	4.68	-0.11	-1.247	-0.04	0.551	0.78	-0.415	-0.635	ND
Skewness	0.3	0.1	0.4	1.98	1.11	0.464	1.13	1.296	-1.05	-0.117	-0.315	ND
Range	1.6	27.0	8.9	38.34	2.14	0.040	2.22	0.620	1.30	0.140	0.090	0.00
Minimum	6.8	1.7	3.5	0.56	0.16	0.011	0.18	0.000	0.00	0.020	0.000	0.00
Maximum	8.4	28.7	12.4	38.90	2.30	0.051	2.40	0.620	1.30	0.160	0.090	0.00
Count	78	78	78	26	78	78	78	75	75	78	78	0
Confidence Level(95.0%)	0.1	1.7	0.6	3.57	0.13	0.003	0.13	0.040	0.07	0.007	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	679.6	667.5	3.7	12.1	12.9	1219	203.4	2684	2.6	ND
Standard Error	ND	ND	42.5	43.0	0.3	1.1	1.3	85	19.4	1354	0.2	ND
Median	ND	ND	550.0	538.5	2.7	7.2	8.5	947	140.0	335	2.5	ND
Mode	ND	ND	1100.0	446.0	2.5	5.6	4.7	1340	130.0	5600	3.7	ND
Standard Deviation	ND	ND	375.8	379.9	2.6	9.8	11.8	753	171.7	6636	0.9	ND
Sample Variance	ND	ND	141208.9	144340.2	6.8	95.9	140.0	566867	29468.1	44030071	0.8	ND
Kurtosis	ND	ND	2.6	2.5	1.6	1.8	4.1	4	7.3	16	-0.5	ND
Skewness	ND	ND	1.6	1.6	1.5	1.6	2.1	2	2.5	4	0.5	ND
Range	0.0	0.0	1740.0	1767.0	12.0	41.6	47.9	3965	905.0	30979	3.2	0
Minimum	0.0	0.0	260.0	225.0	0.0	3.4	3.5	385	55.0	21	1.3	0
Maximum	0.0	0.0	2000.0	1992.0	12.0	45.0	51.4	4350	960.0	31000	4.5	0
Count	0	0	78	78	78	78	78	78	78	24	24	0
Confidence Level(95.0%)	ND	ND	84.7	85.7	0.6	2.2	2.7	170	38.7	2802	0.4	ND

ND = No Data

Provisional MMSD Water Quality data

MUSKEGO AVENUE - SITE 11
MENOMONEE RIVER
WATER QUALITY DATA - 2011

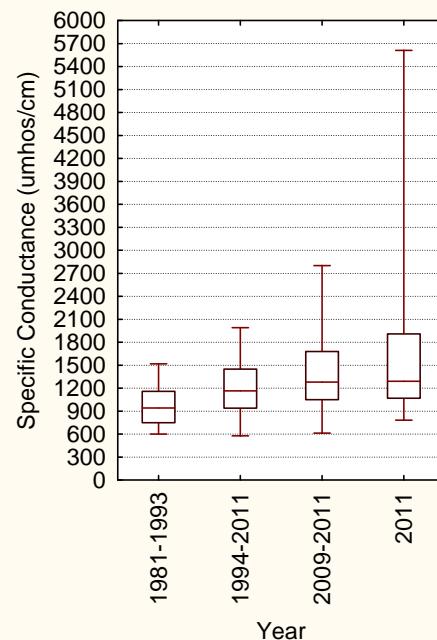
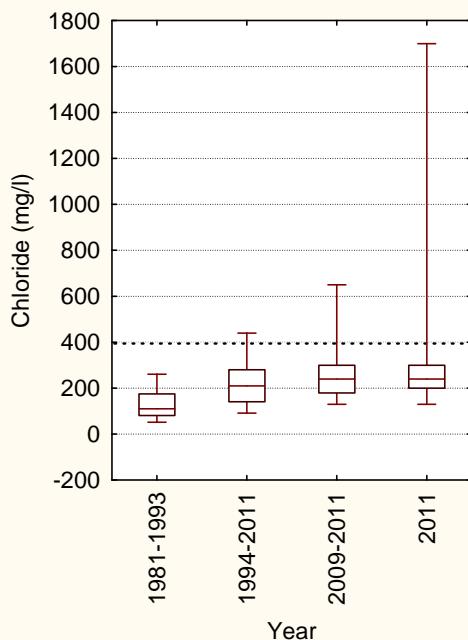
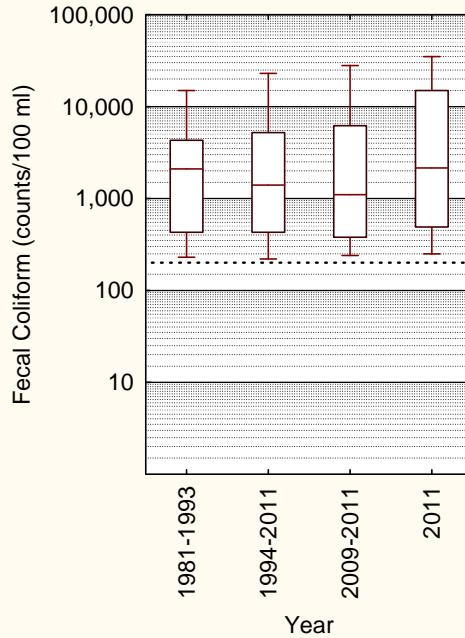
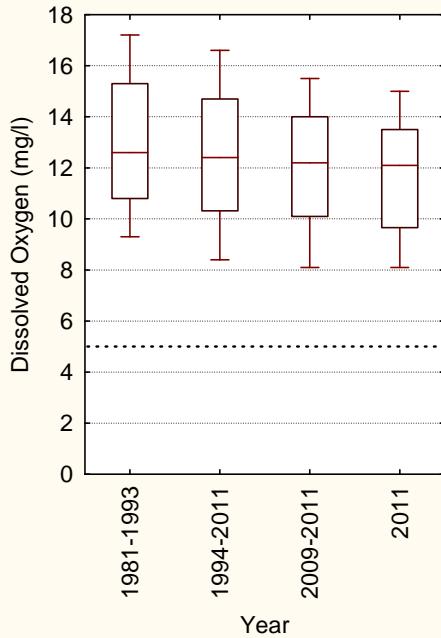
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	64.77	30.62	0.0	2.3	13.2	2.4	4.0	19.8	0.3	1.1	0.0	ND
Standard Error	3.75	1.83	0.0	0.7	0.8	0.2	0.8	1.6	0.1	0.3	0.0	ND
Median	65.00	32.50	0.0	0.0	13.5	2.2	3.9	19.0	0.0	1.2	0.0	ND
Mode	91.00	32.00	0.0	0.0	16.0	2.0	0.0	20.0	0.0	0.0	0.0	ND
Standard Deviation	19.11	9.32	0.0	3.3	3.7	0.9	3.6	8.4	0.4	1.3	0.0	ND
Sample Variance	365.30	86.86	0.0	11.1	13.9	0.8	13.1	70.0	0.2	1.6	0.0	ND
Kurtosis	-0.73	-0.20	ND	-1.3	0.1	1.8	-1.6	0.6	2.1	5.8	ND	ND
Skewness	-0.35	-0.86	ND	0.8	0.1	0.0	0.1	1.0	1.6	1.9	ND	ND
Range	66.00	33.80	0.0	8.6	16.0	4.3	9.8	32.1	1.4	5.7	0.0	0.0
Minimum	25.00	9.20	0.0	0.0	6.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0
Maximum	91.00	43.00	0.0	8.6	22.0	4.3	9.8	40.0	1.4	5.7	0.0	0.0
Count	26	26	26	26	22	26	22	26	26	25	26	0
Confidence Level(95.0%)	7.72	3.76	0.0	1.3	1.7	0.4	1.6	3.4	0.2	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	288	209	1.4	11.4	58.7	51.9	6.8	6.5
Standard Error	17	7	0.2	1.0	2.4	2.4	0.2	0.2
Median	300	220	0.0	10.8	58.0	52.0	6.9	6.5
Mode	380	240	0.0	13.0	58.0	54.0	5.4	5.2
Standard Deviation	85	64	2.0	4.9	21.4	20.8	1.6	1.4
Sample Variance	7194	4149	4.2	23.6	456.4	431.9	2.5	2.1
Kurtosis	0	0	2.8	2.8	5.2	4.9	-0.8	-0.6
Skewness	-1	-1	1.7	1.1	1.6	1.6	-0.1	0.0
Range	300	249	8.3	22.8	117.0	111.0	6.3	6.1
Minimum	100	61	0.0	4.2	23.0	19.0	3.7	3.7
Maximum	400	310	8.3	27.0	140.0	130.0	10.0	9.8
Count	26	78	78	26	78	78	78	78
Confidence Level(95.0%)	34	15	0.5	2.0	4.8	4.7	0.4	0.3

ND = No Data

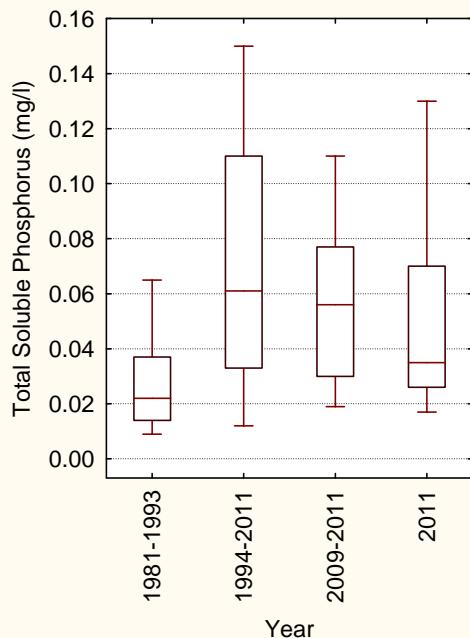
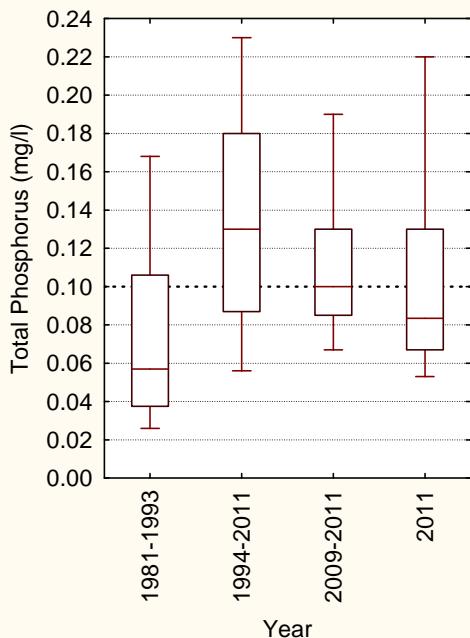
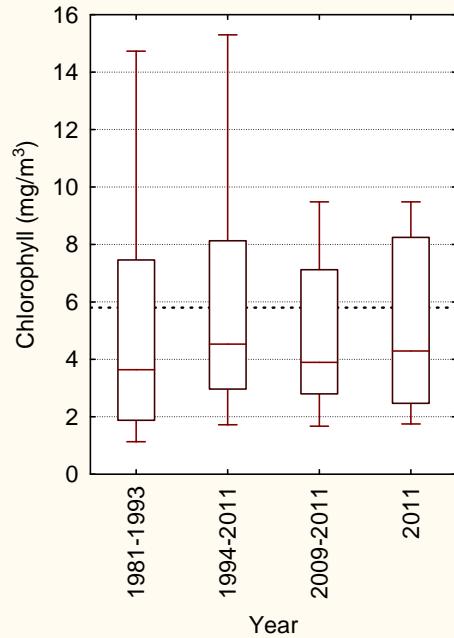
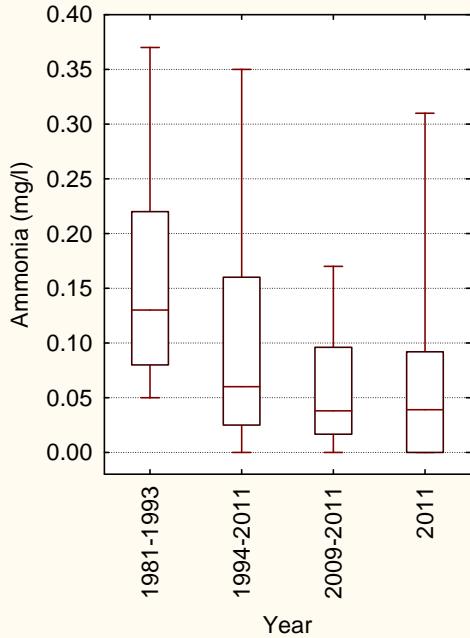
Provisional MMSD Water Quality data

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at S. 27th St., Site RI-12



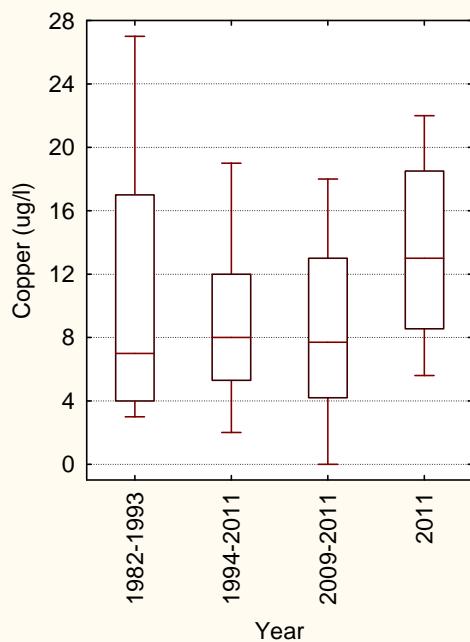
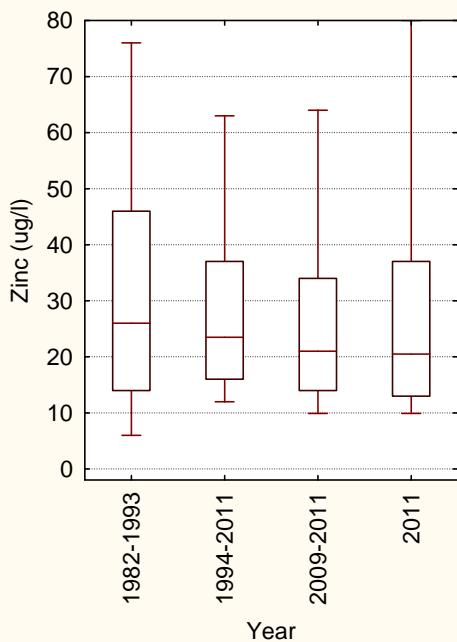
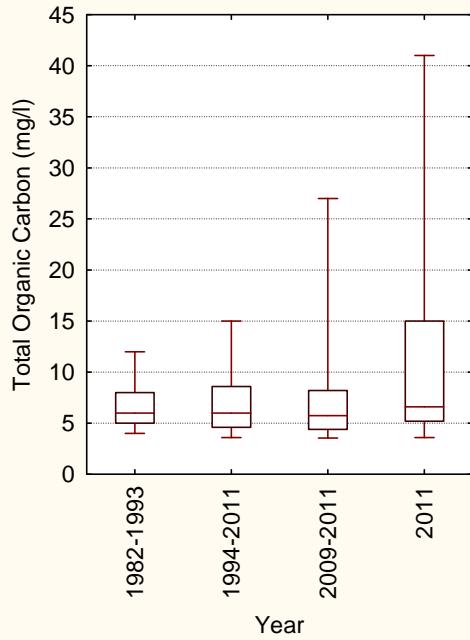
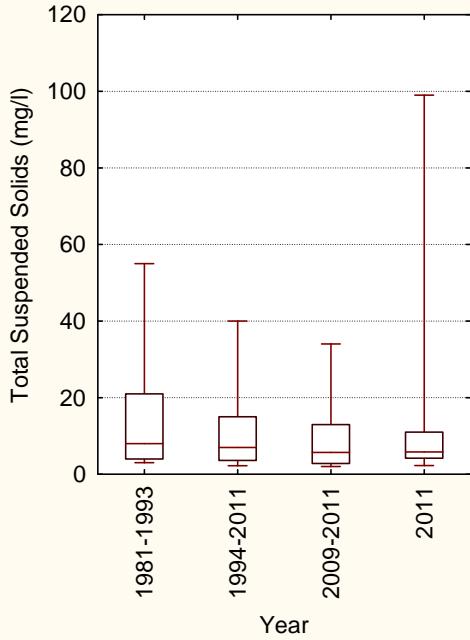
— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at S. 27th St., Site RI-12



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at S. 27th St., Site RI-12



— Median □ 25%-75% □ 10%-90%

27TH STREET - SITE 12
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	12.4	11.7	5.30	0.53	0.038	0.56	0.091	0.70	0.109	0.050	ND
Standard Error	0.1	1.5	0.6	0.68	0.06	0.006	0.06	0.028	0.09	0.013	0.008	ND
Median	8.1	13.5	12.1	4.30	0.47	0.033	0.50	0.039	0.67	0.084	0.035	ND
Mode	8.2	19.9	8.1	ND	0.23	0.013	0.22	0.000	0.00	0.071	0.000	ND
Standard Deviation	0.3	7.8	3.0	3.49	0.30	0.029	0.31	0.140	0.46	0.064	0.043	ND
Sample Variance	0.1	60.9	9.1	12.18	0.09	0.001	0.10	0.019	0.21	0.004	0.002	ND
Kurtosis	-0.7	-1.2	0.3	0.41	0.03	0.124	-0.62	5.134	1.68	0.601	2.700	ND
Skewness	-0.2	-0.3	0.4	1.03	0.84	1.050	0.65	2.232	0.92	1.253	1.661	ND
Range	1.2	24.2	13.1	13.27	1.10	0.099	1.08	0.570	2.00	0.230	0.180	0.00
Minimum	7.4	-0.3	6.5	0.83	0.20	0.000	0.22	0.000	0.00	0.040	0.000	0.00
Maximum	8.6	23.9	19.6	14.10	1.30	0.099	1.30	0.570	2.00	0.270	0.180	0.00
Count	26	26	26	26	26	26	26	25	25	26	26	0
Confidence Level(95.0%)	0.1	3.2	1.2	1.41	0.12	0.012	0.13	0.058	0.19	0.026	0.017	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	1210.0	1181.3	6.9	28.7	34.2	2095	481.6	9063	3.3	10518
Standard Error	ND	ND	215.9	218.3	2.4	12.7	15.1	412	126.0	2490	0.2	3608
Median	ND	ND	770.0	765.5	3.5	5.9	8.1	1290	240.0	2150	3.3	2150
Mode	ND	ND	660.0	ND	5.4	11.0	ND	1660	240.0	38000	4.6	1400
Standard Deviation	ND	ND	1100.6	1113.2	12.0	64.9	77.1	2101	642.6	12694	0.9	18396
Sample Variance	ND	ND	1211416.0	1239264.3	144.5	4207.3	5944.1	4413832	412947.1	161149724	0.8	338423028
Kurtosis	ND	ND	4.4	4.2	11.7	12.9	12.9	5	4.9	1	-0.1	8
Skewness	ND	ND	2.3	2.2	3.3	3.5	3.5	2	2.4	1	-0.4	3
Range	0.0	0.0	4210.0	4349.0	56.0	298.0	355.7	8441	2449.0	37988	3.5	76943
Minimum	0.0	0.0	390.0	240.0	0.0	2.0	1.3	409	51.0	12	1.1	57
Maximum	0.0	0.0	4600.0	4589.0	56.0	300.0	357.0	8850	2500.0	38000	4.6	77000
Count	0	0	26	26	26	26	26	26	26	26	26	26
Confidence Level(95.0%)	ND	ND	444.6	449.6	4.9	26.2	31.1	849	259.6	5127	0.4	7430

ND = No Data

Provisional MMSD Water Quality Data

27TH STREET - SITE 12
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	72.62	32.50	0.0	3.9	13.9	4.6	3.1	30.9	0.1	0.6	0.0	ND
Standard Error	4.09	1.94	0.0	1.0	1.4	0.7	0.8	4.9	0.1	0.2	0.0	ND
Median	71.00	33.50	0.0	0.0	13.0	3.6	1.7	20.5	0.0	0.0	0.0	ND
Mode	70.00	30.00	0.0	0.0	18.0	3.2	0.0	14.0	0.0	0.0	0.0	ND
Standard Deviation	20.83	9.91	0.1	5.0	6.8	3.4	3.5	25.1	0.3	0.8	0.0	ND
Sample Variance	434.09	98.26	0.0	25.3	45.9	11.8	12.5	631.0	0.1	0.7	0.0	ND
Kurtosis	-0.10	-0.26	26.0	-0.8	-0.6	2.5	-1.2	0.3	2.3	-0.2	ND	ND
Skewness	0.10	-0.39	5.1	0.8	0.3	1.5	0.6	1.3	1.8	1.0	ND	ND
Range	84.00	38.00	0.7	15.0	25.1	15.0	9.2	77.0	0.9	2.6	0.0	0.0
Minimum	36.00	13.00	0.0	0.0	2.9	0.0	0.0	8.0	0.0	0.0	0.0	0.0
Maximum	120.00	51.00	0.7	15.0	28.0	15.0	9.2	85.0	0.9	2.6	0.0	0.0
Count	26	26	26	26	24	26	19	26	26	25	26	0
Confidence Level(95.0%)	8.42	4.00	0.1	2.0	2.9	1.4	1.7	10.1	0.1	0.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	315	201	24.8	46.8	62.7	47.7	14.8	14.0
Standard Error	18	12	11.4	16.5	5.2	3.7	3.8	3.9
Median	315	210	5.0	18.0	56.0	47.0	6.6	6.4
Mode	150	210	0.0	18.0	69.0	51.0	8.2	7.3
Standard Deviation	90	59	58.0	84.3	26.0	18.3	19.0	19.1
Sample Variance	8130	3495	3358.3	7109.8	678.6	334.1	360.5	364.4
Kurtosis	0	1	9.7	9.3	1.4	10.4	5.3	5.3
Skewness	0	-1	3.2	3.1	1.3	2.4	2.4	2.5
Range	340	242	240.0	360.0	100.0	103.0	73.2	71.3
Minimum	150	58	0.0	0.0	30.0	17.0	1.8	1.7
Maximum	490	300	240.0	360.0	130.0	120.0	75.0	73.0
Count	26	26	26	26	25	25	25	24
Confidence Level(95.0%)	36	24	23.4	34.1	10.8	7.5	7.8	8.1

ND = No Data

Provisional MMSD Water Quality Data

8TH STREET - SITE 13
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.5	16.5	14.7	8.27	0.37	0.028	0.40	0.030	0.55	0.074	0.027	ND
Standard Error	0.1	1.4	1.2	1.09	0.07	0.006	0.08	0.023	0.10	0.013	0.006	ND
Median	8.4	16.9	14.7	6.88	0.24	0.021	0.26	0.000	0.60	0.065	0.021	ND
Mode	8.4	20.0	10.8	ND	0.12	0.045	0.10	0.000	0.00	0.068	0.000	ND
Standard Deviation	0.3	6.1	5.3	4.87	0.33	0.025	0.35	0.098	0.44	0.056	0.027	ND
Sample Variance	0.1	37.8	27.7	23.72	0.11	0.001	0.13	0.010	0.19	0.003	0.001	ND
Kurtosis	-0.6	-1.0	-0.3	-0.48	-1.42	0.304	-1.48	15.646	-0.25	4.182	6.523	ND
Skewness	0.0	-0.3	0.5	0.78	0.52	0.885	0.49	3.886	0.34	1.877	2.211	ND
Range	1.2	19.9	18.3	15.31	0.95	0.091	0.97	0.420	1.50	0.234	0.120	0.00
Minimum	7.8	5.6	7.4	2.39	0.02	0.000	0.03	0.000	0.00	0.016	0.000	0.00
Maximum	9.0	25.5	25.7	17.70	0.97	0.091	1.00	0.420	1.50	0.250	0.120	0.00
Count	20	20	20	20	20	20	20	19	19	20	20	0
Confidence Level(95.0%)	0.2	2.9	2.5	2.28	0.16	0.012	0.17	0.047	0.21	0.026	0.013	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	749.0	729.0	3.9	20.0	22.6	1283	229.1	10328	3.2	5097
Standard Error	ND	ND	63.5	67.9	1.2	9.2	10.8	120	23.5	4146	0.2	1802
Median	ND	ND	700.0	694.3	2.8	6.7	5.3	1230	220.0	1030	3.0	1300
Mode	ND	ND	680.0	ND	0.0	8.3	1.4	1550	220.0	410	2.6	1300
Standard Deviation	ND	ND	284.1	303.8	5.5	41.2	48.2	536	105.0	18542	0.9	8059
Sample Variance	ND	ND	80725.3	92295.5	29.9	1700.3	2321.3	287283	11024.1	343804379	0.8	64942728
Kurtosis	ND	ND	0.5	0.4	15.8	6.8	7.1	0	2.5	4	-0.9	4
Skewness	ND	ND	0.8	0.5	3.8	2.8	2.8	0	0.9	2	0.3	2
Range	0.0	0.0	1060.0	1191.7	26.0	138.2	172.6	2170	485.0	66923	2.9	29913
Minimum	0.0	0.0	340.0	200.0	0.0	1.8	1.4	280	35.0	77	1.9	87
Maximum	0.0	0.0	1400.0	1391.7	26.0	140.0	174.0	2450	520.0	67000	4.8	30000
Count	0	0	20	20	20	20	20	20	20	20	20	20
Confidence Level(95.0%)	ND	ND	133.0	142.2	2.6	19.3	22.5	251	49.1	8678	0.4	3772

ND = No Data

Provisional MMSD Water Quality Data

8TH STREET - SITE 13
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

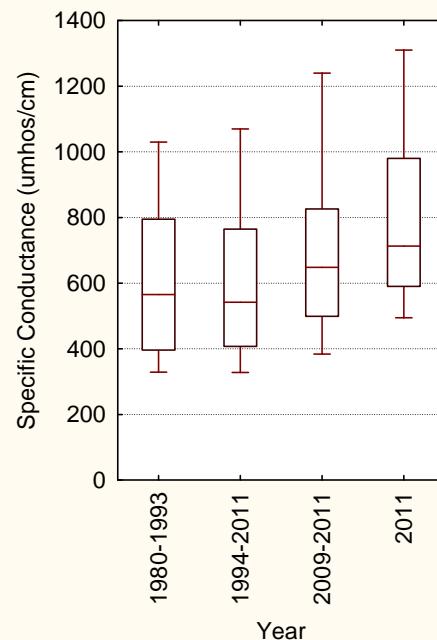
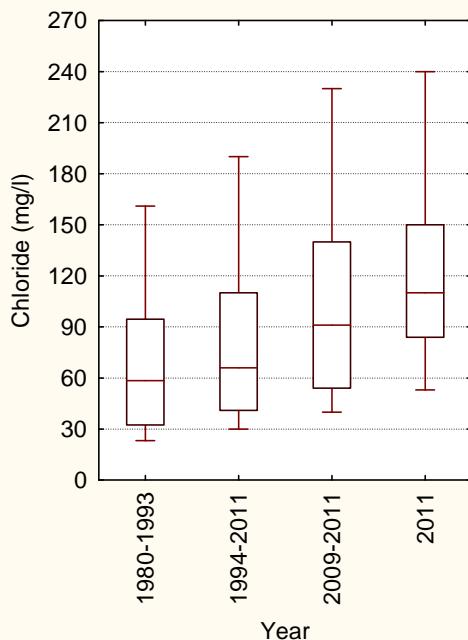
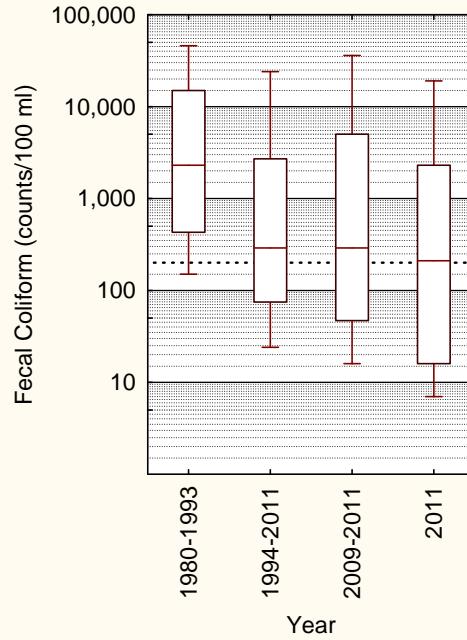
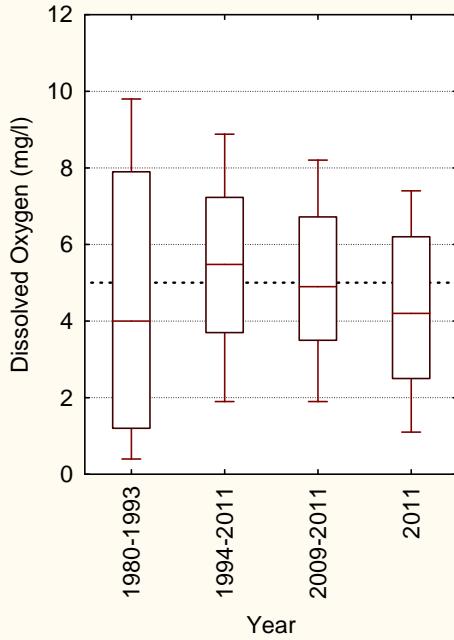
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	64.80	31.05	0.0	2.2	12.3	4.0	4.4	23.8	0.2	0.9	0.0	ND
Standard Error	4.66	2.69	0.0	0.9	1.3	0.5	0.8	3.7	0.1	0.2	0.0	ND
Median	68.50	32.00	0.0	0.0	11.0	3.0	4.3	19.5	0.0	1.0	0.0	ND
Mode	64.00	32.00	0.0	0.0	11.0	2.4	0.0	27.0	0.0	0.0	0.0	ND
Standard Deviation	20.83	12.05	0.0	4.0	5.5	2.4	3.2	16.4	0.3	0.7	0.0	ND
Sample Variance	433.96	145.21	0.0	15.7	30.1	5.7	10.5	267.4	0.1	0.5	0.0	ND
Kurtosis	-0.72	-0.94	ND	-0.3	0.0	-0.2	-1.5	4.7	6.8	-0.8	ND	ND
Skewness	-0.15	-0.29	ND	1.3	0.7	1.0	-0.1	2.0	2.5	0.1	ND	ND
Range	72.00	40.00	0.0	10.0	20.0	7.8	9.3	67.8	1.3	2.4	0.0	0.0
Minimum	28.00	11.00	0.0	0.0	4.0	1.3	0.0	7.2	0.0	0.0	0.0	0.0
Maximum	100.00	51.00	0.0	10.0	24.0	9.1	9.3	75.0	1.3	2.4	0.0	0.0
Count	20	20	20	20	18	20	15	20	20	19	20	0
Confidence Level(95.0%)	9.75	5.64	0.0	1.9	2.7	1.1	1.8	7.7	0.2	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	291	186	5.7	14.9	51.3	44.2	7.3	6.7
Standard Error	23	14	1.7	2.7	3.7	4.1	0.9	0.9
Median	305	200	3.3	12.0	52.0	42.0	6.5	6.4
Mode	140	200	0.0	12.0	54.0	47.0	6.5	6.6
Standard Deviation	102	64	7.7	11.9	16.2	17.9	3.9	3.9
Sample Variance	10331	4102	59.0	142.6	260.9	319.3	14.9	15.0
Kurtosis	-1	1	2.9	1.5	4.0	5.1	1.1	0.9
Skewness	0	-1	1.8	1.4	1.3	1.4	1.3	1.2
Range	340	260	28.0	45.0	77.0	90.2	14.8	14.2
Minimum	110	30	0.0	0.0	23.0	9.8	2.2	1.8
Maximum	450	290	28.0	45.0	100.0	100.0	17.0	16.0
Count	20	20	20	20	19	19	19	19
Confidence Level(95.0%)	48	30	3.6	5.6	7.8	8.6	1.9	1.9

ND = No Data

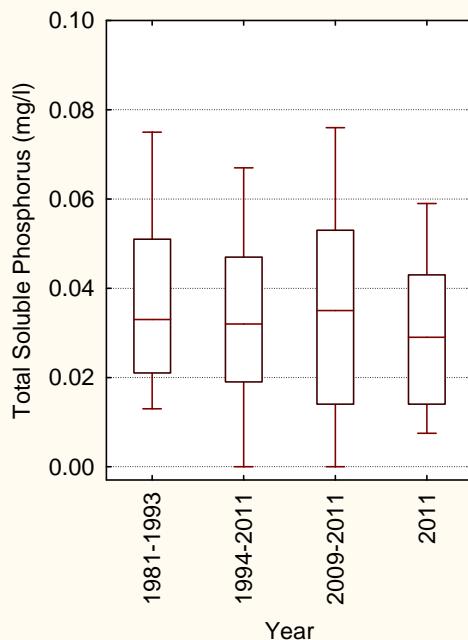
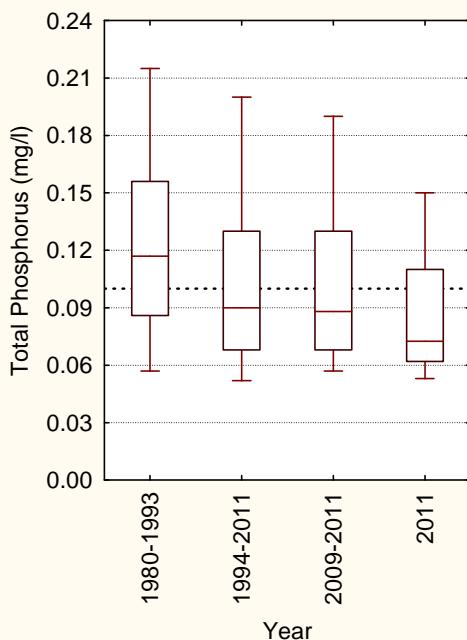
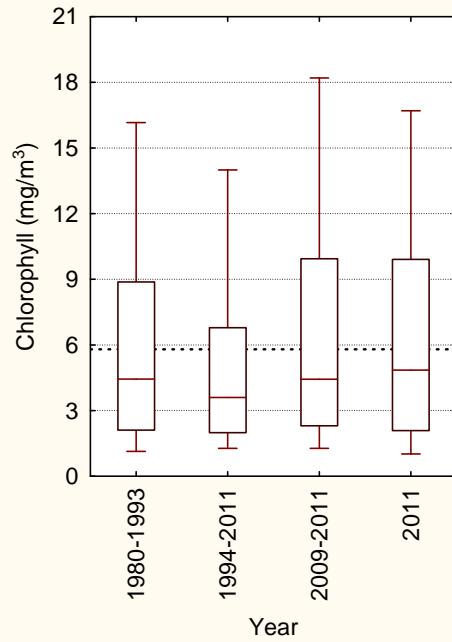
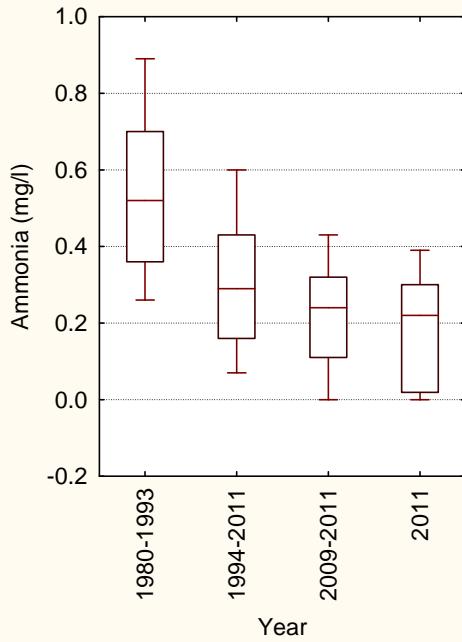
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at 1st St., Site RI-14



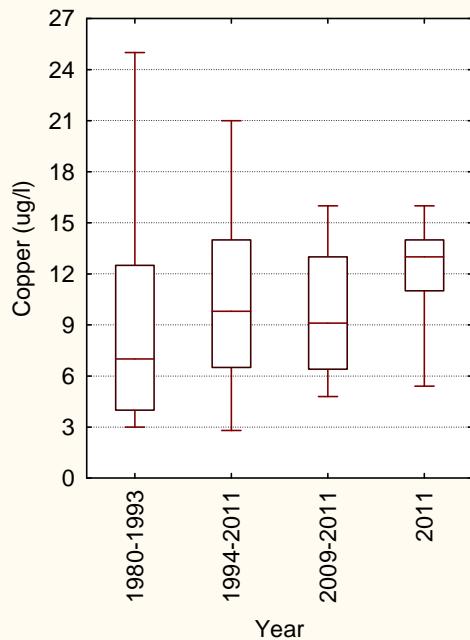
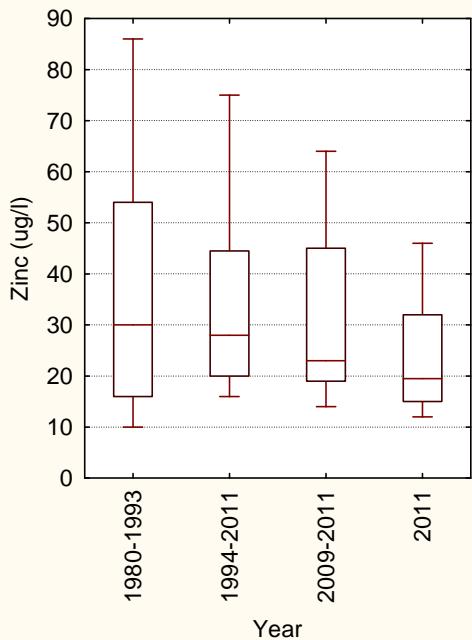
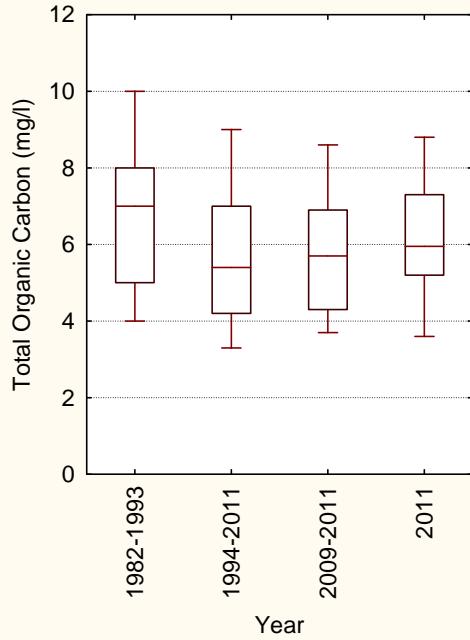
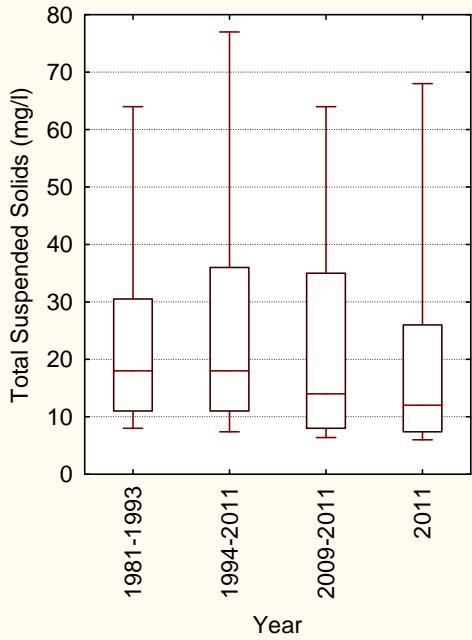
— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at 1st St., Site RI-14



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at 1st St., Site RI-14



— Median □ 25%-75% ━ 10%-90%

1ST STREET - SITE 14
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.4	14.1	4.3	8.08	0.62	0.043	0.66	0.187	0.74	0.090	0.031	ND
Standard Error	0.0	0.8	0.3	1.88	0.04	0.003	0.04	0.019	0.04	0.005	0.003	ND
Median	7.4	14.8	4.2	4.85	0.51	0.036	0.57	0.220	0.79	0.073	0.029	ND
Mode	7.4	18.6	4.0	ND	0.48	0.030	1.20	0.000	0.00	0.110	0.000	ND
Standard Deviation	0.3	6.8	2.4	8.84	0.31	0.021	0.30	0.151	0.31	0.043	0.021	ND
Sample Variance	0.1	46.8	5.8	78.12	0.10	0.000	0.09	0.023	0.09	0.002	0.000	ND
Kurtosis	-0.1	-0.9	-1.0	5.66	0.32	2.841	0.15	-1.382	0.92	0.952	-0.346	ND
Skewness	0.3	-0.5	-0.1	2.18	0.82	1.803	0.79	0.090	-1.17	1.043	0.487	ND
Range	1.2	23.7	8.6	37.45	1.36	0.089	1.28	0.440	1.20	0.203	0.079	0.00
Minimum	6.9	-0.1	0.0	0.65	0.04	0.021	0.12	0.000	0.00	0.017	0.000	0.00
Maximum	8.1	23.6	8.6	38.10	1.40	0.110	1.40	0.440	1.20	0.220	0.079	0.00
Count	64	67	67	22	66	66	66	63	63	66	66	0
Confidence Level(95.0%)	0.1	1.7	0.6	3.92	0.08	0.005	0.07	0.038	0.08	0.011	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	471.7	445.9	4.7	25.7	35.1	797	129.8	8921	2.4	9139
Standard Error	ND	ND	21.5	22.8	0.4	4.3	7.5	43	10.1	5156	0.3	7355
Median	ND	ND	405.0	387.0	3.6	12.0	12.4	713	110.0	210	2.3	220
Mode	ND	ND	370.0	230.0	3.6	16.0	13.1	1310	120.0	7	0.8	19
Standard Deviation	ND	ND	174.4	185.1	3.4	35.0	60.6	352	81.7	24182	1.4	35273
Sample Variance	ND	ND	30429.5	34255.3	11.6	1225.9	3674.1	123577	6678.5	584777398	1.9	1244201384
Kurtosis	ND	ND	3.3	2.8	1.1	9.9	10.7	2	2.5	11	-0.7	22
Skewness	ND	ND	1.7	1.5	1.3	3.0	3.3	1	1.6	3	0.3	5
Range	0.0	0.0	820.0	912.6	15.0	186.2	285.1	1719	373.0	100000	5.0	169996
Minimum	0.0	0.0	280.0	180.0	0.0	3.8	5.0	251	27.0	0	0.0	4
Maximum	0.0	0.0	1100.0	1092.6	15.0	190.0	290.0	1970	400.0	100000	5.0	170000
Count	0	0	66	66	66	66	66	67	66	22	22	23
Confidence Level(95.0%)	ND	ND	42.9	45.5	0.8	8.6	14.9	86	20.1	10722	0.6	15253

ND = No Data

Provisional MMSD Water Quality Data

1ST STREET - SITE 14
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

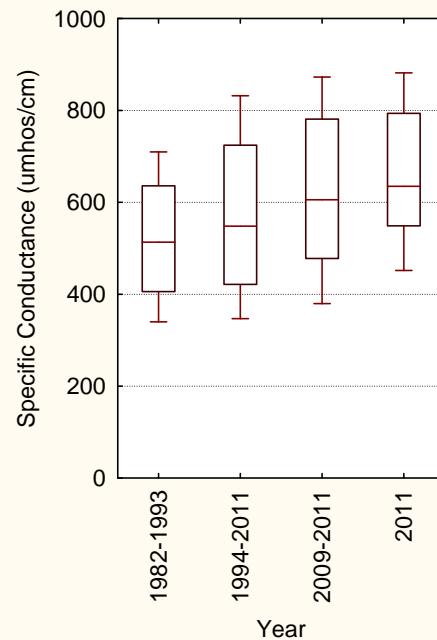
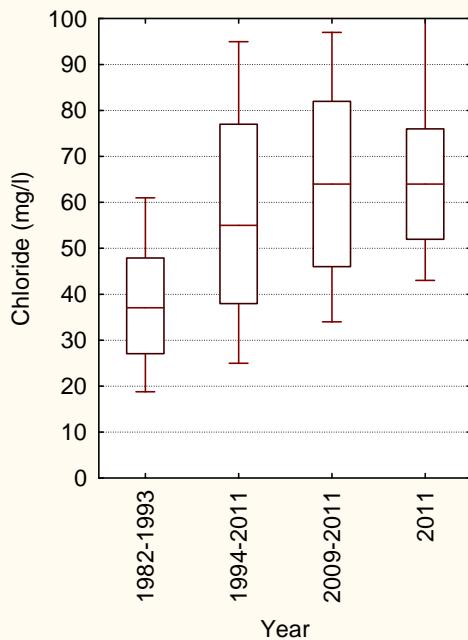
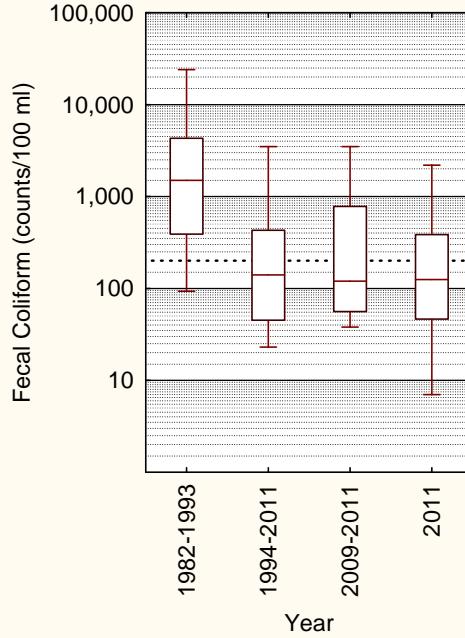
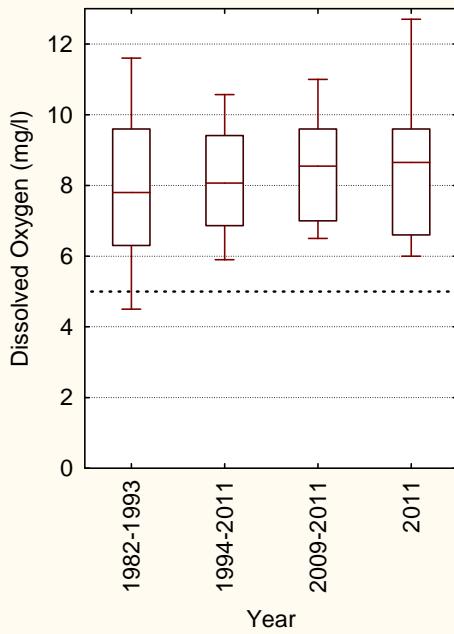
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	46.77	21.31	0.0	3.5	11.7	3.3	6.2	24.5	0.1	1.1	0.0	ND
Standard Error	2.55	1.33	0.0	1.0	0.9	0.6	1.1	3.0	0.1	0.2	0.0	ND
Median	44.00	22.00	0.0	0.0	13.0	2.9	7.7	19.5	0.0	1.0	0.0	ND
Mode	42.00	25.00	0.0	0.0	11.0	1.7	0.0	19.0	0.0	0.0	0.0	ND
Standard Deviation	11.97	6.26	0.0	4.7	3.5	2.7	4.6	14.1	0.3	0.9	0.0	ND
Sample Variance	143.33	39.13	0.0	21.8	12.3	7.2	21.2	199.2	0.1	0.8	0.0	ND
Kurtosis	-0.70	0.96	ND	-0.6	-0.1	12.9	-1.3	0.7	7.3	-0.5	ND	ND
Skewness	0.22	0.34	ND	0.9	-0.4	3.2	-0.1	0.9	2.8	0.4	ND	ND
Range	44.00	28.20	0.0	14.0	12.8	14.0	14.0	60.0	1.0	3.0	0.0	0.0
Minimum	26.00	8.80	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	70.00	37.00	0.0	14.0	18.0	14.0	14.0	60.0	1.0	3.0	0.0	0.0
Count	22	22	22	22	17	22	18	22	22	21	22	0
Confidence Level(95.0%)	5.31	2.77	0.0	2.1	1.8	1.2	2.3	6.3	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	205	152	3.7	14.1	43.3	37.2	6.3	6.1
Standard Error	12	6	0.5	1.4	1.9	1.8	0.3	0.2
Median	200	150	3.2	12.5	40.5	35.0	6.0	5.8
Mode	180	160	0.0	11.0	35.0	39.0	6.9	6.4
Standard Deviation	55	44	4.3	6.5	15.2	14.4	2.1	2.0
Sample Variance	3045	1910	18.5	42.8	232.2	207.9	4.4	3.9
Kurtosis	0	1	3.1	1.5	3.6	4.6	0.5	0.9
Skewness	0	0	1.7	1.2	1.5	1.8	0.5	0.8
Range	230	216	17.0	27.1	76.0	73.0	9.7	9.2
Minimum	100	44	0.0	4.9	20.0	16.0	2.3	2.8
Maximum	330	260	17.0	32.0	96.0	89.0	12.0	12.0
Count	22	63	66	22	66	66	66	66
Confidence Level(95.0%)	24	11	1.1	2.9	3.7	3.5	0.5	0.5

ND = No Data

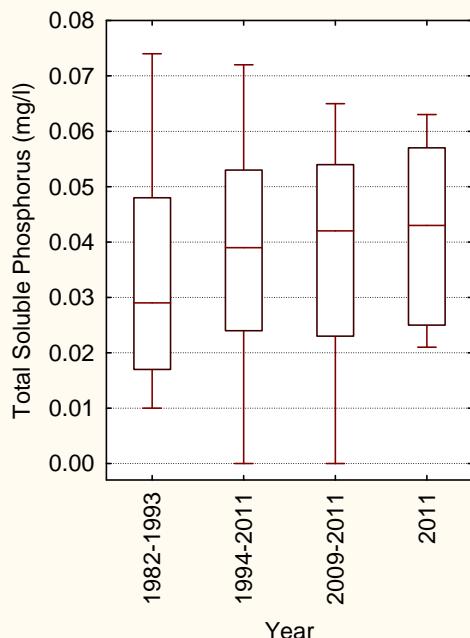
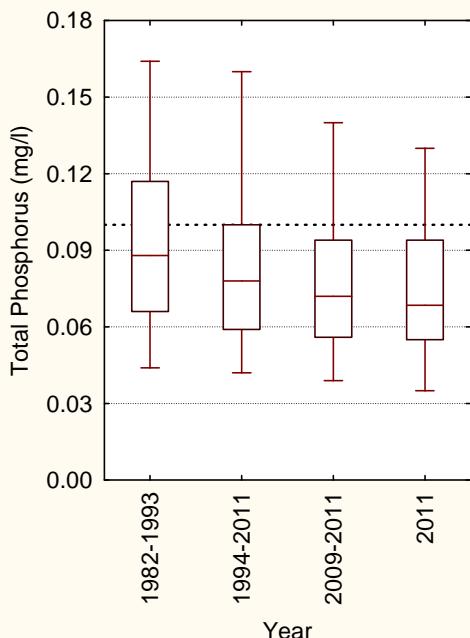
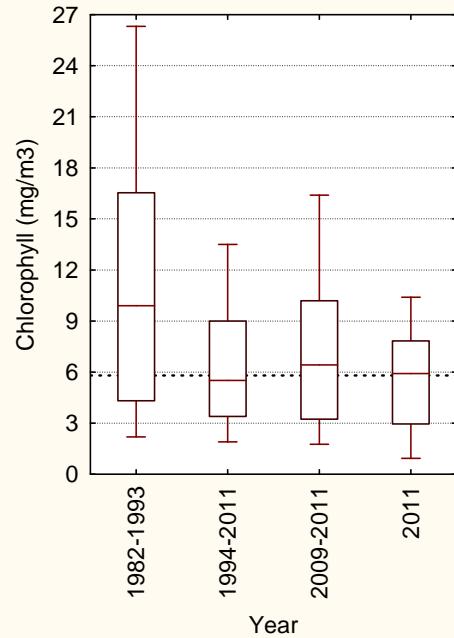
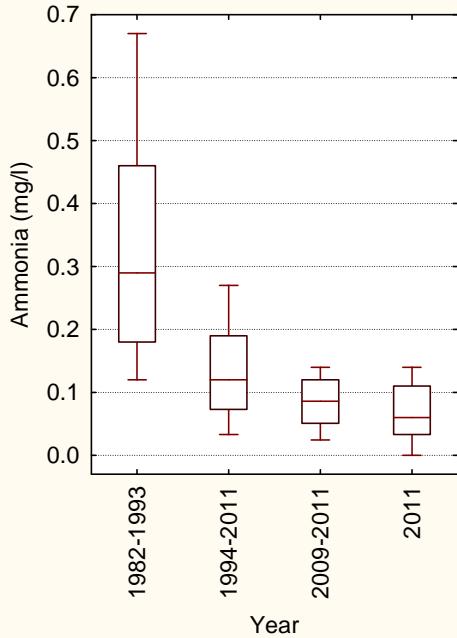
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Milwaukee River at C-NW Railway, Site RI-15



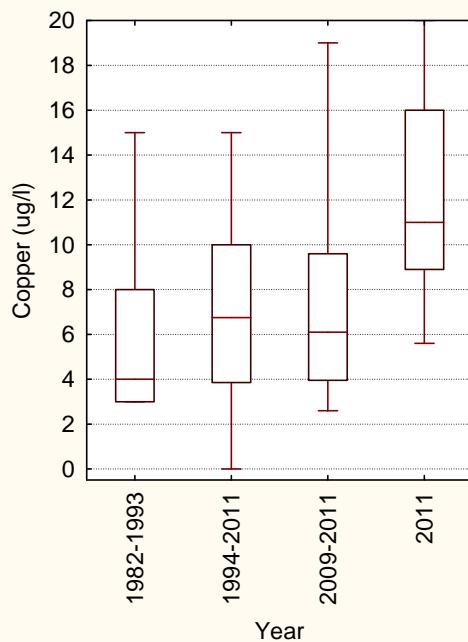
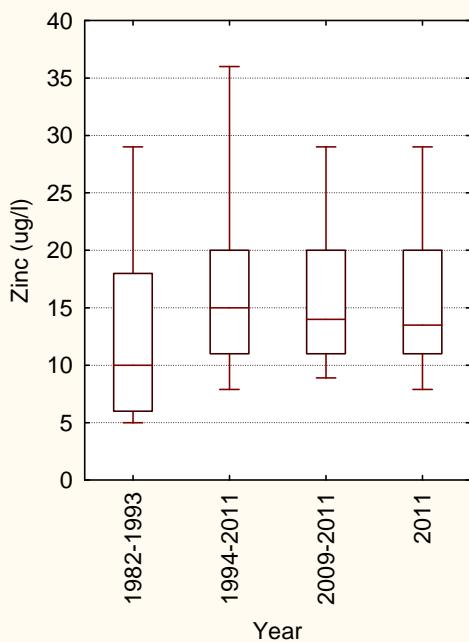
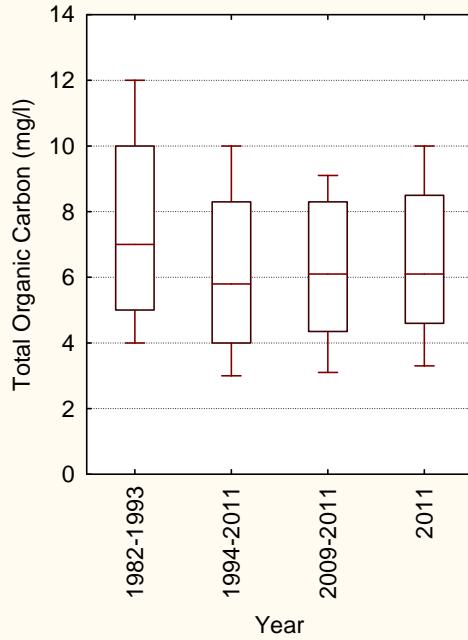
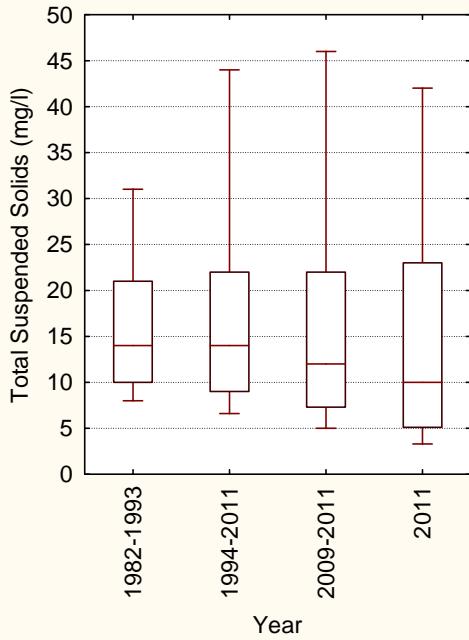
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at C-NW Railway, Site RI-15



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Milwaukee River at C-NW Railway, Site RI-15



— Median □ 25%-75% ┤ 10%-90%

C-NW RAILWAY - SITE 15
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	14.7	8.5	5.82	0.92	0.017	0.94	0.069	0.63	0.078	0.042	ND
Standard Error	0.0	0.8	0.3	0.91	0.06	0.001	0.06	0.007	0.04	0.005	0.002	ND
Median	7.8	15.3	8.7	5.92	0.79	0.015	0.80	0.060	0.61	0.069	0.043	ND
Mode	7.8	19.4	9.6	ND	1.40	0.015	1.40	0.000	0.00	0.077	0.036	ND
Standard Deviation	0.3	6.0	2.2	3.84	0.40	0.008	0.40	0.047	0.31	0.040	0.018	ND
Sample Variance	0.1	35.7	4.9	14.77	0.16	0.000	0.16	0.002	0.09	0.002	0.000	ND
Kurtosis	-0.2	-0.3	-0.4	2.07	-0.58	0.743	-0.53	-0.945	0.00	2.787	-0.450	ND
Skewness	0.9	-0.7	0.7	1.08	0.83	0.726	0.82	0.280	-0.02	1.424	0.137	ND
Range	1.0	22.8	7.5	15.76	1.38	0.037	1.46	0.160	1.30	0.210	0.088	0.00
Minimum	7.5	1.7	5.8	0.64	0.42	0.000	0.44	0.000	0.00	0.000	0.000	0.00
Maximum	8.5	24.4	13.3	16.40	1.80	0.037	1.90	0.160	1.30	0.210	0.088	0.00
Count	54	54	54	18	54	54	54	51	51	54	54	0
Confidence Level(95.0%)	0.1	1.6	0.6	1.91	0.11	0.002	0.11	0.013	0.09	0.011	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.1	2.2	402.0	382.4	4.4	19.7	17.9	676	73.7	1655	2.1	ND
Standard Error	0.1	0.3	12.8	13.8	0.6	3.0	3.2	25	4.9	1299	0.2	ND
Median	1.2	2.1	380.0	369.8	2.8	10.0	8.7	635	64.0	125	2.1	ND
Mode	1.6	1.2	440.0	340.0	0.0	18.0	23.4	794	110.0	120	2.1	ND
Standard Deviation	0.6	1.2	94.4	101.0	4.3	22.4	23.6	181	36.3	5197	1.0	ND
Sample Variance	0.3	1.3	8907.1	10210.2	18.5	499.7	555.3	32719	1318.1	27005573	1.0	ND
Kurtosis	-1.1	-1.1	0.1	0.1	1.7	6.1	11.9	0	6.1	15	1.4	ND
Skewness	-0.1	0.3	0.6	0.5	1.4	2.3	3.2	1	2.2	4	0.1	ND
Range	1.9	3.8	420.0	458.2	19.0	107.8	131.2	818	190.0	21000	4.3	0
Minimum	0.2	0.5	250.0	208.0	0.0	2.2	2.8	392	30.0	0	0.0	0
Maximum	2.1	4.3	670.0	666.2	19.0	110.0	134.0	1210	220.0	21000	4.3	0
Count	18	18	54	54	54	54	54	54	54	16	16	0
Confidence Level(95.0%)	0.3	0.6	25.8	27.6	1.2	6.1	6.4	49	9.9	2769	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

C-NW RAILWAY - SITE 15
MILWAUKEE RIVER
WATER QUALITY DATA - 2011

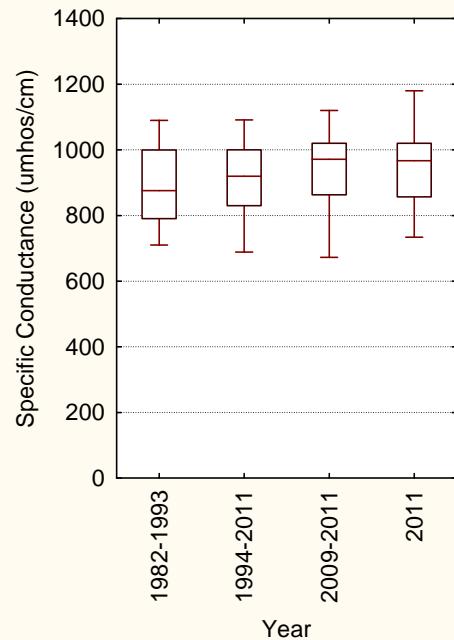
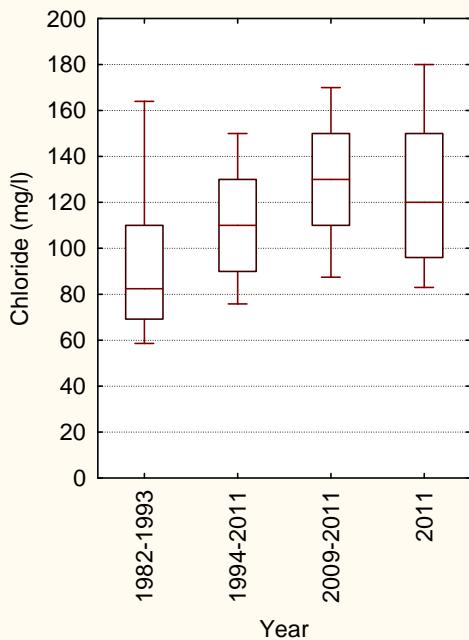
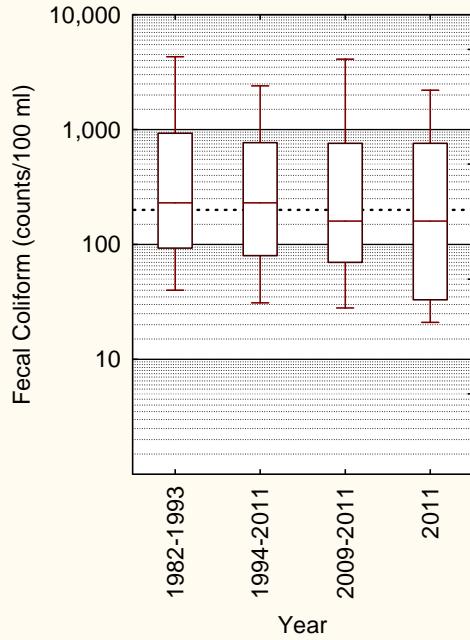
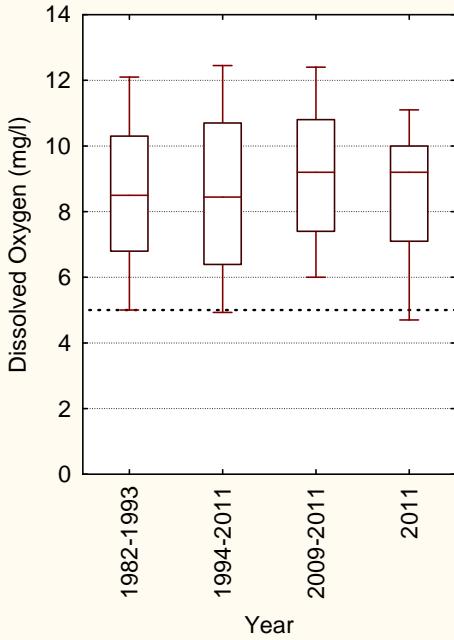
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	53.22	27.06	0.0	2.3	12.0	2.0	4.2	16.0	0.1	1.0	0.0	ND
Standard Error	2.80	1.83	0.0	0.8	1.3	0.3	1.0	2.2	0.0	0.2	0.0	ND
Median	50.50	24.50	0.0	0.0	11.0	1.8	4.1	13.5	0.0	1.0	0.0	ND
Mode	71.00	31.00	0.0	0.0	20.0	1.6	0.0	14.0	0.0	0.0	0.0	ND
Standard Deviation	11.86	7.77	0.1	3.4	5.1	1.2	3.7	9.4	0.2	0.9	0.0	ND
Sample Variance	140.65	60.41	0.0	11.8	25.6	1.4	13.6	88.4	0.0	0.8	0.0	ND
Kurtosis	-1.04	-1.33	18.0	-1.4	-0.7	5.8	-1.7	1.9	7.9	-0.5	ND	ND
Skewness	0.09	0.24	4.2	0.8	0.5	1.5	0.1	1.1	2.9	0.5	ND	ND
Range	37.00	23.00	0.6	8.2	15.4	5.7	9.7	41.0	0.6	2.6	0.0	0.0
Minimum	34.00	16.00	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	71.00	39.00	0.6	8.2	20.0	5.7	9.7	41.0	0.6	2.6	0.0	0.0
Count	18	18	18	18	15	18	14	18	18	18	18	0
Confidence Level(95.0%)	5.90	3.87	0.1	1.7	2.8	0.6	2.1	4.7	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	245	191	0.7	8.0	55.0	48.5	6.5	6.4
Standard Error	14	7	0.2	1.0	3.3	2.8	0.4	0.4
Median	225	180	0.0	7.7	48.0	43.0	6.1	5.9
Mode	220	240	0.0	15.0	60.0	40.0	10.0	5.0
Standard Deviation	61	51	1.2	4.2	23.9	20.3	2.6	2.7
Sample Variance	3662	2553	1.4	17.8	572.0	412.8	6.9	7.1
Kurtosis	-1	-1	0.3	-0.5	7.1	6.9	-0.7	-0.4
Skewness	0	0	1.4	0.3	2.5	2.4	0.2	0.4
Range	190	180	3.7	15.0	109.0	94.0	10.1	10.2
Minimum	150	100	0.0	0.0	31.0	26.0	1.9	1.8
Maximum	340	280	3.7	15.0	140.0	120.0	12.0	12.0
Count	18	54	54	18	54	53	53	53
Confidence Level(95.0%)	30	14	0.3	2.1	6.5	5.6	0.7	0.7

ND = No Data

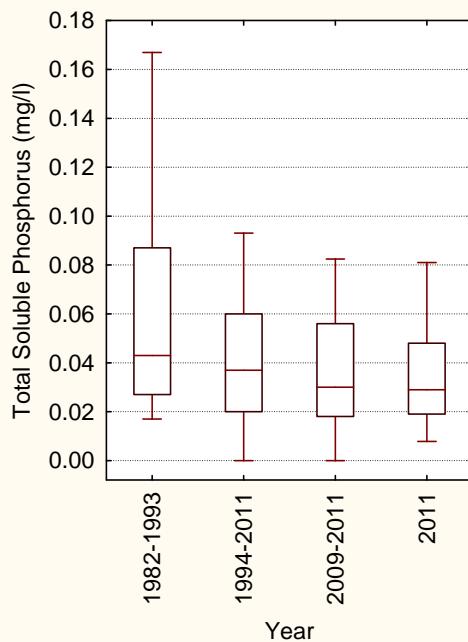
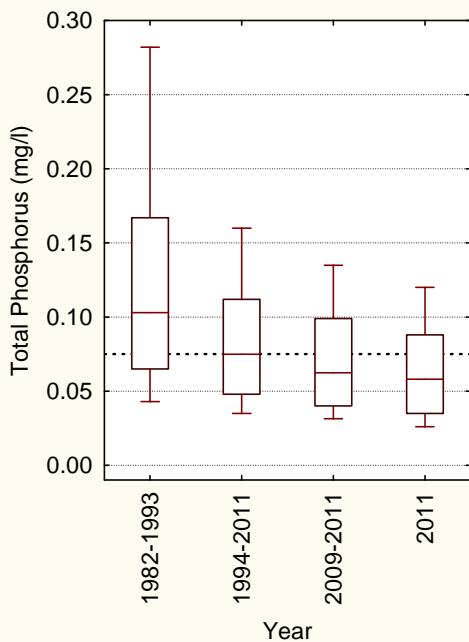
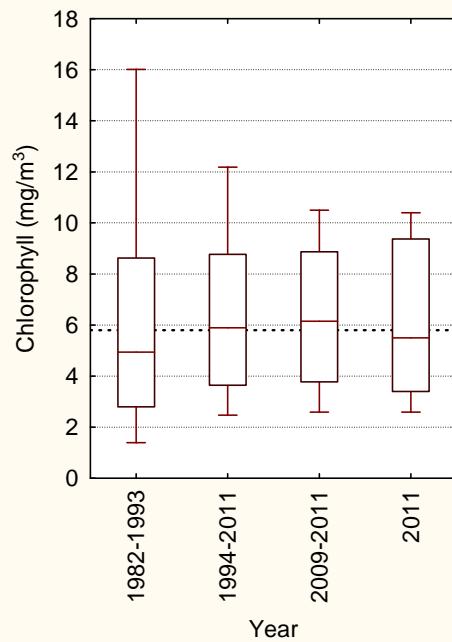
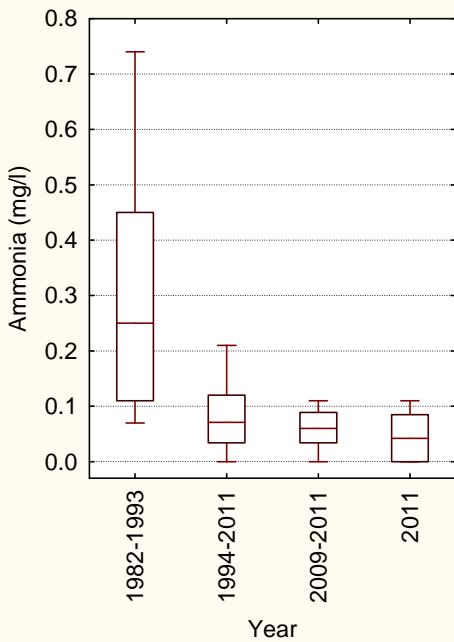
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Menomonee River at County Line Rd., Site RI-16



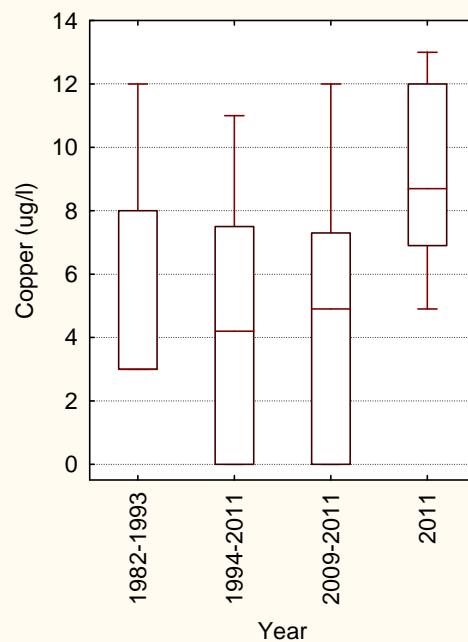
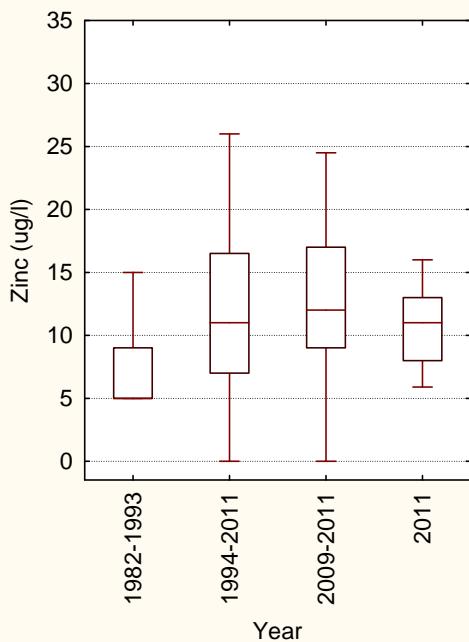
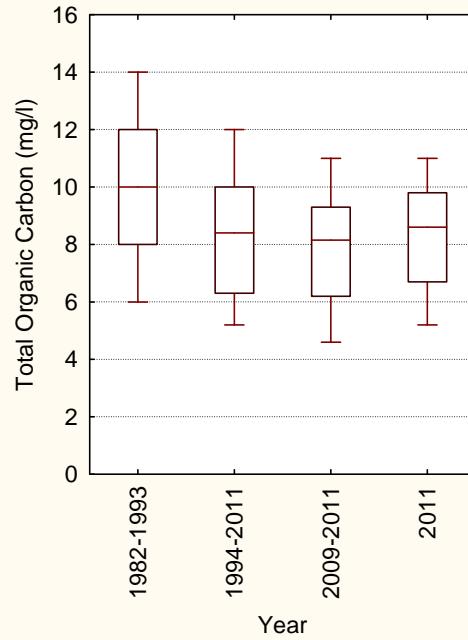
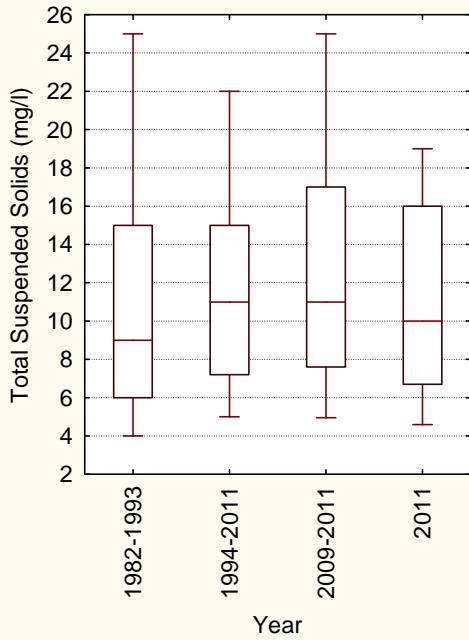
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at County Line Rd., Site RI-16



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at County Line Rd., Site RI-16



— Median □ 25%-75% □ 10%-90%

COUNTY LINE ROAD - SITE 16
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	12.9	8.5	6.00	0.71	0.025	0.74	0.055	0.70	0.064	0.036	ND
Standard Error	0.1	1.6	0.5	0.66	0.09	0.005	0.09	0.012	0.07	0.008	0.005	ND
Median	7.6	13.0	9.2	5.50	0.63	0.016	0.64	0.042	0.74	0.058	0.029	ND
Mode	7.6	ND	9.7	ND	1.10	0.012	1.60	0.000	1.10	0.039	0.020	ND
Standard Deviation	0.3	7.5	2.5	3.14	0.41	0.025	0.41	0.058	0.32	0.039	0.026	ND
Sample Variance	0.1	56.1	6.2	9.88	0.17	0.001	0.17	0.003	0.10	0.002	0.001	ND
Kurtosis	-0.7	-1.2	-0.2	-0.87	-0.05	6.594	0.09	2.508	0.65	0.288	-0.156	ND
Skewness	-0.1	-0.3	-0.3	0.43	0.76	2.512	0.76	1.449	-0.69	0.791	0.886	ND
Range	0.9	23.0	9.7	10.78	1.45	0.110	1.44	0.230	1.20	0.160	0.092	0.00
Minimum	7.2	0.0	3.5	1.62	0.15	0.000	0.16	0.000	0.00	0.000	0.000	0.00
Maximum	8.1	23.0	13.2	12.40	1.60	0.110	1.60	0.230	1.20	0.160	0.092	0.00
Count	23	23	23	23	23	23	23	22	22	23	23	0
Confidence Level(95.0%)	0.1	3.2	1.1	1.36	0.18	0.011	0.18	0.026	0.14	0.017	0.011	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	569.1	558.0	3.0	11.1	9.0	953	127.6	1759	2.3	ND
Standard Error	ND	ND	23.0	23.5	0.4	1.4	1.1	40	9.1	1099	0.2	ND
Median	ND	ND	560.0	555.1	2.3	10.0	7.7	967	120.0	160	2.2	ND
Mode	ND	ND	540.0	ND	2.3	12.0	ND	1020	120.0	77	1.9	ND
Standard Deviation	ND	ND	110.1	112.7	1.9	6.5	5.1	194	43.5	5036	0.9	ND
Sample Variance	ND	ND	12126.5	12712.3	3.6	42.0	26.0	37702	1891.5	25359916	0.8	ND
Kurtosis	ND	ND	2.1	2.1	-0.3	0.5	-1.0	3	2.8	18	-0.2	ND
Skewness	ND	ND	0.4	0.4	0.5	1.1	0.7	1	1.4	4	0.6	ND
Range	0.0	0.0	520.0	542.3	7.2	22.8	14.9	986	190.0	22986	3.2	0
Minimum	0.0	0.0	340.0	314.0	0.0	3.2	3.0	534	70.0	14	1.1	0
Maximum	0.0	0.0	860.0	856.3	7.2	26.0	17.9	1520	260.0	23000	4.4	0
Count	0	0	23	23	23	23	23	23	23	21	21	0
Confidence Level(95.0%)	ND	ND	47.6	48.8	0.8	2.8	2.2	84	18.8	2292	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

COUNTY LINE ROAD - SITE 16
MENOMONEE RIVER
WATER QUALITY DATA - 2011

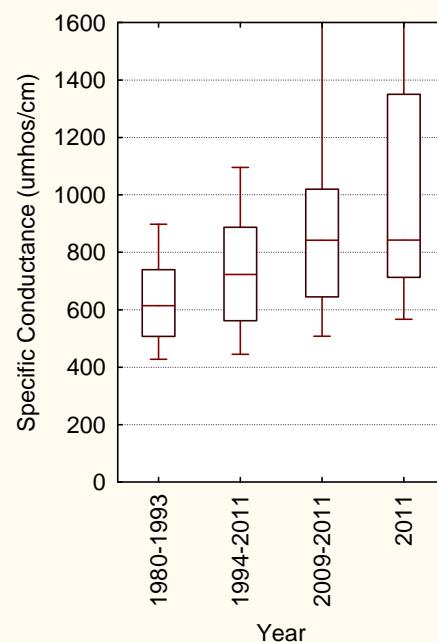
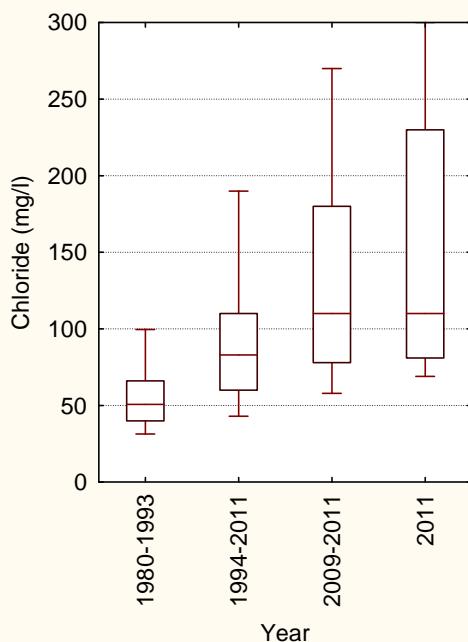
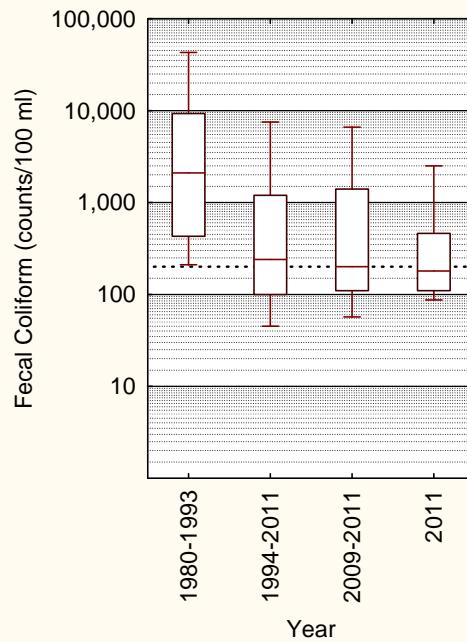
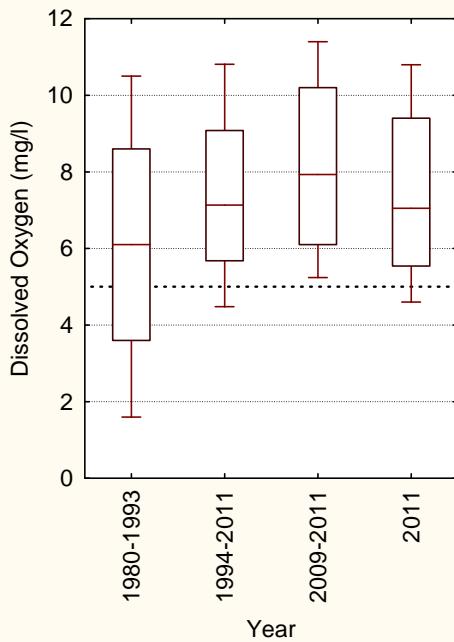
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	71.78	36.78	0.0	1.9	8.9	1.9	4.4	10.7	0.1	0.9	0.0	ND
Standard Error	3.10	1.53	0.0	0.7	0.7	0.2	0.8	1.1	0.0	0.2	0.0	ND
Median	74.00	39.00	0.0	0.0	8.7	1.9	4.8	11.0	0.0	0.9	0.0	ND
Mode	74.00	39.00	0.0	0.0	13.0	1.9	0.0	12.0	0.0	0.0	0.0	ND
Standard Deviation	14.86	7.34	0.0	3.4	2.9	1.0	3.6	5.0	0.2	0.8	0.0	ND
Sample Variance	220.91	53.91	0.0	11.9	8.1	0.9	12.8	25.4	0.1	0.6	0.0	ND
Kurtosis	0.92	1.31	ND	1.9	-0.9	1.8	-1.6	2.3	1.1	-1.0	ND	ND
Skewness	-0.40	-1.15	ND	1.7	0.0	-0.2	-0.1	0.7	1.6	0.2	ND	ND
Range	65.00	29.00	0.0	12.0	9.2	4.3	9.7	25.0	0.7	2.3	0.0	0.0
Minimum	35.00	17.00	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	100.00	46.00	0.0	12.0	13.0	4.3	9.7	25.0	0.7	2.3	0.0	0.0
Count	23	23	23	23	19	23	21	23	23	23	23	0
Confidence Level(95.0%)	6.43	3.17	0.0	1.5	1.4	0.4	1.6	2.2	0.1	0.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	331	257	1.1	10.6	71.4	62.7	8.3	8.0
Standard Error	14	9	0.3	1.7	4.5	4.0	0.5	0.5
Median	340	270	0.0	8.0	69.0	62.0	8.6	7.9
Mode	340	280	0.0	7.6	68.0	60.0	9.8	7.7
Standard Deviation	65	45	1.4	8.2	21.6	19.4	2.6	2.6
Sample Variance	4257	2029	2.0	66.8	465.7	376.3	6.9	6.6
Kurtosis	1	3	-0.7	11.7	13.9	12.2	0.6	0.6
Skewness	-1	-2	0.8	3.0	3.2	2.8	0.0	0.1
Range	280	190	4.4	43.0	122.0	109.0	11.2	11.1
Minimum	160	120	0.0	0.0	38.0	31.0	2.8	2.9
Maximum	440	310	4.4	43.0	160.0	140.0	14.0	14.0
Count	23	23	23	23	23	23	23	23
Confidence Level(95.0%)	28	19	0.6	3.5	9.3	8.4	1.1	1.1

ND = No Data

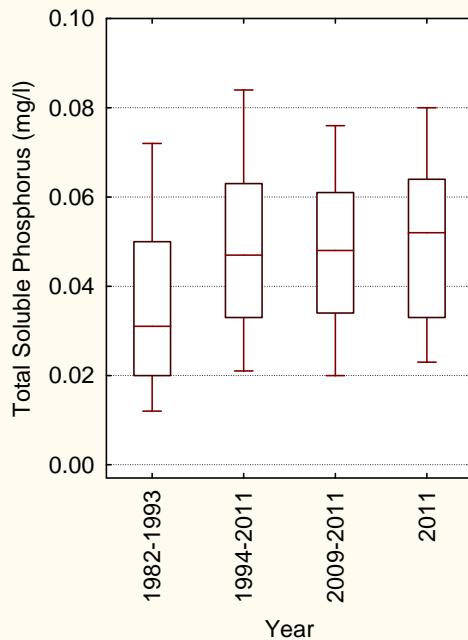
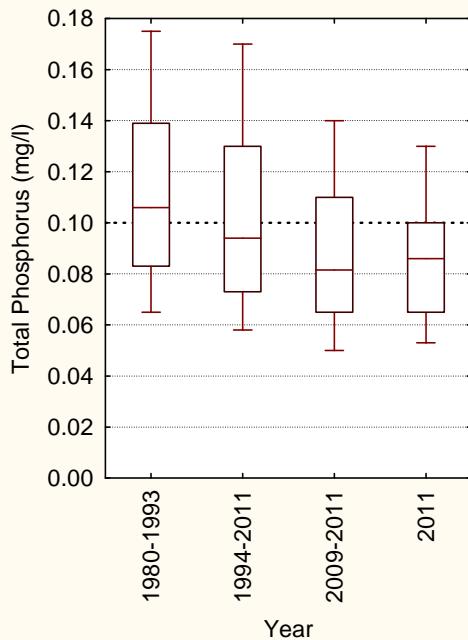
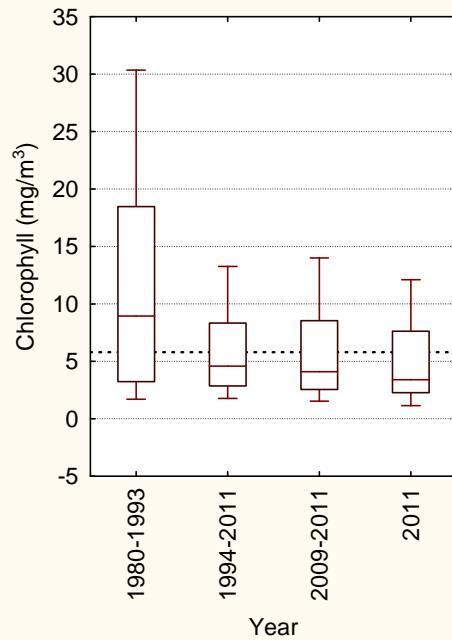
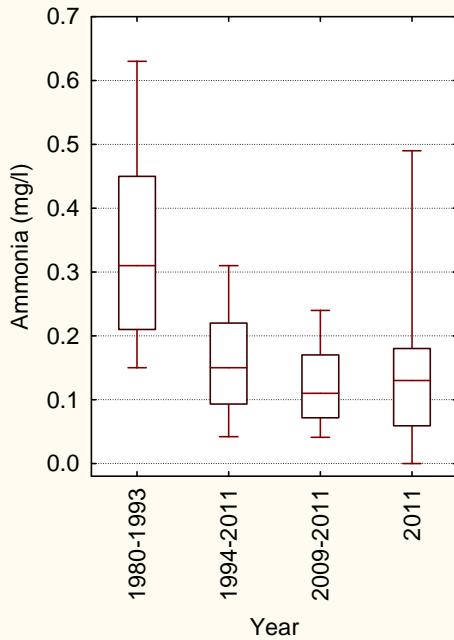
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Menomonee River at South Second St., Site RI-17



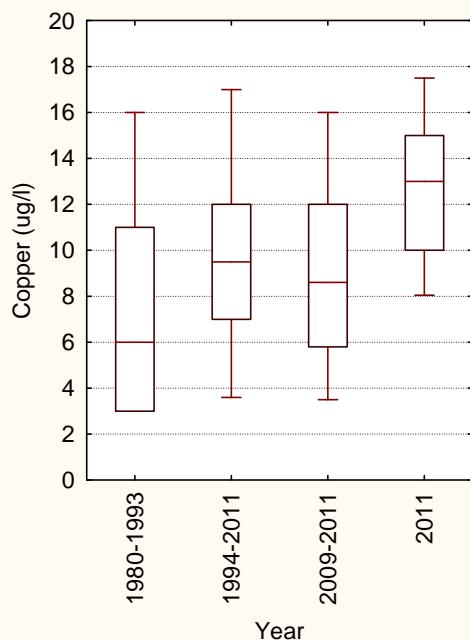
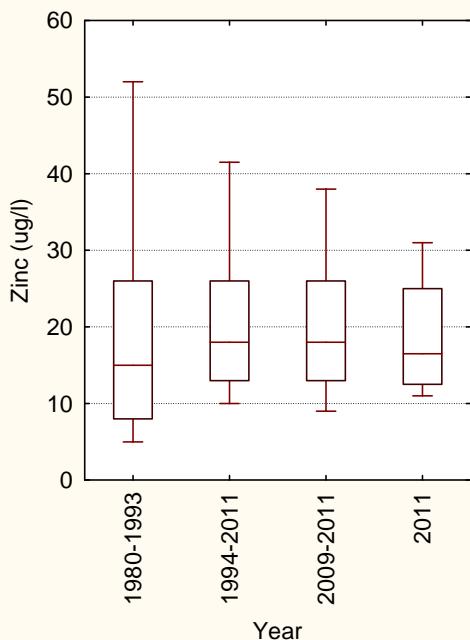
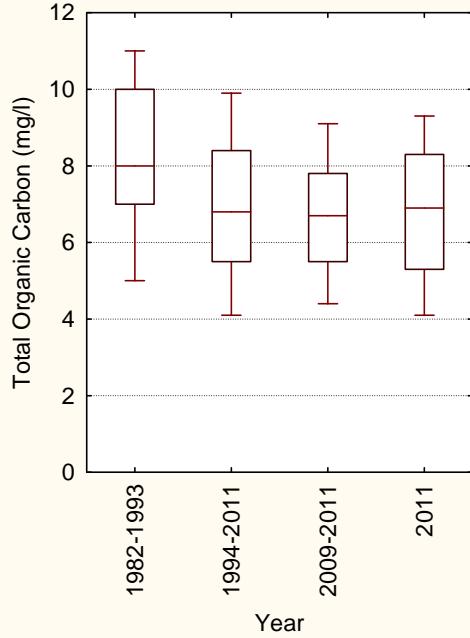
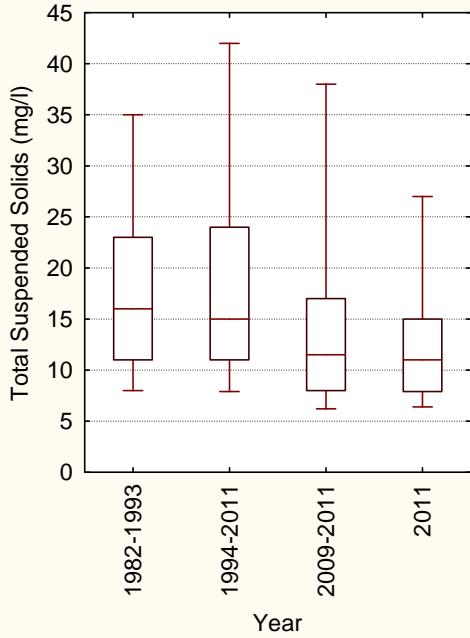
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at South Second St., Site RI-17



— Median □ 25%-75% ━ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at South Second St., Site RI-17



— Median □ 25%-75% □ 10%-90%

2ND STREET - SITE 17
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	15.3	7.5	6.06	1.05	0.025	1.08	0.167	0.75	0.087	0.050	ND
Standard Error	0.0	0.8	0.3	1.45	0.07	0.002	0.07	0.018	0.03	0.003	0.002	ND
Median	7.7	15.1	7.1	3.41	0.76	0.020	0.78	0.130	0.81	0.086	0.052	ND
Mode	7.7	11.4	5.6	ND	1.20	0.019	1.20	0.000	1.00	0.110	0.060	ND
Standard Deviation	0.3	7.1	2.3	7.37	0.63	0.014	0.64	0.157	0.25	0.027	0.020	ND
Sample Variance	0.1	50.6	5.3	54.32	0.40	0.000	0.41	0.025	0.06	0.001	0.000	ND
Kurtosis	-0.9	-1.1	-1.1	14.46	-0.31	-0.712	-0.38	0.872	2.25	-0.169	-0.991	ND
Skewness	0.4	0.2	0.3	3.45	1.02	0.629	1.00	1.353	-0.79	0.513	0.116	ND
Range	1.3	27.9	8.6	37.21	2.22	0.057	2.20	0.600	1.50	0.120	0.075	0.00
Minimum	7.2	2.1	3.8	0.69	0.28	0.000	0.30	0.000	0.00	0.040	0.016	0.00
Maximum	8.5	30.0	12.4	37.90	2.50	0.057	2.50	0.600	1.50	0.160	0.091	0.00
Count	78	78	78	26	78	78	78	75	75	77	77	0
Confidence Level(95.0%)	0.1	1.6	0.5	2.98	0.14	0.003	0.14	0.036	0.06	0.006	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	608.7	594.5	3.9	14.2	13.2	1051	157.0	1595	2.5	649
Standard Error	ND	ND	32.6	33.1	0.3	1.2	1.3	62	12.7	973	0.1	209
Median	ND	ND	500.0	485.1	3.1	11.0	9.7	843	110.0	180	2.3	210
Mode	ND	ND	1000.0	418.0	2.9	13.0	12.0	1510	110.0	120	2.1	120
Standard Deviation	ND	ND	287.8	292.2	2.6	11.0	11.8	545	112.6	4863	0.7	1046
Sample Variance	ND	ND	82852.9	85383.1	6.9	121.4	139.0	297556	12676.2	23650176	0.5	1094680
Kurtosis	ND	ND	0.5	0.5	6.0	8.0	11.6	1	1.8	21	1.8	5
Skewness	ND	ND	1.3	1.3	2.3	2.7	3.3	1	1.6	4	1.3	2
Range	0.0	0.0	1100.0	1149.0	14.8	56.3	63.5	2315	479.0	23970	2.9	4067
Minimum	0.0	0.0	300.0	240.0	1.2	4.7	4.4	435	51.0	30	1.5	33
Maximum	0.0	0.0	1400.0	1389.0	16.0	61.0	67.9	2750	530.0	24000	4.4	4100
Count	0	0	78	78	78	78	78	78	78	25	25	25
Confidence Level(95.0%)	ND	ND	64.9	65.9	0.6	2.5	2.7	123	25.4	2007	0.3	432

ND = No Data

Provisional MMSD Water Quality Data

2ND STREET - SITE 17
MENOMONEE RIVER
WATER QUALITY DATA - 2011

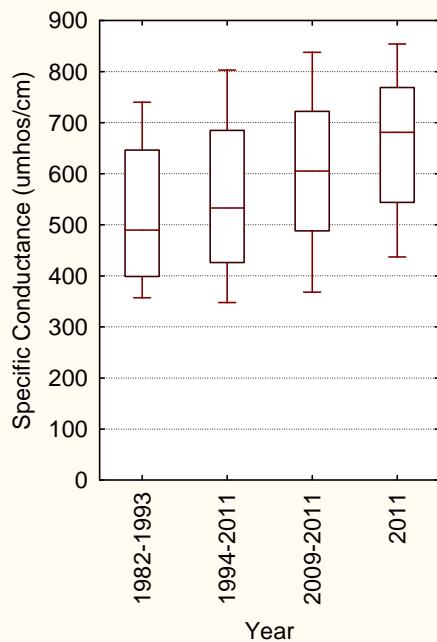
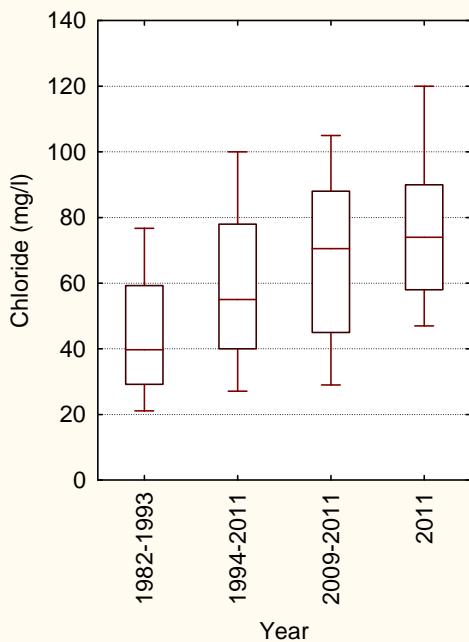
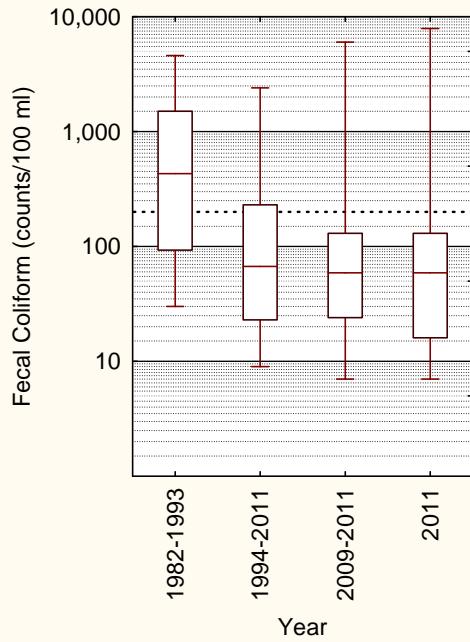
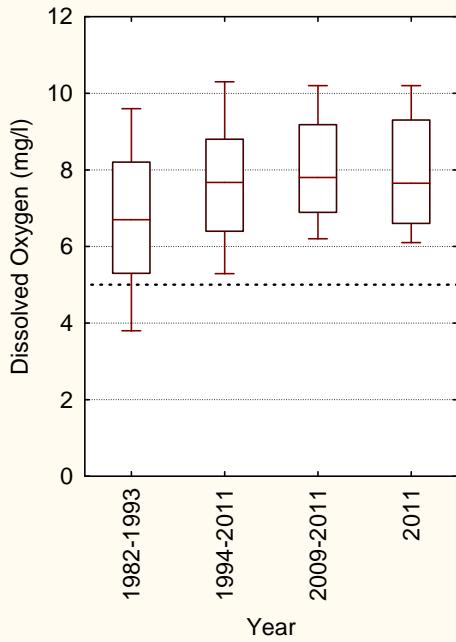
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	65.31	32.54	0.1	2.8	12.6	2.4	3.4	19.0	0.0	0.9	0.0	ND
Standard Error	3.42	1.74	0.1	0.7	0.7	0.2	0.8	2.0	0.0	0.2	0.0	ND
Median	67.00	35.50	0.0	0.0	13.0	2.2	2.8	16.5	0.0	0.9	0.0	ND
Mode	84.00	38.00	0.0	0.0	13.0	1.9	0.0	26.0	0.0	0.0	0.0	ND
Standard Deviation	17.44	8.85	0.3	3.4	3.3	1.0	3.6	9.9	0.1	0.9	0.0	ND
Sample Variance	304.22	78.34	0.1	11.7	10.9	1.0	13.3	98.0	0.0	0.8	0.0	ND
Kurtosis	-0.47	-0.03	11.1	-1.8	-0.9	2.2	-1.5	2.6	16.0	-1.7	ND	ND
Skewness	-0.22	-0.94	3.5	0.5	0.1	0.6	0.4	1.1	4.0	0.1	ND	ND
Range	65.00	31.00	1.4	8.5	10.9	4.8	9.7	49.0	0.6	2.3	0.0	0.0
Minimum	30.00	13.00	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	95.00	44.00	1.4	8.5	18.0	4.8	9.7	49.0	0.6	2.3	0.0	0.0
Count	26	26	26	26	20	26	19	24	26	25	26	0
Confidence Level(95.0%)	7.04	3.57	0.1	1.4	1.5	0.4	1.8	4.2	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	297	223	0.7	10.7	61.4	54.6	6.9	6.7
Standard Error	15	6	0.1	0.7	2.2	2.1	0.2	0.2
Median	310	230	0.0	12.0	61.5	54.0	6.9	6.9
Mode	330	260	0.0	14.0	69.0	58.0	7.4	5.8
Standard Deviation	78	56	1.2	3.5	19.8	18.5	2.0	1.9
Sample Variance	6100	3143	1.5	12.4	394.0	340.8	3.9	3.5
Kurtosis	0	0	0.1	-1.1	5.1	4.4	-0.3	-0.4
Skewness	-1	-1	1.4	-0.5	1.5	1.5	0.2	0.1
Range	280	224	3.8	10.6	113.0	96.0	8.9	8.8
Minimum	130	86	0.0	4.4	27.0	24.0	3.1	3.2
Maximum	410	310	3.8	15.0	140.0	120.0	12.0	12.0
Count	26	78	78	26	78	77	77	76
Confidence Level(95.0%)	32	13	0.3	1.4	4.5	4.2	0.4	0.4

ND = No Data

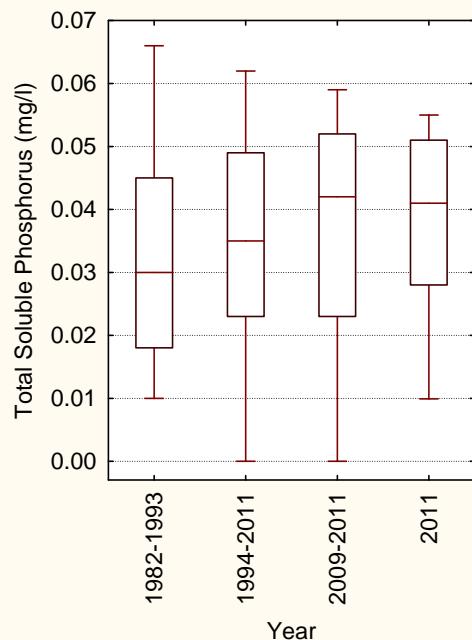
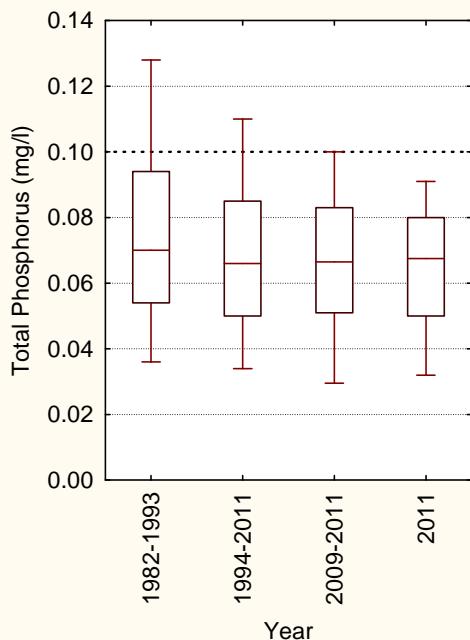
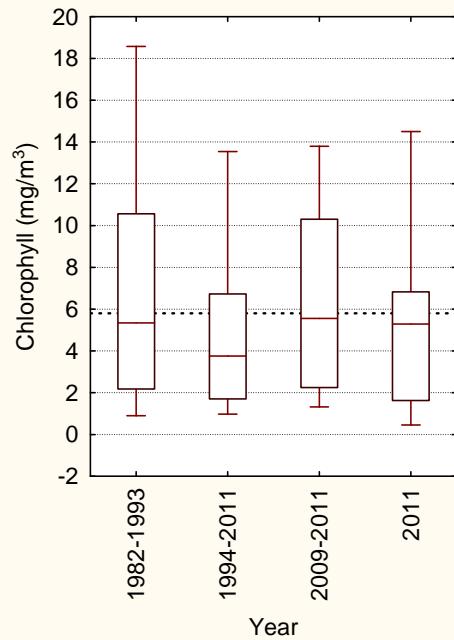
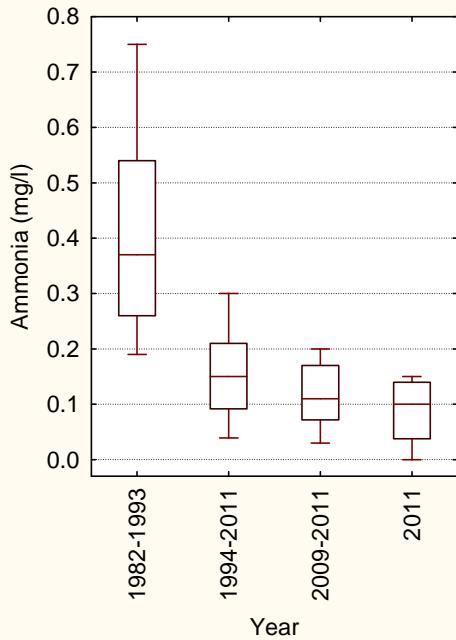
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at Greenfield Ave. Extended, Site RI-18



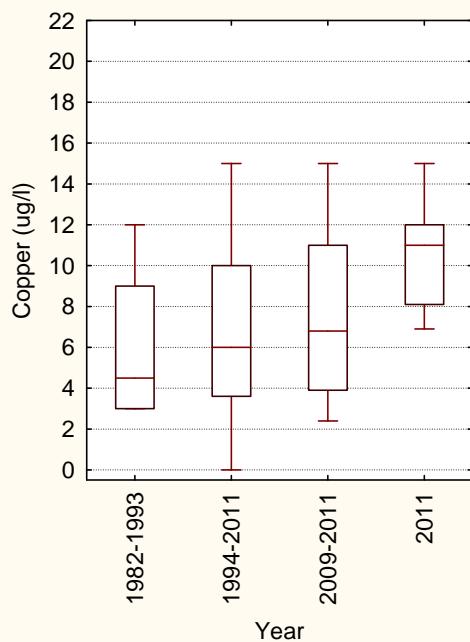
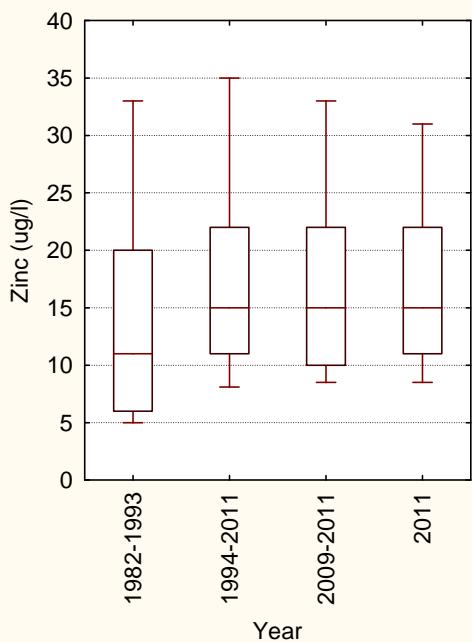
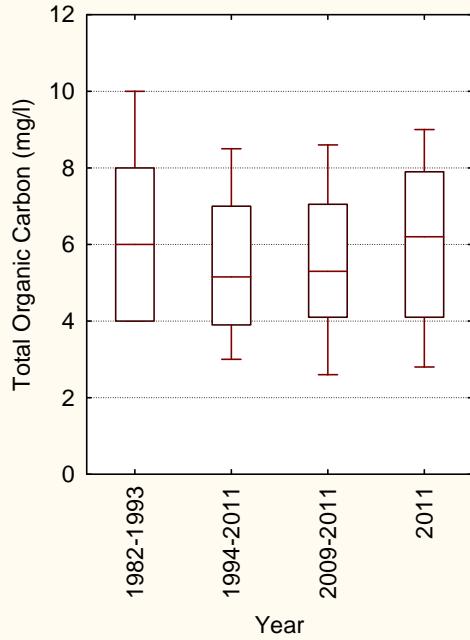
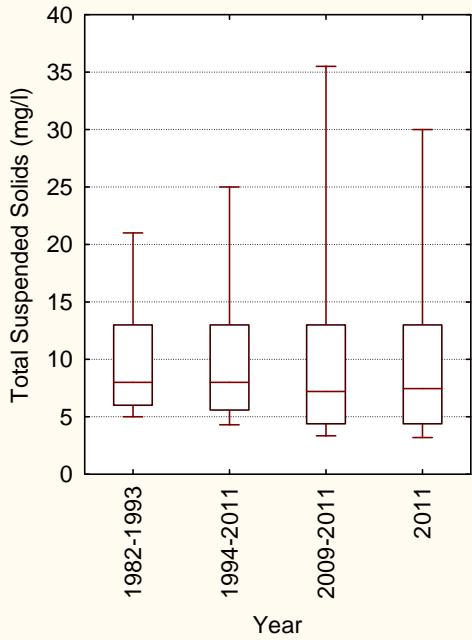
— Median □ 25%-75% □ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at Greenfield Ave. Extended, Site RI-18



— Median □ 25%-75% ━ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at Greenfield Ave. Extended, Site RI-18



— Median □ 25%-75% ─ 10%-90%

GREENFIELD AVENUE EXTENDED - SITE 18
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	13.9	8.0	6.08	0.90	0.019	0.92	0.089	0.61	0.064	0.038	ND
Standard Error	0.0	0.8	0.2	1.14	0.05	0.001	0.05	0.008	0.04	0.003	0.002	ND
Median	7.7	14.8	7.7	5.29	0.90	0.018	0.92	0.100	0.68	0.068	0.041	ND
Mode	7.6	14.8	6.6	ND	1.10	0.018	1.10	0.000	0.00	0.080	0.000	ND
Standard Deviation	0.2	5.8	1.6	4.83	0.33	0.006	0.33	0.057	0.30	0.024	0.017	ND
Sample Variance	0.1	33.8	2.4	23.28	0.11	0.000	0.11	0.003	0.09	0.001	0.000	ND
Kurtosis	-1.1	-0.4	-1.2	-0.53	0.60	3.491	0.93	-1.002	0.41	0.398	0.059	ND
Skewness	0.4	-0.6	0.2	0.77	0.86	1.653	0.94	-0.184	-0.36	-0.524	-0.648	ND
Range	0.8	22.1	5.4	14.65	1.38	0.031	1.37	0.190	1.30	0.110	0.070	0.00
Minimum	7.4	2.2	5.4	0.45	0.42	0.010	0.43	0.000	0.00	0.000	0.000	0.00
Maximum	8.2	24.3	10.8	15.10	1.80	0.041	1.80	0.190	1.30	0.110	0.070	0.00
Count	51	54	54	18	54	54	54	51	51	54	54	0
Confidence Level(95.0%)	0.1	1.6	0.4	2.40	0.09	0.002	0.09	0.016	0.09	0.007	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.2	2.6	390.0	379.0	2.8	11.0	11.5	665	79.7	2053	1.8	ND
Standard Error	0.1	0.3	11.4	11.5	0.2	1.3	1.4	22	4.9	1587	0.2	ND
Median	1.3	2.3	400.0	386.0	2.4	7.5	6.9	681	74.0	59	1.8	ND
Mode	1.4	2.0	400.0	391.0	0.0	12.0	37.9	560	74.0	73	1.9	ND
Standard Deviation	0.5	1.3	83.9	84.8	1.8	9.6	10.5	161	36.2	6733	1.0	ND
Sample Variance	0.2	1.6	7045.3	7189.3	3.3	92.6	110.6	25964	1308.4	45334507	1.0	ND
Kurtosis	-0.5	0.0	-0.3	-0.2	0.3	2.0	3.0	0	3.8	15	2.5	ND
Skewness	-0.4	0.4	0.2	0.3	0.7	1.7	2.0	0	1.7	4	1.6	ND
Range	1.8	4.6	360.0	368.2	7.5	37.1	42.8	776	175.0	27995	3.7	0
Minimum	0.2	0.5	240.0	228.0	0.0	1.9	2.3	374	25.0	5	0.7	0
Maximum	2.0	5.1	600.0	596.2	7.5	39.0	45.1	1150	200.0	28000	4.4	0
Count	18	18	54	54	54	54	54	54	54	18	18	0
Confidence Level(95.0%)	0.2	0.6	22.9	23.1	0.5	2.6	2.9	44	9.9	3348	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

GREENFIELD AVENUE EXTENDED - SITE 18
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	50.72	25.00	0.0	1.8	10.5	1.7	4.8	17.0	0.1	1.2	0.0	ND
Standard Error	2.07	1.31	0.0	0.9	1.0	0.2	1.0	2.1	0.1	0.2	0.0	ND
Median	51.50	23.00	0.0	0.0	11.0	1.9	5.8	15.0	0.0	1.2	0.0	ND
Mode	52.00	22.00	0.0	0.0	11.0	1.5	0.0	22.0	0.0	0.0	0.0	ND
Standard Deviation	8.77	5.55	0.2	3.7	3.5	0.8	3.7	8.7	0.3	0.8	0.0	ND
Sample Variance	76.92	30.82	0.0	13.4	12.2	0.7	13.6	74.9	0.1	0.6	0.0	ND
Kurtosis	-0.61	-0.89	18.0	1.4	0.2	1.1	-1.4	-0.2	12.2	-1.0	ND	ND
Skewness	0.43	0.60	4.2	1.7	0.0	-0.7	-0.2	0.2	3.4	-0.6	ND	ND
Range	30.00	18.00	0.7	11.0	13.1	3.2	9.8	33.0	1.2	2.1	0.0	0.0
Minimum	38.00	17.00	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	68.00	35.00	0.7	11.0	17.0	3.2	9.8	33.0	1.2	2.1	0.0	0.0
Count	18	18	18	18	13	18	14	17	18	17	18	0
Confidence Level(95.0%)	4.36	2.76	0.1	1.8	2.1	0.4	2.1	4.4	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	229	180	0.4	7.8	51.0	45.3	6.0	5.8
Standard Error	10	5	0.1	0.8	2.6	2.4	0.3	0.3
Median	220	180	0.0	7.9	46.0	40.0	6.2	6.0
Mode	220	150	0.0	13.0	44.0	38.0	3.6	7.6
Standard Deviation	44	39	1.1	3.3	19.1	17.6	2.2	2.2
Sample Variance	1935	1539	1.1	10.7	366.1	309.0	4.8	4.8
Kurtosis	-1	0	7.5	-1.2	7.7	8.8	-1.2	-1.1
Skewness	1	0	2.9	0.5	2.6	2.9	-0.2	-0.1
Range	140	160	4.5	8.8	90.0	84.0	6.9	7.2
Minimum	170	100	0.0	4.2	30.0	26.0	2.4	2.3
Maximum	310	260	4.5	13.0	120.0	110.0	9.3	9.5
Count	18	54	54	18	54	53	53	53
Confidence Level(95.0%)	22	11	0.3	1.6	5.2	4.8	0.6	0.6

ND = No Data

Provisional MMSD Water Quality Data

JONES ISLAND FERRY - SITE 19
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	14.0	8.4	5.61	0.92	0.018	0.94	0.079	0.59	0.066	0.038	ND
Standard Error	0.0	0.8	0.3	0.93	0.05	0.001	0.05	0.007	0.04	0.004	0.002	ND
Median	7.8	14.8	8.0	5.02	0.88	0.017	0.90	0.089	0.64	0.068	0.037	ND
Mode	7.7	10.6	9.8	ND	1.10	0.016	1.20	0.000	0.00	0.073	0.000	ND
Standard Deviation	0.2	5.8	1.9	3.97	0.36	0.006	0.36	0.049	0.27	0.026	0.018	ND
Sample Variance	0.1	34.1	3.8	15.73	0.13	0.000	0.13	0.002	0.07	0.001	0.000	ND
Kurtosis	-0.5	-0.5	-0.7	3.09	1.14	1.992	0.91	-0.756	0.30	0.710	-0.077	ND
Skewness	0.7	-0.5	0.5	1.47	1.00	1.211	0.93	-0.231	-0.94	-0.225	-0.450	ND
Range	0.9	22.4	7.4	16.47	1.49	0.030	1.48	0.190	1.00	0.120	0.070	0.00
Minimum	7.5	2.0	5.3	0.63	0.41	0.007	0.42	0.000	0.00	0.000	0.000	0.00
Maximum	8.4	24.4	12.7	17.10	1.90	0.037	1.90	0.190	1.00	0.120	0.070	0.00
Count	54	54	54	18	54	54	54	51	51	54	54	0
Confidence Level(95.0%)	0.1	1.6	0.5	1.97	0.10	0.002	0.10	0.014	0.08	0.007	0.005	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.1	2.4	385.4	372.6	3.2	12.8	13.3	648	73.2	1256	2.1	ND
Standard Error	0.1	0.3	11.4	11.7	0.3	1.4	1.8	21	4.6	756	0.2	ND
Median	1.1	2.2	400.0	378.5	3.0	10.0	9.0	639	70.5	140	2.1	ND
Mode	1.1	2.5	410.0	389.0	1.1	13.0	12.2	799	67.0	170	2.2	ND
Standard Deviation	0.4	1.2	83.7	86.3	2.0	9.9	13.6	157	33.8	3209	1.0	ND
Sample Variance	0.2	1.4	7014.0	7444.7	3.9	98.9	184.7	24633	1142.7	10295826	1.0	ND
Kurtosis	-0.5	0.2	0.7	0.8	0.8	2.8	10.7	2	7.5	8	0.7	ND
Skewness	-0.3	0.6	0.3	0.3	0.9	1.6	2.9	1	2.2	3	0.1	ND
Range	1.6	4.4	420.0	429.1	8.6	43.9	76.9	835	200.0	12000	4.1	0
Minimum	0.2	0.6	230.0	217.0	0.0	2.1	2.5	335	20.0	0	0.0	0
Maximum	1.8	5.0	650.0	646.1	8.6	46.0	79.4	1170	220.0	12000	4.1	0
Count	18	18	54	54	54	54	54	54	54	18	18	0
Confidence Level(95.0%)	0.2	0.6	22.9	23.6	0.5	2.7	3.7	43	9.2	1596	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

JONES ISLAND FERRY - SITE 19
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2011

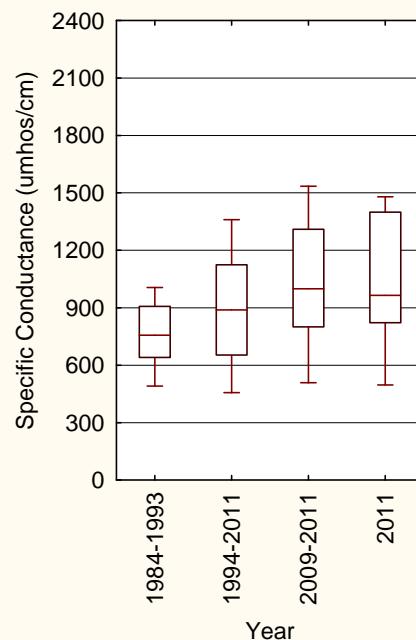
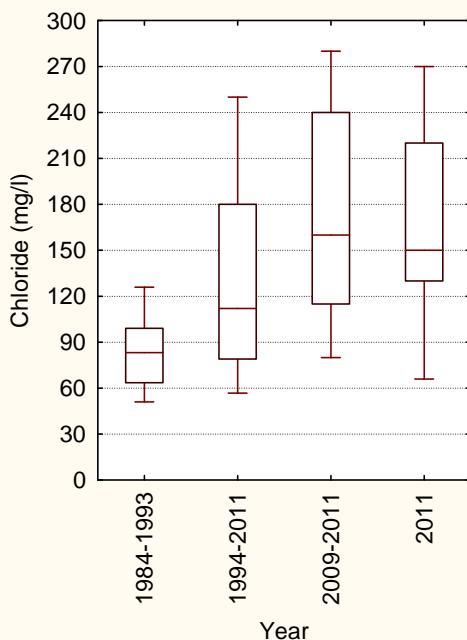
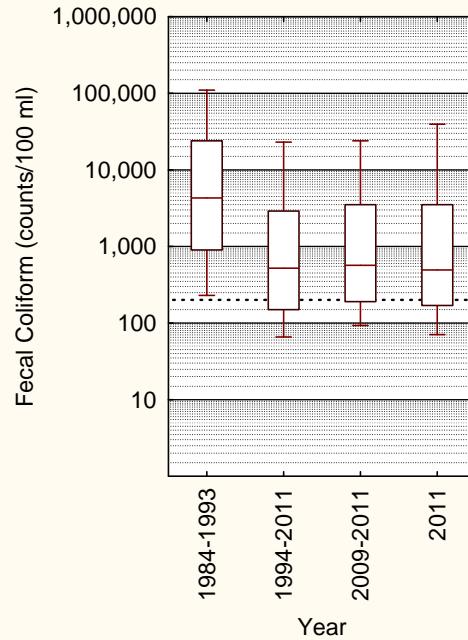
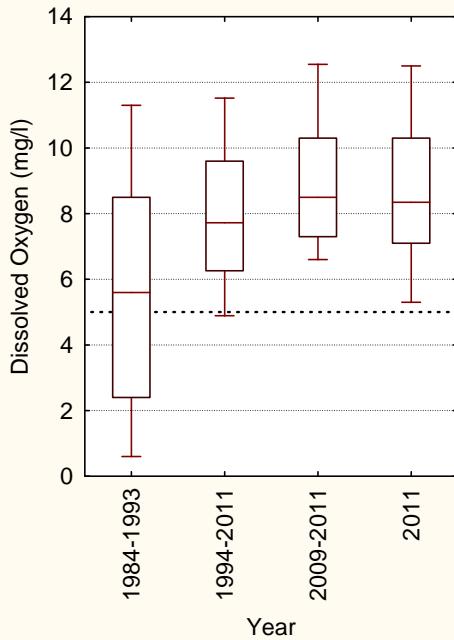
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	50.83	25.33	0.0	1.8	10.7	1.9	4.5	15.9	0.1	1.2	0.0	ND
Standard Error	2.25	1.47	0.0	0.9	0.8	0.2	0.9	2.6	0.1	0.2	0.0	ND
Median	50.50	23.50	0.0	0.0	11.0	1.8	4.7	13.5	0.0	1.4	0.0	ND
Mode	48.00	21.00	0.0	0.0	11.0	1.7	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	9.53	6.24	0.0	3.7	3.2	0.9	3.4	10.9	0.2	0.8	0.0	ND
Sample Variance	90.85	38.94	0.0	13.4	10.2	0.8	11.8	118.6	0.0	0.7	0.0	ND
Kurtosis	-0.17	-0.71	ND	2.5	-0.7	1.3	-1.4	7.0	8.4	-0.7	ND	ND
Skewness	-0.21	0.19	ND	1.9	-0.2	-0.3	-0.2	2.2	3.0	-0.4	ND	ND
Range	37.00	22.00	0.0	12.0	10.9	3.8	9.1	52.0	0.8	2.6	0.0	0.0
Minimum	30.00	14.00	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	67.00	36.00	0.0	12.0	16.0	3.8	9.1	52.0	0.8	2.6	0.0	0.0
Count	18	18	18	18	15	18	15	18	18	17	18	0
Confidence Level(95.0%)	4.74	3.10	0.0	1.8	1.8	0.5	1.9	5.4	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	231	182	0.4	8.0	51.9	46.3	6.1	5.9
Standard Error	12	6	0.1	0.7	2.8	2.7	0.3	0.3
Median	220	180	0.0	8.0	48.0	41.0	5.8	5.8
Mode	220	210	0.0	12.0	41.0	48.0	8.2	5.0
Standard Deviation	50	41	1.0	2.8	20.8	19.9	2.4	2.5
Sample Variance	2500	1649	0.9	7.9	432.1	397.4	6.0	6.3
Kurtosis	-1	0	4.6	-1.3	7.9	9.0	-0.7	-0.5
Skewness	0	0	2.5	0.2	2.6	2.9	0.0	0.2
Range	180	178	3.7	7.7	100.0	95.0	10.1	9.9
Minimum	130	92	0.0	4.3	30.0	25.0	0.9	1.1
Maximum	310	270	3.7	12.0	130.0	120.0	11.0	11.0
Count	18	54	54	18	54	53	53	53
Confidence Level(95.0%)	25	11	0.3	1.4	5.7	5.5	0.7	0.7

ND = No Data

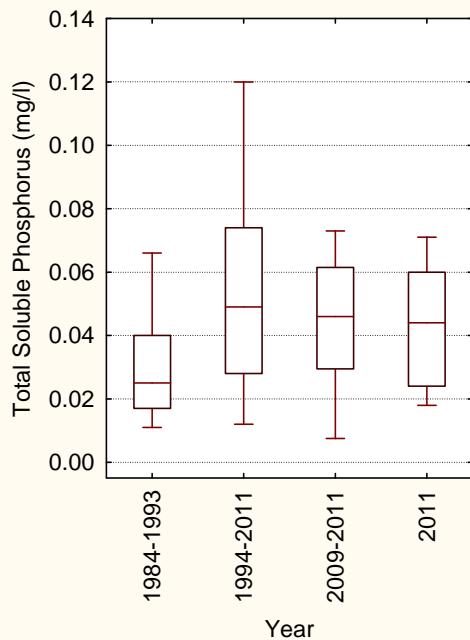
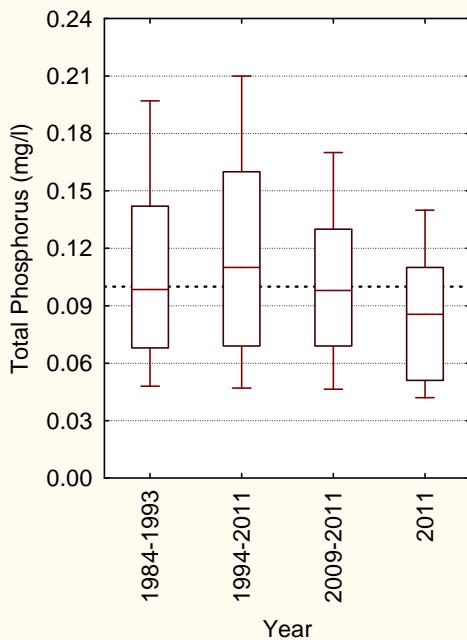
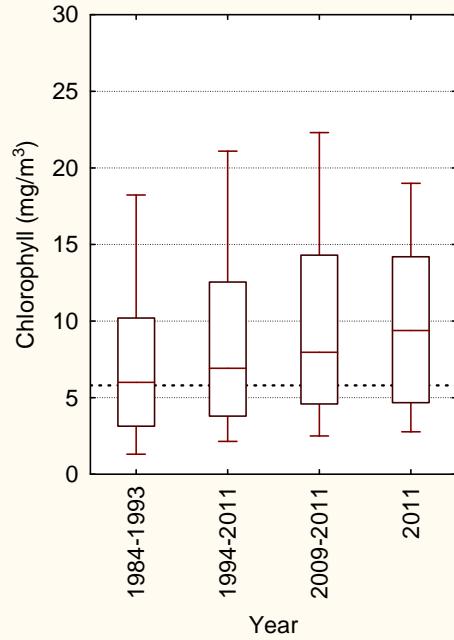
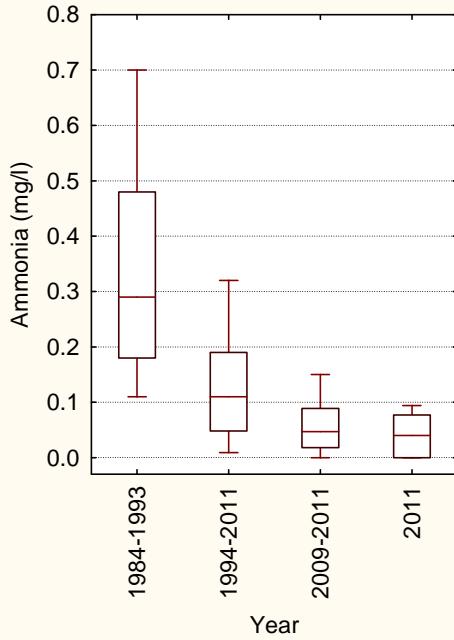
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Menomonee River at 25th St., Site RI-20



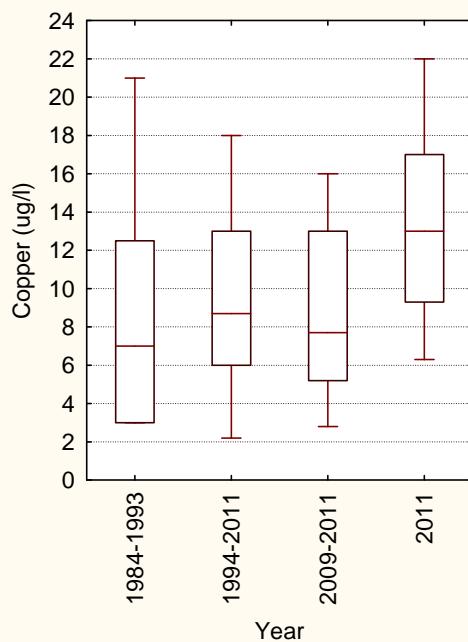
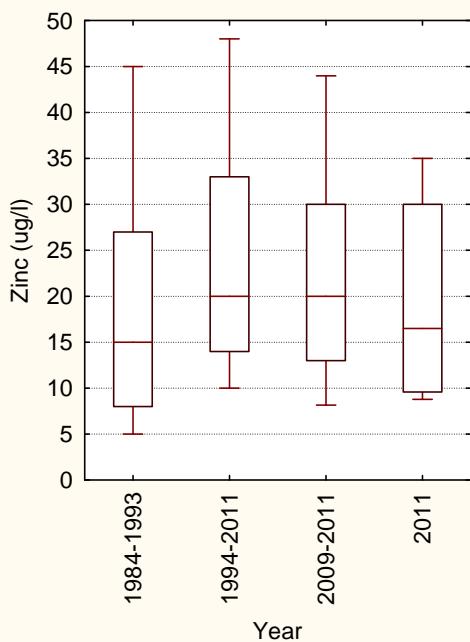
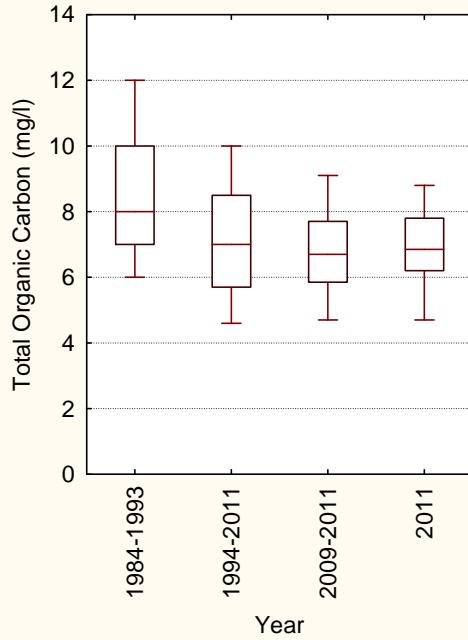
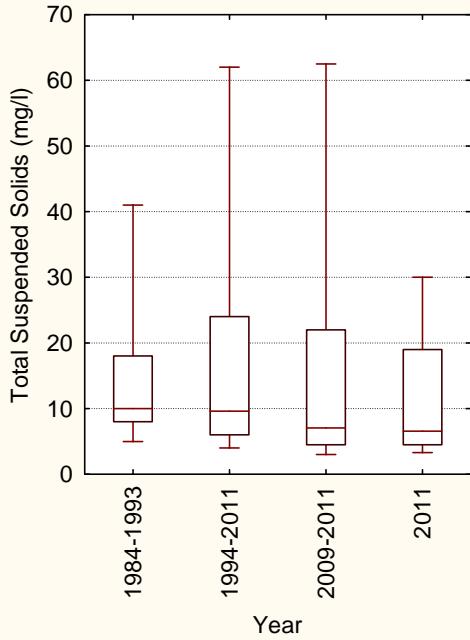
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at 25th St., Site RI-20



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at 25th St., Site RI-20



— Median □ 25%-75% ┤ 10%-90%

25TH STREET - SITE 20
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	14.5	8.6	10.24	0.61	0.021	0.64	0.046	0.67	0.085	0.043	ND
Standard Error	0.0	1.6	0.5	1.38	0.08	0.002	0.08	0.011	0.06	0.008	0.005	ND
Median	7.8	15.1	8.4	9.38	0.56	0.021	0.59	0.040	0.71	0.086	0.044	ND
Mode	8.0	ND	9.9	ND	0.56	0.020	0.13	0.000	0.55	0.110	0.050	ND
Standard Deviation	0.2	7.6	2.5	6.46	0.36	0.012	0.37	0.050	0.27	0.038	0.024	ND
Sample Variance	0.1	58.1	6.4	41.75	0.13	0.000	0.14	0.002	0.07	0.001	0.001	ND
Kurtosis	-0.6	-1.0	-0.5	-0.51	1.73	-0.632	2.24	0.205	2.04	-0.508	-0.364	ND
Skewness	-0.1	-0.3	0.2	0.54	0.99	-0.157	1.06	0.950	-1.34	0.291	0.162	ND
Range	0.8	25.7	9.2	22.50	1.49	0.040	1.59	0.160	1.00	0.137	0.094	0.00
Minimum	7.4	0.0	4.0	1.20	0.11	0.000	0.11	0.000	0.00	0.023	0.000	0.00
Maximum	8.2	25.7	13.2	23.70	1.60	0.040	1.70	0.160	1.00	0.160	0.094	0.00
Count	22	22	22	22	22	22	22	21	21	22	22	0
Confidence Level(95.0%)	0.1	3.4	1.1	2.86	0.16	0.005	0.16	0.023	0.12	0.017	0.010	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	664.1	649.6	4.4	14.5	12.1	1141	204.5	8560	2.9	3129
Standard Error	ND	ND	76.4	77.9	0.9	3.8	2.9	136	40.3	4493	0.2	1527
Median	ND	ND	580.0	575.1	3.2	6.6	6.0	965	150.0	495	2.7	600
Mode	ND	ND	330.0	ND	1.7	6.9	ND	1480	130.0	ND	ND	980
Standard Deviation	ND	ND	358.4	365.3	4.2	17.8	13.6	639	189.2	20094	0.9	7164
Sample Variance	ND	ND	128453.9	133460.9	17.3	316.2	183.7	407727	35795.1	403750323	0.9	51324449
Kurtosis	ND	ND	9.1	8.6	3.4	4.3	5.9	8	15.4	7	-0.2	16
Skewness	ND	ND	2.6	2.5	1.9	2.2	2.3	2	3.7	3	0.8	4
Range	0.0	0.0	1740.0	1750.7	16.0	62.8	55.8	3017	930.0	72941	3.1	32970
Minimum	0.0	0.0	260.0	244.0	0.0	2.2	2.2	423	60.0	59	1.8	30
Maximum	0.0	0.0	2000.0	1994.7	16.0	65.0	58.0	3440	990.0	73000	4.9	33000
Count	0	0	22	22	22	22	22	22	22	20	20	22
Confidence Level(95.0%)	ND	ND	158.9	162.0	1.8	7.9	6.0	283	83.9	9404	0.4	3176

ND = No Data

Provisional MMSD Water Quality Data

25TH STREET - SITE 20
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	66.36	30.09	0.0	1.9	13.2	2.5	4.9	19.9	0.1	0.9	0.0	ND
Standard Error	4.77	2.29	0.0	0.7	1.3	0.3	0.9	2.3	0.0	0.2	0.0	ND
Median	69.00	32.00	0.0	0.0	13.0	2.4	4.4	16.5	0.0	1.2	0.0	ND
Mode	56.00	32.00	0.0	0.0	13.0	1.9	0.0	9.6	0.0	0.0	0.0	ND
Standard Deviation	22.35	10.73	0.0	3.1	5.6	1.5	4.1	10.7	0.2	0.8	0.0	ND
Sample Variance	499.67	115.04	0.0	9.8	31.2	2.2	16.5	114.9	0.0	0.6	0.0	ND
Kurtosis	-0.67	-1.07	ND	-0.6	-0.5	3.9	-1.1	-0.3	3.8	-1.4	ND	ND
Skewness	-0.17	-0.47	ND	1.2	0.6	1.2	0.3	0.7	2.3	0.1	ND	ND
Range	84.00	34.00	0.0	8.0	18.9	7.1	12.0	38.1	0.6	2.4	0.0	0.0
Minimum	26.00	11.00	0.0	0.0	6.1	0.0	0.0	6.9	0.0	0.0	0.0	0.0
Maximum	110.00	45.00	0.0	8.0	25.0	7.1	12.0	45.0	0.6	2.4	0.0	0.0
Count	22	22	22	22	19	22	20	22	22	22	22	0
Confidence Level(95.0%)	9.91	4.76	0.0	1.4	2.7	0.7	1.9	4.8	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	290	199	1.9	9.7	56.6	49.7	7.0	6.5
Standard Error	21	14	0.4	1.0	5.0	4.8	0.3	0.3
Median	310	210	2.3	9.5	56.5	49.0	6.9	6.5
Mode	390	210	0.0	15.0	52.0	49.0	8.8	5.3
Standard Deviation	99	65	2.0	4.5	23.4	22.5	1.6	1.6
Sample Variance	9805	4268	3.8	20.6	545.7	506.6	2.5	2.4
Kurtosis	-1	0	-1.5	-0.1	7.4	7.4	1.0	0.0
Skewness	0	-1	0.3	0.1	2.0	2.0	0.5	0.5
Range	350	224	5.2	19.0	116.0	112.0	6.9	6.1
Minimum	110	66	0.0	0.0	24.0	18.0	4.1	3.9
Maximum	460	290	5.2	19.0	140.0	130.0	11.0	10.0
Count	22	22	22	22	22	22	22	22
Confidence Level(95.0%)	44	29	0.9	2.0	10.4	10.0	0.7	0.7

ND = No Data

Provisional MMSD Water Quality Data

127TH STREET EXTENDED - SITE 21
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	14.2	10.3	7.52	0.53	0.017	0.55	0.033	0.72	0.078	0.041	ND
Standard Error	0.0	1.5	0.6	1.00	0.07	0.003	0.07	0.018	0.11	0.010	0.006	ND
Median	7.9	15.1	9.6	7.30	0.50	0.013	0.52	0.000	0.63	0.068	0.037	ND
Mode	7.9	ND	7.7	ND	ND	0.012	0.50	0.000	0.00	0.046	0.000	ND
Standard Deviation	0.2	6.9	2.7	4.69	0.33	0.013	0.34	0.082	0.49	0.048	0.028	ND
Sample Variance	0.1	47.9	7.1	22.00	0.11	0.000	0.11	0.007	0.24	0.002	0.001	ND
Kurtosis	0.7	-0.9	-1.3	-0.26	0.60	0.143	0.91	15.583	6.78	-0.875	-1.292	ND
Skewness	0.3	-0.4	0.2	0.67	0.86	0.861	0.90	3.779	1.95	0.537	0.188	ND
Range	1.0	23.3	9.0	16.08	1.23	0.047	1.33	0.370	2.40	0.158	0.089	0.00
Minimum	7.5	-0.1	6.2	1.72	0.07	0.000	0.07	0.000	0.00	0.012	0.000	0.00
Maximum	8.5	23.2	15.2	17.80	1.30	0.047	1.40	0.370	2.40	0.170	0.089	0.00
Count	22	22	22	22	22	22	22	21	21	22	22	0
Confidence Level(95.0%)	0.1	3.1	1.2	2.08	0.14	0.006	0.15	0.037	0.22	0.021	0.013	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	603.6	587.0	3.8	16.7	15.0	1019	161.9	3621	2.7	2190
Standard Error	ND	ND	46.0	47.7	0.9	4.8	3.9	82	16.6	1445	0.2	756
Median	ND	ND	600.0	593.3	2.2	7.3	6.6	980	165.0	200	2.3	260
Mode	ND	ND	680.0	ND	0.0	5.8	ND	938	200.0	190	2.3	130
Standard Deviation	ND	ND	215.7	223.7	4.3	22.4	18.5	386	77.7	6620	0.9	3545
Sample Variance	ND	ND	46529.0	50044.9	18.3	502.0	342.6	148726	6032.8	43822582	0.8	12564167
Kurtosis	ND	ND	4.6	4.1	5.4	7.5	7.1	2	5.1	5	-1.1	2
Skewness	ND	ND	1.3	1.2	2.3	2.7	2.5	1	1.6	2	0.6	2
Range	0.0	0.0	1050.0	1069.4	18.0	93.4	78.9	1690	368.0	24965	2.9	11964
Minimum	0.0	0.0	250.0	227.0	0.0	2.6	2.0	400	52.0	35	1.5	36
Maximum	0.0	0.0	1300.0	1296.4	18.0	96.0	80.9	2090	420.0	25000	4.4	12000
Count	0	0	22	22	22	22	22	22	22	21	21	22
Confidence Level(95.0%)	ND	ND	95.6	99.2	1.9	9.9	8.2	171	34.4	3013	0.4	1572

ND = No Data

Provisional MMSD Water Quality Data

127TH STREET EXTENDED - SITE 21
MENOMONEE RIVER
WATER QUALITY DATA - 2011

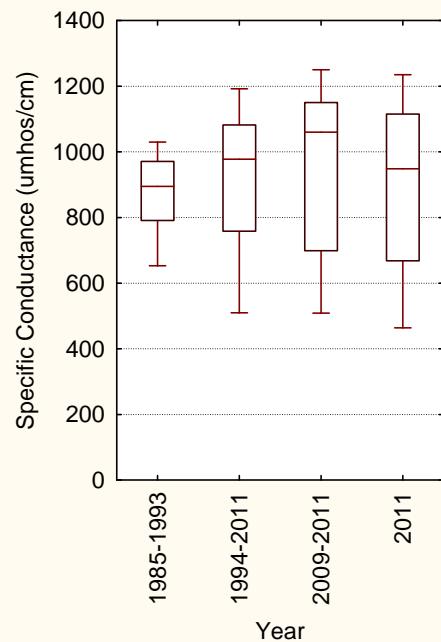
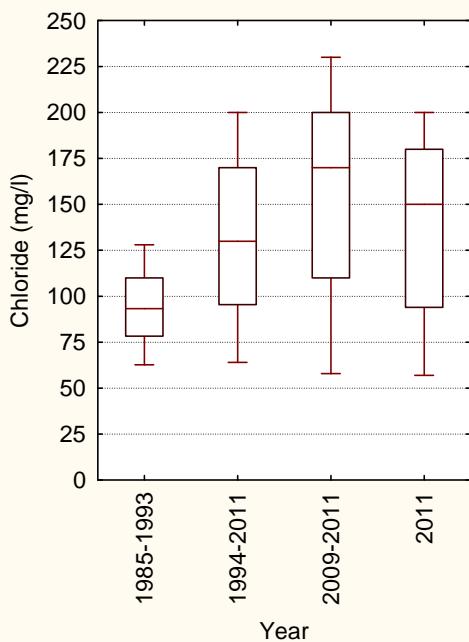
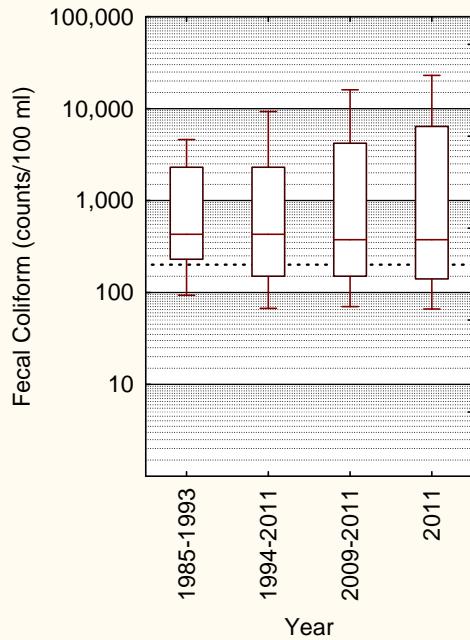
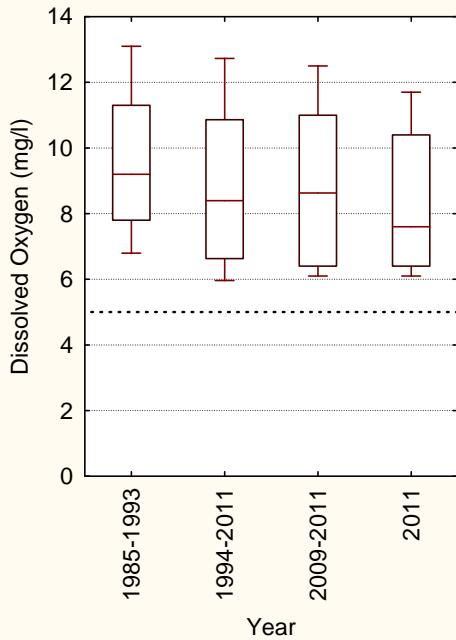
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	68.14	32.86	0.0	1.8	8.8	2.8	4.6	15.3	0.0	1.0	0.0	ND
Standard Error	4.39	2.16	0.0	0.8	0.7	0.4	0.9	2.4	0.0	0.2	0.0	ND
Median	72.50	36.50	0.0	0.0	9.3	2.0	5.0	15.5	0.0	1.1	0.0	ND
Mode	81.00	37.00	0.0	0.0	12.0	1.9	0.0	17.0	0.0	0.0	0.0	ND
Standard Deviation	20.59	10.13	0.0	3.5	2.9	2.0	3.8	11.1	0.2	0.9	0.0	ND
Sample Variance	423.74	102.60	0.0	12.4	8.3	4.1	14.5	122.6	0.0	0.8	0.0	ND
Kurtosis	0.19	-0.35	ND	2.2	-0.8	4.7	-1.6	9.7	14.9	0.1	ND	ND
Skewness	-0.41	-0.80	ND	1.8	-0.5	2.0	0.1	2.6	3.8	0.5	ND	ND
Range	85.00	35.00	0.0	12.0	9.1	9.2	9.9	57.0	0.7	3.3	0.0	0.0
Minimum	25.00	12.00	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	110.00	47.00	0.0	12.0	13.0	9.2	9.9	57.0	0.7	3.3	0.0	0.0
Count	22	22	22	21	17	21	20	22	22	22	22	0
Confidence Level(95.0%)	9.13	4.49	0.0	1.6	1.5	0.9	1.8	4.9	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	305	223	1.1	7.2	62.6	55.4	7.2	7.0
Standard Error	19	14	0.4	1.2	5.1	4.9	0.4	0.4
Median	340	250	0.0	5.4	64.5	57.5	7.5	7.2
Mode	360	260	0.0	0.0	66.0	58.0	7.7	7.3
Standard Deviation	91	65	1.8	5.7	23.9	23.1	2.0	2.0
Sample Variance	8207	4251	3.4	33.0	573.6	532.3	3.9	3.9
Kurtosis	0	0	1.9	0.1	8.5	8.6	1.0	1.1
Skewness	-1	-1	1.6	0.8	2.1	2.2	0.4	0.4
Range	340	222	6.4	21.0	125.0	119.0	8.6	8.8
Minimum	120	78	0.0	0.0	25.0	21.0	3.4	3.2
Maximum	460	300	6.4	21.0	150.0	140.0	12.0	12.0
Count	22	22	22	22	22	22	22	22
Confidence Level(95.0%)	40	29	0.8	2.5	10.6	10.2	0.9	0.9

ND = No Data

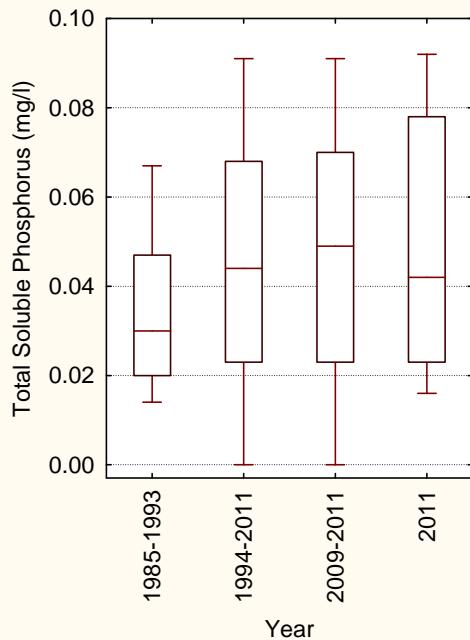
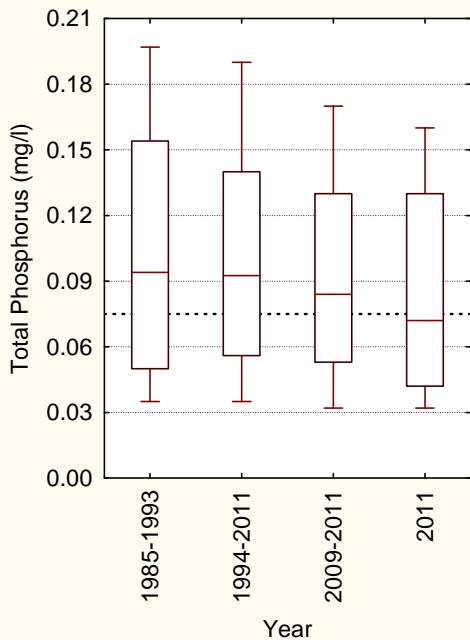
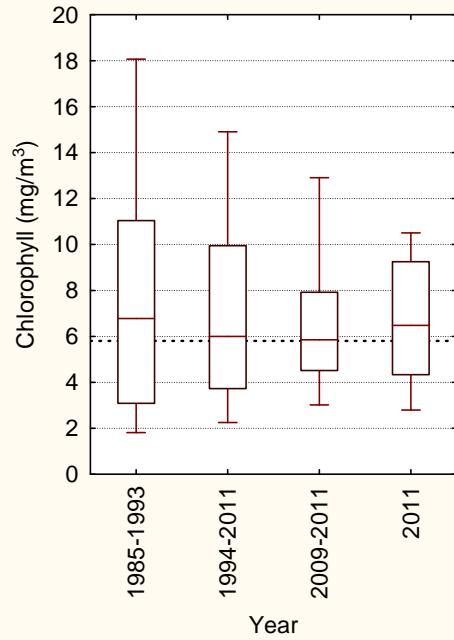
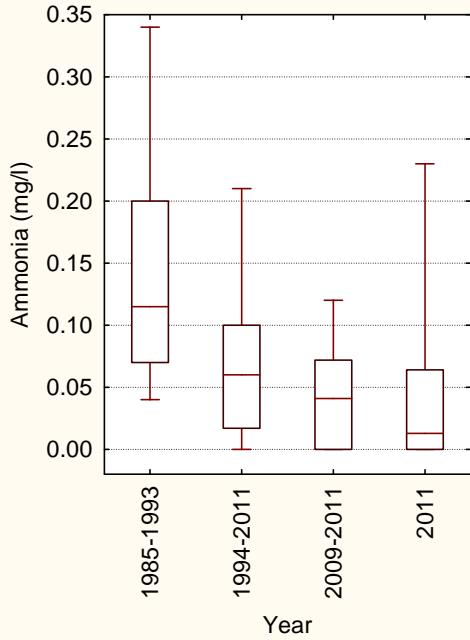
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Menomonee River at Hampton Ave., Site RI-22



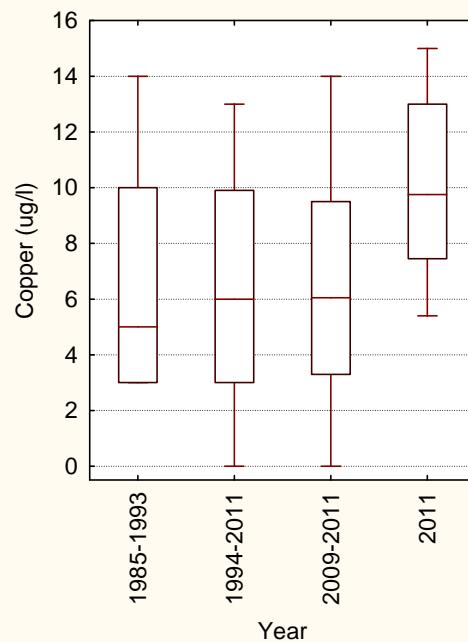
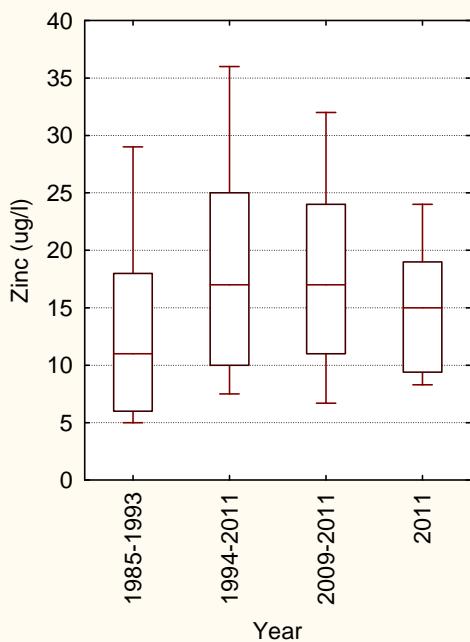
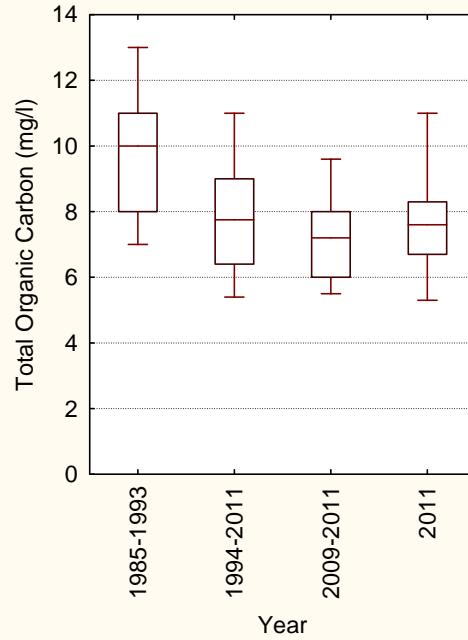
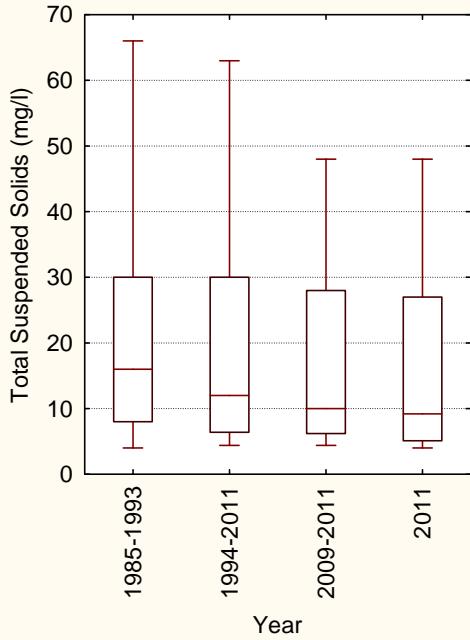
— Median □ 25%-75% □ 10%-90%
----WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at Hampton Ave., Site RI-22



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at Hampton Ave., Site RI-22



— Median □ 25%-75% █ 10%-90%

HAMPTON AVENUE - SITE 22
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	14.9	8.5	6.92	0.56	0.022	0.58	0.061	0.70	0.097	0.052	ND
Standard Error	0.0	1.3	0.5	0.79	0.08	0.003	0.08	0.026	0.07	0.016	0.008	ND
Median	7.8	16.5	7.6	6.48	0.50	0.018	0.52	0.013	0.70	0.072	0.042	ND
Mode	7.8	ND	8.9	9.25	0.83	0.012	0.52	0.000	1.40	0.062	0.016	ND
Standard Deviation	0.2	6.1	2.4	3.63	0.34	0.016	0.34	0.117	0.32	0.073	0.037	ND
Sample Variance	0.0	37.5	5.6	13.16	0.12	0.000	0.12	0.014	0.11	0.005	0.001	ND
Kurtosis	0.5	-0.9	-1.2	1.16	1.49	-0.111	1.23	6.163	1.33	1.894	-0.172	ND
Skewness	0.6	-0.4	0.5	0.94	0.98	0.663	0.82	2.581	0.48	1.419	0.706	ND
Range	0.9	20.6	7.1	14.53	1.44	0.060	1.44	0.430	1.40	0.271	0.140	0.00
Minimum	7.4	2.7	5.7	2.07	0.06	0.000	0.06	0.000	0.00	0.019	0.000	0.00
Maximum	8.3	23.3	12.8	16.60	1.50	0.060	1.50	0.430	1.40	0.290	0.140	0.00
Count	21	21	21	21	21	21	21	20	20	21	21	0
Confidence Level(95.0%)	0.1	2.8	1.1	1.65	0.16	0.007	0.16	0.055	0.15	0.033	0.017	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	547.1	526.1	4.8	21.0	20.5	911	142.6	5273	2.9	ND
Standard Error	ND	ND	35.0	37.7	1.3	6.3	5.8	71	12.5	2067	0.2	ND
Median	ND	ND	580.0	556.0	2.0	9.2	9.4	949	150.0	375	2.6	ND
Mode	ND	ND	680.0	ND	1.7	6.4	ND	909	200.0	80	1.9	ND
Standard Deviation	ND	ND	160.4	172.7	6.0	29.0	26.4	318	57.4	9244	0.9	ND
Sample Variance	ND	ND	25731.4	29831.8	35.6	841.0	695.7	101072	3293.5	85442557	0.9	ND
Kurtosis	ND	ND	0.0	-0.4	5.4	6.7	7.0	0	-0.7	3	-1.2	ND
Skewness	ND	ND	-0.3	-0.3	2.3	2.5	2.5	0	0.0	2	0.4	ND
Range	0.0	0.0	640.0	660.6	24.0	116.3	108.8	1246	208.0	29955	2.8	0
Minimum	0.0	0.0	240.0	213.0	0.0	3.7	3.3	404	52.0	45	1.7	0
Maximum	0.0	0.0	880.0	873.6	24.0	120.0	112.0	1650	260.0	30000	4.5	0
Count	0	0	21	21	21	21	21	20	21	20	20	0
Confidence Level(95.0%)	ND	ND	73.0	78.6	2.7	13.2	12.0	149	26.1	4326	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

HAMPTON AVENUE - SITE 22
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	63.19	30.00	0.0	1.6	10.2	2.6	4.6	20.1	0.1	1.3	0.0	ND
Standard Error	4.36	2.27	0.0	0.6	0.9	0.3	0.8	4.4	0.1	0.2	0.0	ND
Median	70.00	34.00	0.0	0.0	9.8	2.4	4.1	15.0	0.0	1.4	0.0	ND
Mode	82.00	40.00	0.0	0.0	12.0	2.4	0.0	19.0	0.0	0.0	0.0	ND
Standard Deviation	20.00	10.42	0.1	3.0	3.5	1.2	3.4	20.4	0.2	0.9	0.0	ND
Sample Variance	400.06	108.60	0.0	8.8	12.3	1.3	11.5	414.9	0.1	0.9	0.0	ND
Kurtosis	-0.75	-1.05	21.0	-0.1	-1.2	2.8	-1.3	6.0	5.4	-1.1	ND	ND
Skewness	-0.57	-0.55	4.6	1.4	0.1	0.8	-0.1	2.6	2.4	-0.1	ND	ND
Range	69.00	32.00	0.6	7.7	11.1	5.8	9.9	79.0	0.9	2.8	0.0	0.0
Minimum	24.00	11.00	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	93.00	43.00	0.6	7.7	16.0	5.8	9.9	79.0	0.9	2.8	0.0	0.0
Count	21	21	21	21	16	21	17	21	21	21	21	0
Confidence Level(95.0%)	9.10	4.74	0.1	1.3	1.9	0.5	1.7	9.3	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	281	207	2.1	10.4	59.4	51.5	7.9	7.4
Standard Error	20	16	0.9	2.0	5.6	5.6	0.6	0.6
Median	330	240	0.0	7.8	63.0	56.0	7.6	7.2
Mode	370	260	0.0	7.8	65.0	59.0	8.0	6.8
Standard Deviation	92	73	3.9	9.2	25.5	25.5	2.5	2.6
Sample Variance	8459	5315	15.5	84.9	652.6	648.2	6.5	6.7
Kurtosis	-1	-1	6.0	4.3	7.7	6.9	4.4	5.4
Skewness	-1	-1	2.5	2.0	2.1	2.0	1.6	1.9
Range	290	235	15.0	38.0	126.0	122.0	12.2	12.3
Minimum	100	65	0.0	0.0	24.0	18.0	3.8	3.7
Maximum	390	300	15.0	38.0	150.0	140.0	16.0	16.0
Count	21	21	21	21	21	21	21	21
Confidence Level(95.0%)	42	33	1.8	4.2	11.6	11.6	1.2	1.2

ND = No Data

Provisional MMSD Water Quality Data

BURNHAM SHIP CANAL - SITE 31
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	18.2	5.8	7.26	0.95	0.030	0.99	0.210	0.76	0.083	0.053	ND
Standard Error	0.0	1.3	0.5	1.15	0.11	0.003	0.12	0.037	0.04	0.005	0.005	ND
Median	7.7	16.8	5.4	5.00	0.72	0.023	0.75	0.150	0.72	0.083	0.055	ND
Mode	7.5	21.9	2.9	ND	2.00	0.020	2.10	0.120	1.00	0.110	0.072	ND
Standard Deviation	0.3	6.7	2.4	5.85	0.59	0.015	0.61	0.187	0.22	0.024	0.023	ND
Sample Variance	0.1	44.7	5.6	34.24	0.34	0.000	0.37	0.035	0.05	0.001	0.001	ND
Kurtosis	-1.0	-1.1	-1.0	-0.54	-0.31	-0.671	-0.27	0.485	-0.31	-0.347	-0.322	ND
Skewness	0.1	0.2	0.4	0.78	1.09	0.922	1.10	1.280	0.38	0.034	-0.221	ND
Range	0.9	23.9	8.1	20.16	1.85	0.046	1.94	0.630	0.83	0.090	0.095	0.00
Minimum	7.2	6.7	2.9	0.94	0.35	0.013	0.36	0.000	0.37	0.040	0.000	0.00
Maximum	8.1	30.5	11.0	21.10	2.20	0.059	2.30	0.630	1.20	0.130	0.095	0.00
Count	26	26	26	26	26	26	26	25	25	26	26	0
Confidence Level(95.0%)	0.1	2.7	1.0	2.36	0.24	0.006	0.25	0.077	0.09	0.010	0.009	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	685.4	678.0	2.8	7.4	7.9	1222	193.8	1344	2.4	ND
Standard Error	ND	ND	63.6	63.7	0.2	0.6	0.7	122	26.3	616	0.2	ND
Median	ND	ND	545.0	538.0	2.4	7.0	6.9	919	125.0	220	2.3	ND
Mode	ND	ND	1200.0	ND	2.4	12.0	ND	ND	120.0	200	2.3	ND
Standard Deviation	ND	ND	324.2	324.8	0.9	2.8	3.6	623	134.1	3016	0.8	ND
Sample Variance	ND	ND	105129.8	105498.5	0.8	7.9	12.9	388752	17976.7	9096334	0.6	ND
Kurtosis	ND	ND	0.0	0.0	-0.6	-1.3	0.0	0	1.3	9	-0.1	ND
Skewness	ND	ND	1.2	1.2	0.7	0.2	0.9	1	1.5	3	0.5	ND
Range	0.0	0.0	1020.0	1025.2	3.1	8.7	12.6	1907	473.0	11990	3.1	0
Minimum	0.0	0.0	380.0	370.2	1.5	3.3	3.3	583	77.0	10	1.0	0
Maximum	0.0	0.0	1400.0	1395.4	4.6	12.0	15.9	2490	550.0	12000	4.1	0
Count	0	0	26	26	26	26	26	26	26	24	24	0
Confidence Level(95.0%)	ND	ND	131.0	131.2	0.4	1.1	1.5	252	54.2	1274	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

BURNHAM SHIP CANAL - SITE 31
MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	68.58	32.85	0.0	2.3	13.1	2.6	4.3	17.6	0.0	1.3	0.0	ND
Standard Error	3.21	1.41	0.0	0.7	0.7	0.2	0.8	1.1	0.0	0.2	0.0	ND
Median	68.50	34.00	0.0	0.0	13.5	2.6	4.2	17.5	0.0	1.3	0.0	ND
Mode	76.00	42.00	0.0	0.0	14.0	3.1	0.0	19.0	0.0	0.0	0.0	ND
Standard Deviation	16.38	7.20	0.2	3.3	3.1	1.1	4.1	5.5	0.1	1.2	0.0	ND
Sample Variance	268.17	51.82	0.0	11.2	9.8	1.1	17.0	30.2	0.0	1.3	0.0	ND
Kurtosis	-1.14	-0.72	26.0	-1.3	-0.6	2.1	-0.7	0.9	26.0	0.6	ND	ND
Skewness	0.15	-0.54	5.1	0.8	0.0	0.5	0.5	0.8	5.1	0.8	ND	ND
Range	60.00	25.00	1.0	8.0	11.0	5.4	12.0	23.3	0.4	4.4	0.0	0.0
Minimum	40.00	17.00	0.0	0.0	8.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0
Maximum	100.00	42.00	1.0	8.0	19.0	5.4	12.0	33.0	0.4	4.4	0.0	0.0
Count	26	26	26	26	20	26	24	26	26	25	26	0
Confidence Level(95.0%)	6.61	2.91	0.1	1.4	1.5	0.4	1.7	2.2	0.0	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	307	224	0.5	10.1	61.0	54.2	6.6	6.4
Standard Error	13	9	0.2	0.8	3.2	3.0	0.3	0.3
Median	310	220	0.0	8.9	58.0	52.0	6.9	6.5
Mode	400	220	0.0	15.0	58.0	54.0	5.5	7.0
Standard Deviation	69	46	1.0	3.9	16.4	15.5	1.6	1.7
Sample Variance	4696	2161	1.0	15.4	269.9	241.7	2.4	2.8
Kurtosis	-1	0	0.1	0.6	5.8	5.7	-0.1	0.1
Skewness	0	0	1.4	-0.3	1.8	1.9	-0.2	0.0
Range	250	190	2.8	18.0	85.0	78.0	6.5	7.3
Minimum	170	120	0.0	0.0	35.0	32.0	3.0	2.7
Maximum	420	310	2.8	18.0	120.0	110.0	9.5	10.0
Count	26	26	26	26	26	26	26	26
Confidence Level(95.0%)	28	19	0.4	1.6	6.6	6.3	0.6	0.7

ND = No Data

Provisional MMSD Water Quality Data

BURLEIGH STREET - SITE 32
 MENOMONEE RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	12.6	10.4	8.30	0.67	0.022	0.70	0.082	0.71	0.089	0.048	ND
Standard Error	0.1	1.8	0.6	1.48	0.08	0.004	0.08	0.034	0.09	0.019	0.010	ND
Median	7.9	13.6	11.3	5.87	0.57	0.016	0.64	0.000	0.65	0.058	0.032	ND
Mode	7.9	13.9	12.2	3.08	0.54	0.013	0.71	0.000	0.74	0.027	0.032	ND
Standard Deviation	0.3	8.1	2.8	6.79	0.35	0.017	0.37	0.150	0.42	0.087	0.044	ND
Sample Variance	0.1	64.8	7.9	46.04	0.13	0.000	0.13	0.023	0.18	0.007	0.002	ND
Kurtosis	0.9	-1.1	-0.9	5.83	1.06	1.252	0.56	4.556	4.27	5.015	1.224	ND
Skewness	0.6	-0.2	-0.3	2.20	0.78	1.148	0.64	2.206	1.69	2.152	1.341	ND
Range	1.2	24.3	9.3	28.45	1.54	0.069	1.54	0.550	2.00	0.350	0.160	0.00
Minimum	7.4	-0.2	5.9	2.75	0.06	0.000	0.06	0.000	0.00	0.020	0.000	0.00
Maximum	8.6	24.1	15.2	31.20	1.60	0.069	1.60	0.550	2.00	0.370	0.160	0.00
Count	21	21	21	21	21	21	21	20	20	21	21	0
Confidence Level(95.0%)	0.1	3.7	1.3	3.09	0.16	0.008	0.17	0.070	0.20	0.039	0.020	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	721.4	700.6	5.3	20.9	17.6	1243	230.9	5197	2.8	2298
Standard Error	ND	ND	105.1	107.1	1.9	7.9	5.5	214	58.3	2782	0.2	955
Median	ND	ND	590.0	584.0	2.3	6.9	6.9	950	150.0	620	2.8	390
Mode	ND	ND	700.0	ND	2.7	5.0	ND	ND	120.0	1400	3.1	1600
Standard Deviation	ND	ND	481.7	490.8	8.8	36.0	25.2	956	267.0	12127	1.0	4376
Sample Variance	ND	ND	232012.9	240840.9	76.8	1296.7	635.2	913411	71315.4	147067979	1.0	19146290
Kurtosis	ND	ND	9.6	9.2	13.3	11.7	7.2	9	14.1	9	-0.6	5
Skewness	ND	ND	2.9	2.8	3.5	3.2	2.6	3	3.6	3	0.3	2
Range	0.0	0.0	2250.0	2294.0	40.0	157.4	102.9	4351	1257.0	47986	3.5	14961
Minimum	0.0	0.0	250.0	201.0	0.0	2.6	3.1	359	43.0	14	1.1	39
Maximum	0.0	0.0	2500.0	2495.0	40.0	160.0	106.0	4710	1300.0	48000	4.7	15000
Count	0	0	21	21	21	21	21	20	21	19	19	21
Confidence Level(95.0%)	ND	ND	219.3	223.4	4.0	16.4	11.5	447	121.6	5845	0.5	1992

ND = No Data

Provisional MMSD Water Quality Data

BURLEIGH STREET - SITE 32
 MENOMONEE RIVER
 WATER QUALITY DATA - 2011

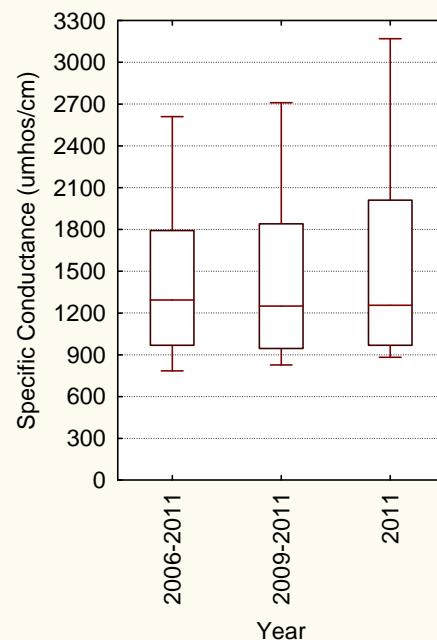
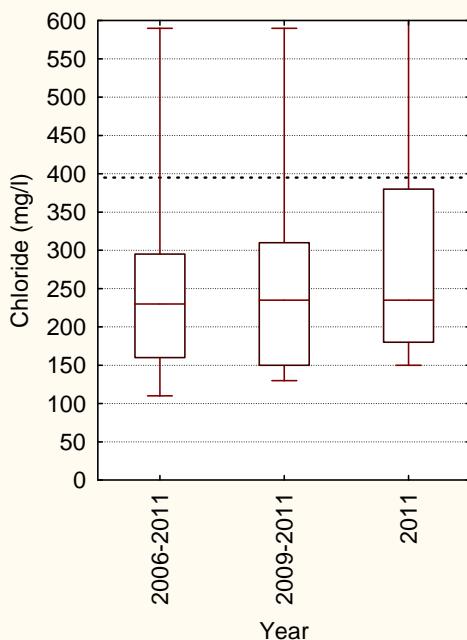
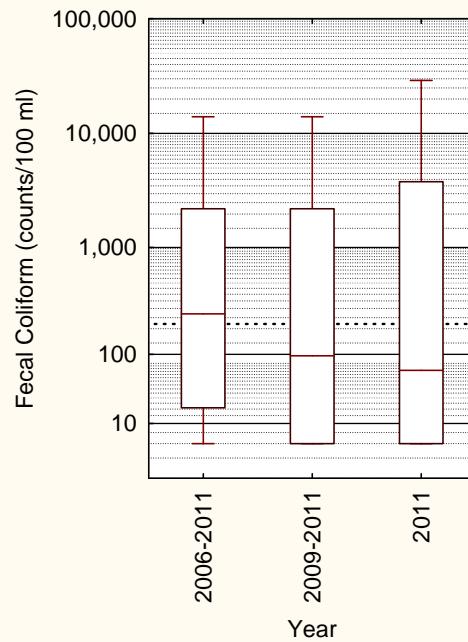
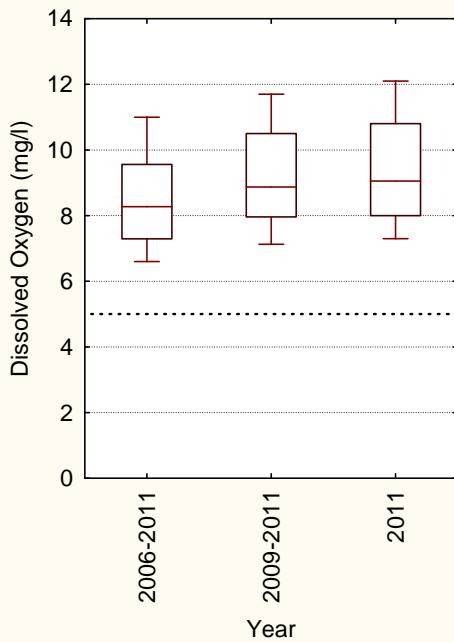
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	69.86	31.50	0.0	2.7	9.2	2.7	2.9	18.7	0.0	1.1	0.0	ND
Standard Error	4.93	2.19	0.0	0.8	0.9	0.3	0.8	2.8	0.0	0.3	0.0	ND
Median	74.00	35.00	0.0	0.0	9.6	2.3	2.0	16.0	0.0	1.2	0.0	ND
Mode	83.00	38.00	0.0	0.0	12.0	2.3	0.0	16.0	0.0	0.0	0.0	ND
Standard Deviation	22.60	10.03	0.1	3.5	3.5	1.5	3.1	12.6	0.1	1.2	0.0	ND
Sample Variance	510.63	100.53	0.0	12.3	12.0	2.1	9.7	159.6	0.0	1.3	0.0	ND
Kurtosis	-0.71	-0.65	21.0	-1.8	-0.7	3.5	-1.1	7.7	21.0	0.8	ND	ND
Skewness	-0.17	-0.55	4.6	0.6	-0.2	1.4	0.6	2.4	4.6	0.9	ND	ND
Range	85.00	36.40	0.6	8.1	12.4	7.1	8.8	56.9	0.3	4.2	0.0	0.0
Minimum	25.00	9.60	0.0	0.0	2.6	0.0	0.0	6.1	0.0	0.0	0.0	0.0
Maximum	110.00	46.00	0.6	8.1	15.0	7.1	8.8	63.0	0.3	4.2	0.0	0.0
Count	21	21	21	21	16	21	17	20	21	21	21	0
Confidence Level(95.0%)	10.29	4.56	0.1	1.6	1.8	0.7	1.6	5.9	0.0	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	304	212	2.5	11.6	60.9	52.8	8.1	7.7
Standard Error	21	15	1.0	2.6	5.5	5.5	0.7	0.7
Median	330	240	0.0	7.4	64.0	56.0	7.5	7.1
Mode	370	250	0.0	4.0	69.0	57.0	7.5	7.6
Standard Deviation	97	68	4.7	11.8	25.1	25.2	3.3	3.3
Sample Variance	9386	4603	22.1	140.4	628.6	632.6	10.9	10.9
Kurtosis	-1	0	5.8	5.3	7.8	6.8	8.5	9.9
Skewness	0	0	2.5	2.3	2.2	2.0	2.5	2.8
Range	370	266	16.0	49.0	125.0	120.0	15.8	16.2
Minimum	100	64	0.0	0.0	25.0	20.0	4.2	3.8
Maximum	470	330	16.0	49.0	150.0	140.0	20.0	20.0
Count	21	21	21	21	21	21	21	21
Confidence Level(95.0%)	44	31	2.1	5.4	11.4	11.4	1.5	1.5

ND = No Data

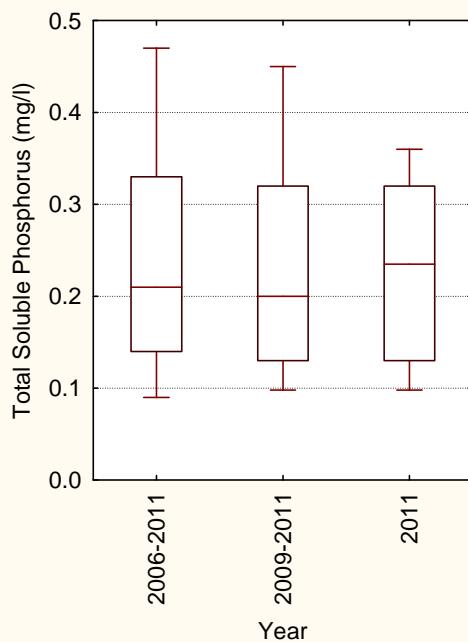
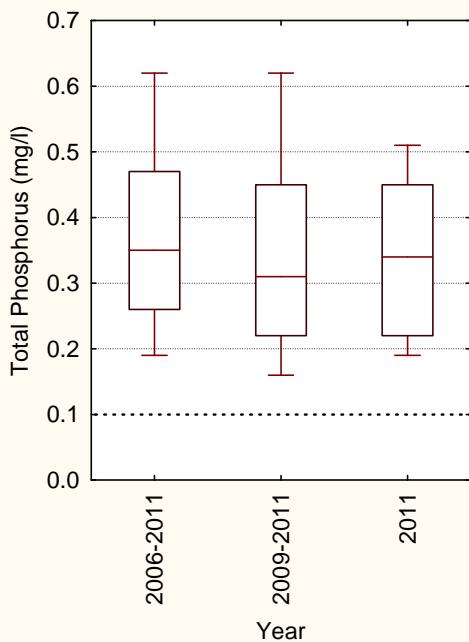
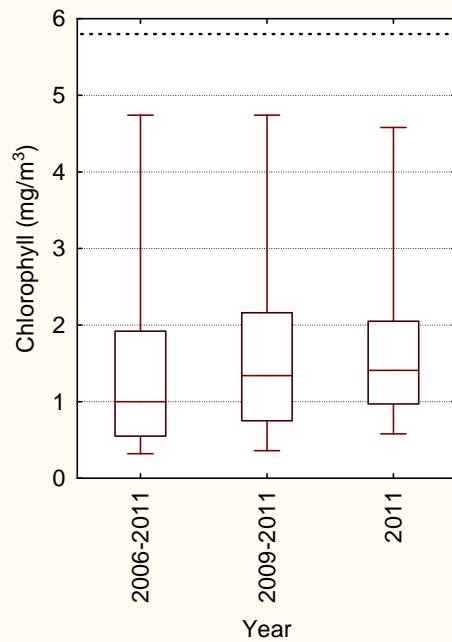
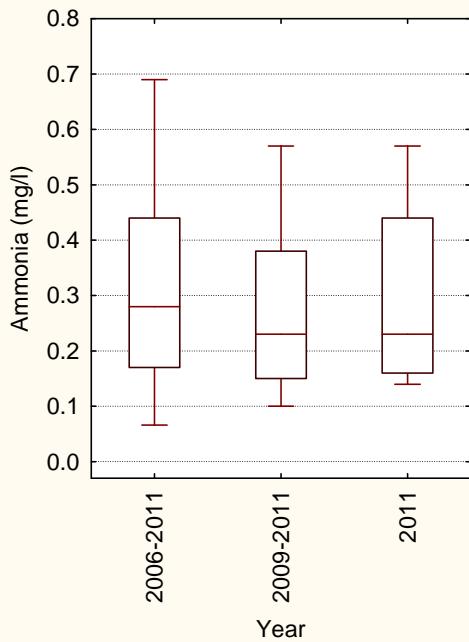
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
43rd St. Ditch at Lincoln Ave., Site RI-33



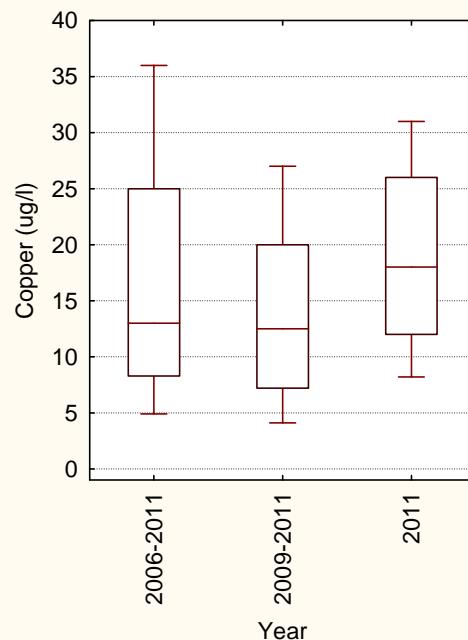
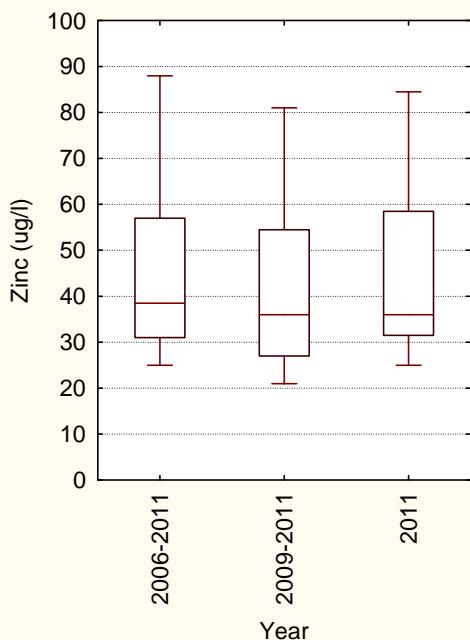
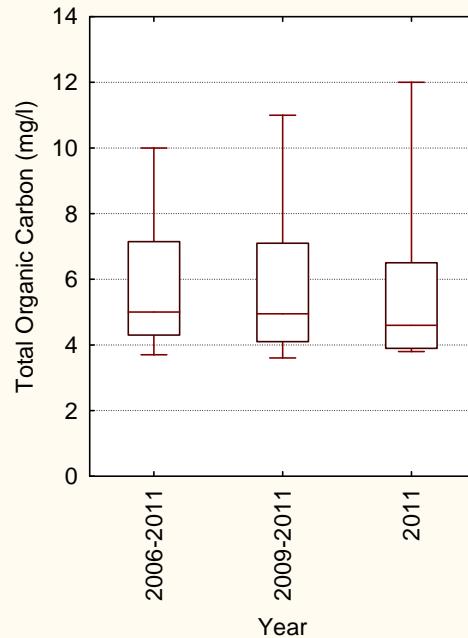
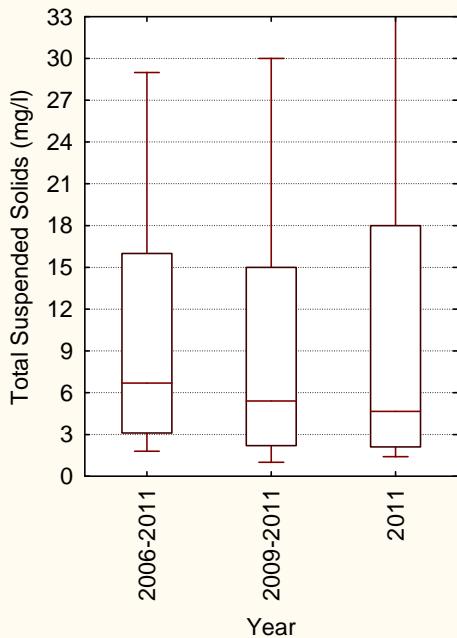
— Median □ 25%-75% | 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
43rd St. Ditch at Lincoln Ave., Site RI-33



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
43rd St. Ditch at Lincoln Ave., Site RI-33



— Median □ 25%-75% ━ 10%-90%

43RD STREET DITCH - SITE 33
TRIBUTARY TO KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	12.5	9.4	2.04	1.03	0.044	1.08	0.289	0.87	0.375	0.284	ND
Standard Error	0.1	1.3	0.4	0.42	0.10	0.004	0.10	0.045	0.12	0.055	0.070	ND
Median	7.8	12.7	9.1	1.41	0.85	0.039	0.88	0.230	0.74	0.340	0.235	ND
Mode	7.8	17.1	12.1	ND	2.00	0.025	0.72	0.230	1.00	0.220	0.260	ND
Standard Deviation	0.3	6.0	1.9	1.99	0.48	0.019	0.49	0.208	0.55	0.257	0.330	ND
Sample Variance	0.1	36.3	3.4	3.96	0.23	0.000	0.24	0.043	0.30	0.066	0.109	ND
Kurtosis	4.9	-1.4	-1.1	3.93	0.03	1.102	0.25	0.252	2.04	12.596	17.977	ND
Skewness	1.6	-0.1	0.2	2.10	1.11	1.276	1.14	0.912	0.97	3.180	4.063	ND
Range	1.2	17.9	6.2	7.55	1.49	0.071	1.54	0.790	2.40	1.280	1.628	0.00
Minimum	7.4	3.5	6.6	0.20	0.51	0.020	0.56	0.000	0.00	0.120	0.072	0.00
Maximum	8.6	21.4	12.8	7.75	2.00	0.091	2.10	0.790	2.40	1.400	1.700	0.00
Count	22	22	22	22	22	22	22	21	21	22	22	0
Confidence Level(95.0%)	0.1	2.7	0.8	0.88	0.21	0.008	0.22	0.095	0.25	0.114	0.146	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	969.1	957.3	4.3	11.8	11.6	1699	358.2	6963	2.1	5678
Standard Error	ND	ND	117.4	116.6	1.1	3.1	3.2	225	64.4	3101	0.4	2759
Median	ND	ND	705.0	699.4	2.5	4.7	4.8	1255	235.0	67	1.8	165
Mode	ND	ND	690.0	ND	0.0	2.3	ND	ND	210.0	0	0.0	3
Standard Deviation	ND	ND	550.6	547.0	5.3	14.4	15.2	1056	302.1	14210	1.7	12939
Sample Variance	ND	ND	303122.9	299190.3	28.2	208.4	231.9	1114194	91253.7	201918337	3.0	167412531
Kurtosis	ND	ND	1.1	1.0	1.7	1.4	8.7	2	2.4	6	-1.5	14
Skewness	ND	ND	1.4	1.3	1.6	1.6	2.8	2	1.8	2	0.1	4
Range	0.0	0.0	1950.0	1932.0	18.0	48.0	65.3	3982	1090.0	54000	4.7	57998
Minimum	0.0	0.0	450.0	431.0	0.0	0.0	2.5	688	110.0	0	0.0	2
Maximum	0.0	0.0	2400.0	2363.0	18.0	48.0	67.8	4670	1200.0	54000	4.7	58000
Count	0	0	22	22	22	22	22	22	22	21	21	22
Confidence Level(95.0%)	ND	ND	244.1	242.5	2.4	6.4	6.8	468	133.9	6468	0.8	5737

ND = No Data

Provisional MMSD Water Quality Data

43RD STREET DITCH - SITE 33
TRIBUTARY TO KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

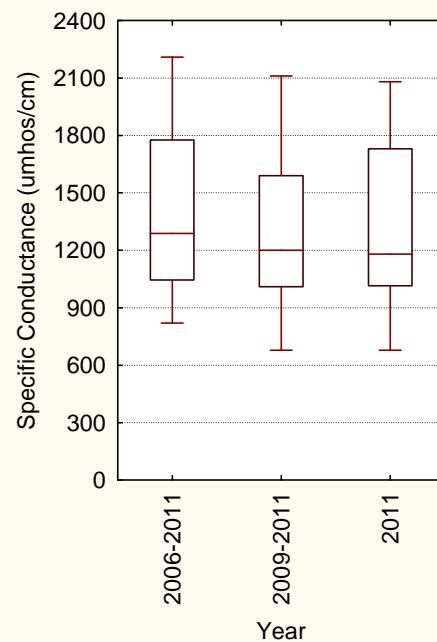
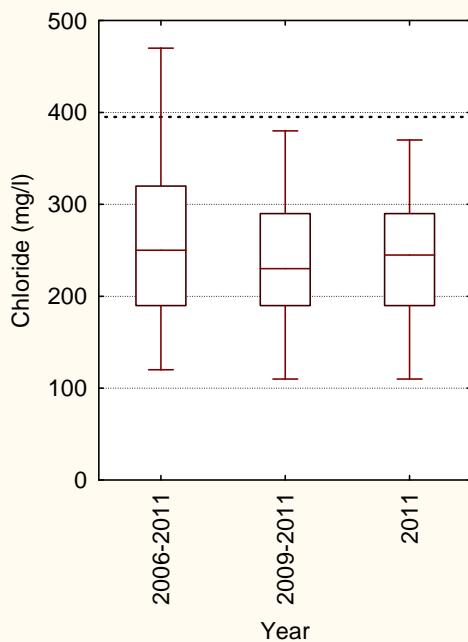
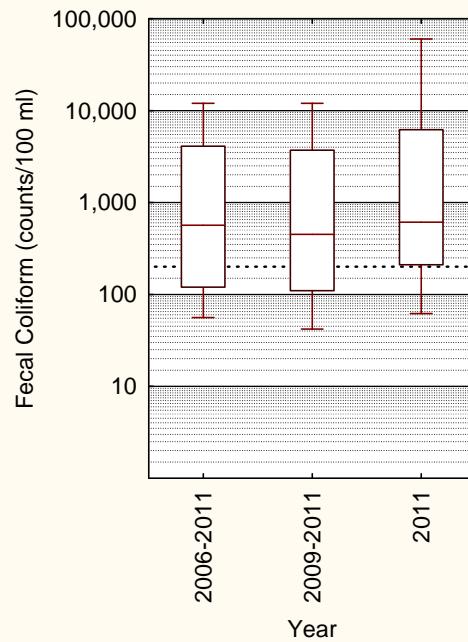
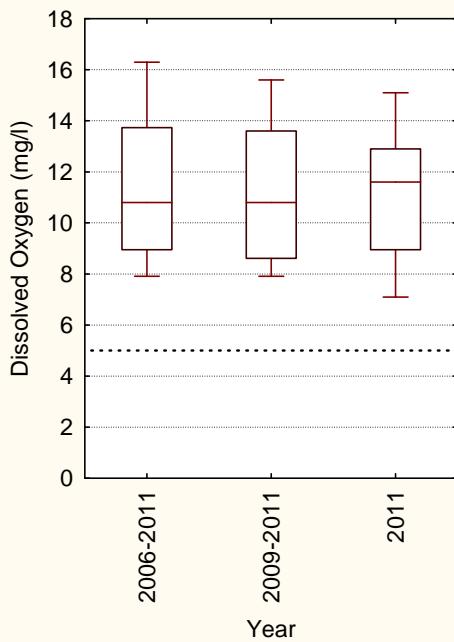
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	78.91	26.32	0.0	3.8	19.0	3.5	4.5	45.3	0.0	0.5	0.0	ND
Standard Error	5.01	1.57	0.0	1.2	2.1	0.3	0.7	5.0	0.0	0.1	0.0	ND
Median	71.50	27.50	0.0	0.0	18.0	3.0	4.6	36.0	0.0	0.0	0.0	ND
Mode	71.00	21.00	0.0	0.0	14.0	4.5	0.0	25.0	0.0	0.0	0.0	ND
Standard Deviation	23.50	7.38	0.2	5.8	8.9	1.6	2.9	22.3	0.1	0.6	0.0	ND
Sample Variance	552.28	54.42	0.0	33.8	78.6	2.5	8.7	499.1	0.0	0.3	0.0	ND
Kurtosis	0.31	-1.36	22.0	2.0	0.6	4.2	-1.0	0.0	9.2	-1.6	ND	ND
Skewness	0.79	-0.10	4.7	1.5	0.9	1.7	-0.4	1.2	3.2	0.4	ND	ND
Range	86.00	22.00	0.8	21.0	33.9	6.9	9.0	69.0	0.4	1.5	0.0	0.0
Minimum	44.00	15.00	0.0	0.0	7.1	1.8	0.0	25.0	0.0	0.0	0.0	0.0
Maximum	130.00	37.00	0.8	21.0	41.0	8.7	9.0	94.0	0.4	1.5	0.0	0.0
Count	22	22	22	22	18	22	19	20	22	21	22	0
Confidence Level(95.0%)	10.42	3.27	0.1	2.6	4.4	0.7	1.4	10.5	0.0	0.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	305	184	3.4	13.2	50.9	44.4	6.1	6.1
Standard Error	18	9	1.2	2.9	3.4	3.4	0.8	0.8
Median	295	195	0.0	9.3	49.5	44.0	4.6	4.3
Mode	280	200	0.0	0.0	58.0	54.0	4.3	4.2
Standard Deviation	84	43	5.7	13.7	15.7	16.0	3.7	3.7
Sample Variance	7112	1843	32.7	186.9	247.1	254.9	13.6	13.4
Kurtosis	0	-1	1.9	1.2	9.5	6.5	4.2	2.8
Skewness	0	0	1.8	1.4	2.6	1.9	2.0	1.8
Range	300	150	18.0	48.0	78.0	79.0	15.1	13.8
Minimum	170	100	0.0	0.0	32.0	21.0	2.9	3.2
Maximum	470	250	18.0	48.0	110.0	100.0	18.0	17.0
Count	22	22	22	22	22	22	22	22
Confidence Level(95.0%)	37	19	2.5	6.1	7.0	7.1	1.6	1.6

ND = No Data

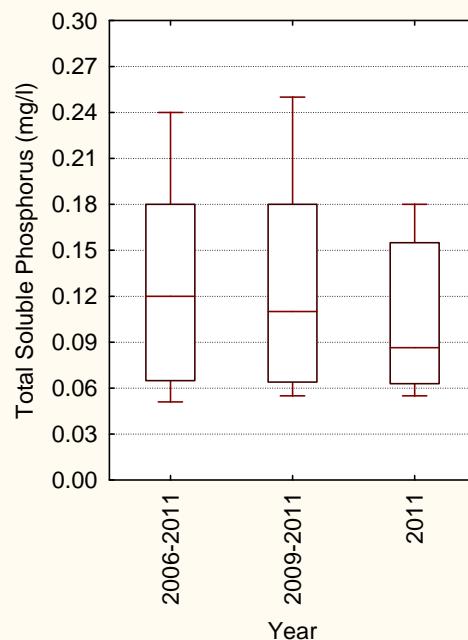
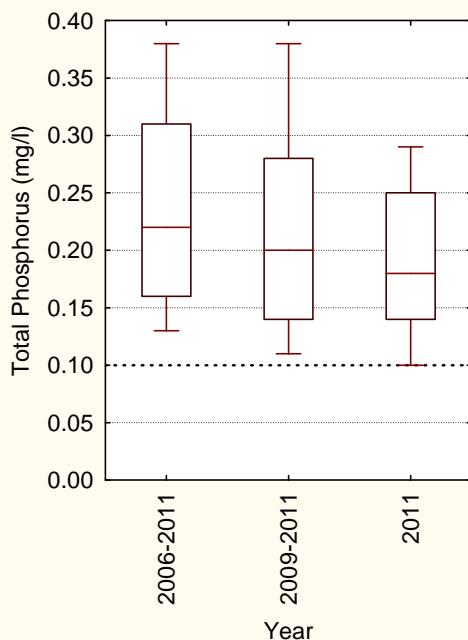
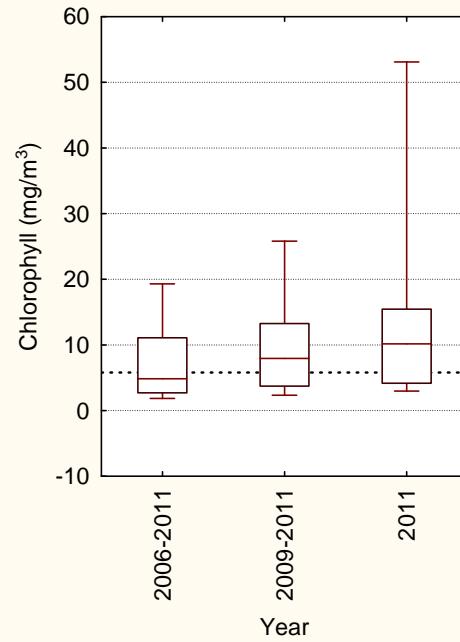
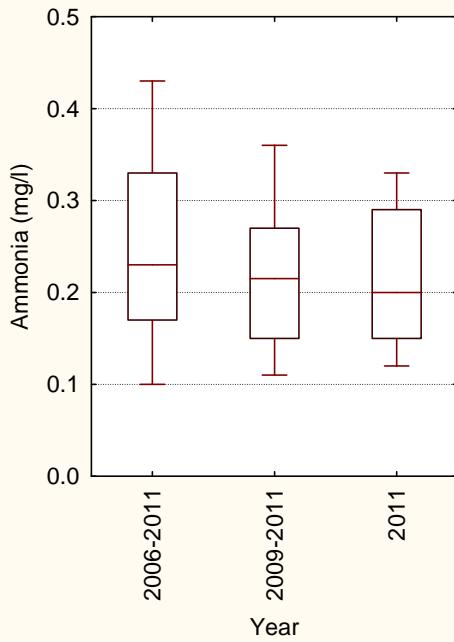
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at W. Forest Home Ave., near 37th and Montana, Site RI-34



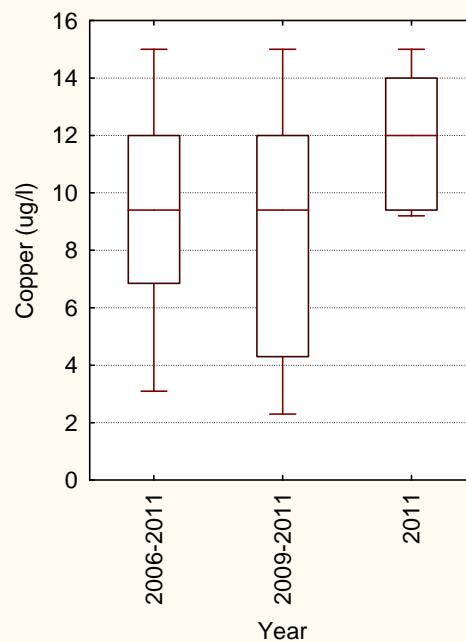
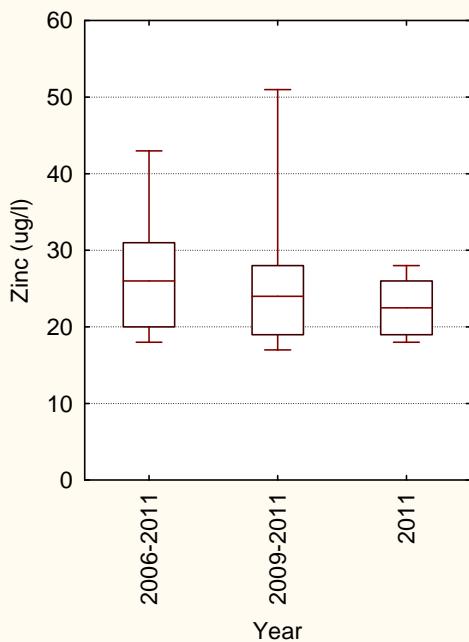
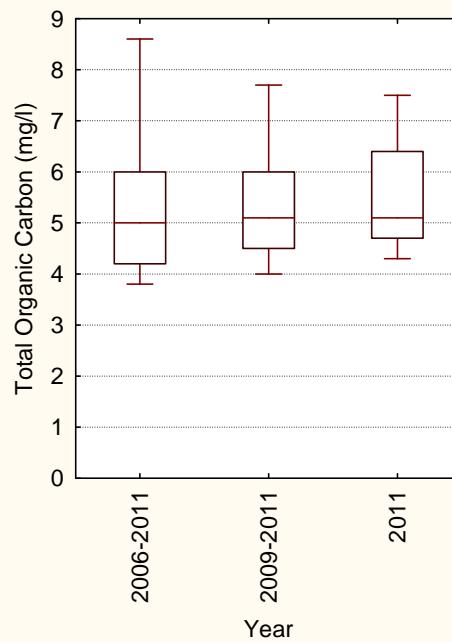
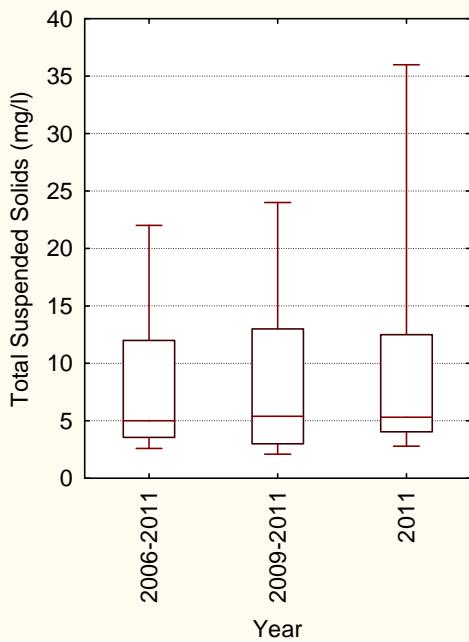
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at W. Forest Home Ave., near 37th and Montana, Site RI-34



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Kinnickinnic River at W. Forest Home Ave., near 37th and Montana, Site RI-34



— Median □ 25%-75% ━ 10%-90%

JACKSON PARK LAGOON - SITE 34
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	16.0	11.8	15.56	0.98	0.042	1.02	0.227	0.95	0.196	0.105	ND
Standard Error	0.1	1.4	1.0	4.48	0.14	0.005	0.14	0.031	0.15	0.020	0.013	ND
Median	7.7	16.8	11.6	10.17	0.84	0.039	0.88	0.200	0.79	0.180	0.087	ND
Mode	7.6	15.4	12.8	ND	1.10	0.039	1.10	0.330	0.79	0.140	0.086	ND
Standard Deviation	0.3	5.7	4.2	17.91	0.54	0.020	0.55	0.121	0.58	0.082	0.051	ND
Sample Variance	0.1	32.0	17.3	320.63	0.29	0.000	0.30	0.015	0.34	0.007	0.003	ND
Kurtosis	4.4	-1.2	4.5	3.81	2.05	9.325	1.75	3.199	3.19	0.999	-0.924	ND
Skewness	1.6	-0.2	1.7	2.11	1.52	2.722	1.45	1.417	1.99	0.978	0.696	ND
Range	1.4	18.0	17.2	61.59	1.89	0.088	1.84	0.509	2.03	0.300	0.160	0.00
Minimum	7.3	6.6	6.9	2.71	0.41	0.022	0.46	0.051	0.37	0.100	0.040	0.00
Maximum	8.7	24.6	24.1	64.30	2.30	0.110	2.30	0.560	2.40	0.400	0.200	0.00
Count	16	16	16	16	16	16	16	15	15	16	16	0
Confidence Level(95.0%)	0.2	3.0	2.2	9.54	0.29	0.011	0.29	0.067	0.32	0.044	0.027	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	766.9	752.1	4.8	14.8	17.6	1333	242.3	10390	3.0	4865
Standard Error	ND	ND	78.5	81.4	1.4	6.7	8.0	149	26.4	5761	0.3	2888
Median	ND	ND	670.0	650.1	2.9	5.3	6.1	1180	245.0	610	2.8	710
Mode	ND	ND	670.0	ND	0.0	5.0	5.0	ND	260.0	ND	ND	ND
Standard Deviation	ND	ND	313.9	325.6	5.6	26.7	31.9	597	105.7	23043	1.2	11552
Sample Variance	ND	ND	98542.9	106001.6	31.2	712.4	1015.7	356163	11171.7	530966510	1.3	133456693
Kurtosis	ND	ND	0.4	0.4	5.6	12.5	13.4	1	1.9	5	0.2	12
Skewness	ND	ND	0.9	0.7	2.2	3.5	3.6	1	0.8	3	-0.2	3
Range	0.0	0.0	1140.0	1247.2	22.0	107.9	129.5	2411	454.0	76997	4.4	45981
Minimum	0.0	0.0	360.0	250.0	0.0	2.1	3.5	389	56.0	3	0.5	19
Maximum	0.0	0.0	1500.0	1497.2	22.0	110.0	133.0	2800	510.0	77000	4.9	46000
Count	0	0	16	16	16	16	16	16	16	16	16	16
Confidence Level(95.0%)	ND	ND	167.3	173.5	3.0	14.2	17.0	318	56.3	12279	0.6	6156

ND = No Data

Provisional MMSD Water Quality Data

JACKSON PARK LAGOON - SITE 34
KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	71.13	27.44	0.0	1.7	12.0	3.0	3.0	22.8	0.1	0.8	0.0	ND
Standard Error	6.26	2.64	0.0	0.9	1.0	0.4	0.7	1.3	0.1	0.2	0.0	ND
Median	65.50	27.00	0.0	0.0	12.0	2.4	3.9	22.5	0.0	0.8	0.0	ND
Mode	59.00	44.00	0.0	0.0	13.0	3.0	0.0	26.0	0.0	0.0	0.0	ND
Standard Deviation	25.04	10.57	0.2	3.6	3.2	1.7	2.2	4.8	0.3	0.8	0.0	ND
Sample Variance	626.78	111.73	0.0	13.3	10.3	3.0	4.8	22.8	0.1	0.6	0.0	ND
Kurtosis	-0.62	-1.08	16.0	1.6	0.8	7.0	-1.6	-0.7	10.6	-0.9	ND	ND
Skewness	0.46	0.13	4.0	1.8	0.9	2.6	-0.4	0.2	3.1	0.6	ND	ND
Range	86.00	32.00	0.6	9.8	11.1	7.0	5.7	17.0	1.2	2.3	0.0	0.0
Minimum	34.00	12.00	0.0	0.0	7.9	1.4	0.0	15.0	0.0	0.0	0.0	0.0
Maximum	120.00	44.00	0.6	9.8	19.0	8.4	5.7	32.0	1.2	2.3	0.0	0.0
Count	16	16	16	16	11	16	9	14	16	16	16	0
Confidence Level(95.0%)	13.34	5.63	0.1	1.9	2.2	0.9	1.7	2.8	0.2	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	290	184	3.3	15.2	53.1	45.5	6.2	5.8
Standard Error	26	16	1.3	2.8	5.8	6.2	0.9	1.0
Median	270	185	3.0	11.8	48.0	41.0	5.1	4.7
Mode	450	250	0.0	14.0	62.0	50.0	5.1	4.4
Standard Deviation	103	63	5.1	11.4	23.2	24.1	3.4	3.8
Sample Variance	10693	3992	26.5	129.4	539.9	578.7	11.7	14.1
Kurtosis	-1	0	10.5	8.6	8.5	6.9	11.9	12.9
Skewness	0	-1	3.0	2.7	2.6	2.1	3.3	3.5
Range	310	224	21.0	48.5	101.0	110.0	14.1	15.4
Minimum	140	46	0.0	4.5	29.0	10.0	3.9	3.6
Maximum	450	270	21.0	53.0	130.0	120.0	18.0	19.0
Count	16	16	16	16	16	15	15	15
Confidence Level(95.0%)	55	34	2.7	6.1	12.4	13.3	1.9	2.1

ND = No Data

Provisional MMSD Water Quality Data

WILSON PARK CREEK - SITE 35
TRIBUTARY TO KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.3	11.1	4.36	0.33	0.032	0.36	0.052	0.56	0.066	0.027	ND
Standard Error	0.1	1.6	0.5	0.83	0.06	0.006	0.06	0.022	0.11	0.012	0.006	ND
Median	8.0	10.7	11.9	3.26	0.25	0.027	0.26	0.000	0.48	0.040	0.020	ND
Mode	7.8	ND	12.4	3.12	ND	0.000	0.18	0.000	0.00	0.027	0.000	ND
Standard Deviation	0.3	7.7	2.5	3.97	0.29	0.029	0.31	0.105	0.50	0.056	0.029	ND
Sample Variance	0.1	59.1	6.3	15.77	0.08	0.001	0.10	0.011	0.25	0.003	0.001	ND
Kurtosis	-0.7	-1.1	-0.9	13.37	-0.92	0.083	-0.96	4.772	0.93	1.962	2.508	ND
Skewness	0.0	0.0	-0.3	3.30	0.75	0.961	0.74	2.345	1.12	1.501	1.667	ND
Range	1.2	23.9	8.6	19.90	0.81	0.100	0.86	0.380	1.70	0.215	0.110	0.00
Minimum	7.4	-0.4	6.5	0.70	0.06	0.000	0.06	0.000	0.00	0.015	0.000	0.00
Maximum	8.6	23.5	15.1	20.60	0.87	0.100	0.92	0.380	1.70	0.230	0.110	0.00
Count	23	23	23	23	23	23	23	22	22	23	23	0
Confidence Level(95.0%)	0.1	3.3	1.1	1.72	0.12	0.013	0.13	0.047	0.22	0.024	0.013	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	1221.3	1201.9	4.6	19.4	29.7	2177	490.8	3169	2.9	2459
Standard Error	ND	ND	249.0	250.5	1.2	7.7	12.7	473	141.5	1552	0.2	1094
Median	ND	ND	730.0	726.0	3.2	7.1	8.3	1270	220.0	560	2.7	870
Mode	ND	ND	730.0	ND	0.0	2.6	ND	ND	130.0	1200	3.1	870
Standard Deviation	ND	ND	1194.1	1201.4	6.0	36.9	60.9	2270	678.6	7441	0.8	5245
Sample Variance	ND	ND	1425830.0	1443403.8	35.6	1363.9	3708.8	5154778	460561.4	55366347	0.6	27506054
Kurtosis	ND	ND	4.4	4.3	6.0	6.7	9.6	5	4.5	17	0.8	17
Skewness	ND	ND	2.3	2.2	2.5	2.8	3.1	2	2.3	4	0.0	4
Range	0.0	0.0	4530.0	4662.2	24.0	138.2	258.5	9055	2552.0	34991	3.6	24965
Minimum	0.0	0.0	370.0	230.0	0.0	1.8	1.5	375	48.0	9	1.0	35
Maximum	0.0	0.0	4900.0	4892.2	24.0	140.0	260.0	9430	2600.0	35000	4.5	25000
Count	0	0	23	23	23	23	23	23	23	23	23	23
Confidence Level(95.0%)	ND	ND	516.4	519.5	2.6	16.0	26.3	982	293.5	3218	0.3	2268

ND = No Data

Provisional MMSD Water Quality Data

WILSON PARK CREEK - SITE 35
TRIBUTARY TO KINNICKINNICK RIVER
WATER QUALITY DATA - 2011

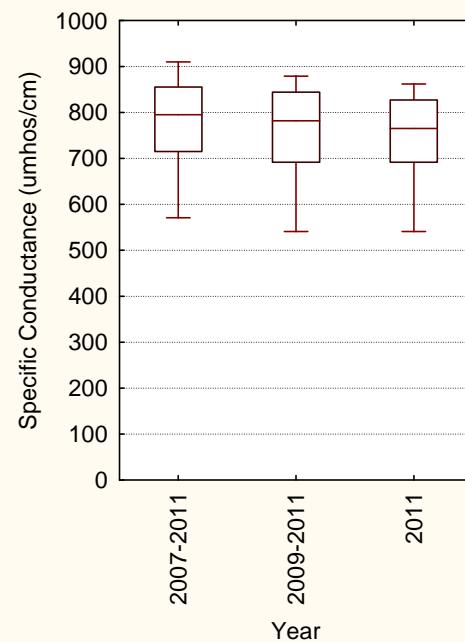
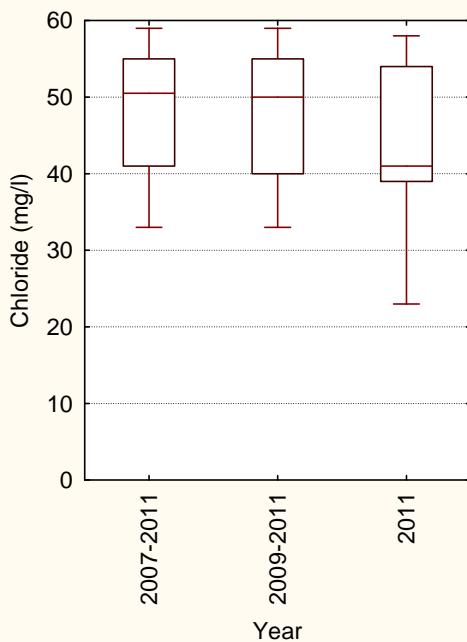
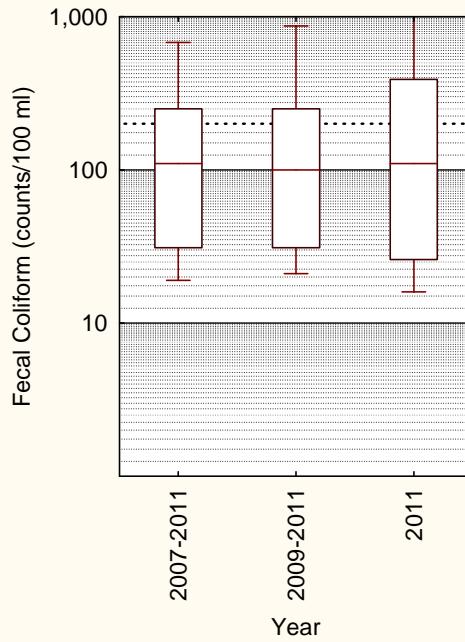
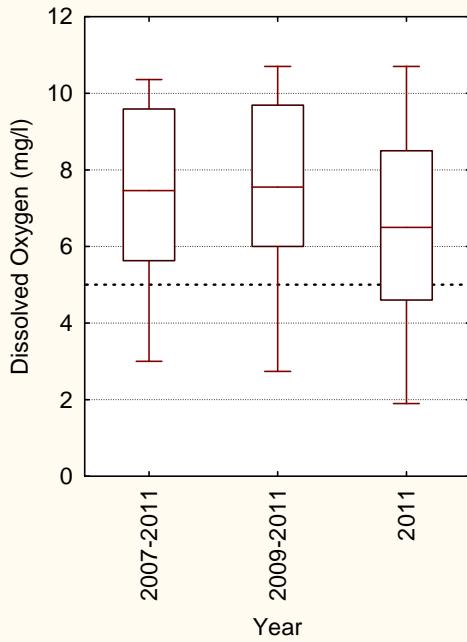
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	73.91	34.30	0.0	3.4	10.4	4.0	1.4	27.9	0.0	0.7	0.0	ND
Standard Error	4.43	2.06	0.0	0.9	1.2	0.5	0.6	4.6	0.0	0.3	0.0	ND
Median	71.00	35.00	0.0	0.0	10.5	3.0	0.0	21.0	0.0	0.0	0.0	ND
Mode	77.00	32.00	0.0	0.0	18.0	2.2	0.0	21.0	0.0	0.0	0.0	ND
Standard Deviation	21.26	9.90	0.1	4.1	5.3	2.4	2.2	22.0	0.1	1.3	0.0	ND
Sample Variance	452.08	98.04	0.0	17.1	28.5	5.6	5.0	482.9	0.0	1.8	0.0	ND
Kurtosis	0.14	0.38	23.0	-1.3	-1.2	-0.2	0.8	0.6	23.0	9.4	ND	ND
Skewness	0.25	-0.64	4.8	0.6	0.1	0.9	1.5	1.3	4.8	2.8	ND	ND
Range	88.00	39.00	0.7	11.0	15.7	8.3	6.4	70.7	0.3	5.8	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	2.3	1.3	0.0	6.3	0.0	0.0	0.0	0.0
Maximum	120.00	51.00	0.7	11.0	18.0	9.6	6.4	77.0	0.3	5.8	0.0	0.0
Count	23	23	23	23	20	23	16	23	23	23	23	0
Confidence Level(95.0%)	9.19	4.28	0.1	1.8	2.5	1.0	1.2	9.5	0.0	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	326	219	37.0	57.7	68.7	51.0	19.6	18.2
Standard Error	19	12	17.1	22.7	6.9	4.4	5.8	5.6
Median	340	230	7.4	18.0	58.0	50.5	7.1	5.8
Mode	340	230	0.0	ND	58.0	54.0	5.3	5.2
Standard Deviation	89	57	82.2	108.7	32.9	20.5	27.1	26.4
Sample Variance	7916	3247	6751.3	11823.7	1081.1	422.2	736.9	699.4
Kurtosis	0	2	7.7	8.4	0.7	11.0	3.9	3.7
Skewness	0	-1	2.9	3.0	1.2	2.6	2.2	2.2
Range	380	266	310.0	440.0	118.0	114.0	94.1	90.0
Minimum	130	54	0.0	0.0	22.0	16.0	2.9	2.0
Maximum	510	320	310.0	440.0	140.0	130.0	97.0	92.0
Count	23	23	23	23	23	22	22	22
Confidence Level(95.0%)	38	25	35.5	47.0	14.2	9.1	12.0	11.7

ND = No Data

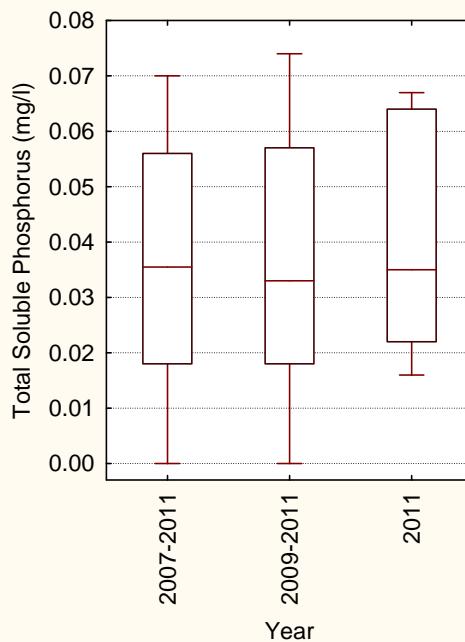
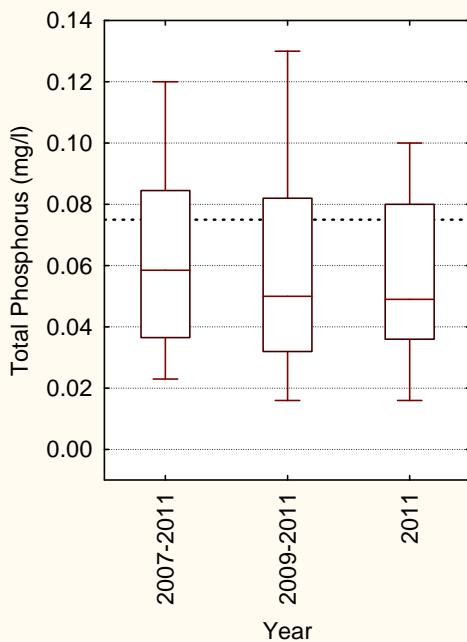
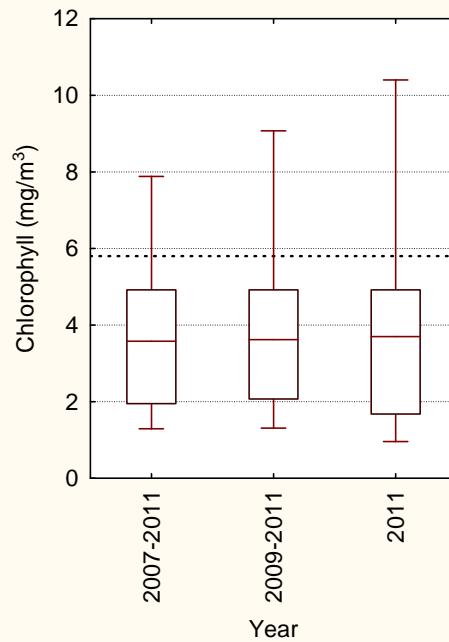
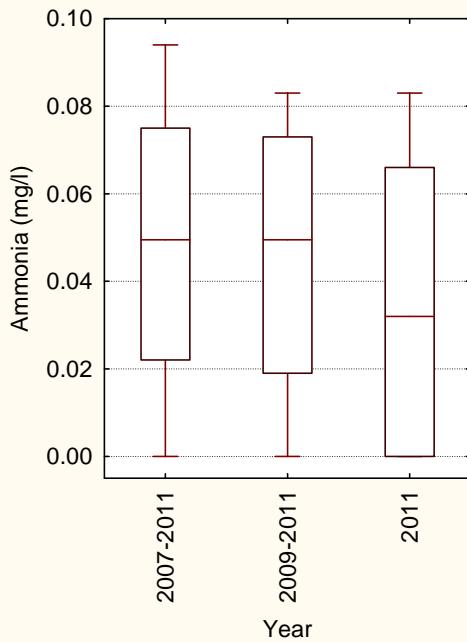
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Menomonee River at Hwy 145 N. of Freistadt Rd., Site RI-36



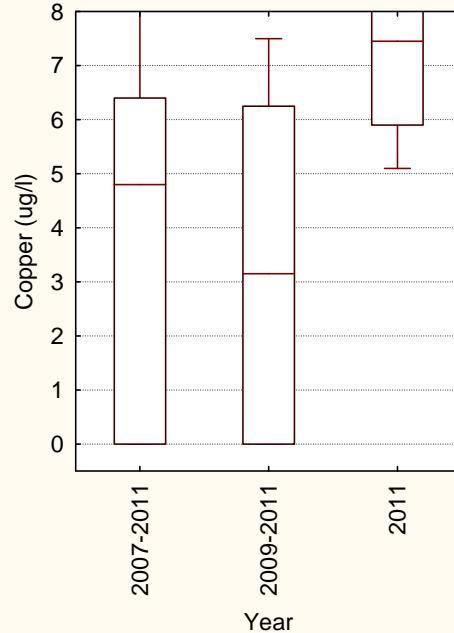
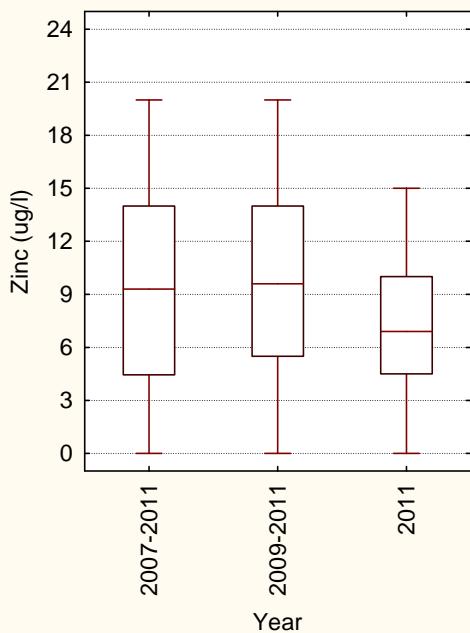
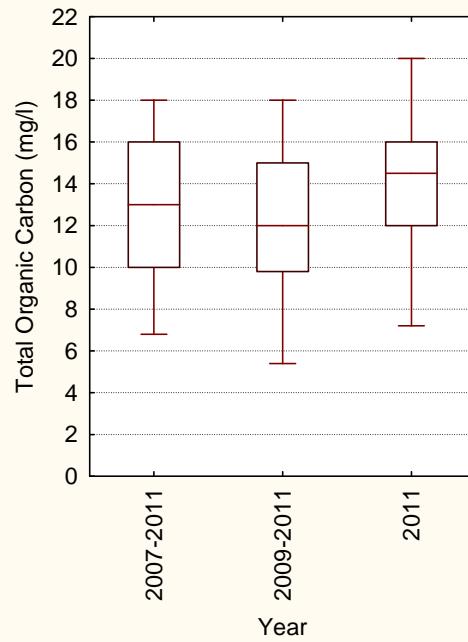
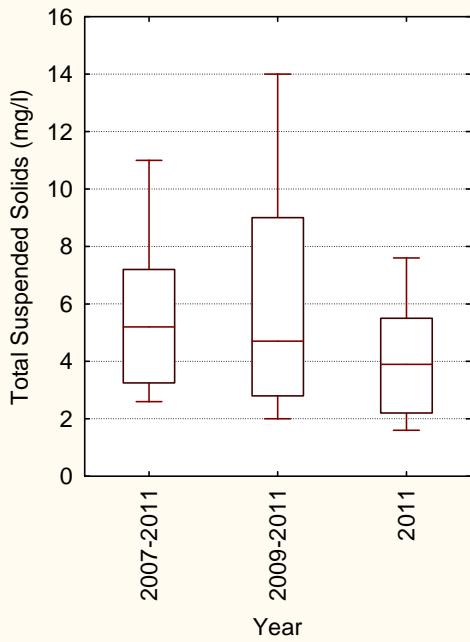
— Median □ 25%-75% ■ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at Hwy 145 N. of Freistadt Rd., Site RI-36



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at Hwy 145 N. of Freistadt Rd., Site RI-36



— Median □ 25%-75% █ 10%-90%

HWY 145, NORTH OF FREISTADT ROAD - SITE 36
 MENOMONEE RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.2	11.1	6.4	4.42	1.23	0.027	1.25	0.036	0.82	0.064	0.045	ND
Standard Error	0.1	1.5	0.7	0.97	0.09	0.006	0.10	0.009	0.07	0.011	0.009	ND
Median	7.3	11.3	6.5	3.70	1.20	0.014	1.20	0.032	0.72	0.049	0.035	ND
Mode	7.3	ND	ND	ND	1.40	0.012	1.30	0.000	1.10	ND	0.026	ND
Standard Deviation	0.5	6.4	2.9	4.23	0.41	0.028	0.41	0.038	0.31	0.050	0.037	ND
Sample Variance	0.3	40.8	8.4	17.86	0.17	0.001	0.17	0.001	0.10	0.002	0.001	ND
Kurtosis	5.2	-1.0	-0.7	6.30	-0.31	6.653	-0.48	-1.203	0.60	8.755	9.877	ND
Skewness	-2.2	-0.2	-0.3	2.34	0.53	2.249	0.46	0.442	1.14	2.569	2.814	ND
Range	2.2	20.8	9.8	17.46	1.48	0.120	1.47	0.110	1.10	0.232	0.172	0.00
Minimum	5.5	0.3	1.0	0.94	0.52	0.000	0.53	0.000	0.50	0.008	0.008	0.00
Maximum	7.7	21.1	10.8	18.40	2.00	0.120	2.00	0.110	1.60	0.240	0.180	0.00
Count	19	19	19	19	19	19	19	18	18	19	19	0
Confidence Level(95.0%)	0.3	3.1	1.4	2.04	0.20	0.013	0.20	0.019	0.16	0.024	0.018	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	460.0	455.9	1.4	4.1	4.1	734	44.2	2666	2.1	644
Standard Error	ND	ND	18.9	19.0	0.3	0.5	0.7	29	2.6	2409	0.2	393
Median	ND	ND	470.0	466.4	1.3	3.9	3.7	765	41.0	110	2.0	100
Mode	ND	ND	450.0	ND	0.0	2.2	ND	791	41.0	ND	ND	36
Standard Deviation	ND	ND	82.3	82.7	1.1	2.1	3.2	125	11.5	10502	1.0	1715
Sample Variance	ND	ND	6777.8	6836.9	1.2	4.5	9.9	15530	132.0	110287353	0.9	2941535
Kurtosis	ND	ND	1.9	2.1	0.6	0.6	5.7	5	0.2	19	2.3	16
Skewness	ND	ND	-1.4	-1.5	0.6	0.9	2.3	-2	-0.3	4	0.6	4
Range	0.0	0.0	300.0	307.1	4.1	7.8	12.7	545	45.0	46000	4.7	7487
Minimum	0.0	0.0	250.0	240.7	0.0	1.5	1.6	342	20.0	0	0.0	13
Maximum	0.0	0.0	550.0	547.8	4.1	9.3	14.2	887	65.0	46000	4.7	7500
Count	0	0	19	19	19	19	19	19	19	19	19	19
Confidence Level(95.0%)	ND	ND	39.7	39.9	0.5	1.0	1.5	60	5.5	5062	0.5	827

ND = No Data

Provisional MMSD Water Quality Data

HWY 145, NORTH OF FREISTADT ROAD - SITE 36
 MENOMONEE RIVER
 WATER QUALITY DATA - 2011

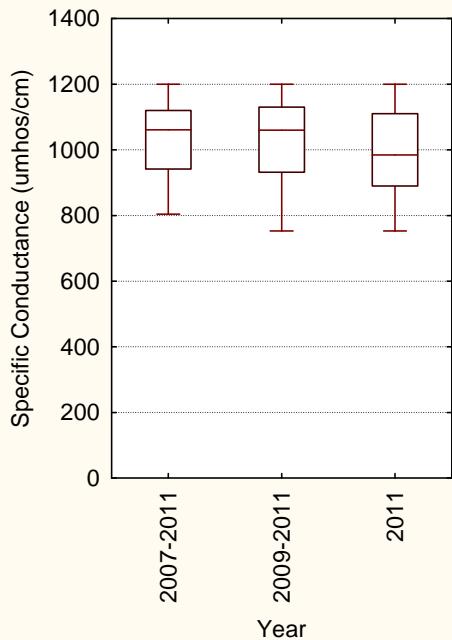
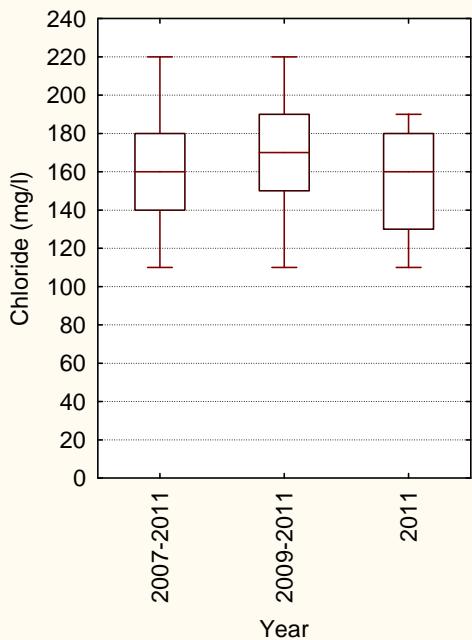
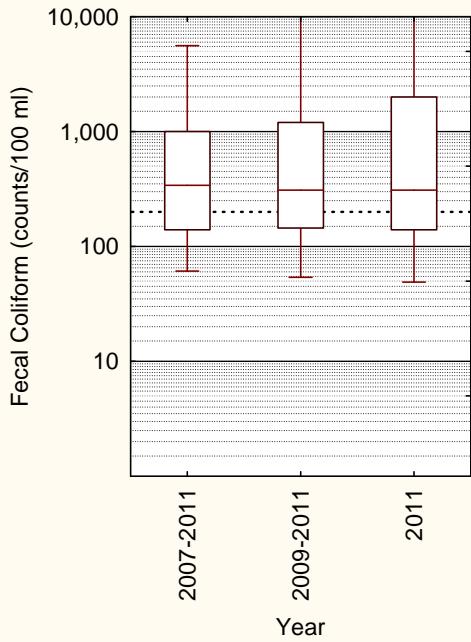
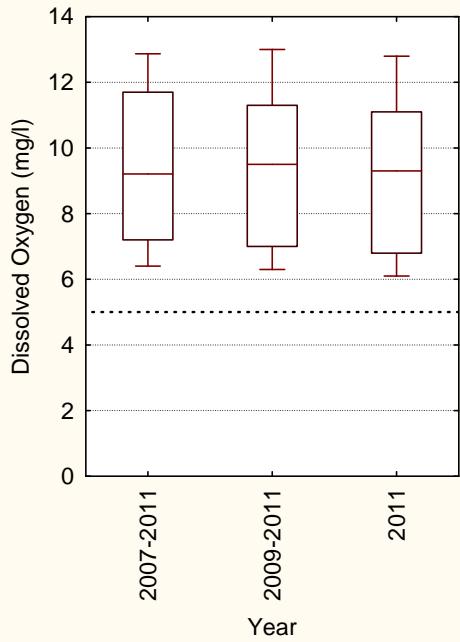
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	76.63	37.05	0.1	1.7	7.0	1.8	1.9	7.2	0.0	1.3	0.0	ND
Standard Error	3.57	2.07	0.1	0.7	0.5	0.2	0.6	1.0	0.0	0.2	0.0	ND
Median	79.00	38.00	0.0	0.0	7.5	2.1	0.9	6.9	0.0	1.3	0.0	ND
Mode	79.00	44.00	0.0	0.0	7.5	0.0	0.0	15.0	0.0	0.0	0.0	ND
Standard Deviation	15.55	9.01	0.2	3.0	1.7	1.0	2.2	4.2	0.1	1.1	0.0	ND
Sample Variance	241.91	81.16	0.1	8.7	2.9	1.0	4.8	17.7	0.0	1.1	0.0	ND
Kurtosis	3.60	1.44	19.0	-0.4	1.2	0.2	-1.9	-0.1	19.0	-1.4	ND	ND
Skewness	-1.65	-1.12	4.4	1.2	-0.7	-0.5	0.4	0.2	4.4	0.1	ND	ND
Range	67.00	36.00	1.0	7.9	7.0	3.7	5.0	15.0	0.4	3.0	0.0	0.0
Minimum	31.00	14.00	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	98.00	50.00	1.0	7.9	10.0	3.7	5.0	15.0	0.4	3.0	0.0	0.0
Count	19	19	19	19	14	19	12	19	19	18	19	0
Confidence Level(95.0%)	7.50	4.34	0.1	1.4	1.0	0.5	1.4	2.0	0.0	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	345	277	0.3	9.1	81.9	68.1	13.9	13.1
Standard Error	17	15	0.2	2.1	6.0	6.0	1.0	0.9
Median	350	290	0.0	7.2	80.0	67.5	14.5	13.0
Mode	350	290	0.0	13.0	79.0	69.0	16.0	12.0
Standard Deviation	75	64	1.0	9.3	26.1	25.4	4.1	3.9
Sample Variance	5571	4101	0.9	86.9	681.4	645.8	16.9	14.9
Kurtosis	3	3	9.5	8.7	7.3	6.3	0.0	-0.1
Skewness	-1	-2	3.1	2.6	2.0	1.8	-0.1	0.0
Range	310	260	3.7	42.0	131.0	124.0	15.0	13.4
Minimum	140	90	0.0	0.0	39.0	26.0	7.0	6.6
Maximum	450	350	3.7	42.0	170.0	150.0	22.0	20.0
Count	19	19	19	19	19	18	18	18
Confidence Level(95.0%)	36	31	0.5	4.5	12.6	12.6	2.0	1.9

ND = No Data

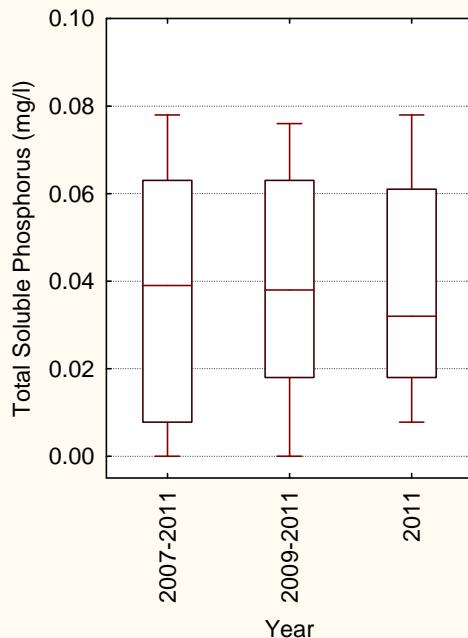
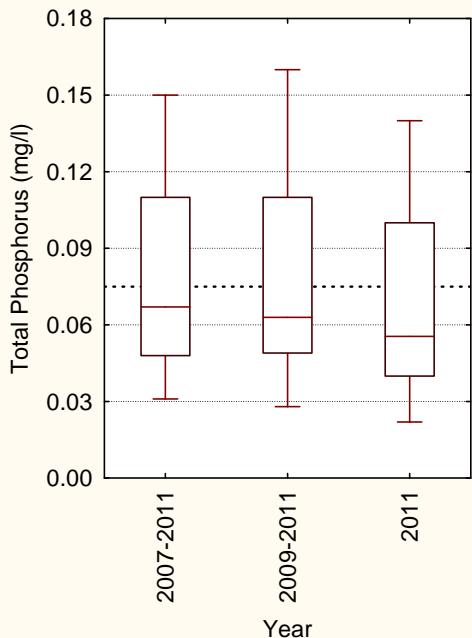
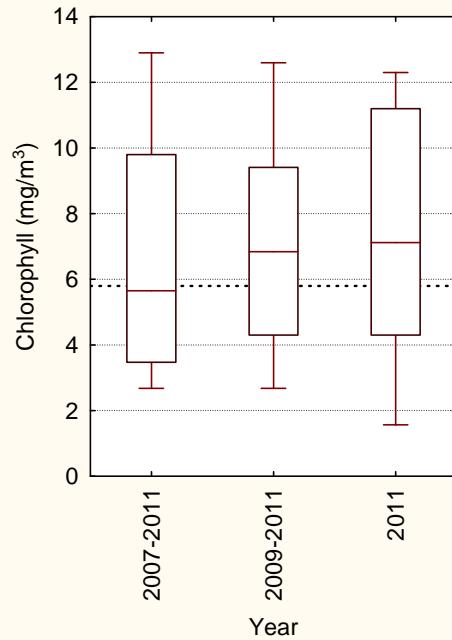
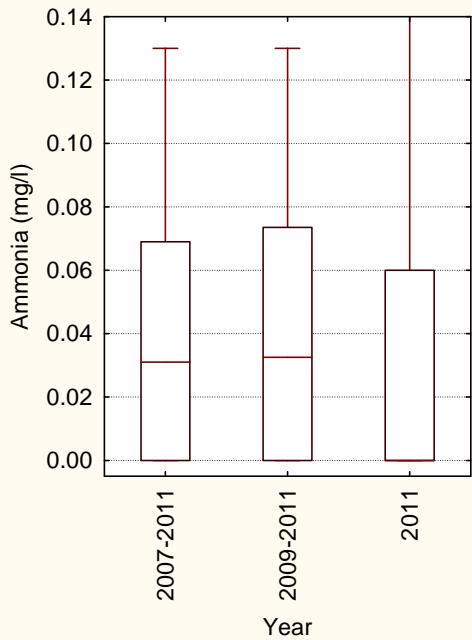
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Menomonee River at Good Hope Rd., Site RI-37



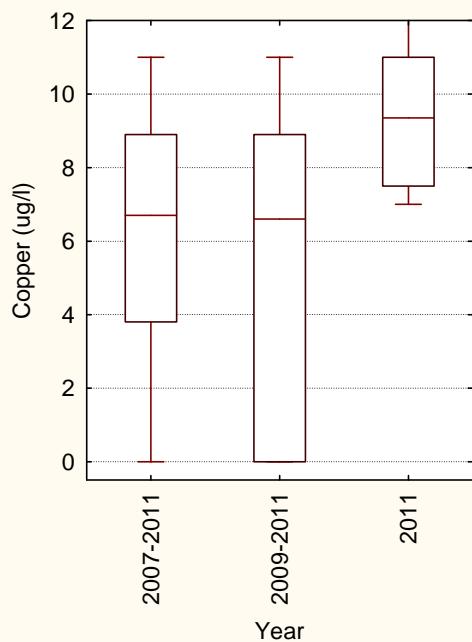
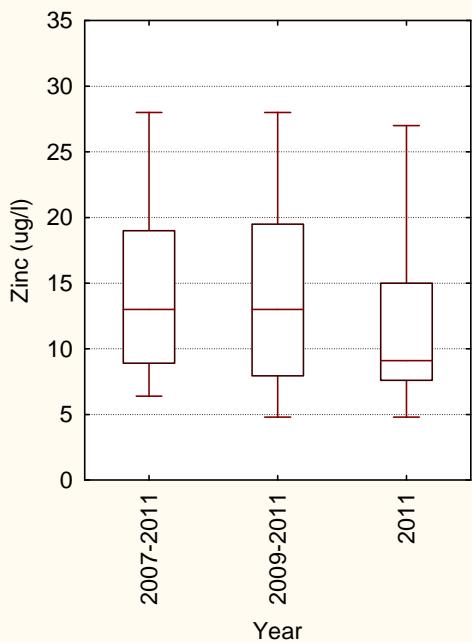
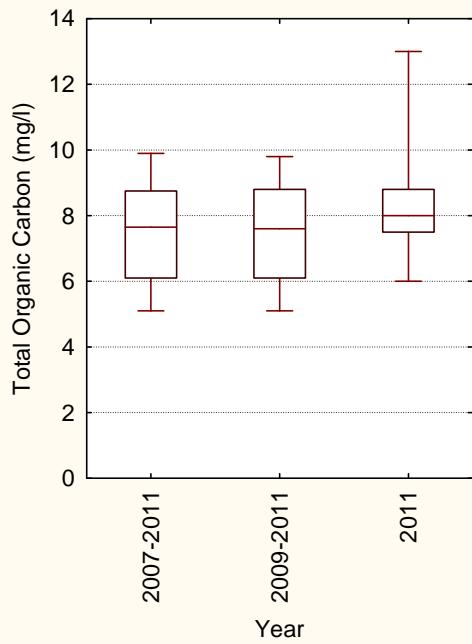
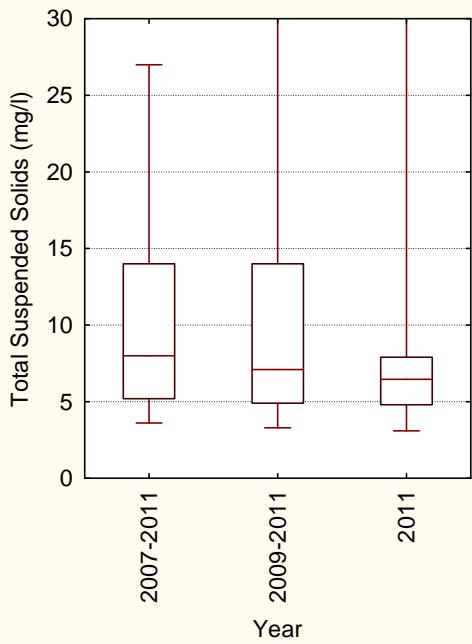
— Median □ 25%-75% ■ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at Good Hope Rd., Site RI-37



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Menomonee River at Good Hope Rd., Site RI-37



— Median □ 25%-75% □ 10%-90%

GOOD HOPE ROAD, EAST OF 124TH STREET - SITE 37
 MENOMONEE RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	13.6	9.1	7.10	0.60	0.018	0.61	0.048	0.63	0.075	0.042	ND
Standard Error	0.1	1.6	0.6	0.89	0.08	0.003	0.08	0.021	0.06	0.013	0.007	ND
Median	7.8	13.2	9.3	7.12	0.56	0.013	0.59	0.000	0.57	0.056	0.032	ND
Mode	7.8	ND	9.5	6.84	0.58	0.011	0.60	0.000	0.48	0.140	0.018	ND
Standard Deviation	0.2	6.8	2.5	3.76	0.35	0.014	0.35	0.085	0.27	0.054	0.030	ND
Sample Variance	0.0	46.7	6.2	14.13	0.12	0.000	0.12	0.007	0.07	0.003	0.001	ND
Kurtosis	-0.5	-1.2	-1.3	-1.18	1.60	-0.019	1.43	4.543	1.53	2.835	-0.114	ND
Skewness	-0.1	-0.2	0.2	0.08	0.98	0.952	0.86	2.209	-0.23	1.562	0.679	ND
Range	0.8	20.8	7.7	11.56	1.46	0.049	1.46	0.300	1.20	0.214	0.110	0.00
Minimum	7.4	2.3	5.3	1.34	0.04	0.000	0.04	0.000	0.00	0.016	0.000	0.00
Maximum	8.2	23.1	13.0	12.90	1.50	0.049	1.50	0.300	1.20	0.230	0.110	0.00
Count	18	18	18	18	18	18	18	17	17	18	18	0
Confidence Level(95.0%)	0.1	3.4	1.2	1.87	0.18	0.007	0.18	0.044	0.14	0.027	0.015	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	587.8	574.9	3.1	12.8	11.2	1001	158.8	6980	2.8	3486
Standard Error	ND	ND	25.6	26.9	0.7	3.6	2.9	52	11.2	3724	0.2	1798
Median	ND	ND	580.0	573.7	2.1	6.5	5.4	985	160.0	310	2.5	330
Mode	ND	ND	640.0	ND	0.0	7.8	ND	ND	180.0	1000	3.0	120
Standard Deviation	ND	ND	108.7	114.3	3.0	15.1	12.2	219	47.6	15354	1.0	7627
Sample Variance	ND	ND	11806.5	13055.8	9.2	228.4	149.6	47840	2266.9	235743880	1.0	58176368
Kurtosis	ND	ND	2.8	2.2	0.7	2.4	1.7	3	4.2	6	-0.4	6
Skewness	ND	ND	-0.4	-0.3	1.3	1.9	1.7	0	1.2	3	0.7	3
Range	0.0	0.0	530.0	543.0	10.0	48.3	38.5	1073	232.0	54958	3.1	26960
Minimum	0.0	0.0	310.0	290.0	0.0	2.7	3.3	507	68.0	42	1.6	40
Maximum	0.0	0.0	840.0	833.0	10.0	51.0	41.8	1580	300.0	55000	4.7	27000
Count	0	0	18	18	18	18	18	18	18	17	17	18
Confidence Level(95.0%)	ND	ND	54.0	56.8	1.5	7.5	6.1	109	23.7	7894	0.5	3793

ND = No Data

Provisional MMSD Water Quality Data

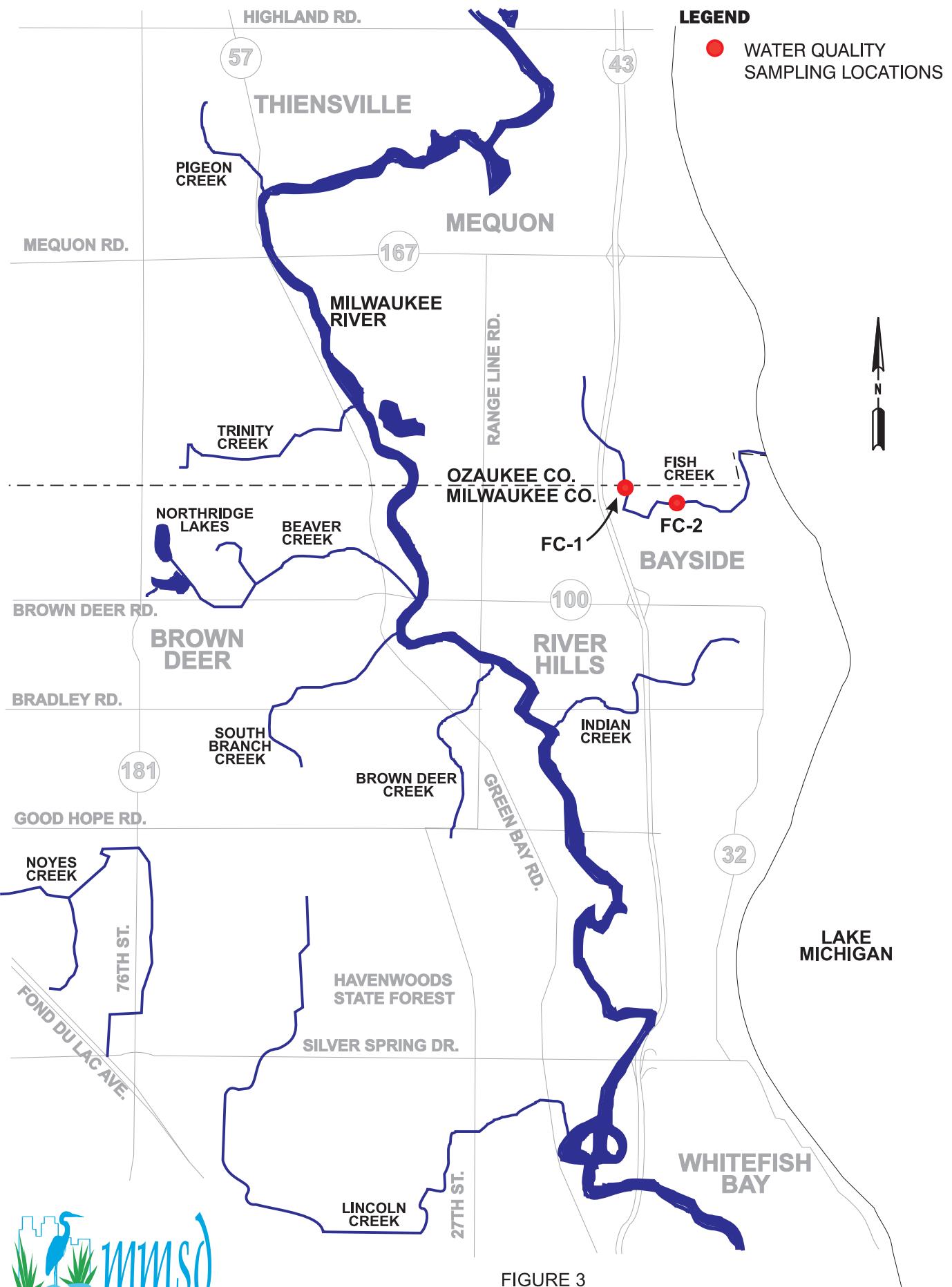
GOOD HOPE ROAD, EAST OF 124TH STREET - SITE 37
 MENOMONEE RIVER
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	69.33	33.22	0.0	1.5	9.5	2.1	3.2	12.0	0.0	1.2	0.0	ND
Standard Error	3.52	1.84	0.0	0.7	0.6	0.3	0.7	1.8	0.0	0.2	0.0	ND
Median	71.00	35.50	0.0	0.0	9.4	2.1	2.9	9.1	0.0	1.0	0.0	ND
Mode	56.00	38.00	0.0	0.0	7.5	0.0	0.0	13.0	0.0	0.0	0.0	ND
Standard Deviation	14.94	7.79	0.0	3.0	2.2	1.1	2.6	7.5	0.1	0.8	0.0	ND
Sample Variance	223.29	60.65	0.0	8.8	4.7	1.2	6.8	56.2	0.0	0.7	0.0	ND
Kurtosis	0.38	0.59	ND	0.4	-0.1	0.2	-1.6	0.5	7.0	-0.7	ND	ND
Skewness	-0.75	-0.95	ND	1.5	0.7	-0.3	0.0	0.9	2.8	0.1	ND	ND
Range	59.00	29.00	0.0	7.8	7.3	3.9	7.2	28.0	0.4	2.6	0.0	0.0
Minimum	33.00	14.00	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	92.00	43.00	0.0	7.8	14.0	3.9	7.2	28.0	0.4	2.6	0.0	0.0
Count	18	18	18	18	14	18	15	17	18	17	18	0
Confidence Level(95.0%)	7.43	3.87	0.0	1.5	1.3	0.5	1.4	3.9	0.1	0.4	0.0	ND

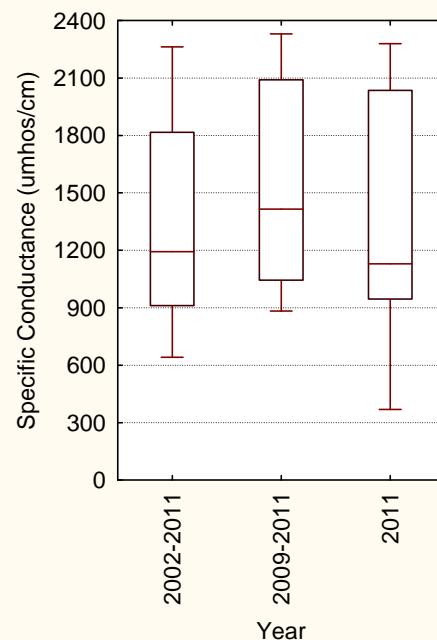
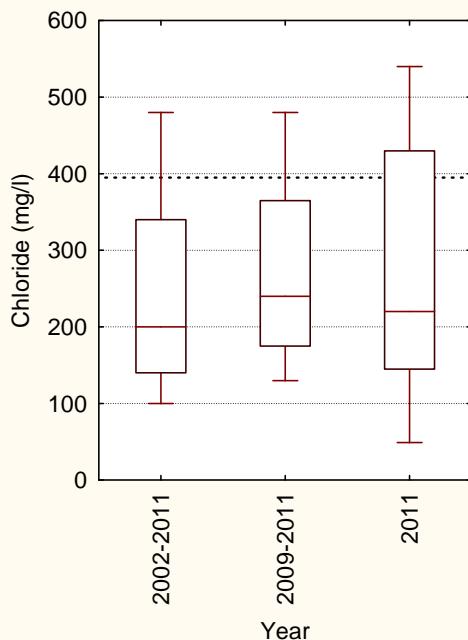
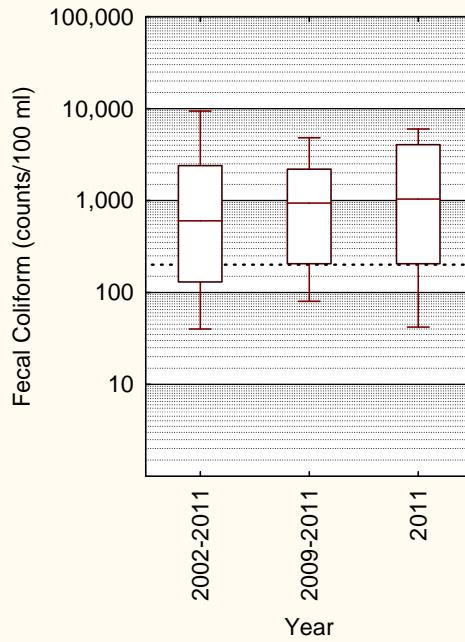
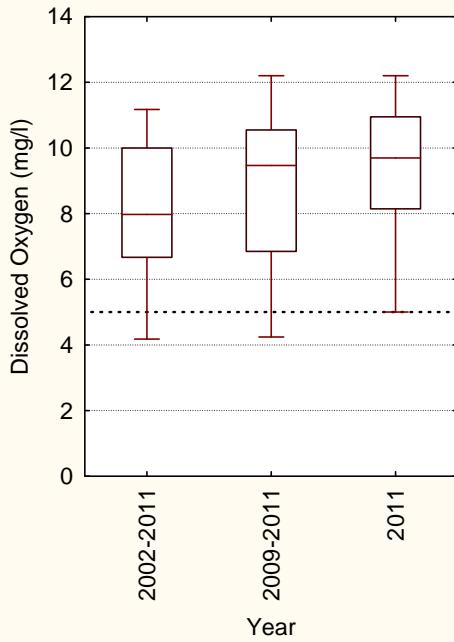
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	310	229	1.5	9.0	66.2	58.9	8.6	8.2
Standard Error	16	12	0.7	1.7	5.5	5.6	0.6	0.6
Median	335	245	0.0	7.6	65.0	58.0	8.0	8.0
Mode	340	260	0.0	15.0	66.0	59.0	8.8	8.0
Standard Deviation	68	51	2.8	7.3	23.4	23.3	2.4	2.4
Sample Variance	4671	2552	7.7	53.9	549.1	542.0	5.8	5.6
Kurtosis	1	1	4.9	2.1	10.5	10.1	1.0	1.3
Skewness	-1	-1	2.2	1.4	2.8	2.7	1.0	1.0
Range	250	190	10.0	29.0	115.0	112.0	9.4	9.8
Minimum	140	100	0.0	0.0	35.0	28.0	4.6	4.2
Maximum	390	290	10.0	29.0	150.0	140.0	14.0	14.0
Count	18	18	18	18	18	17	17	17
Confidence Level(95.0%)	34	25	1.4	3.7	11.7	12.0	1.2	1.2

ND = No Data

Provisional MMSD Water Quality Data

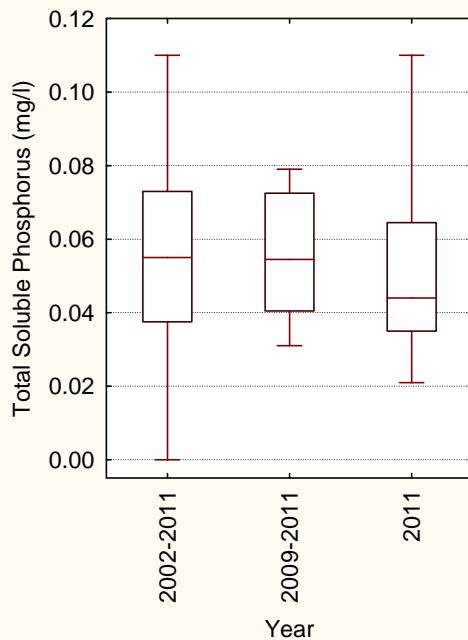
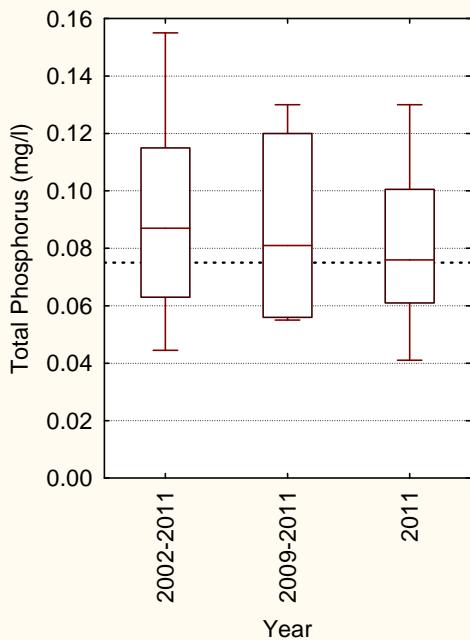
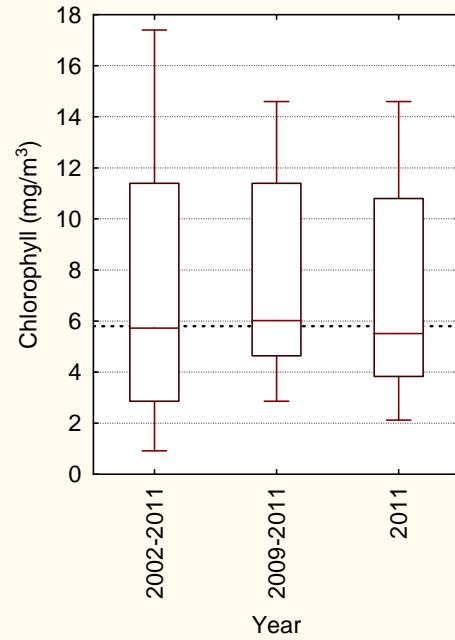
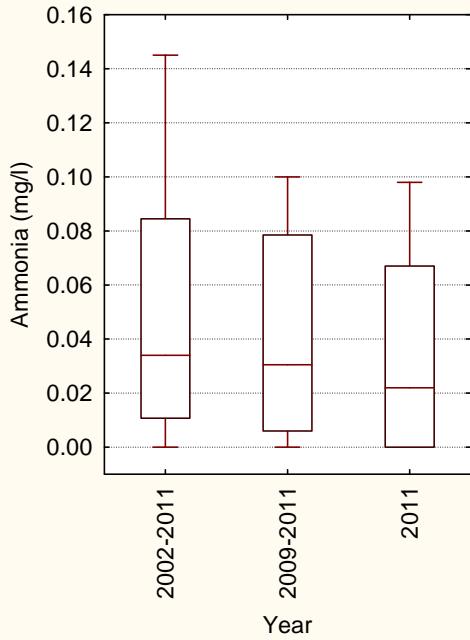


MMSD Water Quality Monitoring Program Data
Fish Creek at Port Washington Rd. and Katherine Ln., Site FC-01



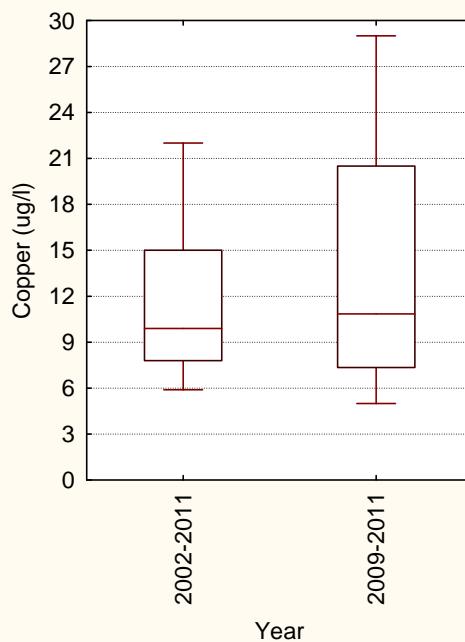
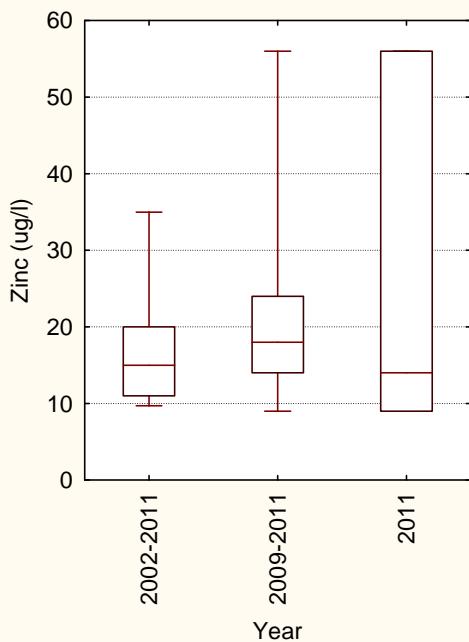
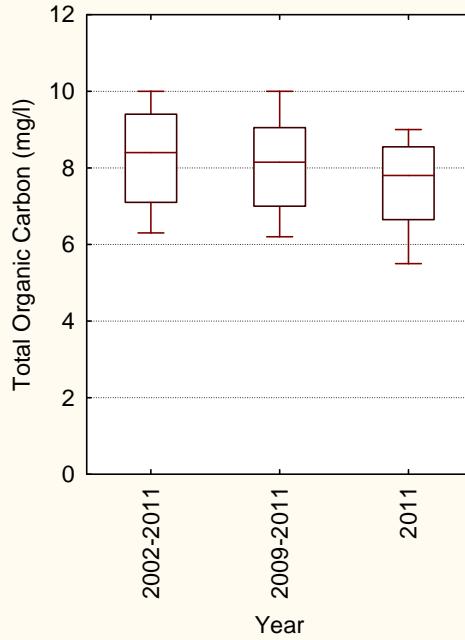
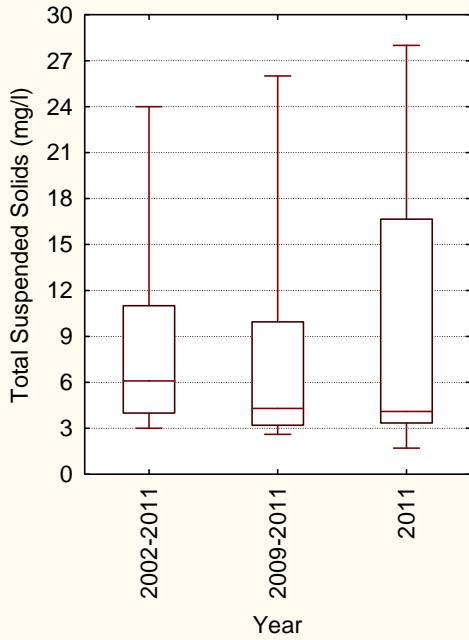
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Fish Creek at Port Washington Rd. and Katherine Ln., Site FC-01



— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Fish Creek at Port Washington Rd. and Katherine Ln., Site FC-01



— Median □ 25%-75% ━ 10%-90%

PORT WASHINGTON ROAD AND KATHERINE LANE - SITE 1
 FISH CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	13.3	9.4	7.13	0.44	0.012	0.45	0.035	0.83	0.081	0.052	ND
Standard Error	0.1	1.9	0.8	1.57	0.10	0.002	0.10	0.014	0.10	0.011	0.010	ND
Median	7.8	14.1	9.7	5.51	0.34	0.013	0.36	0.022	0.73	0.076	0.044	ND
Mode	7.8	ND	ND	ND	ND	0.014	ND	0.000	0.65	0.081	ND	ND
Standard Deviation	0.4	5.3	2.3	4.44	0.29	0.007	0.29	0.038	0.29	0.030	0.028	ND
Sample Variance	0.1	28.2	5.5	19.74	0.08	0.000	0.08	0.001	0.08	0.001	0.001	ND
Kurtosis	-0.5	-1.1	0.5	-0.87	0.51	0.900	0.34	-1.202	-0.72	-0.413	1.910	ND
Skewness	-0.5	-0.5	-0.9	0.67	1.07	-0.394	1.02	0.653	0.88	0.663	1.353	ND
Range	1.1	14.7	7.2	12.48	0.84	0.023	0.84	0.098	0.75	0.089	0.089	0.00
Minimum	7.1	4.7	5.0	2.12	0.16	0.000	0.16	0.000	0.55	0.041	0.021	0.00
Maximum	8.2	19.4	12.2	14.60	1.00	0.023	1.00	0.098	1.30	0.130	0.110	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.4	2.0	3.71	0.24	0.006	0.24	0.032	0.24	0.025	0.024	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	791.3	781.5	3.4	9.7	9.3	1359	272.4	2079	2.9	2627
Standard Error	ND	ND	141.1	141.7	1.1	3.8	4.0	241	61.4	832	0.3	1117
Median	ND	ND	675.0	671.7	2.0	4.1	4.1	1130	220.0	1040	2.9	1420
Mode	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	399.0	400.9	3.0	10.8	11.3	682	173.7	2353	0.8	3160
Sample Variance	ND	ND	159183.9	160724.3	8.9	116.3	127.1	464776	30170.8	5536677	0.6	9988255
Kurtosis	ND	ND	-1.1	-1.0	0.5	-0.1	4.4	-1	-1.3	-1	-1.5	1
Skewness	ND	ND	0.3	0.3	1.4	1.4	2.1	0	0.4	1	-0.3	1
Range	0.0	0.0	1160.0	1182.0	7.7	26.3	32.4	1911	491.0	5958	2.2	8704
Minimum	0.0	0.0	240.0	214.0	1.3	1.7	2.5	369	49.0	42	1.6	96
Maximum	0.0	0.0	1400.0	1396.0	9.0	28.0	34.9	2280	540.0	6000	3.8	8800
Count	0	0	8	8	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	333.6	335.2	2.5	9.0	9.4	570	145.2	1967	0.7	2642

ND = No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD AND KATHERINE LANE - SITE 1
 FISH CREEK
 WATER QUALITY DATA - 2011

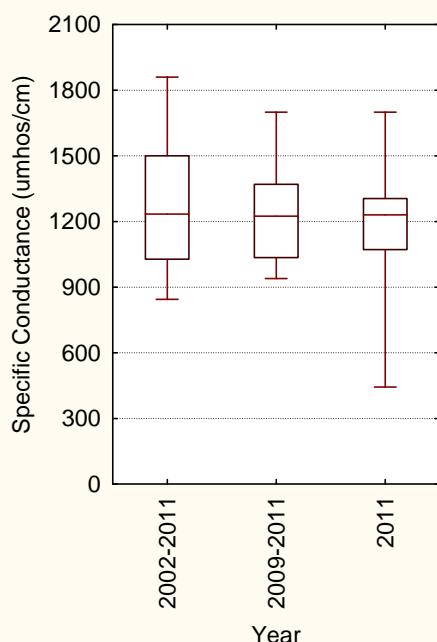
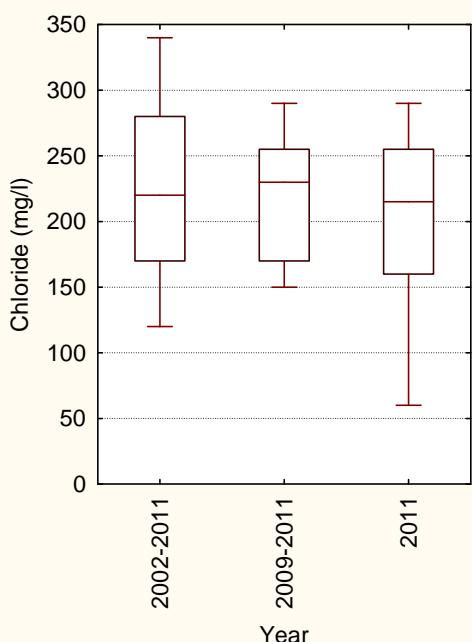
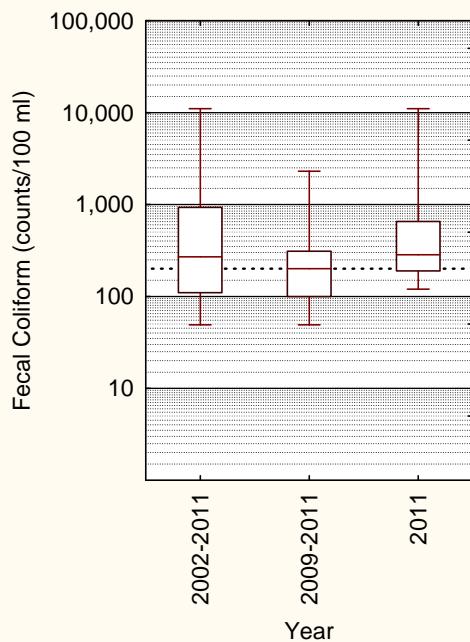
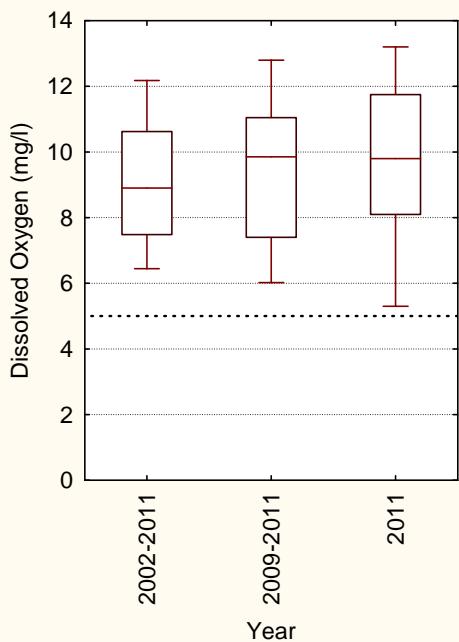
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	53.00	26.67	0.0	1.9	ND	3.7	6.0	26.3	0.3	1.3	0.0	ND
Standard Error	15.70	7.69	0.0	1.9	ND	1.1	1.5	14.9	0.3	0.7	0.0	ND
Median	60.00	30.00	0.0	0.0	ND	2.7	6.0	14.0	0.0	1.6	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	27.18	13.32	0.0	3.3	ND	2.0	2.1	25.8	0.5	1.2	0.0	ND
Sample Variance	739.00	177.33	0.0	10.8	ND	3.9	4.5	666.3	0.3	1.5	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	-1.08	-1.06	ND	1.7	ND	1.7	ND	1.7	1.7	-0.9	ND	ND
Range	53.00	26.00	0.0	5.7	0.0	3.5	3.0	47.0	0.9	2.4	0.0	0.0
Minimum	23.00	12.00	0.0	0.0	0.0	2.5	4.5	9.0	0.0	0.0	0.0	0.0
Maximum	76.00	38.00	0.0	5.7	0.0	6.0	7.5	56.0	0.9	2.4	0.0	0.0
Count	3	3	3	3	0	3	2	3	3	3	3	0
Confidence Level(95.0%)	67.53	33.08	0.0	8.2	ND	4.9	19.1	64.1	1.3	3.0	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	243	226	0.7	5.6	63.5	56.0	7.6	7.4
Standard Error	74	24	0.5	0.5	4.8	4.7	0.4	0.4
Median	280	250	0.0	5.0	67.5	59.5	7.8	7.6
Mode	ND	260	0.0	5.0	73.0	ND	ND	7.1
Standard Deviation	129	69	1.4	1.5	13.7	13.2	1.2	1.2
Sample Variance	16633	4710	2.1	2.2	186.6	174.9	1.5	1.4
Kurtosis	ND	2	2.5	1.9	1.4	1.0	-0.9	-0.4
Skewness	-1	-1	1.8	1.5	-1.4	-1.2	-0.6	-0.8
Range	250	215	3.8	4.5	40.0	39.0	3.5	3.3
Minimum	100	85	0.0	4.2	36.0	30.0	5.5	5.3
Maximum	350	300	3.8	8.7	76.0	69.0	9.0	8.6
Count	3	8	8	8	8	8	8	8
Confidence Level(95.0%)	320	57	1.2	1.3	11.4	11.1	1.0	1.0

ND = No Data

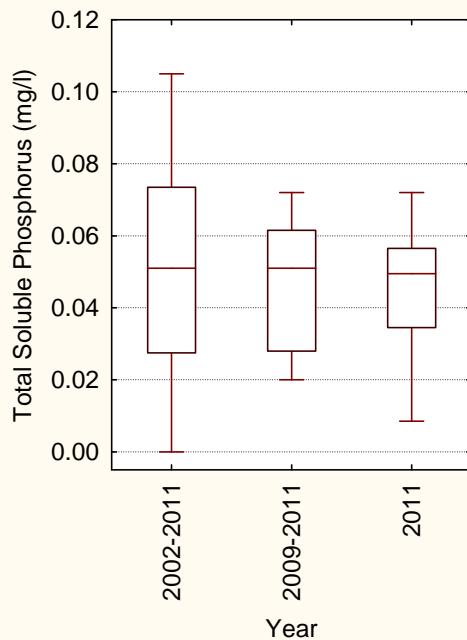
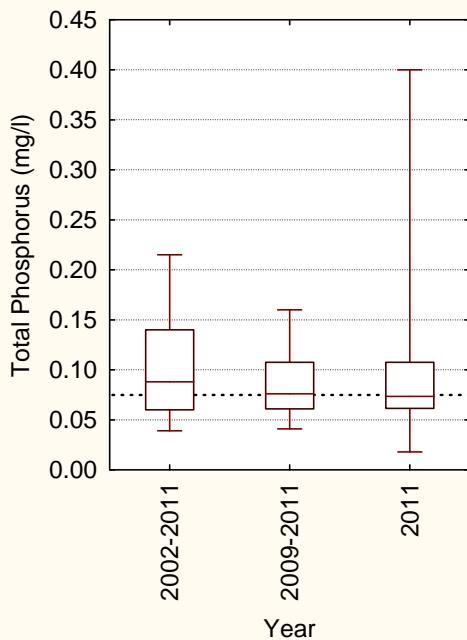
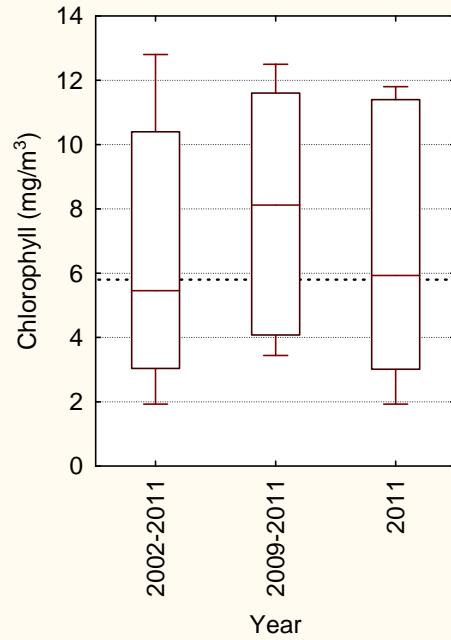
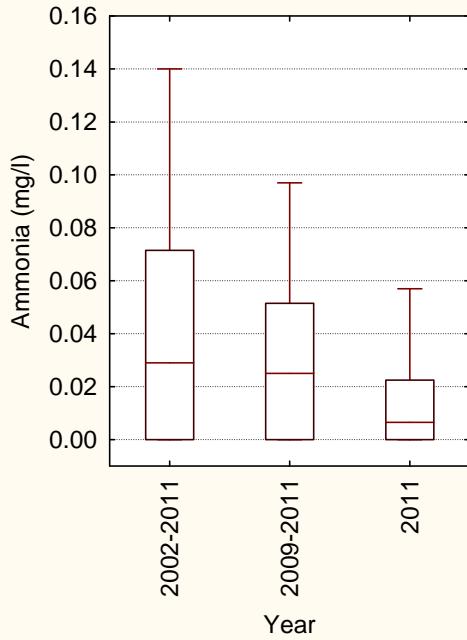
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Fish Creek at Ravine Baye Rd., Site FC-02



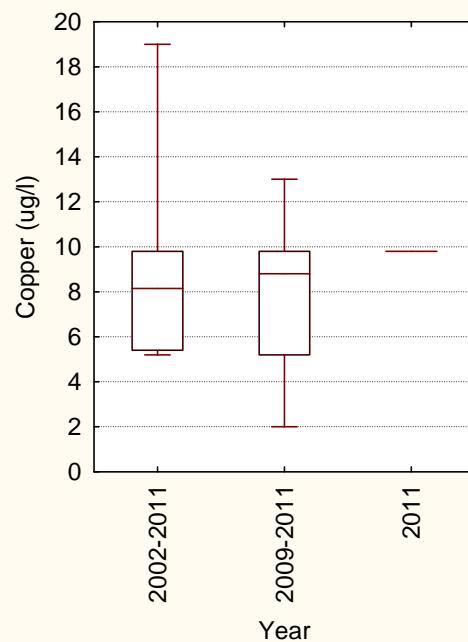
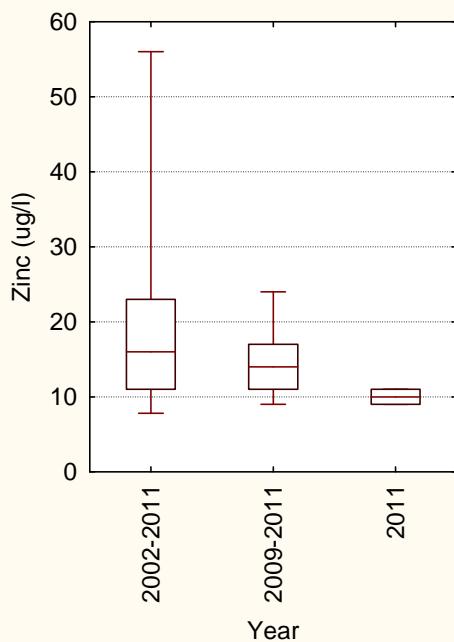
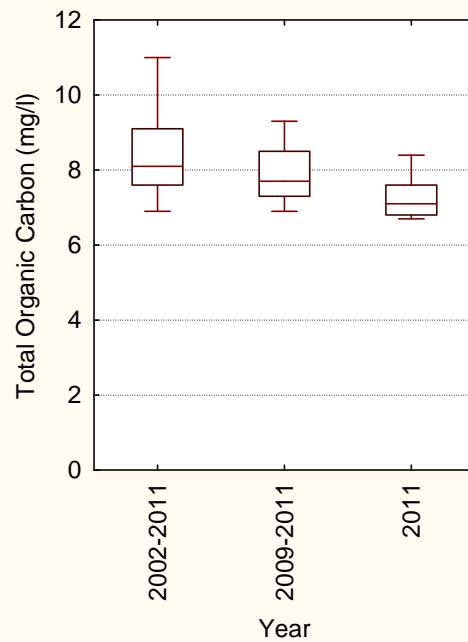
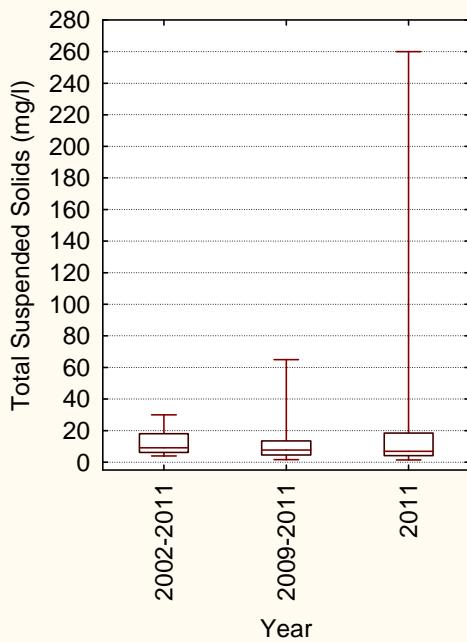
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Fish Creek at Ravine Baye Rd., Site FC-02



— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Fish Creek at Ravine Baye Rd., Site FC-02



— Median □ 25%-75% □ 10%-90%

RAVINE BAYE ROAD - SITE 2
FISH CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	12.8	9.7	6.80	0.35	0.017	0.36	0.014	0.90	0.113	0.045	ND
Standard Error	0.1	1.9	0.9	1.53	0.09	0.006	0.09	0.007	0.15	0.042	0.007	ND
Median	7.8	12.9	9.8	5.93	0.33	0.014	0.37	0.007	0.74	0.074	0.050	ND
Mode	8.2	ND	ND	ND	ND	ND	ND	0.000	0.66	0.067	ND	ND
Standard Deviation	0.3	5.4	2.6	4.33	0.26	0.016	0.26	0.020	0.41	0.120	0.020	ND
Sample Variance	0.1	29.6	6.7	18.75	0.07	0.000	0.07	0.000	0.17	0.014	0.000	ND
Kurtosis	-1.6	-1.1	-0.2	-2.34	2.81	3.713	2.57	2.660	3.29	6.453	0.602	ND
Skewness	0.1	-0.4	-0.4	0.15	1.48	1.713	1.37	1.605	1.76	2.459	-0.836	ND
Range	0.8	15.1	7.9	9.87	0.80	0.051	0.82	0.057	1.25	0.382	0.064	0.00
Minimum	7.4	4.0	5.3	1.93	0.10	0.000	0.10	0.000	0.55	0.018	0.009	0.00
Maximum	8.2	19.1	13.2	11.80	0.90	0.051	0.92	0.057	1.80	0.400	0.072	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.5	2.2	3.62	0.22	0.013	0.22	0.017	0.35	0.100	0.017	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	695.0	654.9	9.7	40.1	47.5	1170	201.3	1673	2.6	2741
Standard Error	ND	ND	46.6	69.5	7.5	31.5	32.6	127	26.4	1336	0.2	1675
Median	ND	ND	700.0	691.9	2.5	6.9	11.4	1230	215.0	285	2.5	235
Mode	ND	ND	ND	ND	ND	4.8	ND	ND	ND	190	2.3	ND
Standard Deviation	ND	ND	131.9	196.6	21.2	89.1	92.2	358	74.5	3779	0.6	4739
Sample Variance	ND	ND	17400.0	38642.3	448.8	7944.5	8500.4	128403	5555.4	14281079	0.4	22455039
Kurtosis	ND	ND	0.5	2.1	7.9	7.9	7.2	3	0.5	8	4.1	0
Skewness	ND	ND	0.3	-1.1	2.8	2.8	2.7	-1	-0.9	3	2.0	1
Range	0.0	0.0	410.0	666.4	62.0	258.5	268.1	1256	230.0	10880	2.0	10951
Minimum	0.0	0.0	520.0	260.0	0.0	1.5	3.9	444	60.0	120	2.1	49
Maximum	0.0	0.0	930.0	926.4	62.0	260.0	272.0	1700	290.0	11000	4.0	11000
Count	0	0	8	8	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	110.3	164.3	17.7	74.5	77.1	300	62.3	3159	0.5	3962

ND = No Data

Provisional MMSD Water Quality Data

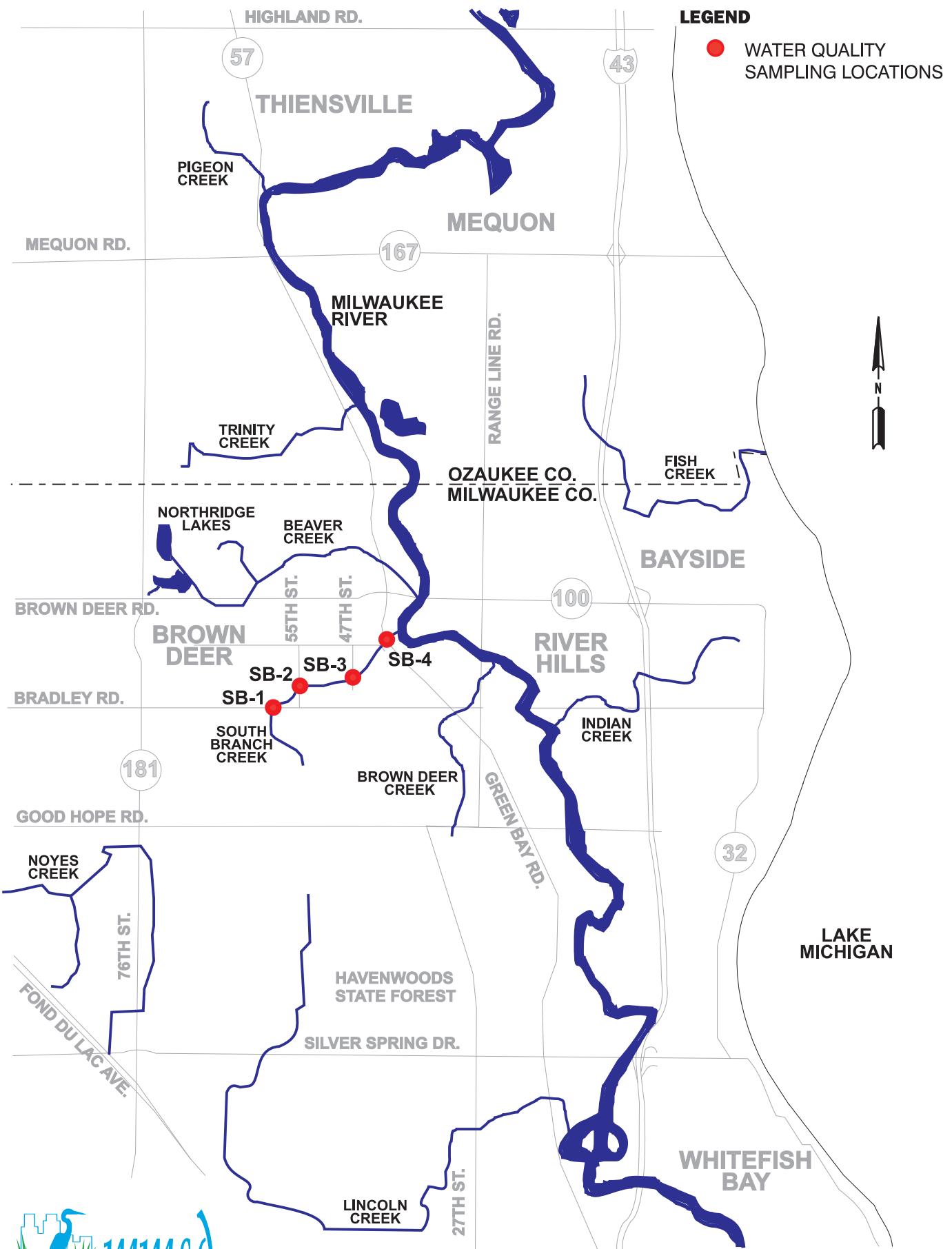
RAVINE BAYE ROAD - SITE 2
FISH CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	67.00	34.33	0.0	4.7	9.8	2.8	6.1	10.0	0.0	1.8	0.0	ND
Standard Error	9.07	4.63	0.0	4.7	0.0	0.7	0.0	1.0	0.0	0.1	0.0	ND
Median	70.00	35.00	0.0	0.0	9.8	2.8	6.1	10.0	0.0	1.8	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	15.72	8.02	0.0	8.1	ND	1.0	ND	1.4	0.0	0.1	0.0	ND
Sample Variance	247.00	64.33	0.0	65.3	ND	1.0	ND	2.0	0.0	0.0	0.0	ND
Kurtosis	ND											
Skewness	-0.83	-0.37	ND	1.7	ND	ND	ND	ND	ND	0.0	ND	ND
Range	31.00	16.00	0.0	14.0	0.0	1.4	0.0	2.0	0.0	0.2	0.0	0.0
Minimum	50.00	26.00	0.0	0.0	9.8	2.1	6.1	9.0	0.0	1.7	0.0	0.0
Maximum	81.00	42.00	0.0	14.0	9.8	3.5	6.1	11.0	0.0	1.9	0.0	0.0
Count	3	3	3	3	1	2	1	2	3	3	3	0
Confidence Level(95.0%)	39.04	19.92	0.0	20.1	ND	8.9	ND	12.7	0.0	0.2	0.0	ND

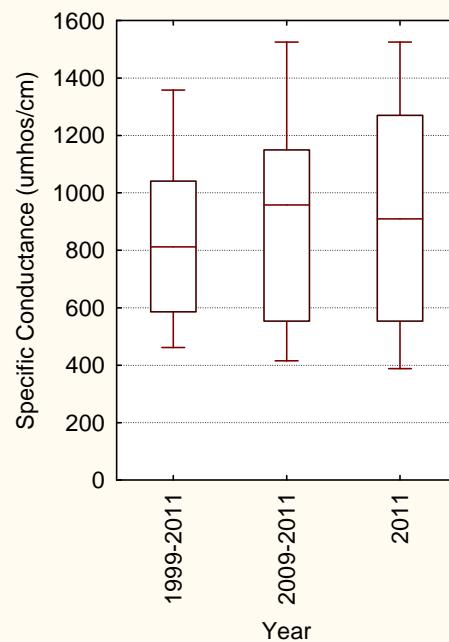
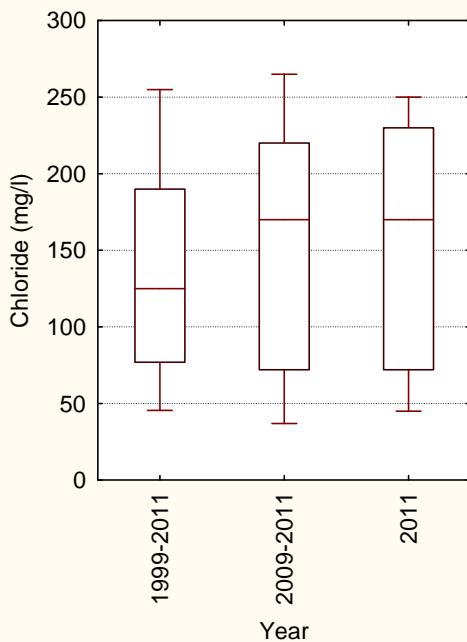
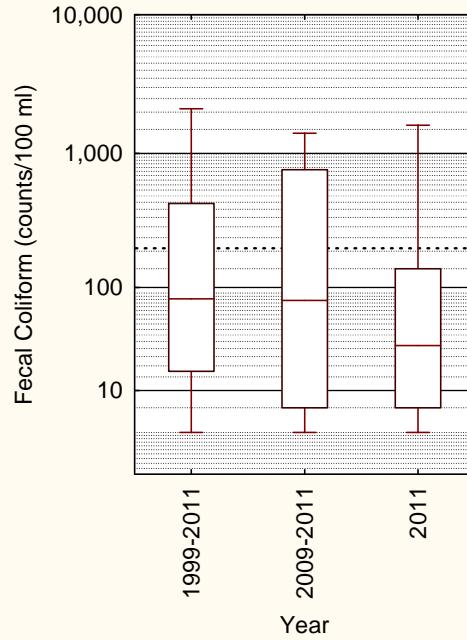
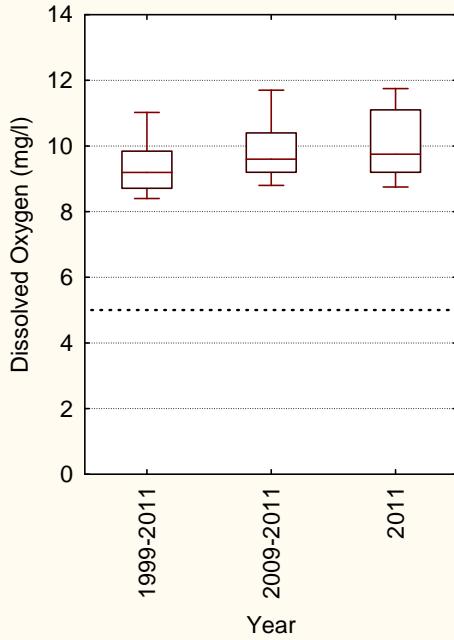
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	307	218	0.7	6.4	60.6	54.3	7.3	7.1
Standard Error	41	23	0.7	1.0	5.4	6.0	0.2	0.2
Median	320	230	0.0	5.5	62.0	54.0	7.1	7.1
Mode	ND	280	0.0	5.5	ND	54.0	ND	6.4
Standard Deviation	71	65	2.1	2.8	15.2	15.9	0.6	0.7
Sample Variance	5033	4199	4.4	7.9	230.0	252.9	0.3	0.5
Kurtosis	ND	1	8.0	5.9	1.6	2.3	1.9	-0.9
Skewness	-1	-1	2.8	2.4	-1.2	-1.4	1.4	0.5
Range	140	187	5.9	8.5	47.0	47.0	1.7	1.9
Minimum	230	93	0.0	4.5	30.0	23.0	6.7	6.4
Maximum	370	280	5.9	13.0	77.0	70.0	8.4	8.3
Count	3	8	8	8	8	7	7	8
Confidence Level(95.0%)	176	54	1.7	2.4	12.7	14.7	0.5	0.6

ND = No Data

Provisional MMSD Water Quality Data

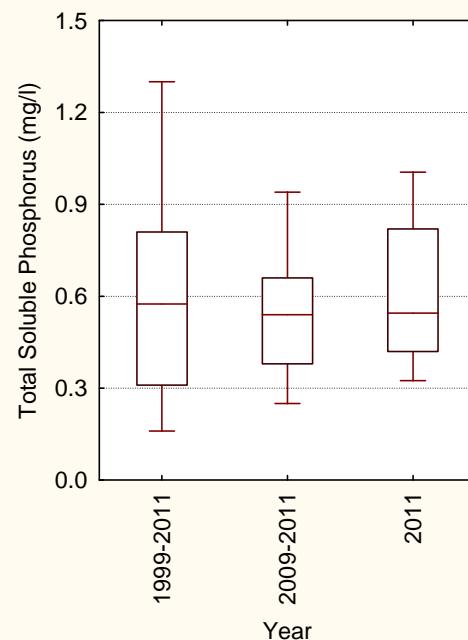
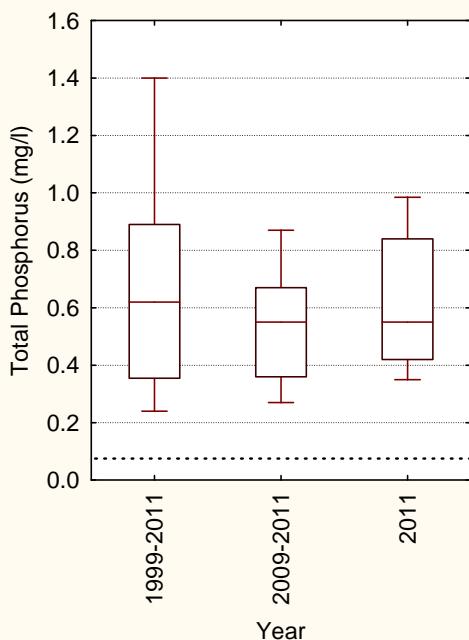
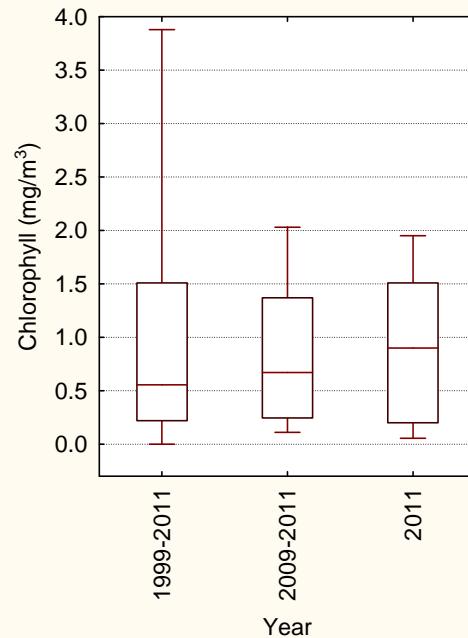
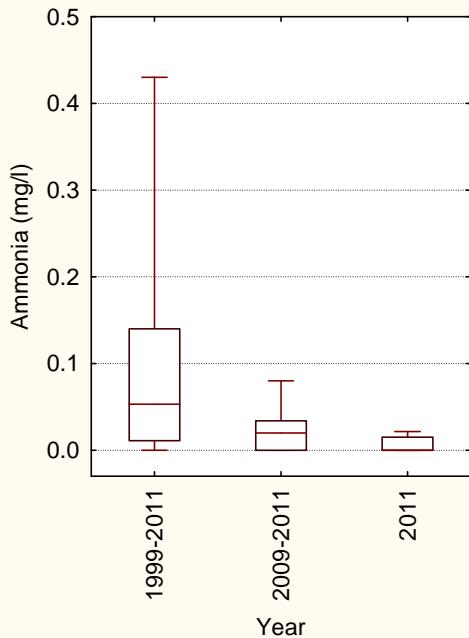


MMSD Water Quality Monitoring Program Data
Southbranch Creek at Bradley Rd., Site SB-01



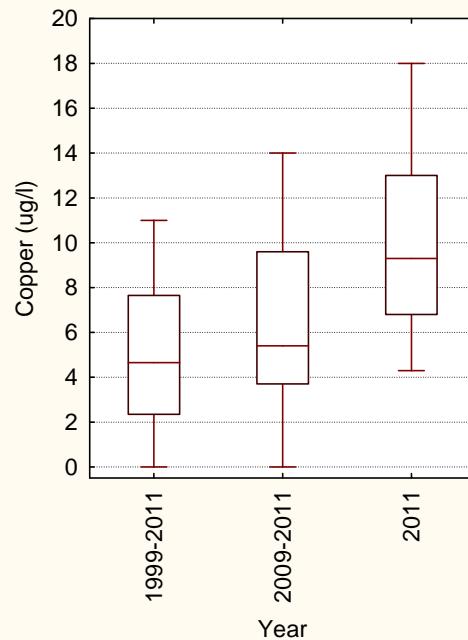
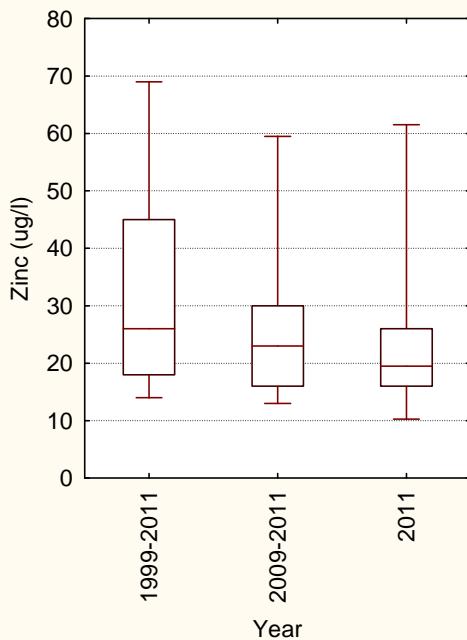
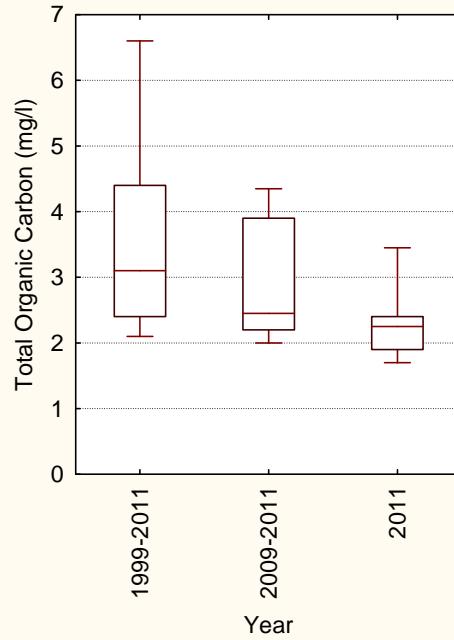
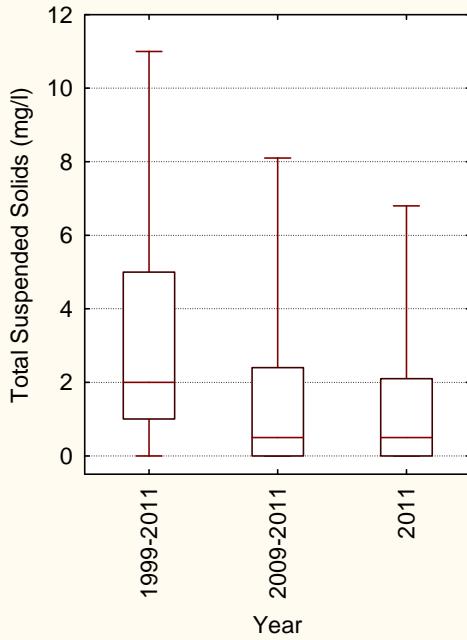
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Southbranch Creek at Bradley Rd., Site SB-01



— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Southbranch Creek at Bradley Rd., Site SB-01



— Median □ 25%-75% □ 10%-90%

BRADLEY RD., WEST OF EDGEWORTH DR. - SITE 1
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.6	10.1	0.94	0.69	0.009	0.69	0.006	0.30	0.622	0.613	ND
Standard Error	0.1	1.4	0.4	0.23	0.07	0.002	0.07	0.003	0.14	0.077	0.082	ND
Median	8.0	14.3	9.8	0.90	0.75	0.007	0.77	0.000	0.00	0.550	0.545	ND
Mode	8.0	ND	ND	ND	0.91	ND	0.92	0.000	0.00	0.550	ND	ND
Standard Deviation	0.3	4.4	1.2	0.72	0.22	0.006	0.22	0.010	0.44	0.244	0.259	ND
Sample Variance	0.1	19.4	1.4	0.52	0.05	0.000	0.05	0.000	0.19	0.059	0.067	ND
Kurtosis	8.5	-1.0	-0.5	-1.21	-0.12	0.113	-0.37	0.940	1.99	-1.217	-0.337	ND
Skewness	-2.8	-0.5	0.6	0.18	-0.90	0.760	-0.84	1.453	1.50	0.531	0.736	ND
Range	0.9	13.0	3.7	2.03	0.66	0.020	0.65	0.027	1.30	0.660	0.800	0.00
Minimum	7.2	5.9	8.5	0.00	0.25	0.000	0.27	0.000	0.00	0.340	0.300	0.00
Maximum	8.1	18.9	12.2	2.03	0.91	0.020	0.92	0.027	1.30	1.000	1.100	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	3.2	0.8	0.51	0.16	0.004	0.16	0.007	0.31	0.174	0.185	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	532.0	530.2	0.7	1.8	2.5	922	153.5	358	1.5	ND
Standard Error	ND	ND	75.3	75.8	0.5	1.1	1.8	141	27.6	217	0.4	ND
Median	ND	ND	550.0	549.3	0.0	0.5	0.5	910	170.0	32	1.5	ND
Mode	ND	ND	ND	ND	0.0	0.0	ND	ND	ND	0	0.0	ND
Standard Deviation	ND	ND	238.1	239.8	1.4	3.4	5.6	445	87.4	651	1.2	ND
Sample Variance	ND	ND	56684.4	57519.5	2.0	11.4	31.3	198041	7635.8	423424	1.4	ND
Kurtosis	ND	ND	-1.0	-1.0	3.7	7.8	9.7	-1	-1.9	1	-1.1	ND
Skewness	ND	ND	0.0	0.0	2.1	2.7	3.1	0	-0.2	2	0.3	ND
Range	0.0	0.0	740.0	751.0	4.1	11.0	17.9	1283	234.0	1600	3.2	0
Minimum	0.0	0.0	160.0	149.0	0.0	0.0	0.4	257	26.0	0	0.0	0
Maximum	0.0	0.0	900.0	900.0	4.1	11.0	18.3	1540	260.0	1600	3.2	0
Count	0	0	10	10	10	10	10	10	10	9	9	0
Confidence Level(95.0%)	ND	ND	170.3	171.6	1.0	2.4	4.0	318	62.5	500	0.9	ND

ND = No Data

Provisional MMSD Water Quality Data

BRADLEY RD., WEST OF EDGEWORTH DR. - SITE 1
SOUTHBRANCH CREEK
WATER QUALITY DATA - 2011

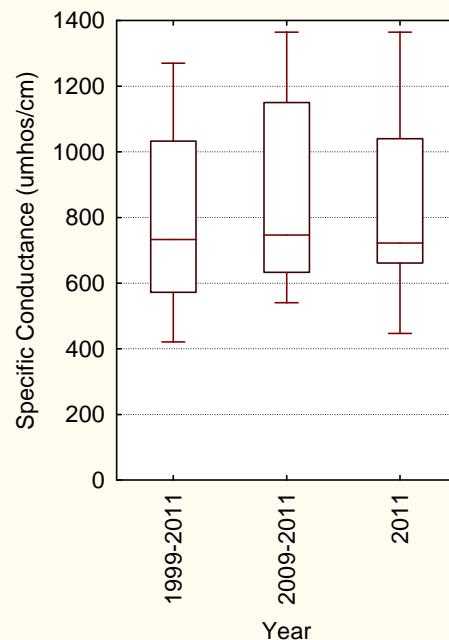
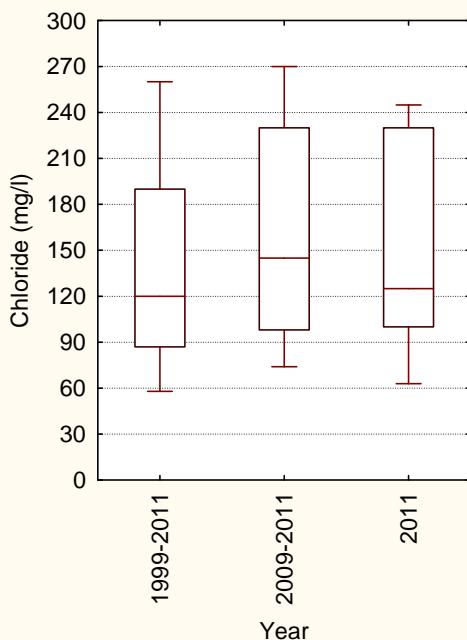
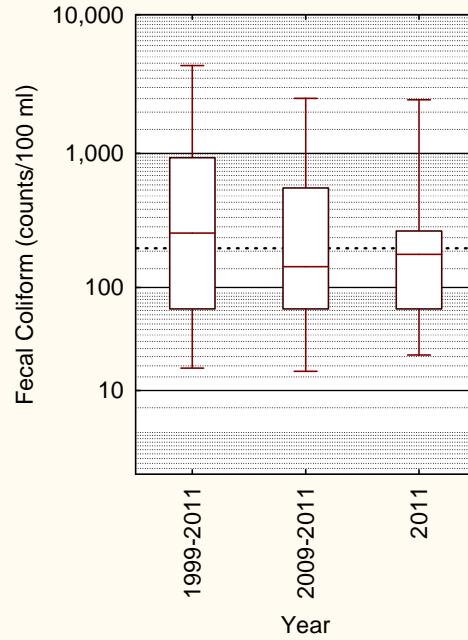
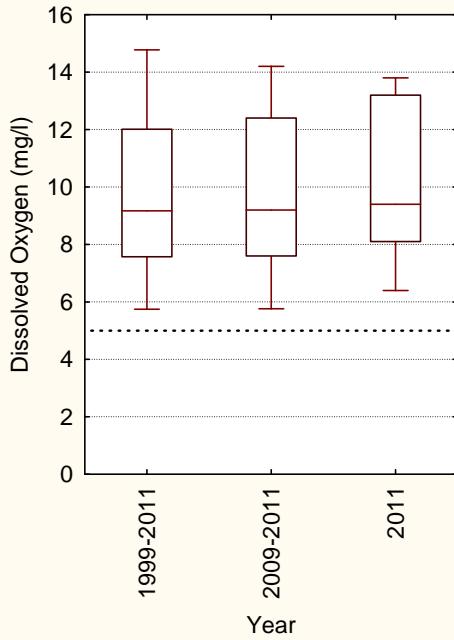
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	55.60	22.30	0.0	1.2	9.7	1.5	4.1	26.5	0.2	0.7	0.0	ND
Standard Error	5.89	2.18	0.0	0.8	1.5	0.3	1.4	7.7	0.1	0.2	0.0	ND
Median	54.00	22.50	0.0	0.0	9.3	1.5	2.9	19.5	0.0	1.0	0.0	ND
Mode	ND	27.00	0.0	0.0	6.8	1.5	ND	18.0	0.0	0.0	0.0	ND
Standard Deviation	18.61	6.88	0.0	2.6	4.6	0.8	3.4	24.2	0.3	0.6	0.0	ND
Sample Variance	346.49	47.34	0.0	6.6	20.9	0.7	11.8	585.5	0.1	0.4	0.0	ND
Kurtosis	-0.54	0.30	ND	1.4	-0.4	0.2	-0.6	8.3	0.2	-1.9	ND	ND
Skewness	-0.25	-0.43	ND	1.8	0.6	-0.1	0.7	2.8	1.1	-0.2	ND	ND
Range	60.00	24.00	0.0	6.2	13.7	2.7	9.3	83.5	0.7	1.6	0.0	0.0
Minimum	22.00	9.00	0.0	0.0	4.3	0.0	0.0	9.5	0.0	0.0	0.0	0.0
Maximum	82.00	33.00	0.0	6.2	18.0	2.7	9.3	93.0	0.7	1.6	0.0	0.0
Count	10	10	10	10	9	10	6	10	10	10	10	0
Confidence Level(95.0%)	13.32	4.92	0.0	1.8	3.5	0.6	3.6	17.3	0.2	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	230	146	0.4	4.2	38.6	36.2	2.4	2.4
Standard Error	23	14	0.4	0.7	3.4	3.5	0.2	0.3
Median	225	155	0.0	3.7	38.5	36.5	2.3	2.2
Mode	180	120	0.0	2.2	45.0	ND	2.3	2.3
Standard Deviation	73	45	1.4	2.1	10.8	11.1	0.8	1.0
Sample Variance	5396	2008	1.8	4.5	116.0	123.5	0.6	1.0
Kurtosis	0	1	10.0	5.0	-0.7	0.0	6.8	7.8
Skewness	0	-1	3.2	2.0	-0.2	-0.5	2.4	2.7
Range	247	147	4.3	7.3	34.0	36.0	2.7	3.6
Minimum	93	53	0.0	2.2	20.0	15.0	1.7	1.6
Maximum	340	200	4.3	9.5	54.0	51.0	4.4	5.2
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	53	32	1.0	1.5	7.7	8.0	0.6	0.7

ND = No Data

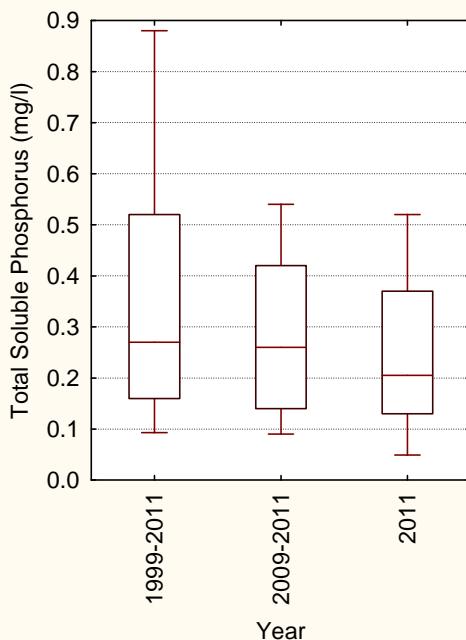
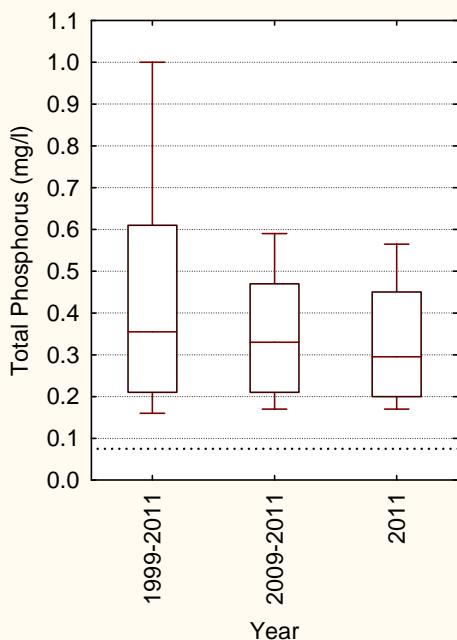
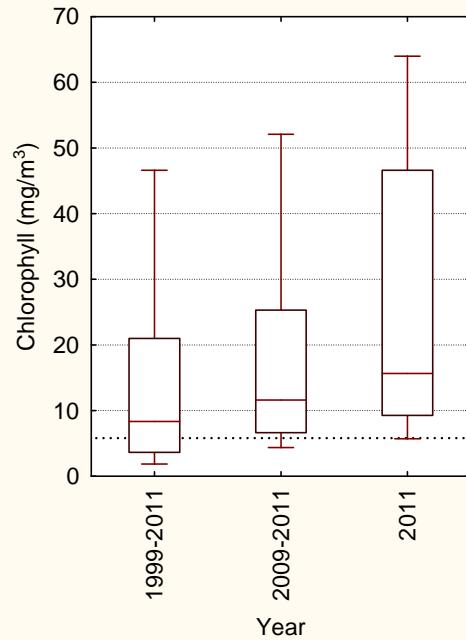
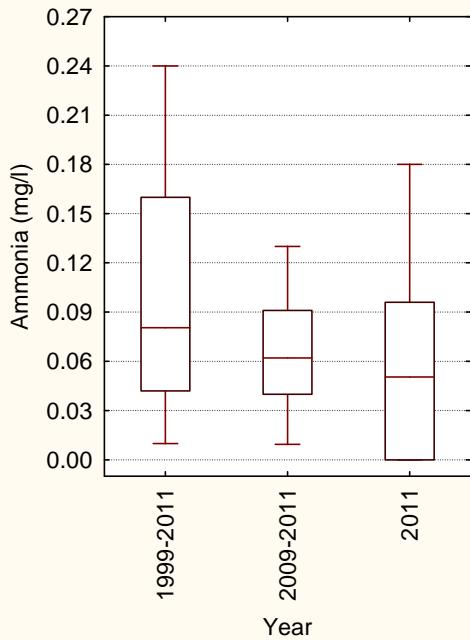
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Southbranch Creek at 55th St., Site SB-02



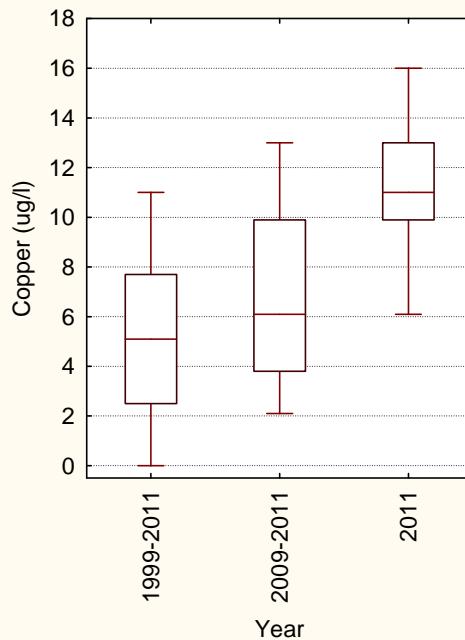
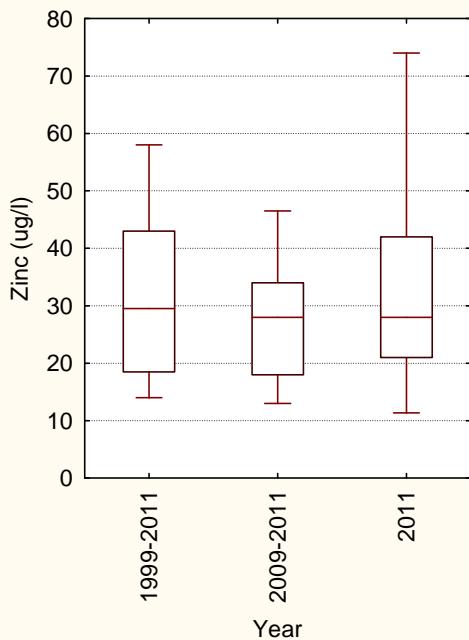
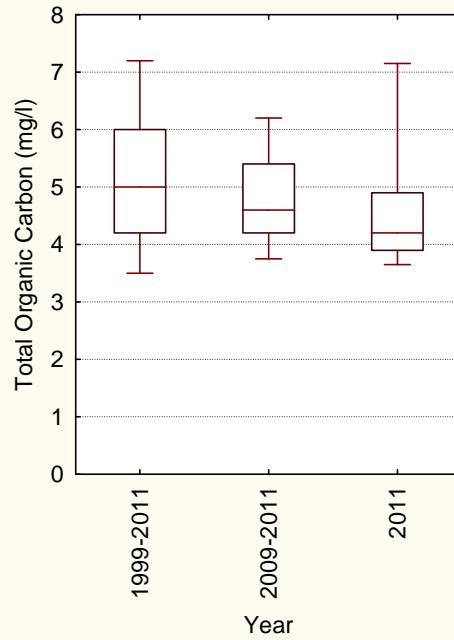
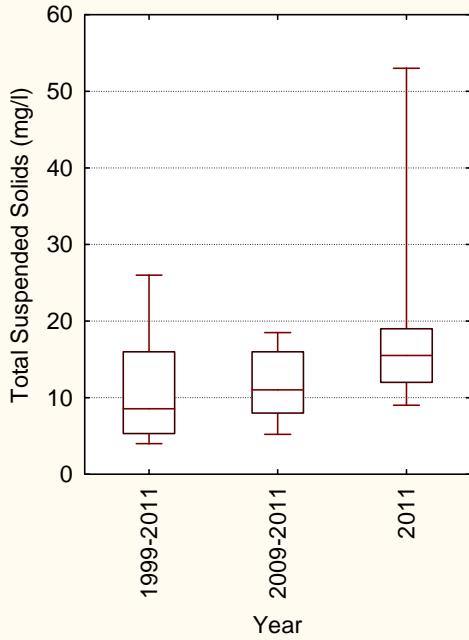
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Southbranch Creek at 55th St., Site SB-02



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Southbranch Creek at 55th St., Site SB-02



— Median □ 25%-75% ┤ 10%-90%

55TH ST., NORTH OF BRADLEY RD. - SITE 2
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.2	18.3	10.1	26.03	0.33	0.023	0.35	0.067	0.90	0.337	0.257	ND
Standard Error	0.2	2.2	1.0	7.50	0.07	0.004	0.07	0.023	0.15	0.050	0.056	ND
Median	8.3	20.5	9.4	15.65	0.27	0.023	0.31	0.051	0.84	0.295	0.205	ND
Mode	8.2	ND	ND	ND	0.17	0.029	0.50	0.000	1.30	0.450	0.160	ND
Standard Deviation	0.5	7.0	3.0	23.72	0.22	0.011	0.22	0.072	0.46	0.159	0.178	ND
Sample Variance	0.3	48.5	9.1	562.50	0.05	0.000	0.05	0.005	0.21	0.025	0.032	ND
Kurtosis	0.1	-0.3	-1.6	0.37	0.63	1.117	0.85	2.068	0.26	-1.617	-1.215	ND
Skewness	-0.9	-0.9	0.0	1.23	0.98	0.696	0.98	1.372	-0.40	0.411	0.413	ND
Range	1.6	21.3	8.6	70.56	0.69	0.039	0.71	0.230	1.60	0.410	0.492	0.00
Minimum	7.2	5.3	5.6	4.14	0.09	0.007	0.10	0.000	0.00	0.160	0.028	0.00
Maximum	8.8	26.6	14.2	74.70	0.78	0.046	0.81	0.230	1.60	0.570	0.520	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.4	5.0	2.2	16.97	0.15	0.008	0.16	0.051	0.33	0.114	0.127	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	507.0	485.4	6.1	21.6	16.6	848	150.6	602	2.2	ND
Standard Error	ND	ND	66.4	64.1	1.5	7.4	3.6	108	23.0	404	0.3	ND
Median	ND	ND	430.0	413.5	5.2	15.5	12.7	722	125.0	180	2.2	ND
Mode	ND	ND	ND	ND	ND	12.0	ND	ND	230.0	ND	ND	ND
Standard Deviation	ND	ND	209.9	202.7	4.8	23.3	11.5	342	72.9	1278	0.8	ND
Sample Variance	ND	ND	44045.6	41096.3	22.7	543.6	132.6	116775	5310.3	1634229	0.7	ND
Kurtosis	ND	ND	-0.2	0.3	7.7	9.2	6.5	0	-1.1	9	2.3	ND
Skewness	ND	ND	0.5	0.6	2.6	3.0	2.4	0	0.2	3	-0.5	ND
Range	0.0	0.0	700.0	707.0	17.0	80.0	38.5	1118	224.0	4197	3.1	0
Minimum	0.0	0.0	190.0	171.0	2.0	7.0	8.6	302	36.0	3	0.5	0
Maximum	0.0	0.0	890.0	878.0	19.0	87.0	47.1	1420	260.0	4200	3.6	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	150.1	145.0	3.4	16.7	8.2	244	52.1	914	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

55TH ST., NORTH OF BRADLEY RD. - SITE 2
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	50.60	21.30	0.0	1.3	11.3	2.4	5.1	35.7	0.1	1.0	0.0	ND
Standard Error	5.62	2.45	0.0	0.9	1.0	0.3	1.6	7.3	0.1	0.3	0.0	ND
Median	45.50	19.50	0.0	0.0	11.0	2.2	5.0	28.0	0.0	0.9	0.0	ND
Mode	ND	18.00	0.0	0.0	ND	2.0	ND	42.0	0.0	0.0	0.0	ND
Standard Deviation	17.77	7.73	0.0	2.8	2.9	0.8	3.5	23.2	0.2	0.8	0.0	ND
Sample Variance	315.60	59.79	0.0	7.6	8.2	0.7	12.2	538.0	0.0	0.6	0.0	ND
Kurtosis	0.40	0.46	ND	3.0	0.6	1.2	-0.3	0.6	1.4	-0.9	ND	ND
Skewness	0.55	0.88	ND	2.0	-0.2	1.5	-0.7	1.1	1.8	0.2	ND	ND
Range	61.00	25.00	0.0	7.7	9.9	2.6	8.5	74.3	0.4	2.3	0.0	0.0
Minimum	22.00	10.00	0.0	0.0	6.1	1.6	0.0	8.7	0.0	0.0	0.0	0.0
Maximum	83.00	35.00	0.0	7.7	16.0	4.2	8.5	83.0	0.4	2.3	0.0	0.0
Count	10	10	10	10	9	10	5	10	10	10	10	0
Confidence Level(95.0%)	12.71	5.53	0.0	2.0	2.2	0.6	4.3	16.6	0.1	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	215	137	3.8	10.1	38.8	34.0	4.8	4.4
Standard Error	24	15	0.4	0.7	3.4	3.5	0.4	0.3
Median	200	130	4.1	9.9	38.0	31.0	4.2	3.9
Mode	180	130	2.2	13.0	38.0	30.0	4.1	3.8
Standard Deviation	76	48	1.1	2.1	10.6	10.9	1.3	1.1
Sample Variance	5702	2322	1.2	4.6	112.6	119.3	1.8	1.2
Kurtosis	0	1	-1.3	-1.2	0.7	0.7	0.7	-0.3
Skewness	1	0	-0.5	0.1	0.3	0.4	1.4	1.1
Range	252	167	2.9	6.0	37.0	38.0	3.6	3.0
Minimum	98	53	2.2	7.0	20.0	15.0	3.6	3.4
Maximum	350	220	5.1	13.0	57.0	53.0	7.2	6.4
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	54	34	0.8	1.5	7.6	7.8	0.9	0.8

ND = No Data

Provisional MMSD Water Quality Data

47TH ST., SOUTH OF CHURCHILL LN. - SITE 3
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.4	18.0	12.5	16.12	0.35	0.016	0.36	0.022	0.77	0.289	0.223	ND
Standard Error	0.2	2.2	0.9	3.25	0.10	0.003	0.10	0.009	0.12	0.058	0.050	ND
Median	8.6	20.5	11.6	12.40	0.26	0.014	0.28	0.014	0.78	0.250	0.195	ND
Mode	8.9	ND	ND	ND	0.26	0.008	0.29	0.000	ND	0.400	0.084	ND
Standard Deviation	0.5	6.8	2.9	10.27	0.32	0.008	0.32	0.030	0.36	0.184	0.157	ND
Sample Variance	0.3	46.8	8.7	105.40	0.10	0.000	0.10	0.001	0.13	0.034	0.025	ND
Kurtosis	1.5	-0.4	2.5	0.90	0.84	-1.520	0.70	2.342	1.46	1.671	-1.492	ND
Skewness	-1.2	-0.9	1.5	1.31	1.43	0.462	1.37	1.694	-0.69	1.238	0.309	ND
Range	1.7	20.3	9.6	32.65	0.89	0.022	0.89	0.089	1.30	0.600	0.454	0.00
Minimum	7.3	5.4	9.7	4.35	0.09	0.007	0.10	0.000	0.00	0.100	0.026	0.00
Maximum	9.0	25.7	19.3	37.00	0.98	0.029	0.99	0.089	1.30	0.700	0.480	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.4	4.9	2.1	7.34	0.23	0.006	0.23	0.021	0.26	0.132	0.112	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	502.0	496.0	2.4	6.0	5.8	884	154.7	1666	2.8	ND
Standard Error	ND	ND	68.1	68.5	0.5	1.4	1.7	125	23.1	627	0.2	ND
Median	ND	ND	435.0	431.0	1.9	5.0	3.5	761	140.0	770	2.9	ND
Mode	ND	ND	ND	ND	3.6	ND	ND	ND	140.0	ND	ND	ND
Standard Deviation	ND	ND	215.4	216.6	1.6	4.5	5.2	397	73.1	1982	0.7	ND
Sample Variance	ND	ND	46395.6	46926.9	2.7	20.1	27.3	157310	5348.5	3927230	0.5	ND
Kurtosis	ND	ND	-0.3	-0.2	1.9	7.1	4.3	0	-0.3	1	-1.1	ND
Skewness	ND	ND	0.4	0.3	1.1	2.5	2.2	1	-0.1	1	-0.3	ND
Range	0.0	0.0	700.0	711.3	6.0	15.9	16.2	1354	244.0	5951	2.1	0
Minimum	0.0	0.0	160.0	142.0	0.0	2.1	2.5	266	26.0	49	1.7	0
Maximum	0.0	0.0	860.0	853.3	6.0	18.0	18.7	1620	270.0	6000	3.8	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	154.1	155.0	1.2	3.2	3.7	284	52.3	1418	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

47TH ST., SOUTH OF CHURCHILL LN. - SITE 3
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2011

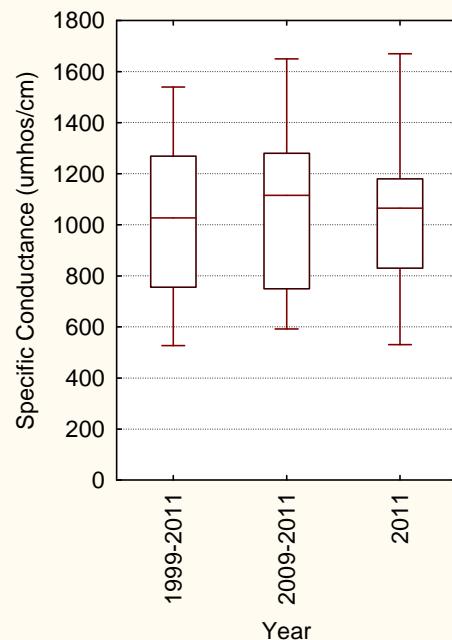
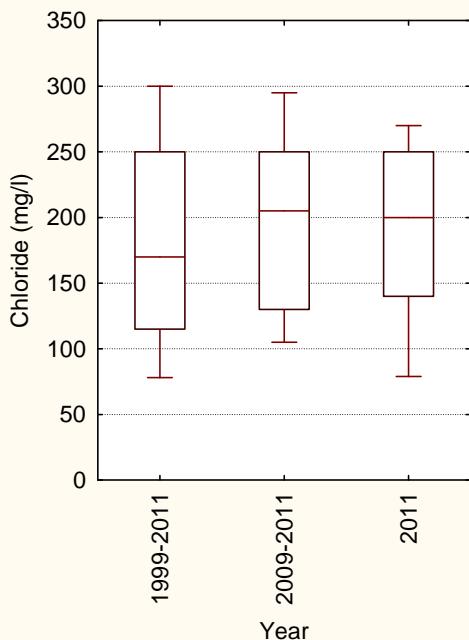
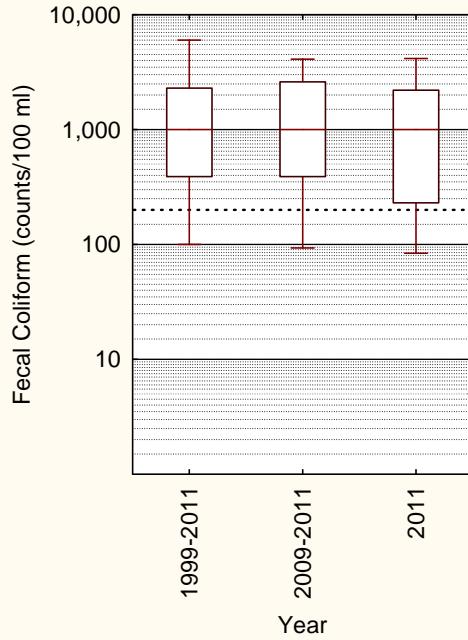
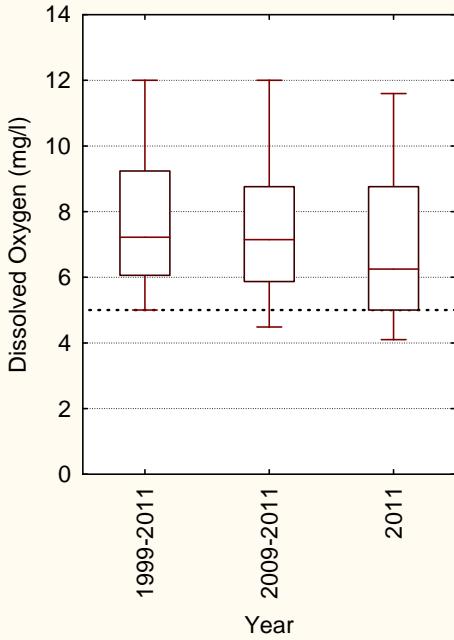
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	49.60	20.18	0.0	0.9	8.7	2.3	2.9	25.8	0.0	1.0	0.0	ND
Standard Error	5.17	2.19	0.0	0.9	1.0	0.3	0.8	6.9	0.0	0.3	0.0	ND
Median	47.00	19.00	0.0	0.0	9.6	1.8	3.0	15.0	0.0	1.2	0.0	ND
Mode	ND	19.00	0.0	0.0	11.0	1.6	ND	14.0	0.0	0.0	0.0	ND
Standard Deviation	16.36	6.91	0.0	2.7	3.0	0.9	2.0	21.8	0.1	0.9	0.0	ND
Sample Variance	267.60	47.79	0.0	7.4	8.9	0.9	4.1	477.1	0.0	0.8	0.0	ND
Kurtosis	1.24	0.78	ND	10.0	-0.6	0.2	1.5	0.2	10.0	-1.8	ND	ND
Skewness	0.25	0.62	ND	3.2	-0.7	1.3	0.3	1.3	3.2	0.0	ND	ND
Range	61.00	24.20	0.0	8.6	8.8	2.6	6.2	58.2	0.4	2.2	0.0	0.0
Minimum	20.00	8.80	0.0	0.0	3.2	1.4	0.0	6.8	0.0	0.0	0.0	0.0
Maximum	81.00	33.00	0.0	8.6	12.0	4.0	6.2	65.0	0.4	2.2	0.0	0.0
Count	10	10	10	10	9	10	6	10	10	10	10	0
Confidence Level(95.0%)	11.70	4.95	0.0	1.9	2.3	0.7	2.1	15.6	0.1	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	208	134	2.4	7.4	39.9	35.1	4.8	4.5
Standard Error	22	14	0.8	0.4	2.9	3.1	0.3	0.3
Median	195	125	2.2	6.9	39.5	34.0	4.3	4.0
Mode	190	120	0.0	6.4	40.0	36.0	3.8	3.7
Standard Deviation	69	46	2.5	1.2	9.3	9.8	1.1	0.9
Sample Variance	4760	2072	6.4	1.4	86.1	96.5	1.2	0.8
Kurtosis	1	0	3.3	-1.0	1.4	1.0	-0.8	-1.3
Skewness	0	0	1.6	1.0	0.0	-0.2	0.9	0.7
Range	252	154	8.4	3.0	35.0	36.0	2.8	2.5
Minimum	88	56	0.0	6.4	22.0	16.0	3.8	3.5
Maximum	340	210	8.4	9.4	57.0	52.0	6.6	6.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	49	33	1.8	0.9	6.6	7.0	0.8	0.7

ND = No Data

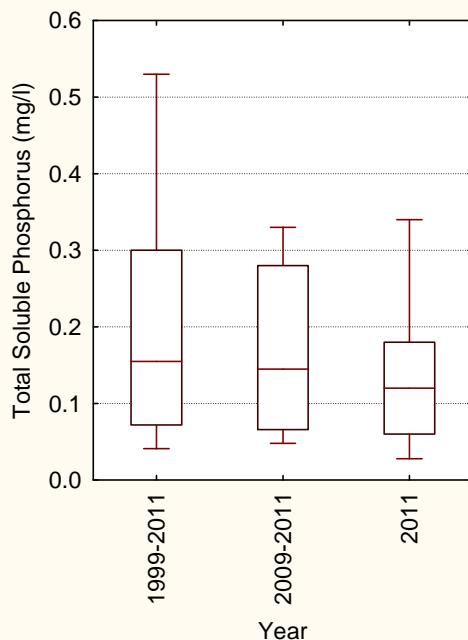
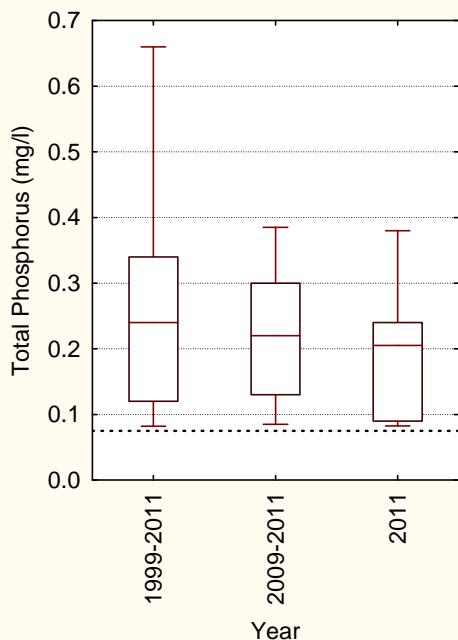
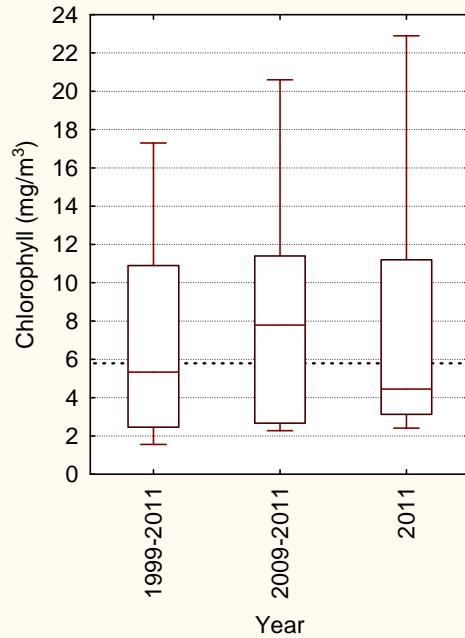
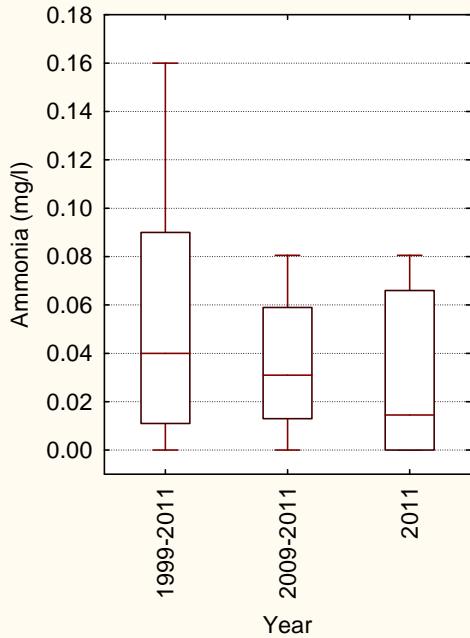
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Southbranch Creek at Green Bay Ct., Site SB-04



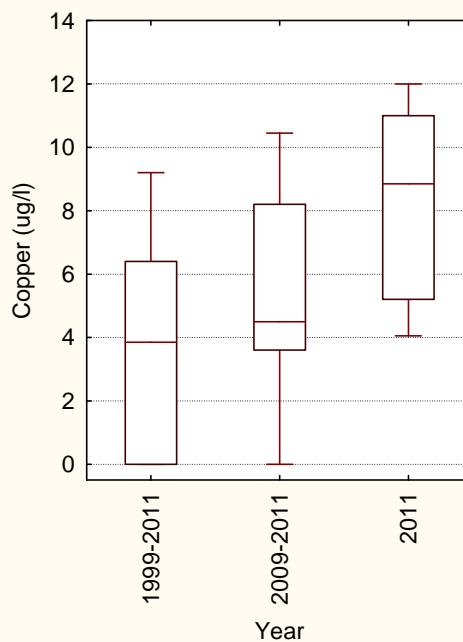
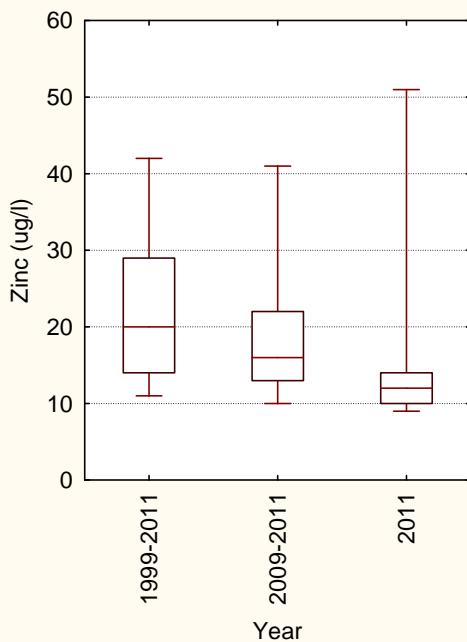
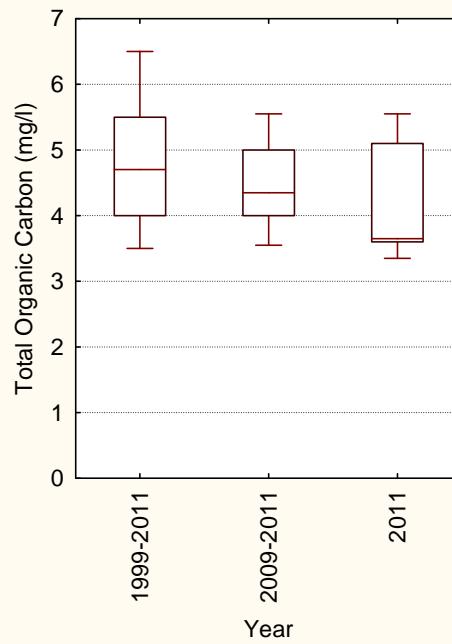
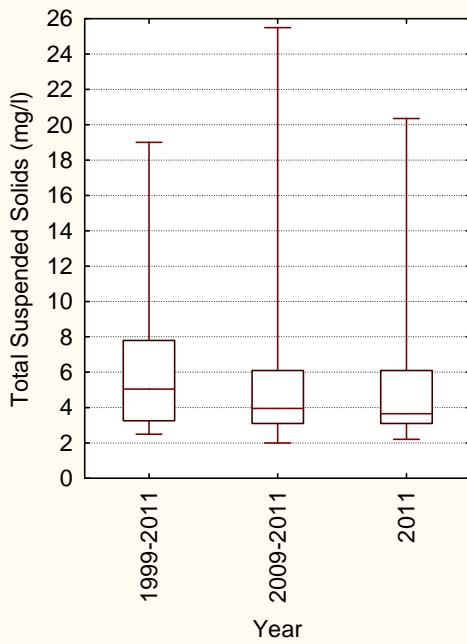
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Southbranch Creek at Green Bay Ct., Site SB-04



— Median □ 25%-75% I 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Southbranch Creek at Green Bay Ct., Site SB-04



— Median □ 25%-75% ━ 10%-90%

GREEN BAY CT., N. OF GREEN BAY RD. AND TEUTONIA AVE. - SITE 4
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.4	15.5	7.0	8.69	0.31	0.015	0.33	0.030	0.53	0.200	0.145	ND
Standard Error	0.1	1.8	0.9	3.07	0.07	0.002	0.07	0.010	0.05	0.038	0.037	ND
Median	7.4	17.7	6.3	4.45	0.25	0.014	0.26	0.015	0.49	0.205	0.120	ND
Mode	7.3	ND	5.0	ND	0.29	ND	0.31	0.000	0.49	0.240	ND	ND
Standard Deviation	0.2	5.7	2.9	9.70	0.21	0.007	0.22	0.033	0.16	0.119	0.118	ND
Sample Variance	0.0	32.7	8.4	94.13	0.05	0.000	0.05	0.001	0.03	0.014	0.014	ND
Kurtosis	-1.8	0.2	-0.1	6.72	6.38	-0.882	6.08	-1.173	6.56	0.160	0.366	ND
Skewness	0.3	-1.1	0.8	2.48	2.44	0.579	2.38	0.815	2.36	0.818	1.038	ND
Range	0.5	17.7	9.1	32.35	0.72	0.021	0.74	0.083	0.58	0.359	0.366	0.00
Minimum	7.2	4.0	3.5	2.15	0.16	0.007	0.17	0.000	0.38	0.081	0.014	0.00
Maximum	7.7	21.7	12.6	34.50	0.88	0.028	0.91	0.083	0.96	0.440	0.380	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.1	4.1	2.1	6.94	0.15	0.005	0.16	0.024	0.12	0.085	0.084	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	620.0	613.1	2.0	6.9	6.5	1074	189.8	1525	2.8	ND
Standard Error	ND	ND	67.6	69.4	0.5	2.9	2.0	131	23.6	503	0.2	ND
Median	ND	ND	620.0	616.2	1.6	3.7	3.9	1065	200.0	1000	3.0	ND
Mode	ND	ND	ND	ND	1.6	ND	ND	ND	200.0	1000	3.0	ND
Standard Deviation	ND	ND	213.6	219.6	1.5	9.0	6.3	413	74.6	1590	0.7	ND
Sample Variance	ND	ND	45644.4	48207.4	2.4	81.8	39.7	170407	5560.4	2529515	0.5	ND
Kurtosis	ND	ND	1.2	1.5	3.6	8.7	6.8	1	1.4	1	0.2	ND
Skewness	ND	ND	-0.6	-0.7	1.6	2.9	2.6	0	-1.1	1	-0.8	ND
Range	0.0	0.0	760.0	789.2	5.7	30.4	20.7	1477	252.0	4772	2.2	0
Minimum	0.0	0.0	180.0	148.0	0.0	1.6	2.7	263	28.0	28	1.4	0
Maximum	0.0	0.0	940.0	937.2	5.7	32.0	23.3	1740	280.0	4800	3.7	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	152.8	157.1	1.1	6.5	4.5	295	53.3	1138	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

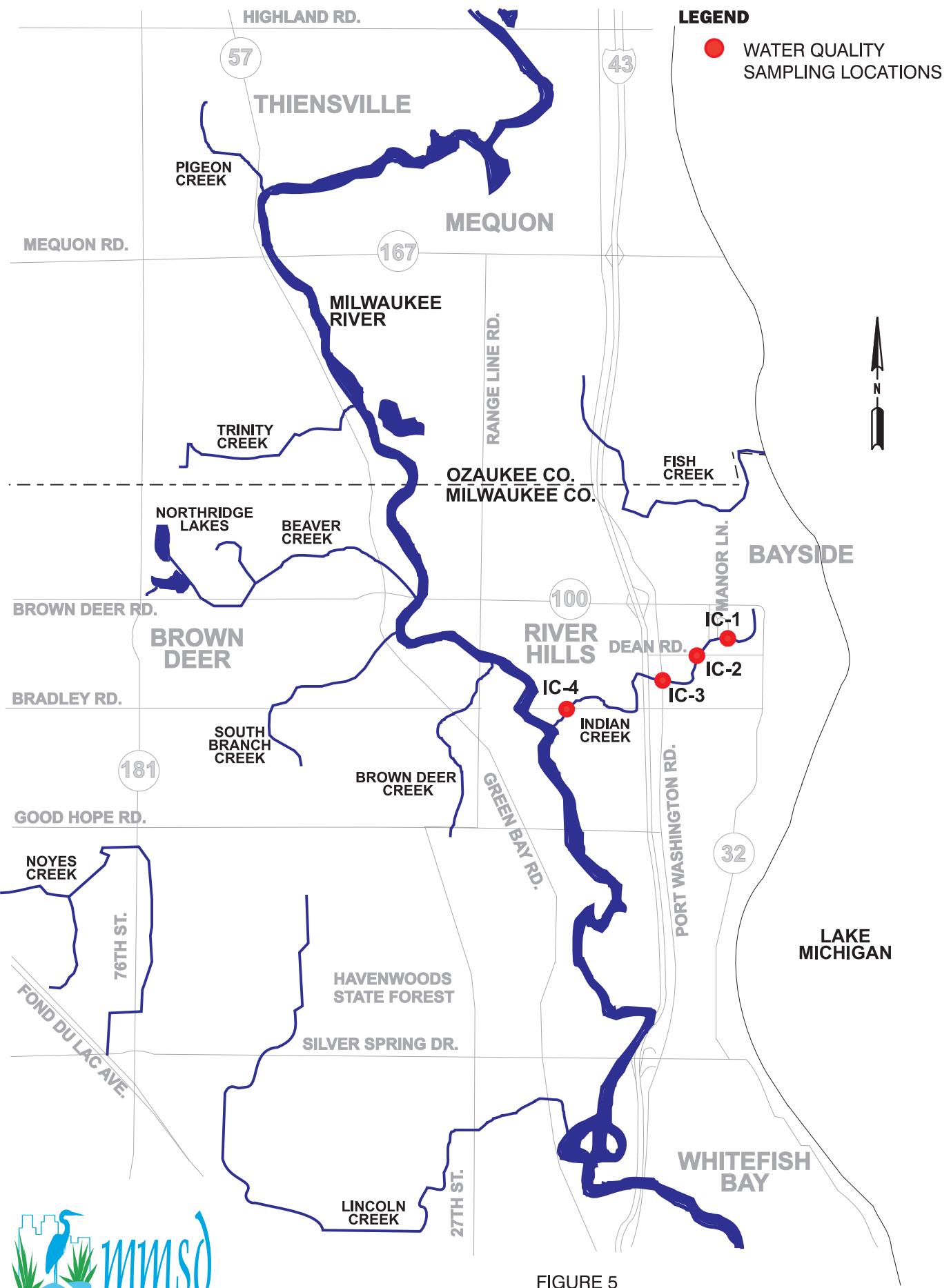
GREEN BAY CT., N. OF GREEN BAY RD. AND TEUTONIA AVE. - SITE 4
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	62.80	25.95	0.0	0.7	8.2	2.2	2.2	17.8	0.1	1.0	0.0	ND
Standard Error	5.80	2.40	0.0	0.7	1.0	0.2	0.7	4.7	0.0	0.3	0.0	ND
Median	64.00	26.50	0.0	0.0	8.9	2.0	2.0	12.0	0.0	1.4	0.0	ND
Mode	64.00	27.00	0.0	0.0	12.0	1.9	ND	12.0	0.0	0.0	0.0	ND
Standard Deviation	18.35	7.60	0.0	2.2	3.1	0.6	1.6	14.2	0.1	0.9	0.0	ND
Sample Variance	336.62	57.80	0.0	5.0	9.7	0.3	2.6	200.5	0.0	0.8	0.0	ND
Kurtosis	2.73	2.12	ND	10.0	-1.6	6.2	-0.3	3.9	1.4	-2.2	ND	ND
Skewness	-0.85	-0.71	ND	3.2	-0.2	2.3	-0.2	2.1	1.8	-0.3	ND	ND
Range	71.00	28.50	0.0	7.1	8.2	1.9	4.2	42.0	0.3	1.9	0.0	0.0
Minimum	22.00	9.50	0.0	0.0	3.8	1.7	0.0	9.0	0.0	0.0	0.0	0.0
Maximum	93.00	38.00	0.0	7.1	12.0	3.6	4.2	51.0	0.3	1.9	0.0	0.0
Count	10	10	10	10	10	10	5	9	10	10	10	0
Confidence Level(95.0%)	13.12	5.44	0.0	1.6	2.2	0.4	2.0	10.9	0.1	0.6	0.0	ND

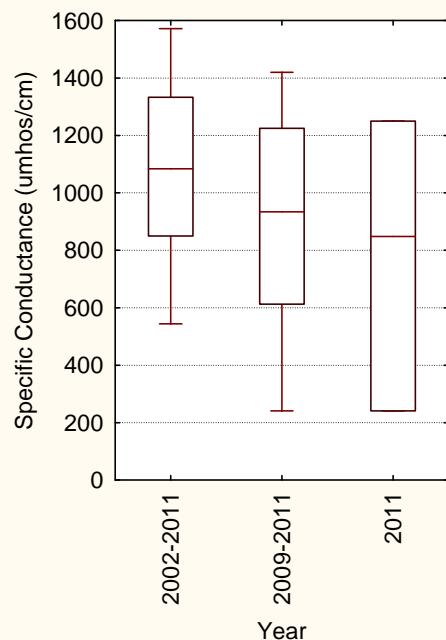
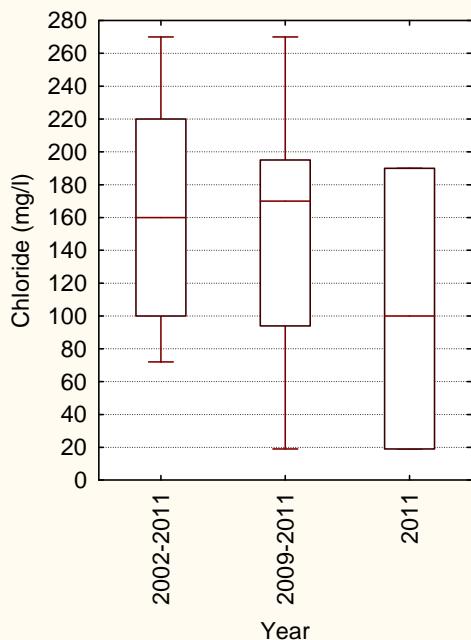
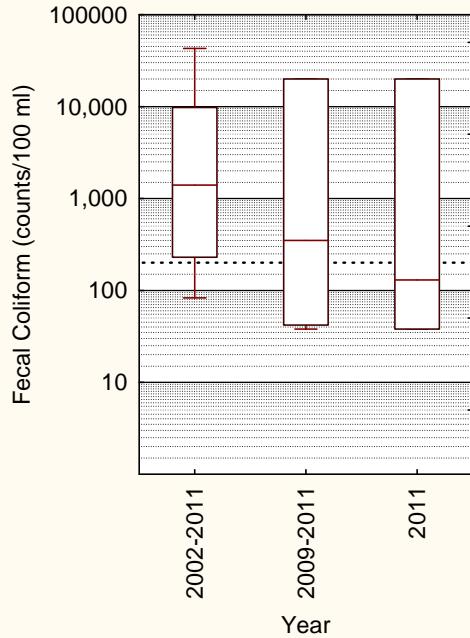
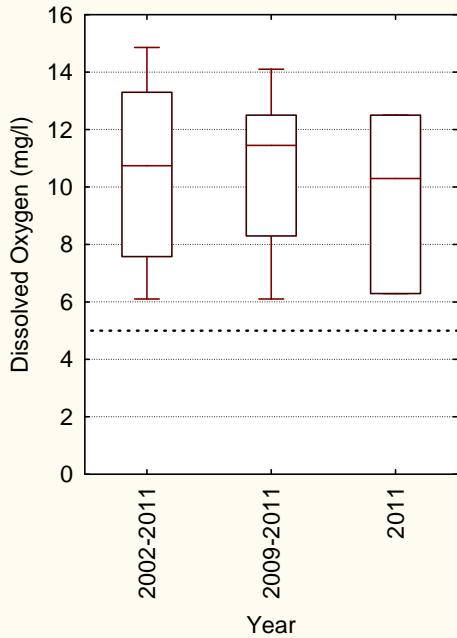
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	264	179	0.7	6.1	47.8	43.6	4.2	4.0
Standard Error	24	18	0.5	0.5	3.9	3.9	0.3	0.3
Median	265	180	0.0	5.6	49.0	45.0	3.7	3.7
Mode	270	180	0.0	5.4	49.0	44.0	3.6	3.6
Standard Deviation	77	57	1.7	1.4	12.3	12.5	0.9	0.9
Sample Variance	5985	3251	2.8	2.1	151.5	155.8	0.8	0.8
Kurtosis	3	2	6.0	8.1	2.1	2.4	-1.0	0.5
Skewness	-1	-1	2.5	2.8	-0.9	-0.9	0.9	1.1
Range	296	204	5.1	4.8	46.0	47.0	2.4	2.8
Minimum	94	56	0.0	5.2	21.0	16.0	3.2	3.1
Maximum	390	260	5.1	10.0	67.0	63.0	5.6	5.9
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	55	41	1.2	1.0	8.8	8.9	0.6	0.6

ND = No Data

Provisional MMSD Water Quality Data

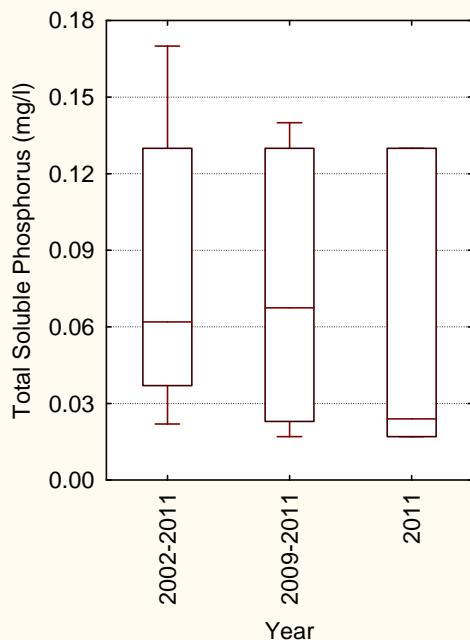
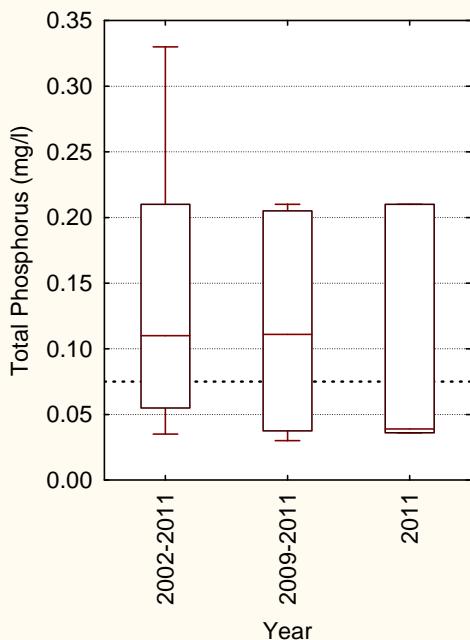
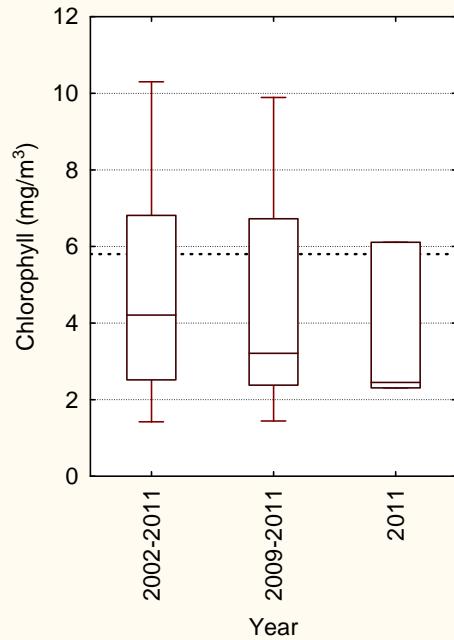
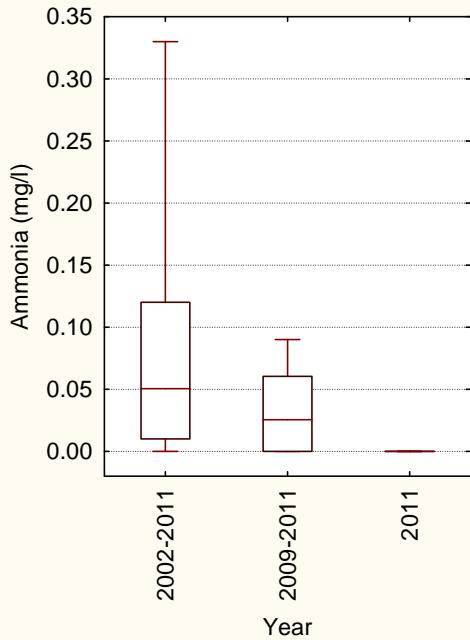


MMSD Water Quality Monitoring Program Data
 Indian Creek at Manor Ln., Site IC-01



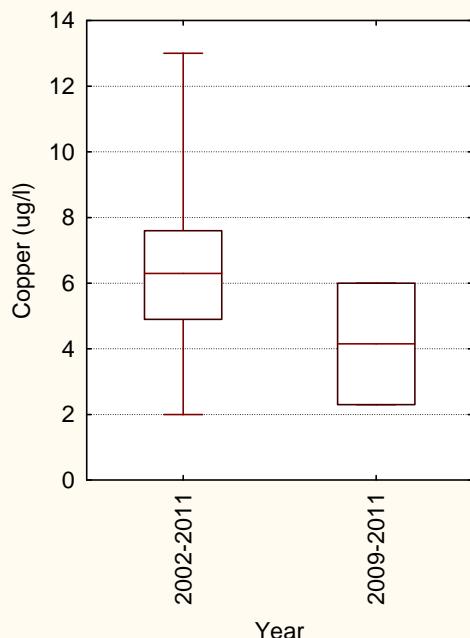
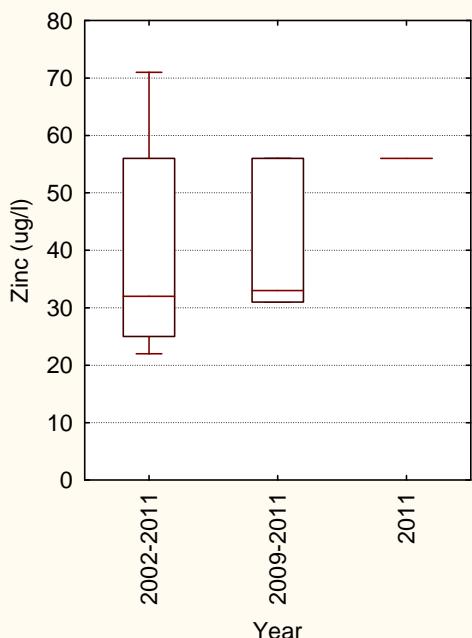
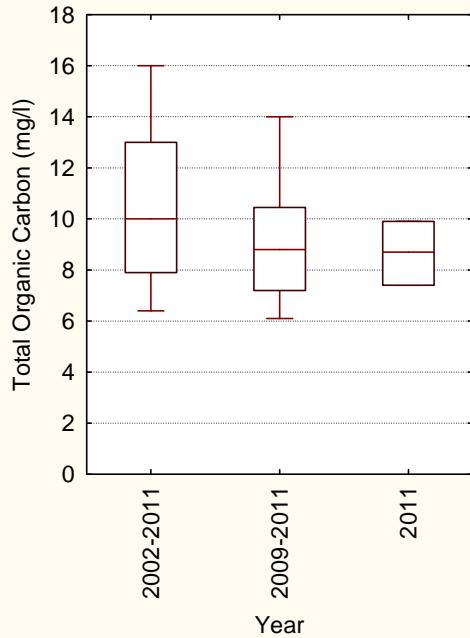
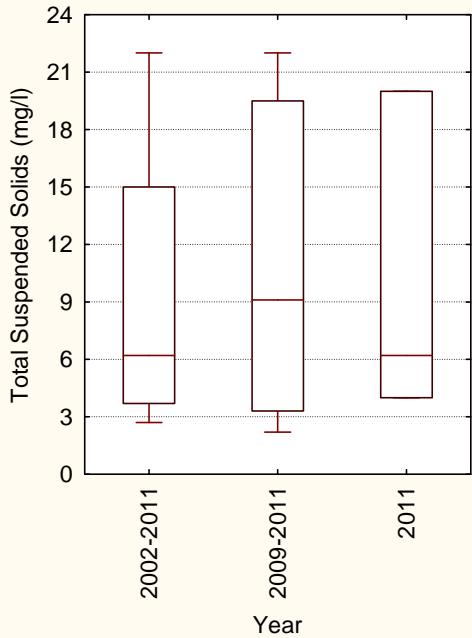
— Median □ 25%-75% □ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
 Indian Creek at Manor Ln., Site IC-01



— Median □ 25%-75% ━ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Indian Creek at Manor Ln., Site IC-01



— Median □ 25%-75% ━ 10%-90%

MANOR LANE - SITE 1
INDIAN CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.5	8.0	9.7	3.62	0.35	0.014	0.36	0.000	0.88	0.095	0.057	ND
Standard Error	0.2	2.1	1.8	1.24	0.13	0.006	0.13	0.000	0.16	0.058	0.037	ND
Median	7.6	8.3	10.3	2.45	0.35	0.009	0.37	0.000	0.78	0.039	0.024	ND
Mode	ND	ND	ND	ND	ND	ND	ND	0.000	ND	ND	ND	ND
Standard Deviation	0.3	3.7	3.1	2.15	0.23	0.010	0.23	0.000	0.28	0.100	0.063	ND
Sample Variance	0.1	13.8	9.9	4.64	0.05	0.000	0.05	0.000	0.08	0.010	0.004	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	-1.5	-0.3	-0.8	1.72	0.00	1.725	-0.13	ND	1.39	1.730	1.708	ND
Range	0.5	7.4	6.2	3.80	0.46	0.017	0.46	0.000	0.54	0.174	0.113	0.00
Minimum	7.2	4.2	6.3	2.31	0.12	0.008	0.13	0.000	0.66	0.036	0.017	0.00
Maximum	7.7	11.6	12.5	6.11	0.58	0.025	0.59	0.000	1.20	0.210	0.130	0.00
Count	3	3	3	3	3	3	3	3	3	3	3	0
Confidence Level(95.0%)	0.7	9.2	7.8	5.35	0.57	0.024	0.57	0.000	0.70	0.247	0.157	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	476.7	466.6	4.1	10.1	15.0	780	103.0	6723	2.7	7702
Standard Error	ND	ND	176.3	180.8	2.9	5.0	9.4	293	49.4	6639	0.8	7649
Median	ND	ND	460.0	453.8	1.2	6.2	7.2	848	100.0	130	2.1	63
Mode	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	305.3	313.2	5.0	8.7	16.2	508	85.5	11499	1.4	13248
Sample Variance	ND	ND	93233.3	98091.9	25.2	75.2	263.8	258022	7317.0	132217801	2.1	175514044
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	0.2	0.2	1.7	1.6	1.7	-1	0.2	2	1.5	2
Range	0.0	0.0	610.0	626.0	8.7	16.0	29.5	1009	171.0	19962	2.7	22956
Minimum	0.0	0.0	180.0	160.0	1.2	4.0	4.2	241	19.0	38	1.6	44
Maximum	0.0	0.0	790.0	786.0	9.9	20.0	33.7	1250	190.0	20000	4.3	23000
Count	0	0	3	3	3	3	3	3	3	3	3	3
Confidence Level(95.0%)	ND	ND	758.5	778.0	12.5	21.5	40.3	1262	212.5	28564	3.6	32910

ND=No Data

Provisional MMSD Water Quality Data

MANOR LANE - SITE 1
INDIAN CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	21.00	9.60	0.0	0.0	ND	3.4	ND	56.0	0.4	1.6	0.0	ND
Standard Error	0.00	0.00	0.0	0.0	ND	0.0	ND	0.0	0.0	0.0	0.0	ND
Median	21.00	9.60	0.0	0.0	ND	3.4	ND	56.0	0.4	1.6	0.0	ND
Mode	ND											
Standard Deviation	ND											
Sample Variance	ND											
Kurtosis	ND											
Skewness	ND											
Range	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	21.00	9.60	0.0	0.0	0.0	3.4	0.0	56.0	0.4	1.6	0.0	0.0
Maximum	21.00	9.60	0.0	0.0	0.0	3.4	0.0	56.0	0.4	1.6	0.0	0.0
Count	1	1	1	1	0	1	0	1	1	1	1	0
Confidence Level(95.0%)	ND											

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	92	194	1.6	6.8	59.0	50.0	8.7	8.2
Standard Error	0	66	1.6	2.1	15.4	15.1	0.7	0.6
Median	92	210	0.0	5.4	62.0	54.0	8.7	8.2
Mode	ND	ND	0.0	ND	ND	ND	ND	ND
Standard Deviation	ND	114	2.7	3.7	26.6	26.2	1.3	1.1
Sample Variance	ND	13066	7.4	13.4	709.0	688.0	1.6	1.1
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	-1	1.7	1.5	-0.5	-0.7	-0.1	0.1
Range	0	227	4.7	6.9	53.0	52.0	2.5	2.1
Minimum	92	73	0.0	4.1	31.0	22.0	7.4	7.2
Maximum	92	300	4.7	11.0	84.0	74.0	9.9	9.3
Count	1	3	3	3	3	3	3	3
Confidence Level(95.0%)	ND	284	6.7	9.1	66.1	65.2	3.1	2.6

ND=No Data

Provisional MMSD Water Quality Data

DEAN ROAD - SITE 2
INDIAN CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.2	9.9	7.4	10.98	0.26	0.011	0.27	0.019	1.09	0.144	0.084	ND
Standard Error	0.2	1.7	1.5	2.13	0.12	0.003	0.12	0.019	0.39	0.040	0.026	ND
Median	7.1	9.3	5.7	10.10	0.13	0.010	0.13	0.000	0.77	0.180	0.120	ND
Mode	7.1	ND	ND	ND	ND	ND	ND	0.000	ND	ND	0.130	ND
Standard Deviation	0.3	3.9	3.4	4.77	0.27	0.006	0.27	0.042	0.86	0.090	0.059	ND
Sample Variance	0.1	15.3	11.6	22.73	0.07	0.000	0.07	0.002	0.74	0.008	0.003	ND
Kurtosis	2.1	0.2	-2.3	0.71	2.10	-0.069	1.84	5.000	4.35	-2.252	-3.290	ND
Skewness	1.3	0.5	0.5	1.06	1.57	0.842	1.53	2.236	2.04	-0.238	-0.590	ND
Range	0.9	10.3	7.9	11.91	0.65	0.015	0.65	0.095	2.13	0.213	0.112	0.00
Minimum	6.9	5.3	3.9	6.49	0.06	0.005	0.07	0.000	0.47	0.037	0.018	0.00
Maximum	7.8	15.6	11.8	18.40	0.71	0.020	0.72	0.095	2.60	0.250	0.130	0.00
Count	5	5	5	5	5	5	5	5	5	5	5	0
Confidence Level(95.0%)	0.4	4.8	4.2	5.92	0.34	0.008	0.34	0.053	1.07	0.112	0.073	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	762.0	753.6	3.9	8.4	8.7	1246	251.8	3688	2.1	3706
Standard Error	ND	ND	205.6	206.3	1.2	2.1	3.5	295	74.7	3579	0.6	3574
Median	ND	ND	710.0	706.3	2.8	6.1	5.9	1340	240.0	79	1.9	120
Mode	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	459.7	461.3	2.7	4.8	7.9	659	167.0	8002	1.4	7992
Sample Variance	ND	ND	211320.0	212778.2	7.5	22.9	62.9	434293	27881.2	64028842	1.8	63871837
Kurtosis	ND	ND	0.0	0.1	-2.2	-3.0	4.6	0	1.2	5	0.9	5
Skewness	ND	ND	0.3	0.3	0.6	0.5	2.1	-1	0.2	2	1.1	2
Range	0.0	0.0	1220.0	1228.0	6.3	10.3	19.5	1575	461.0	17993	3.4	18000
Minimum	0.0	0.0	180.0	167.0	1.2	3.7	3.2	275	29.0	7	0.8	0
Maximum	0.0	0.0	1400.0	1395.0	7.5	14.0	22.7	1850	490.0	18000	4.3	18000
Count	0	0	5	5	5	5	5	5	5	5	5	5
Confidence Level(95.0%)	ND	ND	570.8	572.8	3.4	5.9	9.8	818	207.3	9936	1.7	9923

ND=No Data

Provisional MMSD Water Quality Data

DEAN ROAD - SITE 2
INDIAN CREEK
WATER QUALITY DATA - 2011

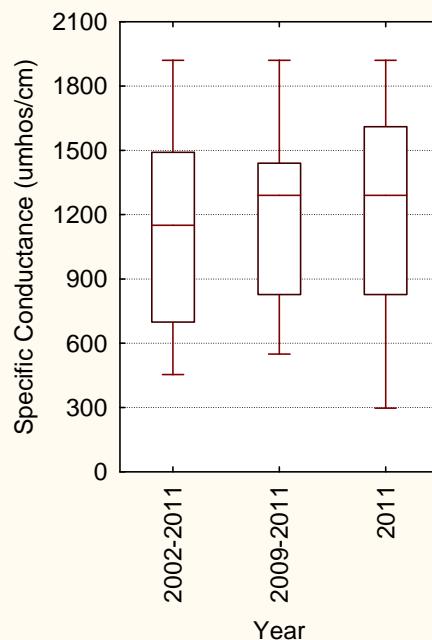
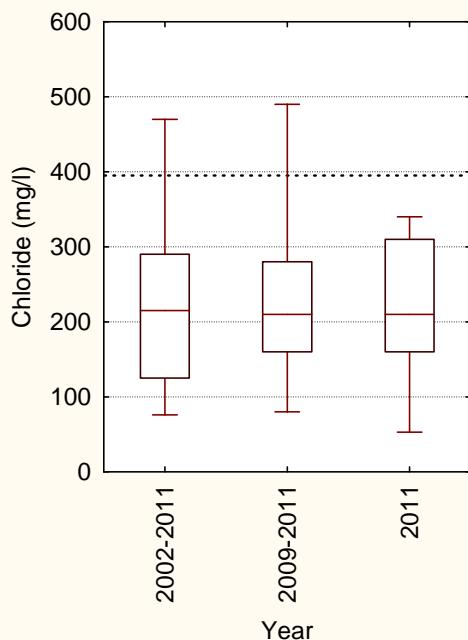
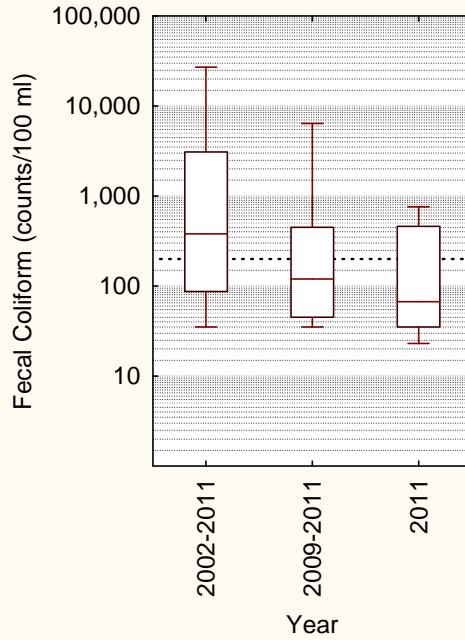
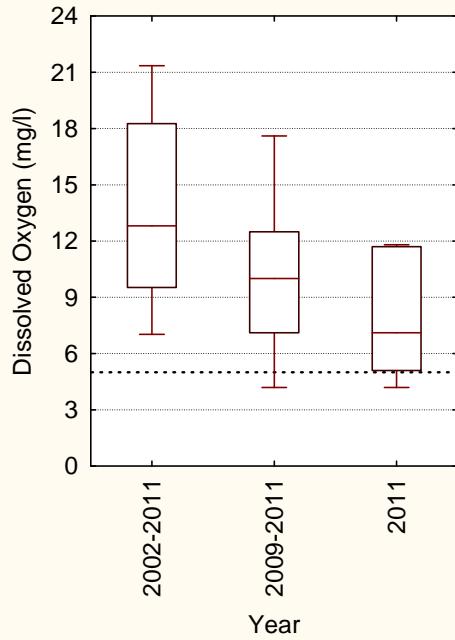
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	46.50	23.20	0.0	0.0	11.0	3.1	7.4	43.0	0.2	1.6	0.0	ND
Standard Error	28.50	14.80	0.0	0.0	0.0	0.8	0.0	23.0	0.2	0.8	0.0	ND
Median	46.50	23.20	0.0	0.0	11.0	3.1	7.4	43.0	0.2	1.6	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	ND	ND	0.0	ND
Standard Deviation	40.31	20.93	0.0	0.0	ND	1.1	ND	32.5	0.2	1.1	0.0	ND
Sample Variance	1624.50	438.08	0.0	0.0	ND	1.1	ND	1058.0	0.0	1.1	0.0	ND
Kurtosis	ND											
Skewness	ND											
Range	57.00	29.60	0.0	0.0	0.0	1.5	0.0	46.0	0.3	1.5	0.0	0.0
Minimum	18.00	8.40	0.0	0.0	11.0	2.3	7.4	20.0	0.0	0.8	0.0	0.0
Maximum	75.00	38.00	0.0	0.0	11.0	3.8	7.4	66.0	0.3	2.3	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	362.13	188.05	0.0	0.0	ND	9.5	ND	292.2	1.9	9.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	216	196	2.0	7.9	57.6	48.8	8.8	8.7
Standard Error	135	39	0.9	1.0	9.1	8.7	0.7	0.6
Median	216	220	2.2	8.7	64.0	57.0	9.8	9.1
Mode	ND	ND	0.0	ND	ND	ND	7.0	9.7
Standard Deviation	190	87	2.0	2.2	20.4	19.5	1.6	1.3
Sample Variance	36181	7557	4.0	4.7	415.3	381.7	2.6	1.6
Kurtosis	ND	0	-2.7	3.8	0.3	-0.2	-3.3	-0.6
Skewness	ND	-1	0.0	-1.9	-0.8	-0.8	-0.6	-0.9
Range	269	232	4.3	5.4	53.0	50.0	3.0	2.9
Minimum	81	68	0.0	4.2	27.0	20.0	7.0	6.8
Maximum	350	300	4.3	9.6	80.0	70.0	10.0	9.7
Count	2	5	5	5	5	5	5	5
Confidence Level(95.0%)	1709	108	2.5	2.7	25.3	24.3	2.0	1.6

ND=No Data

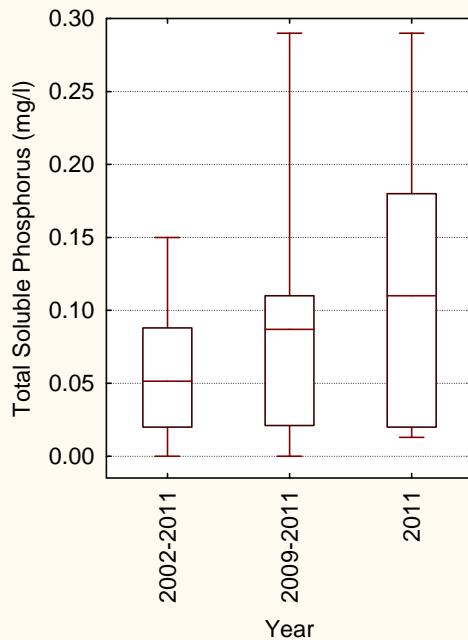
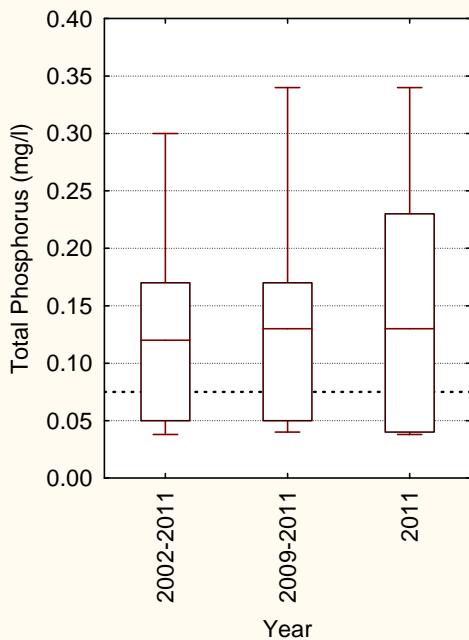
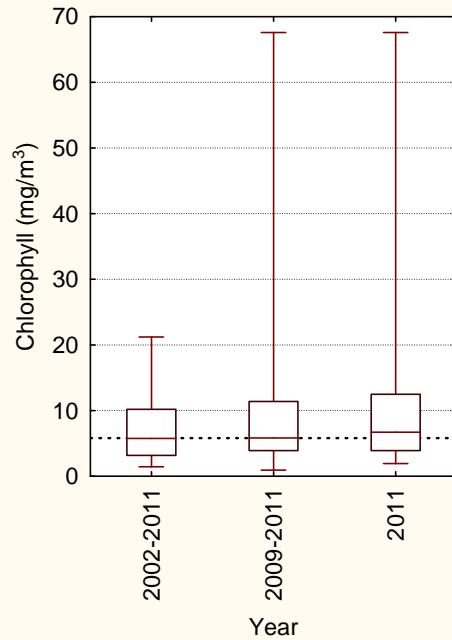
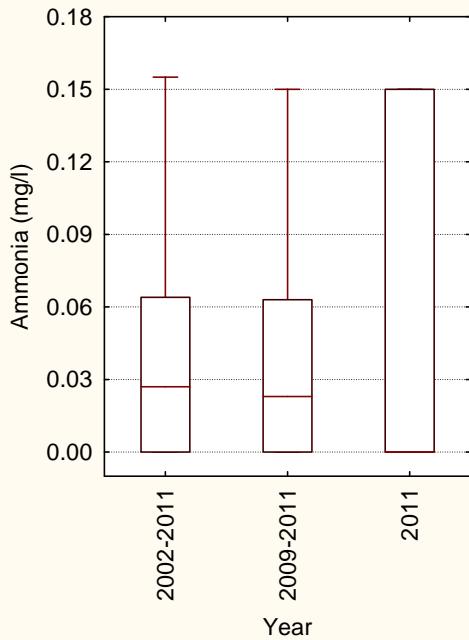
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Indian Creek at Port Washington Rd., Site IC-03



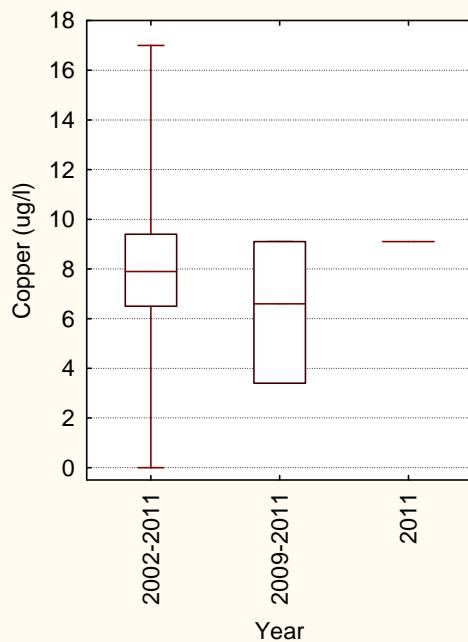
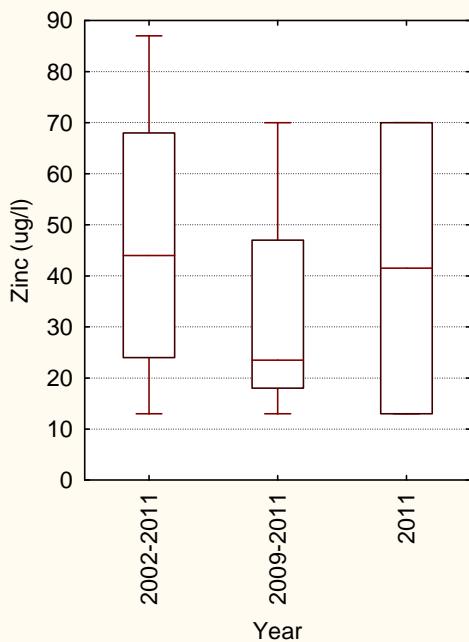
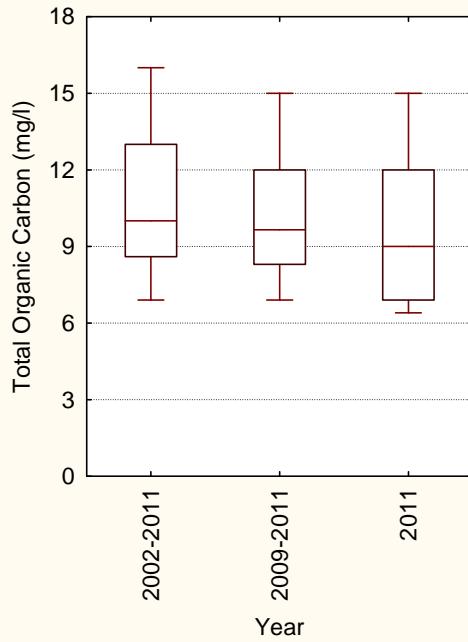
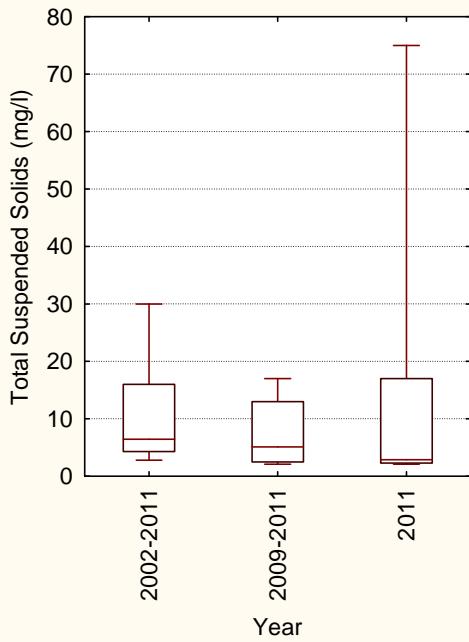
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Indian Creek at Port Washington Rd., Site IC-03



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Indian Creek at Port Washington Rd., Site IC-03



— Median □ 25%-75% ┤ 10%-90%

PORT WASHINGTON ROAD - SITE 3
INDIAN CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.3	13.5	8.1	15.53	0.23	0.018	0.25	0.043	1.33	0.160	0.115	ND
Standard Error	0.1	2.4	1.2	8.80	0.11	0.007	0.11	0.028	0.42	0.042	0.036	ND
Median	7.2	11.6	7.1	6.71	0.16	0.009	0.19	0.000	0.96	0.130	0.110	ND
Mode	7.8	ND	ND	ND	0.18	ND	0.19	0.000	ND	ND	0.110	ND
Standard Deviation	0.3	6.3	3.1	23.29	0.28	0.019	0.28	0.073	1.10	0.110	0.096	ND
Sample Variance	0.1	39.5	9.4	542.22	0.08	0.000	0.08	0.005	1.22	0.012	0.009	ND
Kurtosis	-1.4	-1.9	-1.8	6.38	6.31	0.751	5.93	-0.840	6.36	-0.559	0.872	ND
Skewness	0.6	0.4	0.1	2.50	2.47	1.197	2.36	1.230	2.49	0.493	0.967	ND
Range	0.8	15.5	7.6	65.65	0.82	0.054	0.82	0.150	3.16	0.302	0.277	0.00
Minimum	7.0	6.5	4.2	1.95	0.05	0.000	0.05	0.000	0.64	0.038	0.013	0.00
Maximum	7.8	22.0	11.8	67.60	0.87	0.054	0.87	0.150	3.80	0.340	0.290	0.00
Count	7	7	7	7	7	7	7	7	7	7	7	0
Confidence Level(95.0%)	0.3	5.8	2.8	21.54	0.26	0.018	0.26	0.068	1.02	0.102	0.089	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	707.1	690.5	5.2	16.7	13.9	1203	213.3	235	2.0	2020
Standard Error	ND	ND	112.6	117.3	1.9	10.0	10.3	203	36.4	125	0.3	1677
Median	ND	ND	690.0	687.5	2.3	2.9	4.6	1290	210.0	67	1.8	78
Mode	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	297.9	310.2	5.1	26.5	27.2	537	96.4	306	0.6	4437
Sample Variance	ND	ND	88723.8	96242.0	26.2	702.4	738.1	288709	9295.6	93596	0.4	19687674
Kurtosis	ND	ND	0.2	0.4	1.5	5.7	6.9	0	0.1	0	-1.6	7
Skewness	ND	ND	0.4	0.1	1.4	2.3	2.6	-1	-0.4	1	0.7	3
Range	0.0	0.0	910.0	968.0	13.8	72.9	74.0	1623	287.0	737	1.5	11966
Minimum	0.0	0.0	290.0	215.0	1.2	2.1	1.4	297	53.0	23	1.4	34
Maximum	0.0	0.0	1200.0	1183.0	15.0	75.0	75.4	1920	340.0	760	2.9	12000
Count	0	0	7	7	7	7	7	7	7	6	6	7
Confidence Level(95.0%)	ND	ND	275.5	286.9	4.7	24.5	25.1	497	89.2	321	0.6	4104

ND=No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD - SITE 3
INDIAN CREEK
WATER QUALITY DATA - 2011

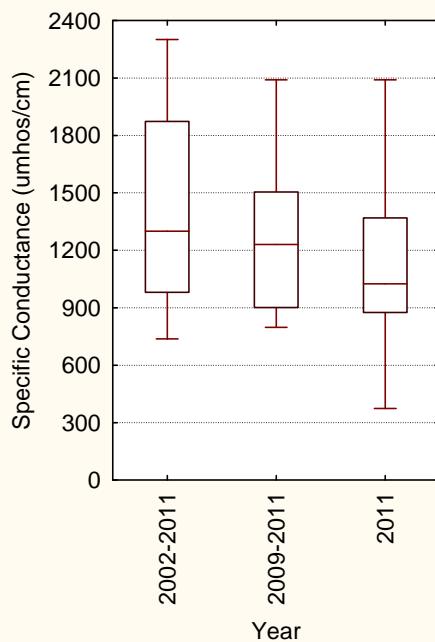
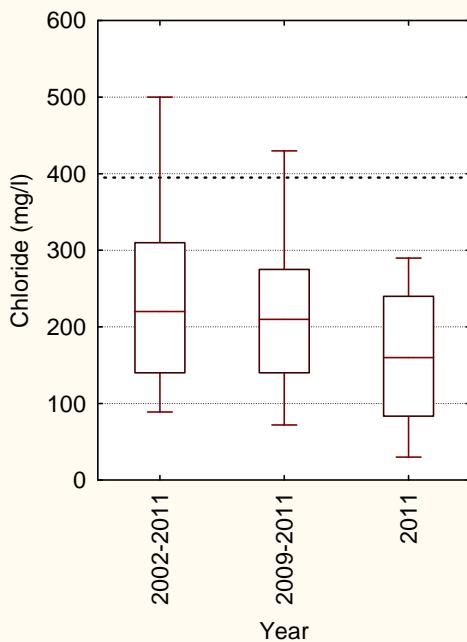
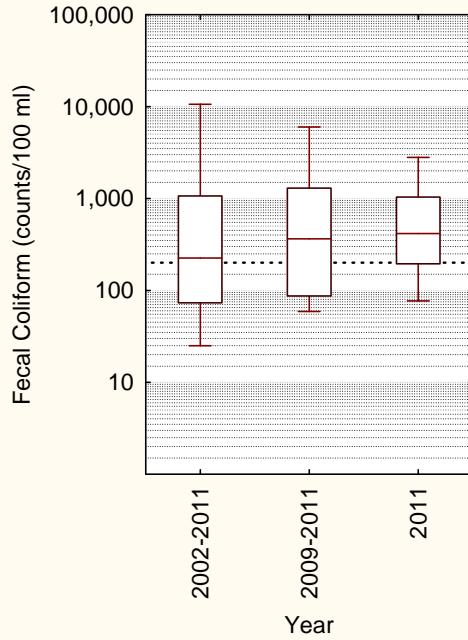
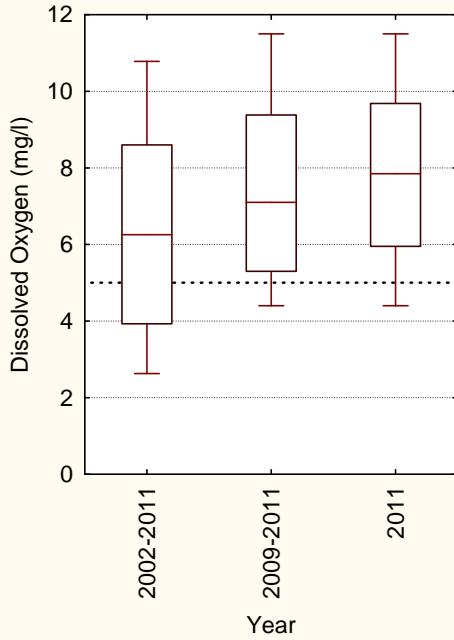
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	52.50	24.00	0.0	3.2	9.1	3.7	2.7	41.5	0.0	0.8	0.0	ND
Standard Error	28.50	12.00	0.0	3.2	0.0	0.5	0.0	28.5	0.0	0.8	0.0	ND
Median	52.50	24.00	0.0	3.2	9.1	3.7	2.7	41.5	0.0	0.8	0.0	ND
Mode	ND	ND	0.0	ND	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	40.31	16.97	0.0	4.5	ND	0.6	ND	40.3	0.0	1.1	0.0	ND
Sample Variance	1624.50	288.00	0.0	19.8	ND	0.4	ND	1624.5	0.0	1.3	0.0	ND
Kurtosis	ND											
Skewness	ND											
Range	57.00	24.00	0.0	6.3	0.0	0.9	0.0	57.0	0.0	1.6	0.0	0.0
Minimum	24.00	12.00	0.0	0.0	9.1	3.2	2.7	13.0	0.0	0.0	0.0	0.0
Maximum	81.00	36.00	0.0	6.3	9.1	4.1	2.7	70.0	0.0	1.6	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	362.13	152.47	0.0	40.0	ND	5.7	ND	362.1	0.0	10.2	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	230	198	1.5	8.2	59.7	50.0	9.7	9.3
Standard Error	120	29	0.7	1.2	6.7	6.5	1.1	0.9
Median	230	180	0.0	7.6	63.0	48.0	9.0	8.8
Mode	ND	250	0.0	ND	ND	ND	9.0	8.8
Standard Deviation	170	76	1.9	3.3	17.8	17.3	3.0	2.4
Sample Variance	28800	5844	3.7	10.6	316.6	297.7	8.9	5.9
Kurtosis	ND	0	-1.9	-1.2	0.9	-0.1	0.6	-0.8
Skewness	ND	-1	0.6	0.2	-0.8	-0.3	1.0	0.6
Range	240	233	4.4	9.0	55.0	52.0	8.6	6.4
Minimum	110	67	0.0	4.0	28.0	22.0	6.4	6.6
Maximum	350	300	4.4	13.0	83.0	74.0	15.0	13.0
Count	2	7	7	7	7	7	7	7
Confidence Level(95.0%)	1525	71	1.8	3.0	16.5	16.0	2.8	2.2

ND=No Data

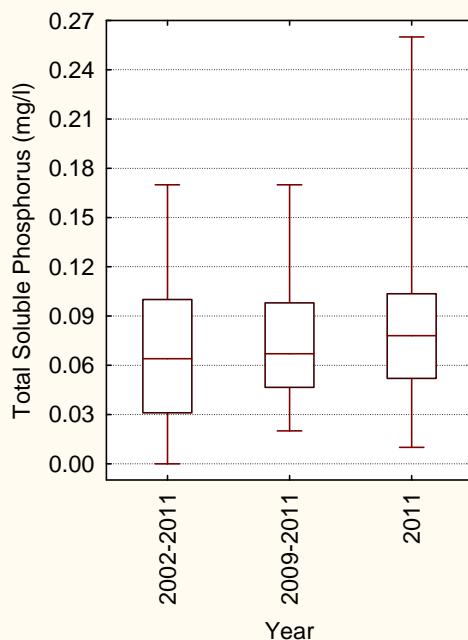
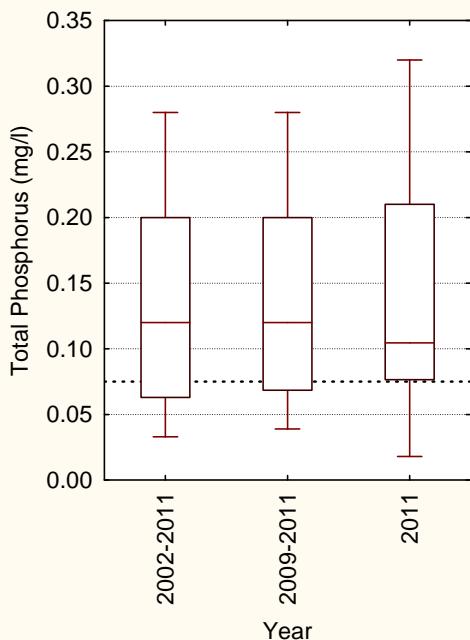
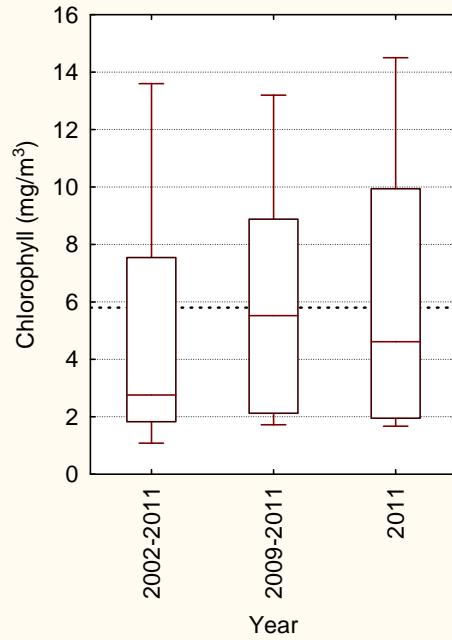
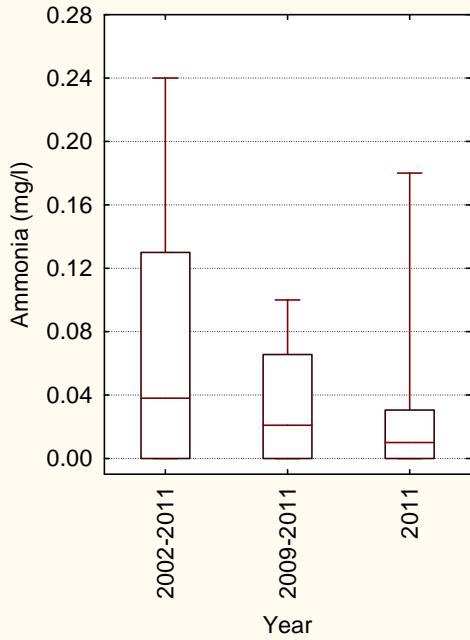
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
 Indian Creek at Bradley Rd., Site IC-04



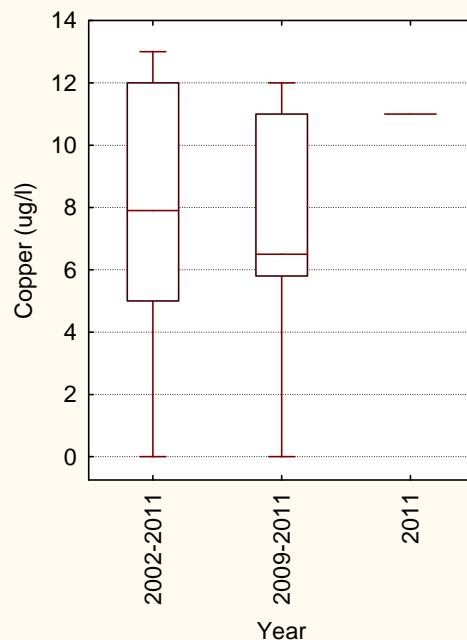
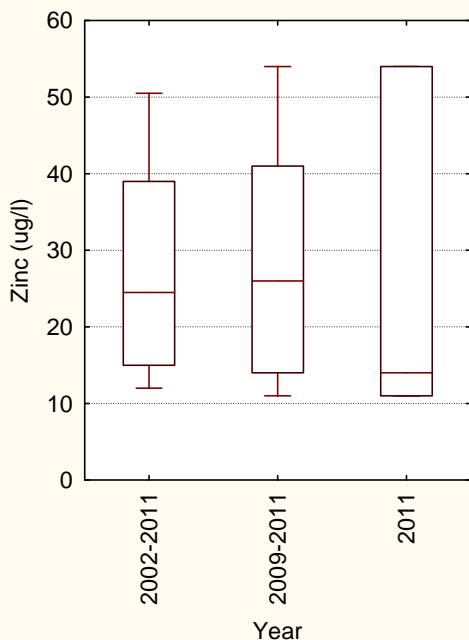
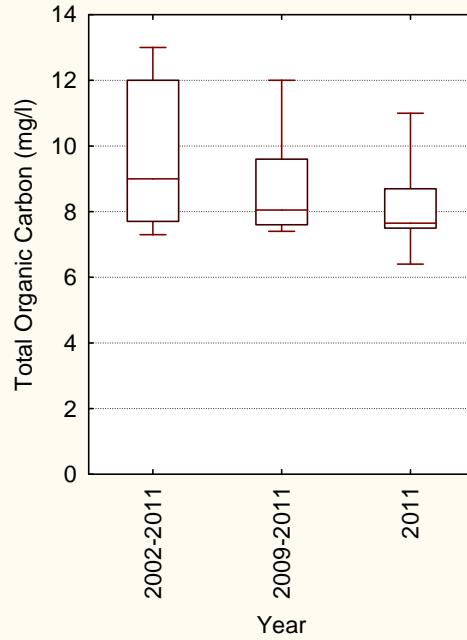
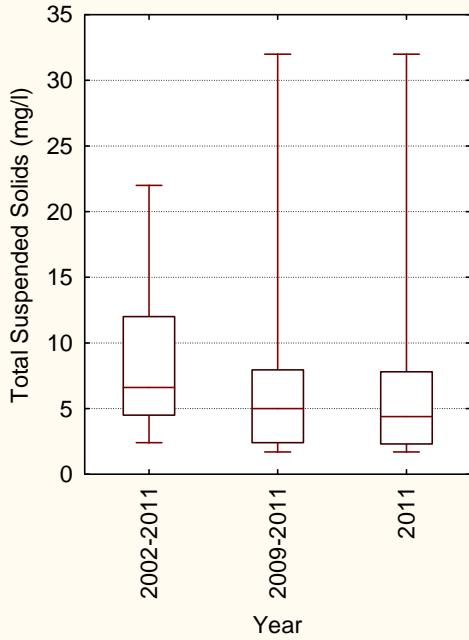
— Median □ 25%-75% ━ 10%-90%
 ----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Indian Creek at Bradley Rd., Site IC-04



— Median □ 25%-75% ▨ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Indian Creek at Bradley Rd., Site IC-04



— Median □ 25%-75% █ 10%-90%

BRADLEY ROAD - SITE 4
INDIAN CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	13.1	7.9	6.15	0.36	0.020	0.37	0.033	0.99	0.140	0.092	ND
Standard Error	0.1	2.0	0.9	1.69	0.17	0.007	0.17	0.022	0.16	0.037	0.027	ND
Median	7.6	13.5	7.9	4.62	0.13	0.012	0.15	0.010	0.82	0.105	0.078	ND
Mode	7.9	16.6	ND	ND	0.13	ND	ND	0.000	ND	ND	ND	ND
Standard Deviation	0.3	5.8	2.5	4.77	0.47	0.020	0.47	0.061	0.46	0.106	0.075	ND
Sample Variance	0.1	33.4	6.1	22.79	0.22	0.000	0.22	0.004	0.22	0.011	0.006	ND
Kurtosis	-1.0	-1.4	-1.0	-0.71	3.56	3.786	3.34	6.752	3.18	-0.215	4.223	ND
Skewness	-0.1	-0.3	0.2	0.78	1.86	1.864	1.81	2.544	1.80	0.989	1.802	ND
Range	1.0	16.0	7.1	12.83	1.40	0.060	1.40	0.180	1.39	0.302	0.250	0.00
Minimum	7.1	4.0	4.4	1.67	0.00	0.003	0.00	0.000	0.61	0.018	0.010	0.00
Maximum	8.1	20.0	11.5	14.50	1.40	0.063	1.40	0.180	2.00	0.320	0.260	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.8	2.1	3.99	0.39	0.016	0.39	0.051	0.39	0.088	0.063	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	576.3	568.4	2.7	7.8	20.5	1126	160.9	772	2.6	587
Standard Error	ND	ND	90.0	91.3	0.7	3.6	11.1	177	32.9	319	0.2	233
Median	ND	ND	525.0	518.4	2.6	4.4	9.2	1025	160.0	415	2.6	340
Mode	ND	ND	540.0	ND	ND	ND	ND	ND	160.0	ND	ND	ND
Standard Deviation	ND	ND	254.6	258.1	1.9	10.1	31.4	502	93.1	903	0.5	658
Sample Variance	ND	ND	64826.8	66615.0	3.6	101.1	985.6	251770	8663.3	816159	0.3	432872
Kurtosis	ND	ND	0.2	0.1	1.2	6.7	6.9	2	-1.2	4	-0.4	1
Skewness	ND	ND	0.6	0.6	0.7	2.5	2.6	1	0.1	2	0.1	2
Range	0.0	0.0	800.0	803.5	6.3	30.3	93.6	1716	260.0	2723	1.6	1852
Minimum	0.0	0.0	200.0	192.7	0.0	1.7	2.8	374	30.0	77	1.9	48
Maximum	0.0	0.0	1000.0	996.2	6.3	32.0	96.4	2090	290.0	2800	3.4	1900
Count	0	0	8	8	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	212.9	215.8	1.6	8.4	26.2	419	77.8	755	0.4	550

ND=No Data

Provisional MMSD Water Quality Data

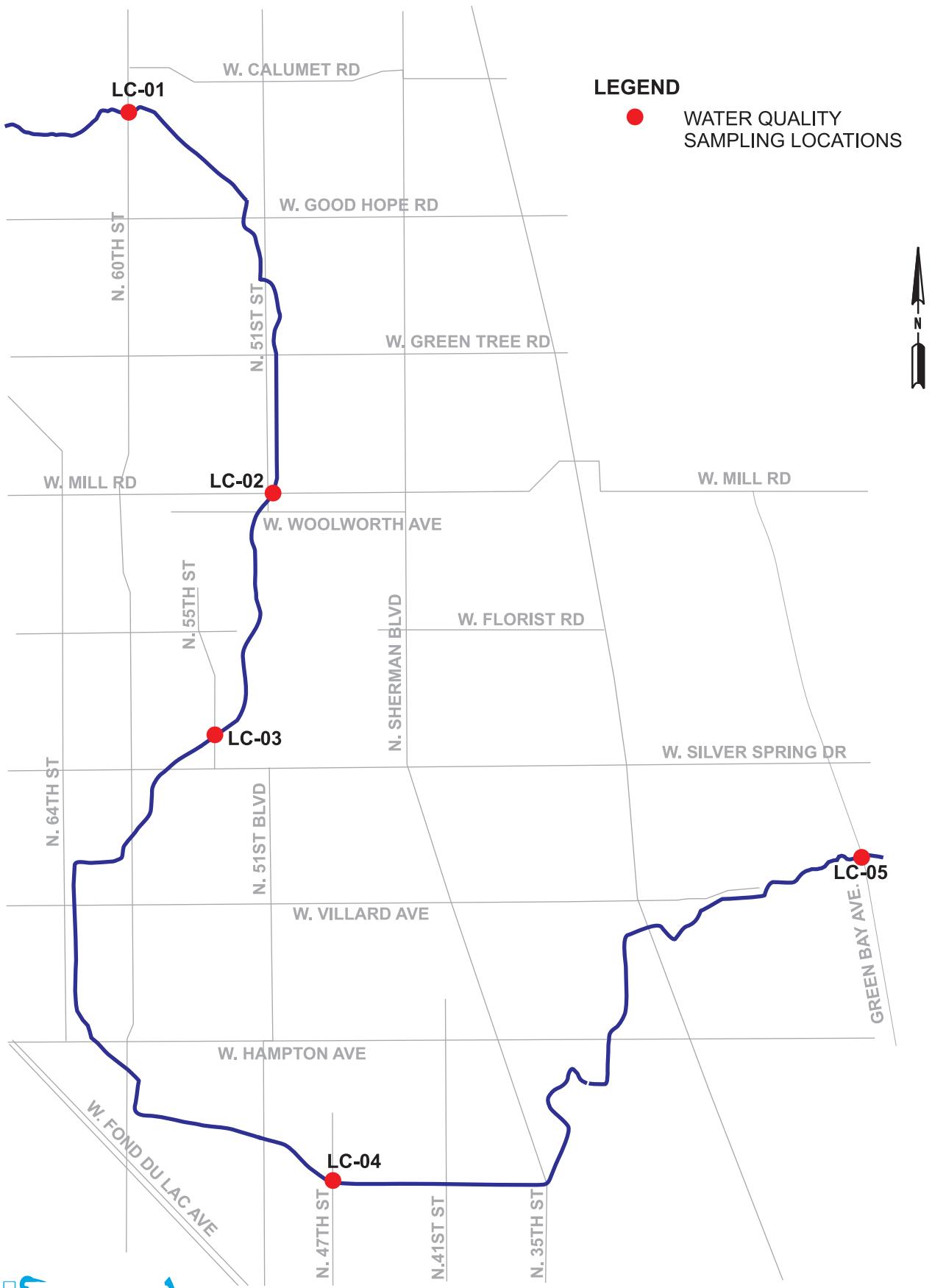
BRADLEY ROAD - SITE 4
INDIAN CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	48.33	23.40	0.0	0.0	11.0	2.4	4.0	26.3	0.2	2.2	0.0	ND
Standard Error	17.03	9.21	0.0	0.0	0.0	0.4	1.8	13.9	0.2	0.6	0.0	ND
Median	48.00	22.00	0.0	0.0	11.0	2.7	4.0	14.0	0.0	2.4	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	29.50	15.95	0.0	0.0	ND	0.7	2.5	24.0	0.3	1.0	0.0	ND
Sample Variance	870.33	254.28	0.0	0.0	ND	0.4	6.1	576.3	0.1	1.0	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	0.05	0.39	ND	ND	ND	-1.7	ND	1.7	1.7	-0.9	ND	ND
Range	59.00	31.80	0.0	0.0	0.0	1.2	3.5	43.0	0.6	2.0	0.0	0.0
Minimum	19.00	8.20	0.0	0.0	11.0	1.6	2.2	11.0	0.0	1.1	0.0	0.0
Maximum	78.00	40.00	0.0	0.0	11.0	2.8	5.7	54.0	0.6	3.1	0.0	0.0
Count	3	3	3	3	1	3	2	3	3	3	3	0
Confidence Level(95.0%)	73.29	39.61	0.0	0.0	ND	1.7	22.2	59.6	0.9	2.5	0.0	ND

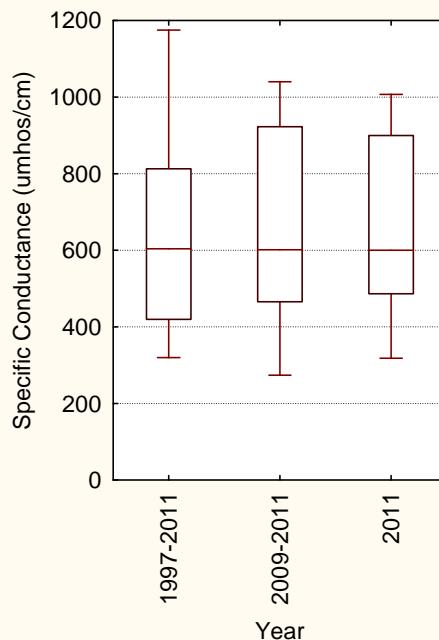
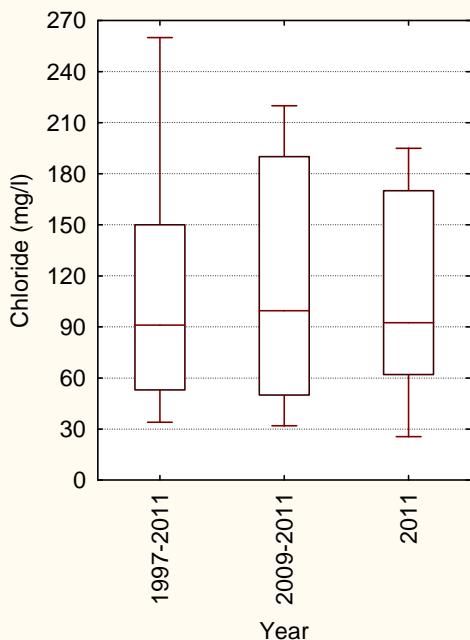
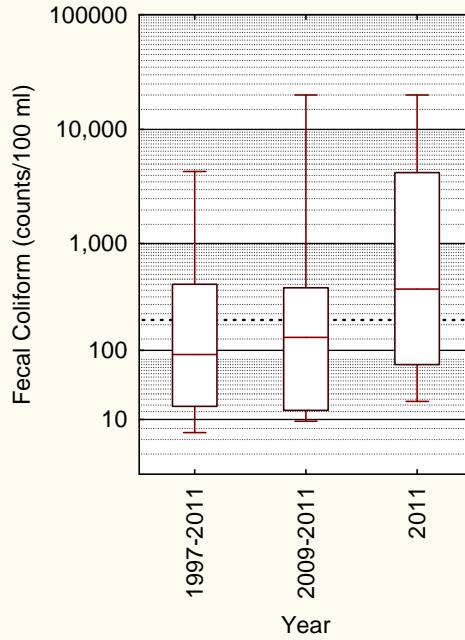
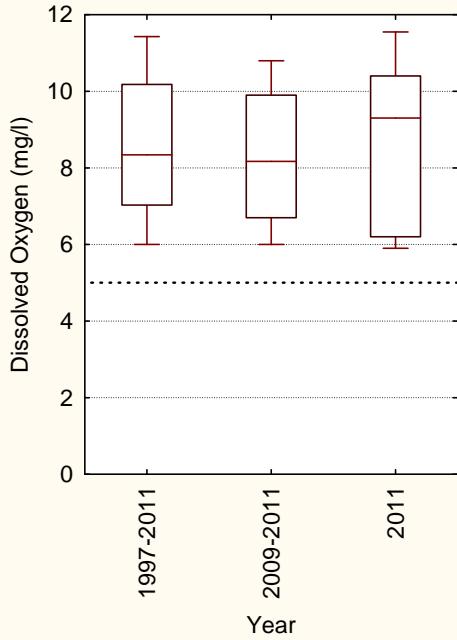
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	217	178	1.7	7.3	53.3	45.4	8.1	7.9
Standard Error	80	26	0.6	0.8	5.5	5.7	0.5	0.5
Median	210	160	2.2	7.0	50.5	43.0	7.7	7.7
Mode	ND	ND	0.0	ND	64.0	ND	7.5	ND
Standard Deviation	139	74	1.6	2.2	15.5	16.0	1.5	1.3
Sample Variance	19361	5542	2.6	4.7	239.9	257.1	2.2	1.7
Kurtosis	ND	0	-0.7	-2.0	0.4	-0.2	1.2	0.5
Skewness	0	0	0.2	0.1	-0.1	0.1	1.3	0.2
Range	278	235	4.4	5.3	51.0	51.0	4.6	4.2
Minimum	82	65	0.0	4.7	27.0	20.0	6.4	5.8
Maximum	360	300	4.4	10.0	78.0	71.0	11.0	10.0
Count	3	8	8	8	8	8	8	8
Confidence Level(95.0%)	346	62	1.3	1.8	12.9	13.4	1.2	1.1

ND=No Data

Provisional MMSD Water Quality Data

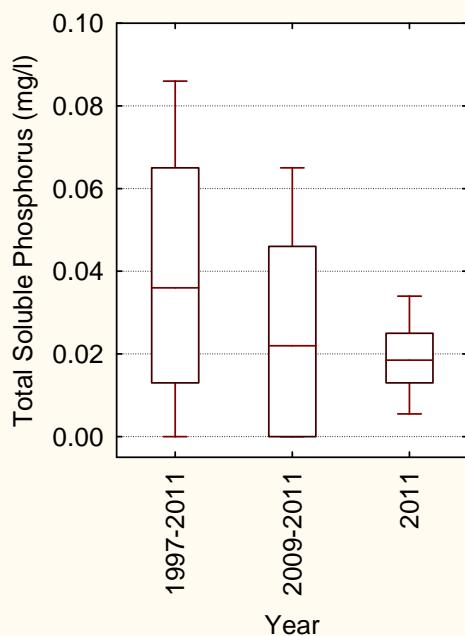
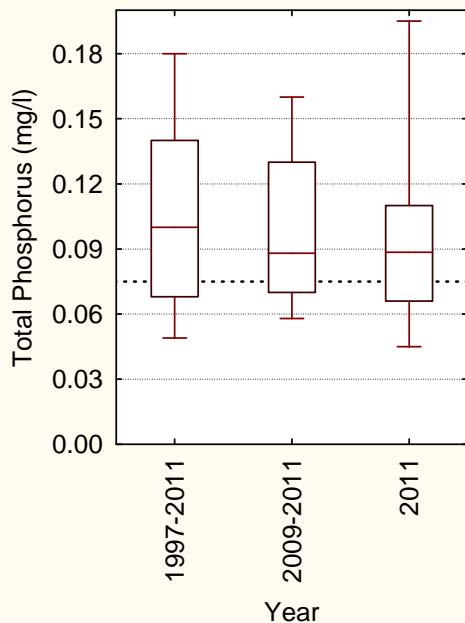
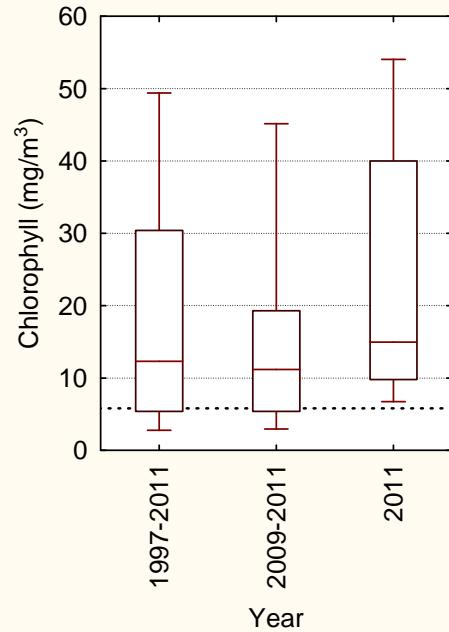
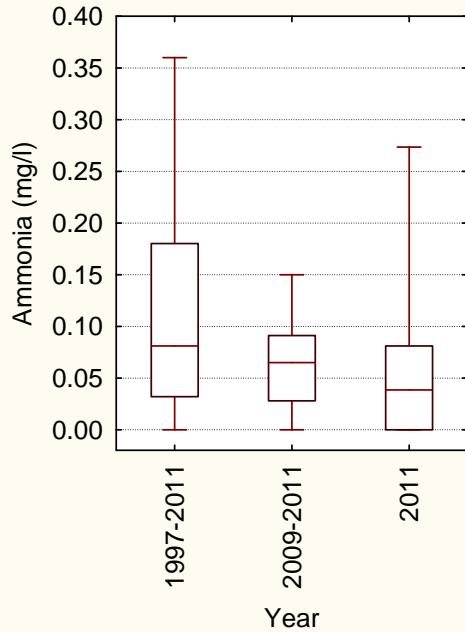


MMSD Water Quality Monitoring Program Data
Lincoln Creek at 60th St., Site LC-01



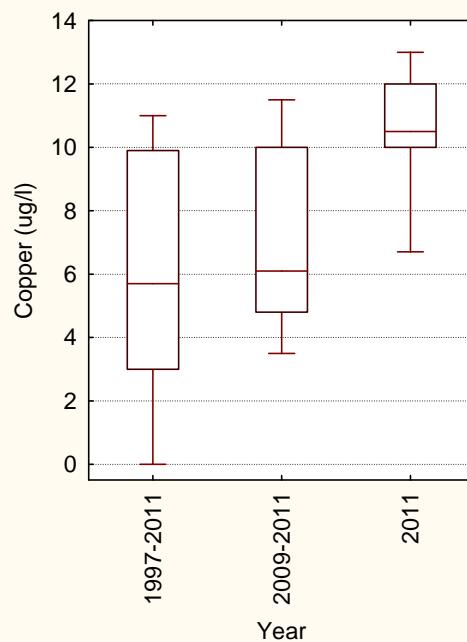
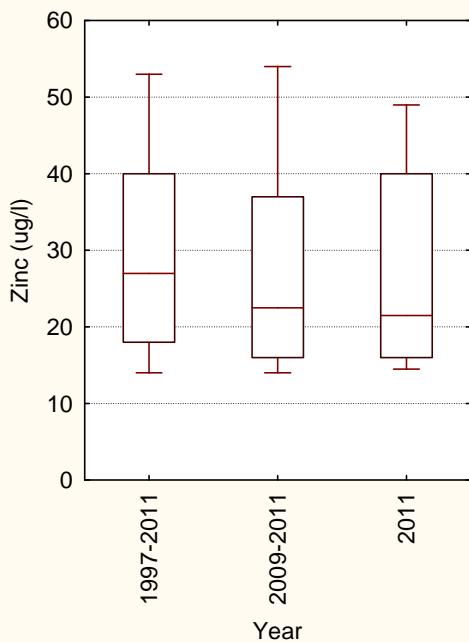
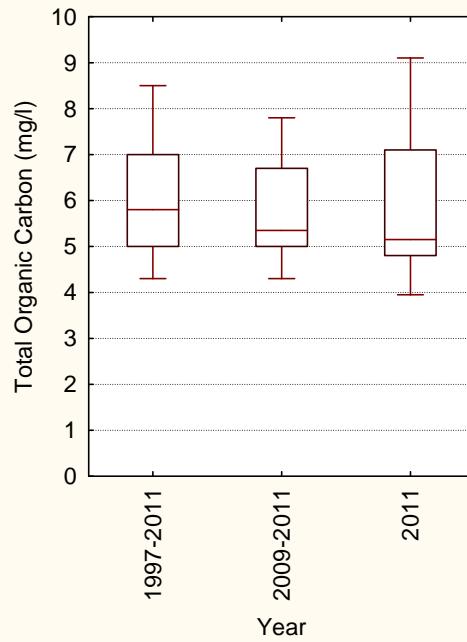
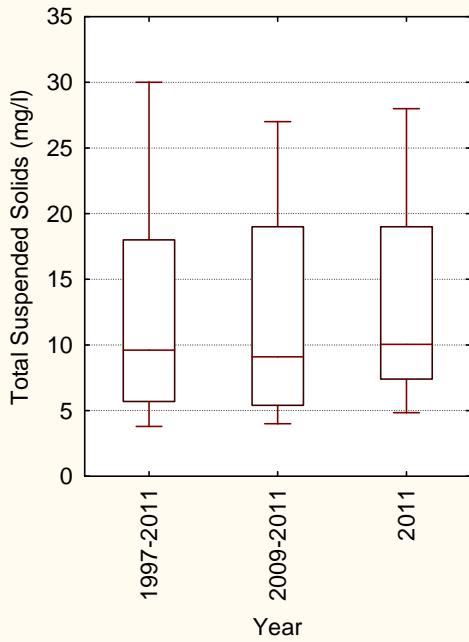
— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Lincoln Creek at 60th St., Site LC-01



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Lincoln Creek at 60th St., Site LC-01



— Median □ 25%-75% █ 10%-90%

60TH STREET, NORTH OF GOOD HOPE ROAD - SITE 1
 LINCOLN CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	15.4	8.8	24.62	0.25	0.018	0.27	0.077	0.85	0.100	0.019	ND
Standard Error	0.1	2.1	0.7	6.29	0.07	0.004	0.07	0.043	0.12	0.019	0.003	ND
Median	7.7	17.5	9.3	14.95	0.20	0.015	0.23	0.039	0.92	0.089	0.019	ND
Mode	7.6	ND	9.3	ND	ND	0.040	ND	0.000	0.92	ND	0.034	ND
Standard Deviation	0.4	6.5	2.3	19.89	0.21	0.014	0.22	0.136	0.37	0.061	0.010	ND
Sample Variance	0.1	42.4	5.2	395.80	0.04	0.000	0.05	0.019	0.14	0.004	0.000	ND
Kurtosis	-0.2	-0.6	-1.0	-0.13	0.56	-0.447	0.67	7.923	3.61	4.337	0.082	ND
Skewness	0.3	-0.7	0.0	0.95	0.98	0.707	0.95	2.718	-0.92	1.858	-0.055	ND
Range	1.2	19.3	6.8	59.73	0.64	0.040	0.68	0.450	1.50	0.218	0.034	0.00
Minimum	7.2	4.2	5.8	4.57	0.04	0.000	0.04	0.000	0.00	0.032	0.000	0.00
Maximum	8.4	23.4	12.6	64.30	0.68	0.040	0.72	0.450	1.50	0.250	0.034	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.3	4.7	1.6	14.23	0.15	0.010	0.15	0.098	0.27	0.043	0.007	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	387.0	373.6	6.2	13.4	16.4	661	110.2	3633	2.7	ND
Standard Error	ND	ND	48.5	48.3	1.2	2.8	4.8	84	20.7	2785	0.4	ND
Median	ND	ND	365.0	354.8	6.3	10.1	10.5	600	92.5	390	2.6	ND
Mode	ND	ND	290.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	153.5	152.7	3.7	8.9	15.2	266	65.5	7368	1.0	ND
Sample Variance	ND	ND	23556.7	23313.2	13.4	80.0	231.5	70719	4287.3	54291579	1.0	ND
Kurtosis	ND	ND	-1.6	-1.5	1.3	0.7	3.7	-1	-1.5	6	-0.4	ND
Skewness	ND	ND	0.1	0.1	0.9	1.2	1.9	0	0.1	2	0.5	ND
Range	0.0	0.0	430.0	443.3	12.6	28.0	48.6	786	182.0	19977	2.9	0
Minimum	0.0	0.0	170.0	151.0	1.4	4.0	4.8	264	18.0	23	1.4	0
Maximum	0.0	0.0	600.0	594.3	14.0	32.0	53.4	1050	200.0	20000	4.3	0
Count	0	0	10	10	10	10	10	10	10	7	7	0
Confidence Level(95.0%)	ND	ND	109.8	109.2	2.6	6.4	10.9	190	46.8	6815	0.9	ND

ND = No Data

Provisional MMSD Water Quality Data

60TH STREET, NORTH OF GOOD HOPE ROAD - SITE 1
 LINCOLN CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	41.80	17.98	0.0	0.8	10.5	4.4	5.6	27.2	0.0	1.2	0.0	ND
Standard Error	3.98	2.32	0.0	0.8	0.9	1.3	1.1	4.5	0.0	0.3	0.0	ND
Median	40.50	14.50	0.0	0.0	10.5	2.5	6.1	21.5	0.0	1.4	0.0	ND
Mode	34.00	22.00	0.0	0.0	10.0	2.1	6.1	16.0	0.0	0.0	0.0	ND
Standard Deviation	12.59	7.33	0.0	2.6	2.2	4.0	3.2	14.2	0.1	0.9	0.0	ND
Sample Variance	158.62	53.74	0.0	6.6	4.7	15.9	10.2	201.7	0.0	0.9	0.0	ND
Kurtosis	0.20	-0.88	ND	10.0	1.4	3.7	-0.4	-0.5	10.0	-0.5	ND	ND
Skewness	0.57	0.68	ND	3.2	-0.9	2.0	-0.7	0.9	3.2	0.0	ND	ND
Range	43.00	21.20	0.0	8.1	6.3	12.2	9.0	40.0	0.4	2.8	0.0	0.0
Minimum	23.00	8.80	0.0	0.0	6.7	1.8	0.0	14.0	0.0	0.0	0.0	0.0
Maximum	66.00	30.00	0.0	8.1	13.0	14.0	9.0	54.0	0.4	2.8	0.0	0.0
Count	10	10	10	10	6	10	8	10	10	10	10	0
Confidence Level(95.0%)	9.01	5.24	0.0	1.8	2.3	2.9	2.7	10.2	0.1	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	179	125	3.6	14.3	37.8	31.8	6.0	5.3
Standard Error	20	13	0.6	1.8	3.6	3.3	0.7	0.4
Median	160	110	3.2	15.0	33.5	28.0	5.2	5.0
Mode	160	100	ND	16.0	32.0	28.0	5.0	5.0
Standard Deviation	62	41	1.9	5.8	11.3	10.3	2.1	1.3
Sample Variance	3821	1658	3.8	33.9	127.5	106.2	4.5	1.7
Kurtosis	0	0	0.0	0.4	0.2	0.8	2.9	-0.6
Skewness	1	1	-0.1	0.6	1.1	1.3	1.5	0.7
Range	196	125	6.5	19.6	33.0	33.0	7.4	3.9
Minimum	94	75	0.0	6.4	25.0	20.0	3.6	3.6
Maximum	290	200	6.5	26.0	58.0	53.0	11.0	7.5
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	44	29	1.4	4.2	8.1	7.4	1.5	0.9

ND = No Data

Provisional MMSD Water Quality Data

51ST STREET AND WOOLWORTH AVENUE - SITE 2
 LINCOLN CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.5	13.4	7.8	12.50	0.30	0.015	0.31	0.005	0.66	0.073	0.033	ND
Standard Error	0.1	1.9	0.9	2.57	0.08	0.004	0.08	0.004	0.08	0.014	0.007	ND
Median	7.5	15.7	7.4	11.60	0.23	0.013	0.24	0.000	0.69	0.074	0.030	ND
Mode	7.5	ND	12.3	ND	ND	0.013	ND	0.000	0.89	ND	ND	ND
Standard Deviation	0.2	6.2	2.8	8.14	0.25	0.011	0.26	0.011	0.26	0.044	0.021	ND
Sample Variance	0.0	37.9	7.9	66.21	0.06	0.000	0.07	0.000	0.07	0.002	0.000	ND
Kurtosis	-0.7	-1.0	-0.7	0.08	1.70	-0.392	1.57	7.056	4.62	-0.889	-1.084	ND
Skewness	-0.3	-0.7	0.7	0.46	1.37	0.722	1.34	2.639	-1.89	0.302	0.468	ND
Range	0.5	16.0	7.5	26.52	0.80	0.034	0.82	0.035	0.89	0.134	0.059	0.00
Minimum	7.2	3.4	4.8	1.48	0.06	0.000	0.07	0.000	0.00	0.016	0.008	0.00
Maximum	7.7	19.4	12.3	28.00	0.86	0.034	0.89	0.035	0.89	0.150	0.067	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.1	4.4	2.0	5.82	0.18	0.008	0.19	0.008	0.19	0.032	0.015	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	519.0	512.1	2.7	6.9	5.4	922	156.7	3653	3.2	ND
Standard Error	ND	ND	56.0	56.6	0.9	2.4	1.5	102	23.6	1615	0.2	ND
Median	ND	ND	480.0	472.4	2.2	3.9	3.1	857	135.0	1400	3.1	ND
Mode	ND	ND	ND	ND	0.0	ND	ND	1270	130.0	12000	4.1	ND
Standard Deviation	ND	ND	177.2	178.9	2.9	7.5	4.9	324	74.7	4846	0.7	ND
Sample Variance	ND	ND	31410.0	32001.0	8.3	56.3	23.9	104848	5586.7	23482575	0.4	ND
Kurtosis	ND	ND	-1.1	-1.1	3.9	7.1	0.8	-1	-1.1	0	-0.6	ND
Skewness	ND	ND	0.1	0.1	1.7	2.6	1.5	0	0.1	1	0.1	ND
Range	0.0	0.0	540.0	544.2	9.7	25.5	13.4	955	229.0	11870	2.0	0
Minimum	0.0	0.0	240.0	233.9	0.0	1.5	1.6	425	41.0	130	2.1	0
Maximum	0.0	0.0	780.0	778.1	9.7	27.0	15.0	1380	270.0	12000	4.1	0
Count	0	0	10	10	10	10	10	10	10	9	9	0
Confidence Level(95.0%)	ND	ND	126.8	128.0	2.1	5.4	3.5	232	53.5	3725	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

51ST STREET AND WOOLWORTH AVENUE - SITE 2
 LINCOLN CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	58.00	23.60	0.0	0.6	11.1	2.7	6.2	21.9	0.1	1.1	0.0	ND
Standard Error	5.23	2.13	0.0	0.6	1.0	0.5	1.2	3.3	0.1	0.3	0.0	ND
Median	58.00	23.00	0.0	0.0	11.0	2.4	7.7	18.5	0.0	1.1	0.0	ND
Mode	ND	20.00	0.0	0.0	11.0	1.5	ND	ND	0.0	0.0	0.0	ND
Standard Deviation	16.55	6.74	0.0	2.0	2.5	1.5	3.5	10.3	0.2	0.9	0.0	ND
Sample Variance	274.00	45.38	0.0	4.0	6.4	2.2	12.1	106.8	0.0	0.8	0.0	ND
Kurtosis	0.05	-0.19	ND	10.0	-1.2	5.3	-0.3	-0.8	10.0	-1.2	ND	ND
Skewness	0.18	0.08	ND	3.2	-0.3	2.2	-1.0	0.8	3.2	0.1	ND	ND
Range	56.00	22.00	0.0	6.3	6.4	5.0	9.3	28.0	0.5	2.4	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	7.6	1.5	0.0	11.0	0.0	0.0	0.0	0.0
Maximum	88.00	34.00	0.0	6.3	14.0	6.5	9.3	39.0	0.5	2.4	0.0	0.0
Count	10	10	10	10	7	10	8	10	10	10	10	0
Confidence Level(95.0%)	11.84	4.82	0.0	1.4	2.3	1.1	2.9	7.4	0.1	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	243	177	1.5	8.3	53.3	47.7	5.4	5.0
Standard Error	22	16	0.6	1.4	5.9	5.9	0.6	0.4
Median	235	175	1.1	9.1	48.0	44.5	5.2	5.0
Mode	ND	110	0.0	ND	ND	ND	ND	ND
Standard Deviation	68	50	1.8	4.3	18.7	18.8	1.8	1.4
Sample Variance	4623	2534	3.1	18.8	349.3	352.0	3.2	1.9
Kurtosis	0	-1	-0.9	2.2	1.4	1.6	-0.3	-0.5
Skewness	0	0	0.6	0.1	1.2	1.2	0.7	0.4
Range	230	140	4.8	17.0	62.0	62.0	5.3	4.2
Minimum	130	110	0.0	0.0	32.0	27.0	3.2	3.2
Maximum	360	250	4.8	17.0	94.0	89.0	8.5	7.4
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	49	36	1.3	3.1	13.4	13.4	1.3	1.0

ND = No Data

Provisional MMSD Water Quality Data

55TH STREET AND THURSTON AVENUE - SITE 3
 LINCOLN CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.3	13.2	9.4	9.81	0.24	0.012	0.25	0.020	0.52	0.041	0.013	ND
Standard Error	0.1	1.7	0.8	1.99	0.06	0.004	0.07	0.013	0.09	0.011	0.005	ND
Median	7.3	15.5	9.3	8.43	0.19	0.007	0.20	0.000	0.47	0.030	0.009	ND
Mode	7.5	ND	ND	10.30	ND	0.000	ND	0.000	0.38	0.037	0.000	ND
Standard Deviation	0.2	5.3	2.5	6.30	0.20	0.013	0.21	0.043	0.27	0.035	0.016	ND
Sample Variance	0.0	27.6	6.2	39.71	0.04	0.000	0.04	0.002	0.07	0.001	0.000	ND
Kurtosis	-1.4	-0.8	0.7	3.39	1.99	1.801	1.69	1.745	0.78	2.130	5.114	ND
Skewness	0.0	-0.8	0.7	1.68	1.53	1.392	1.45	1.828	-0.06	1.700	2.073	ND
Range	0.5	14.9	8.6	21.67	0.63	0.040	0.65	0.110	0.94	0.108	0.053	0.00
Minimum	7.0	4.0	5.7	3.23	0.06	0.000	0.06	0.000	0.00	0.012	0.000	0.00
Maximum	7.5	18.9	14.3	24.90	0.69	0.040	0.71	0.110	0.94	0.120	0.053	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.1	3.8	1.8	4.51	0.14	0.009	0.15	0.030	0.19	0.025	0.011	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	692.0	687.4	1.6	4.6	5.5	1169	174.8	1924	2.7	ND
Standard Error	ND	ND	77.8	78.7	0.4	1.0	1.5	128	21.9	1074	0.2	ND
Median	ND	ND	750.0	746.2	1.7	3.9	3.6	1305	195.0	375	2.6	ND
Mode	ND	ND	840.0	ND	0.0	4.6	ND	ND	240.0	ND	ND	ND
Standard Deviation	ND	ND	246.0	248.9	1.3	3.3	4.8	405	69.1	3396	0.7	ND
Sample Variance	ND	ND	60528.9	61960.7	1.7	10.7	22.8	164343	4777.1	11535636	0.5	ND
Kurtosis	ND	ND	0.3	0.3	2.3	2.1	5.3	0	0.1	2	-0.1	ND
Skewness	ND	ND	-0.4	-0.4	1.0	1.5	2.2	-1	-0.9	2	0.9	ND
Range	0.0	0.0	860.0	870.6	4.6	10.6	15.8	1346	212.0	9127	2.1	0
Minimum	0.0	0.0	240.0	228.0	0.0	1.4	2.0	414	38.0	73	1.9	0
Maximum	0.0	0.0	1100.0	1098.6	4.6	12.0	17.8	1760	250.0	9200	4.0	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	176.0	178.1	0.9	2.3	3.4	290	49.4	2430	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

55TH STREET AND THURSTON AVENUE - SITE 3
 LINCOLN CREEK
 WATER QUALITY DATA - 2011

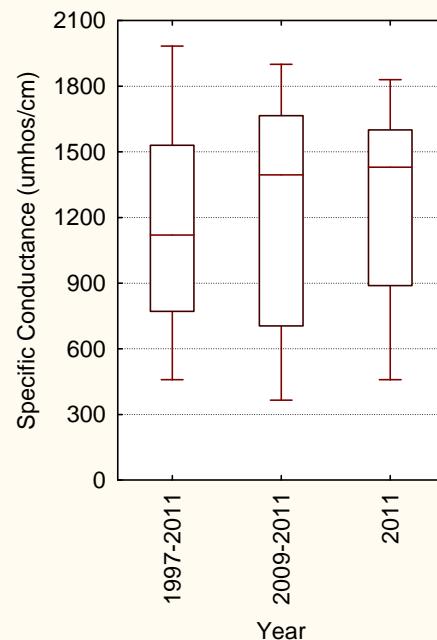
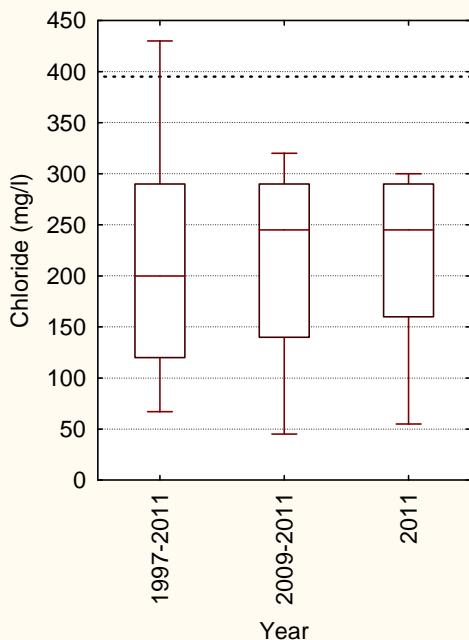
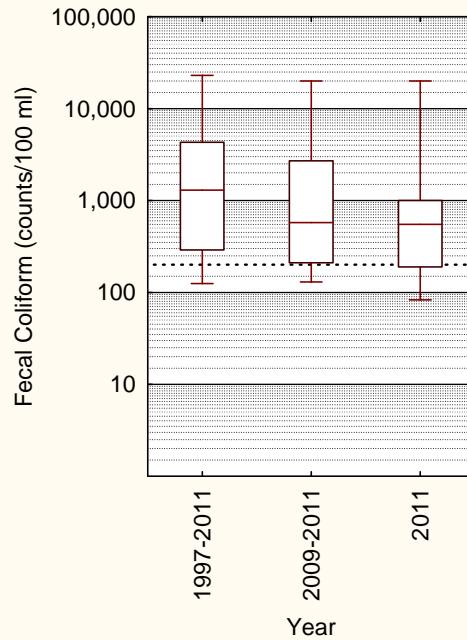
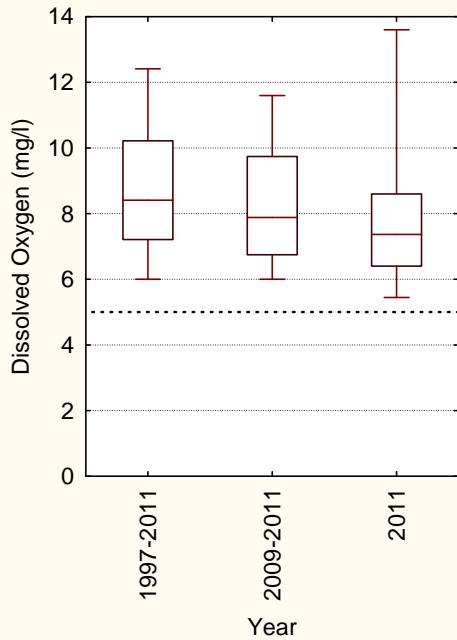
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	86.70	37.00	0.0	0.7	9.5	2.1	5.1	16.3	0.2	0.5	0.0	ND
Standard Error	9.97	4.73	0.0	0.7	0.7	0.2	1.1	3.0	0.1	0.2	0.0	ND
Median	94.50	40.00	0.0	0.0	9.8	2.1	5.5	12.5	0.0	0.0	0.0	ND
Mode	100.00	46.00	0.0	0.0	12.0	2.1	5.5	11.0	0.0	0.0	0.0	ND
Standard Deviation	31.53	14.94	0.0	2.2	2.1	0.8	2.9	9.4	0.3	0.7	0.0	ND
Sample Variance	994.01	223.33	0.0	4.6	4.3	0.6	8.5	88.1	0.1	0.5	0.0	ND
Kurtosis	0.25	0.17	ND	10.0	0.5	2.7	0.2	2.4	2.9	-0.1	ND	ND
Skewness	-0.33	0.00	ND	3.2	-0.7	1.3	-1.0	1.6	1.8	1.1	ND	ND
Range	108.00	52.00	0.0	6.8	6.5	2.8	8.4	30.2	0.9	1.8	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	5.5	1.1	0.0	7.8	0.0	0.0	0.0	0.0
Maximum	140.00	64.00	0.0	6.8	12.0	3.9	8.4	38.0	0.9	1.8	0.0	0.0
Count	10	10	10	10	9	10	7	10	10	10	10	0
Confidence Level(95.0%)	22.55	10.69	0.0	1.5	1.6	0.6	2.7	6.7	0.2	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	370	248	1.0	6.6	59.8	54.9	4.7	4.3
Standard Error	45	28	0.5	1.5	5.5	5.6	0.6	0.5
Median	400	280	0.0	6.7	63.0	59.0	4.8	4.2
Mode	450	300	0.0	0.0	74.0	ND	3.2	3.1
Standard Deviation	141	89	1.6	4.9	17.5	17.7	1.8	1.6
Sample Variance	20022	7907	2.5	23.5	305.1	314.5	3.3	2.6
Kurtosis	0	-1	-0.1	0.3	-1.6	-1.4	0.6	-0.5
Skewness	0	-1	1.3	0.3	-0.3	-0.4	0.7	0.4
Range	490	280	4.1	16.0	47.0	47.0	6.2	5.1
Minimum	130	100	0.0	0.0	33.0	28.0	2.2	2.0
Maximum	620	380	4.1	16.0	80.0	75.0	8.4	7.1
Count	10	10	10	10	10	10	10	9
Confidence Level(95.0%)	101	64	1.1	3.5	12.5	12.7	1.3	1.2

ND = No Data

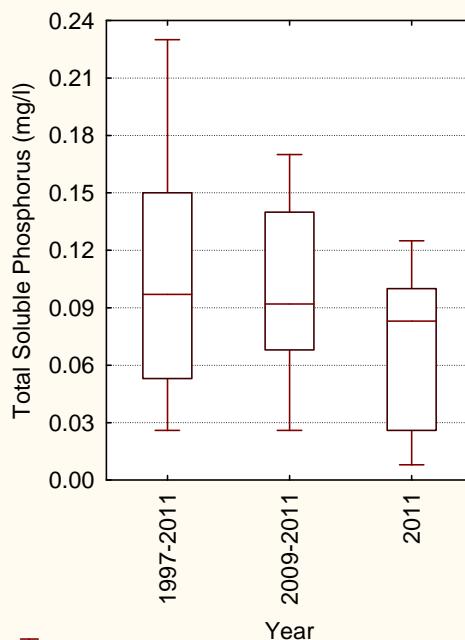
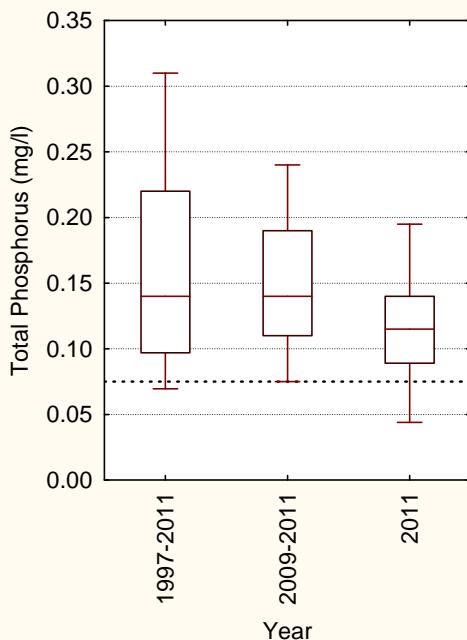
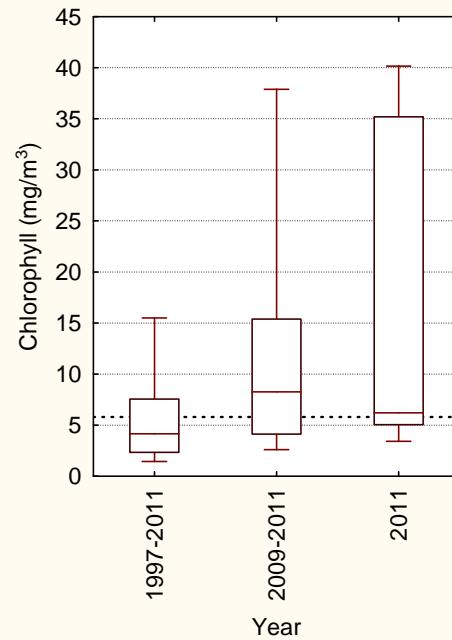
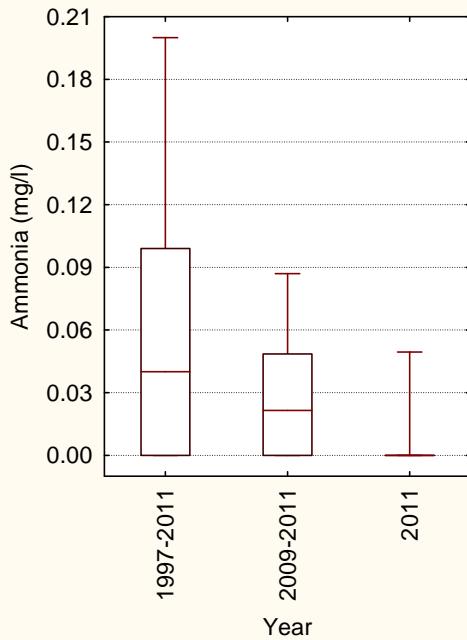
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Lincoln Creek at 47th St. and Congress, Site LC-04



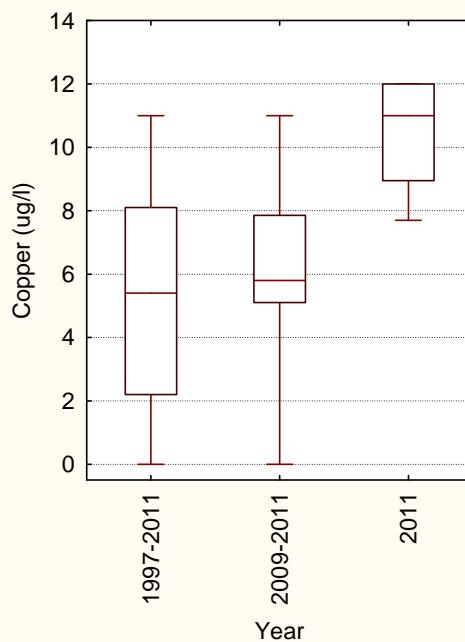
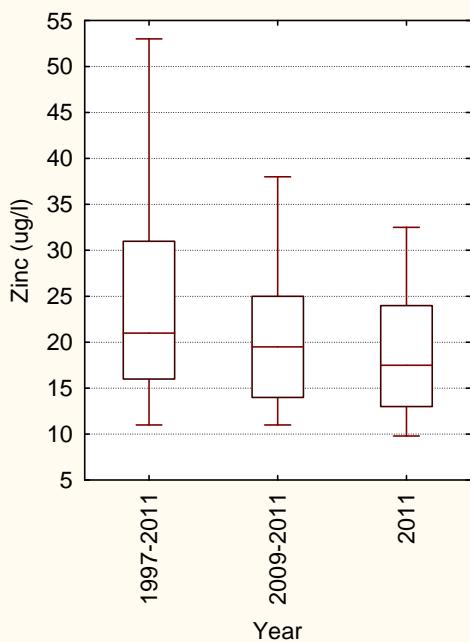
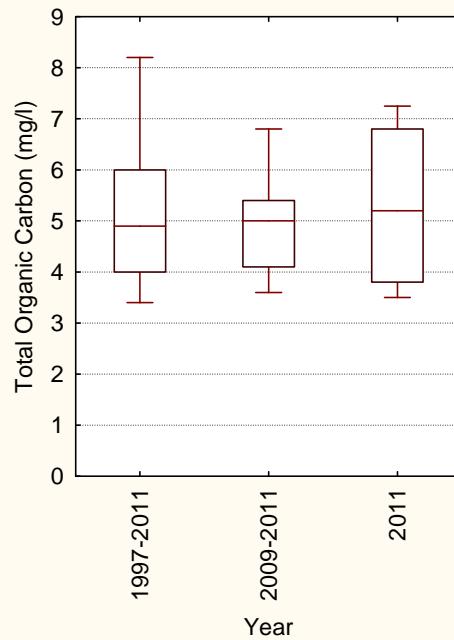
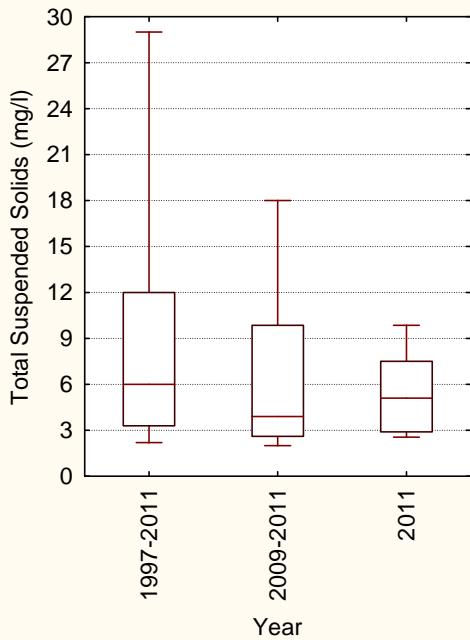
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Lincoln Creek at 47th St. and Congress, Site LC-04



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Lincoln Creek at 47th St. and Congress, Site LC-04



— Median □ 25%-75% ━ 10%-90%

47TH STREET AND CONGRESS STREET - SITE 4
LINCOLN CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	14.6	8.3	16.91	0.58	0.022	0.60	0.010	0.58	0.118	0.073	ND
Standard Error	0.1	2.0	0.9	5.11	0.11	0.005	0.11	0.010	0.08	0.017	0.014	ND
Median	7.7	16.9	7.4	6.20	0.56	0.020	0.60	0.000	0.62	0.115	0.083	ND
Mode	7.7	ND	7.3	ND	ND	0.019	0.60	0.000	ND	0.140	ND	ND
Standard Deviation	0.2	6.3	3.0	16.16	0.36	0.015	0.36	0.031	0.26	0.053	0.045	ND
Sample Variance	0.1	40.2	8.9	261.07	0.13	0.000	0.13	0.001	0.07	0.003	0.002	ND
Kurtosis	0.1	-1.0	0.6	-1.35	-1.12	5.734	-1.09	10.000	2.10	-0.577	-0.755	ND
Skewness	-0.3	-0.7	1.2	0.77	-0.01	2.024	-0.13	3.162	-0.98	0.119	-0.454	ND
Range	0.8	16.9	9.1	41.48	1.02	0.056	1.02	0.099	0.97	0.158	0.140	0.00
Minimum	7.2	4.3	4.7	2.72	0.08	0.005	0.08	0.000	0.00	0.042	0.000	0.00
Maximum	8.0	21.2	13.8	44.20	1.10	0.061	1.10	0.099	0.97	0.200	0.140	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	4.5	2.1	11.56	0.26	0.011	0.26	0.022	0.19	0.038	0.032	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	712.0	706.3	2.5	5.7	5.3	1268	214.0	2745	2.8	2311
Standard Error	ND	ND	86.7	86.9	0.6	0.9	1.1	162	29.6	2164	0.2	1443
Median	ND	ND	810.0	802.5	1.8	5.1	4.2	1430	245.0	550	2.7	720
Mode	ND	ND	ND	ND	1.3	7.5	ND	ND	300.0	190	2.3	ND
Standard Deviation	ND	ND	274.2	274.9	1.8	2.8	3.5	513	93.7	6493	0.7	4564
Sample Variance	ND	ND	75173.3	75575.6	3.3	8.0	12.4	262891	8776.7	42157680	0.5	20828612
Kurtosis	ND	ND	-0.6	-0.6	-1.3	-1.3	8.1	-1	-0.2	9	2.2	9
Skewness	ND	ND	-0.9	-0.9	0.5	0.4	2.8	-1	-1.1	3	1.3	3
Range	0.0	0.0	770.0	769.8	5.1	7.7	12.0	1535	255.0	19917	2.4	14917
Minimum	0.0	0.0	210.0	205.0	0.0	2.3	2.9	365	45.0	83	1.9	83
Maximum	0.0	0.0	980.0	974.8	5.1	10.0	14.9	1900	300.0	20000	4.3	15000
Count	0	0	10	10	10	10	10	10	10	9	9	10
Confidence Level(95.0%)	ND	ND	196.1	196.7	1.3	2.0	2.5	367	67.0	4991	0.5	3265

ND = No Data

Provisional MMSD Water Quality Data

47TH STREET AND CONGRESS STREET - SITE 4
 LINCOLN CREEK
 WATER QUALITY DATA - 2011

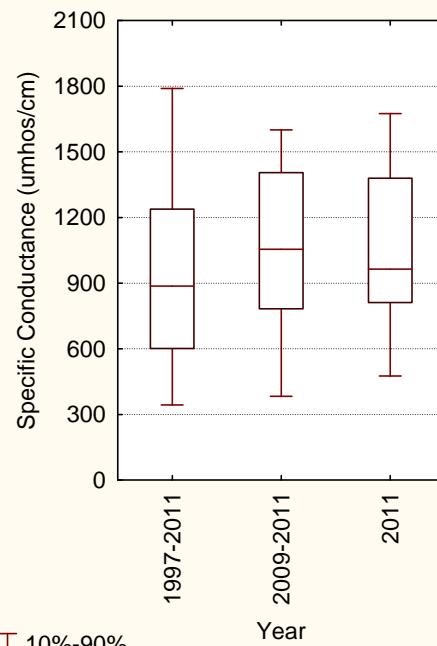
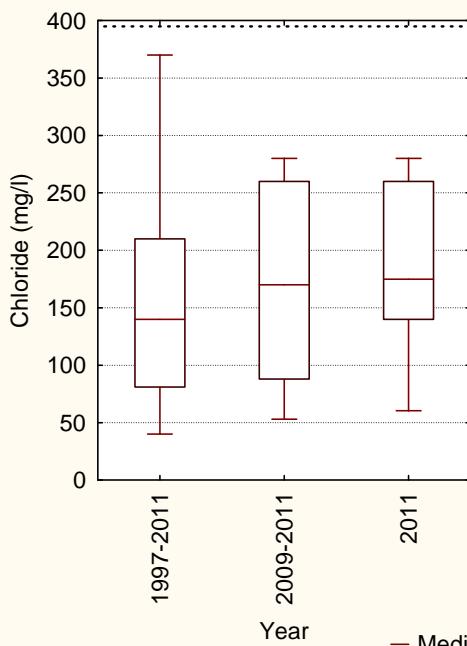
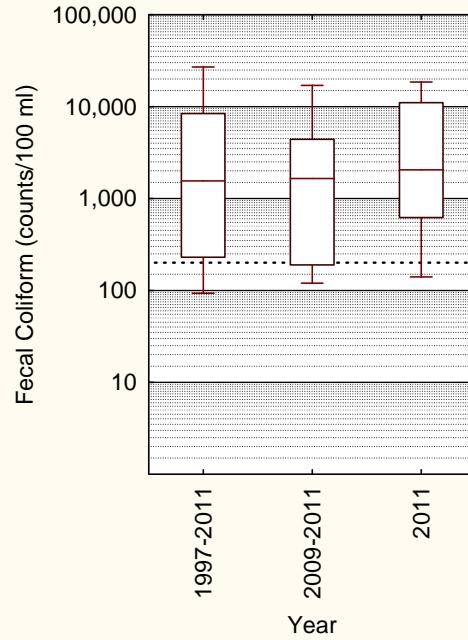
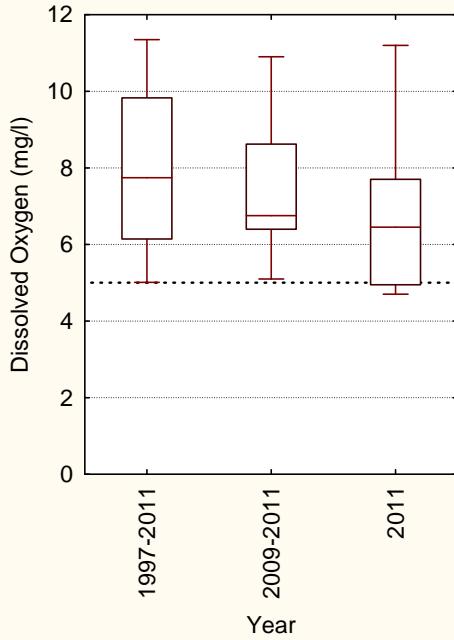
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	71.00	30.02	0.1	0.7	10.5	2.3	4.1	19.0	0.1	0.8	0.0	ND
Standard Error	7.16	3.51	0.1	0.7	0.6	0.2	1.3	2.9	0.1	0.2	0.0	ND
Median	76.00	34.00	0.0	0.0	11.0	2.3	3.7	17.5	0.0	0.9	0.0	ND
Mode	ND	35.00	0.0	0.0	12.0	2.6	ND	19.0	0.0	0.0	0.0	ND
Standard Deviation	22.65	11.10	0.3	2.1	1.8	0.7	3.2	9.1	0.3	0.8	0.0	ND
Sample Variance	512.89	123.25	0.1	4.4	3.2	0.4	10.3	83.4	0.1	0.6	0.0	ND
Kurtosis	0.19	0.16	10.0	10.0	-0.9	-1.2	-0.7	2.5	10.0	-1.9	ND	ND
Skewness	-1.00	-0.94	3.2	3.2	-0.9	0.2	0.3	1.4	3.2	0.1	ND	ND
Range	67.00	34.80	0.9	6.6	4.3	2.0	8.8	32.4	1.0	1.8	0.0	0.0
Minimum	26.00	8.20	0.0	0.0	7.7	1.4	0.0	7.6	0.0	0.0	0.0	0.0
Maximum	93.00	43.00	0.9	6.6	12.0	3.4	8.8	40.0	1.0	1.8	0.0	0.0
Count	10	10	10	10	8	10	6	10	10	10	10	0
Confidence Level(95.0%)	16.20	7.94	0.2	1.5	1.5	0.5	3.4	6.5	0.2	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	301	196	1.8	8.6	53.2	47.9	5.2	4.8
Standard Error	32	21	0.5	1.5	4.4	4.5	0.5	0.5
Median	335	205	2.5	9.5	56.0	51.5	5.2	5.2
Mode	350	230	0.0	0.0	ND	59.0	3.8	5.2
Standard Deviation	101	65	1.6	4.9	14.0	14.1	1.5	1.5
Sample Variance	10166	4232	2.7	24.0	194.8	199.0	2.3	2.2
Kurtosis	0	2	-2.1	0.6	0.6	0.8	-1.5	-0.9
Skewness	-1	-1	-0.3	-1.1	-1.0	-1.1	0.3	0.3
Range	302	216	3.8	15.0	43.0	45.0	4.0	4.4
Minimum	98	54	0.0	0.0	24.0	18.0	3.4	3.0
Maximum	400	270	3.8	15.0	67.0	63.0	7.4	7.4
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	72	47	1.2	3.5	10.0	10.1	1.1	1.1

ND = No Data

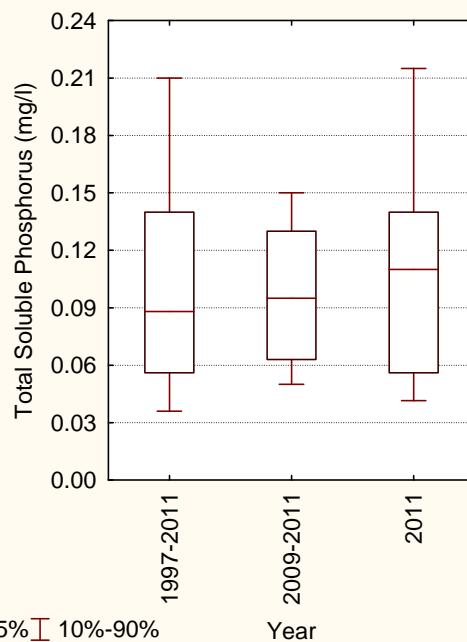
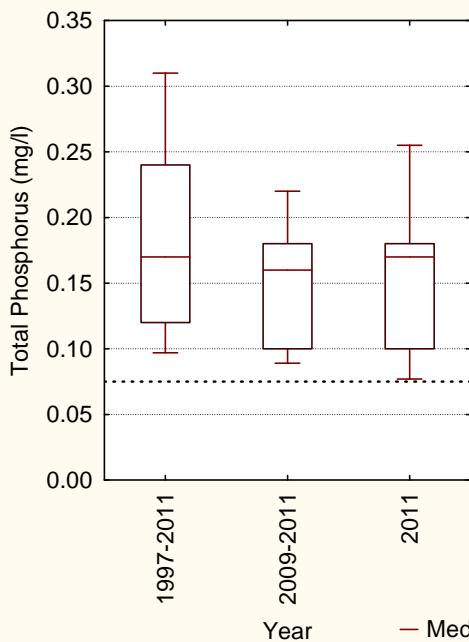
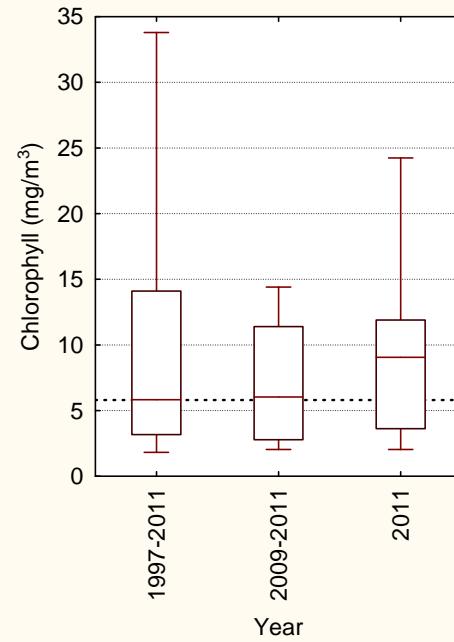
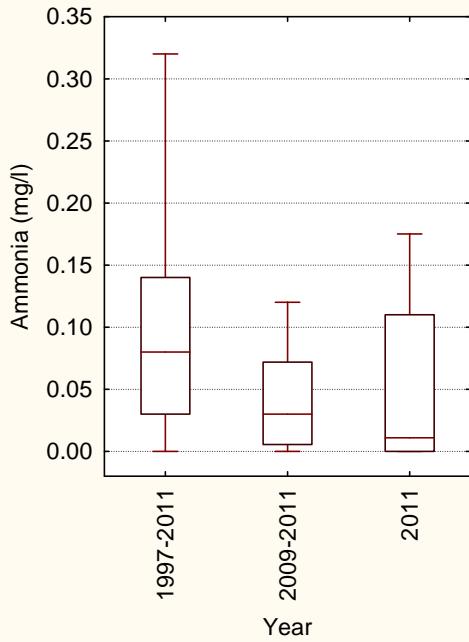
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Lincoln Creek at Green Bay Ave., Site LC-05



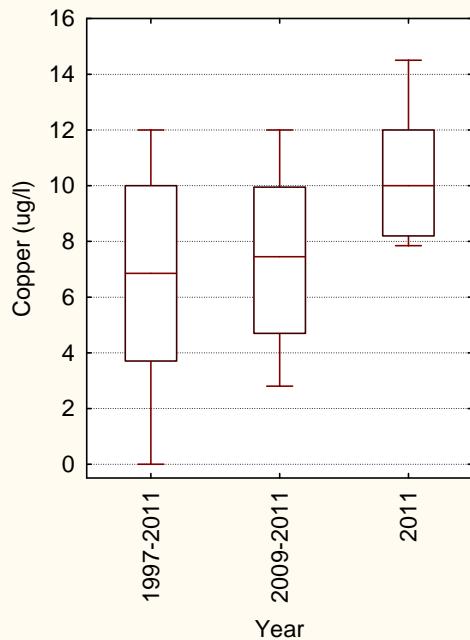
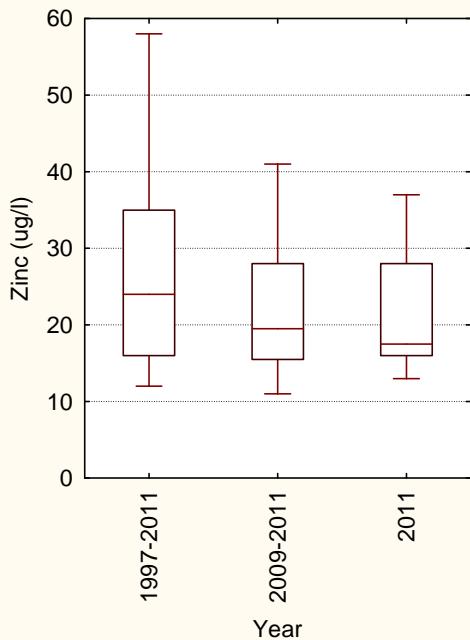
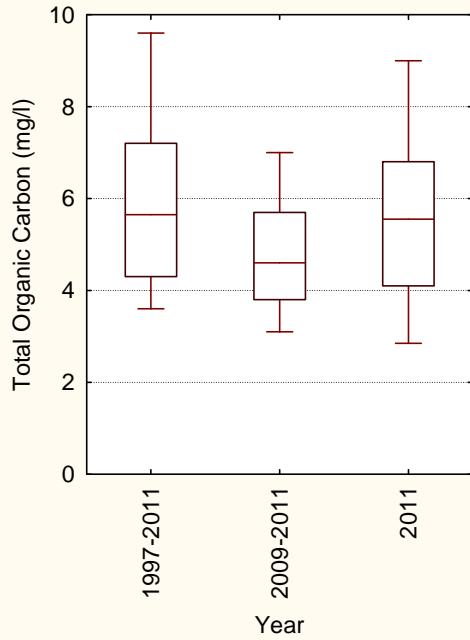
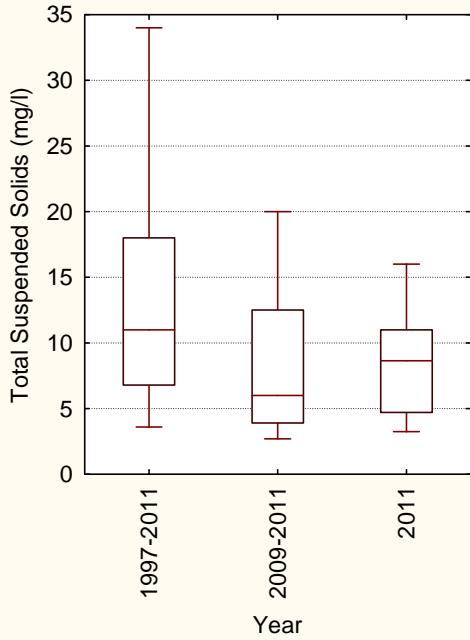
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Lincoln Creek at Green Bay Ave., Site LC-05



— Median □ 25%-75% | 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Lincoln Creek at Green Bay Ave., Site LC-05



— Median □ 25%-75% ━ 10%-90%

GREEN BAY AVENUE - SITE 5
LINCOLN CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	15.0	7.0	10.33	0.58	0.035	0.62	0.051	0.59	0.161	0.113	ND
Standard Error	0.1	1.9	0.8	2.91	0.09	0.009	0.09	0.025	0.10	0.022	0.022	ND
Median	7.6	17.1	6.5	9.06	0.62	0.029	0.69	0.011	0.59	0.170	0.110	ND
Mode	7.4	20.7	ND	ND	0.26	0.024	0.28	0.000	0.63	0.180	0.110	ND
Standard Deviation	0.3	6.1	2.4	9.19	0.29	0.027	0.30	0.078	0.32	0.071	0.070	ND
Sample Variance	0.1	36.7	5.8	84.44	0.09	0.001	0.09	0.006	0.10	0.005	0.005	ND
Kurtosis	0.6	-1.1	0.2	4.29	-1.21	8.259	-1.26	2.145	3.30	2.238	3.371	ND
Skewness	0.5	-0.6	1.1	1.86	-0.27	2.768	-0.42	1.632	0.62	0.981	1.534	ND
Range	1.1	16.4	6.9	31.72	0.87	0.096	0.86	0.230	1.30	0.255	0.240	0.00
Minimum	7.1	5.2	4.6	1.38	0.12	0.014	0.14	0.000	0.00	0.065	0.040	0.00
Maximum	8.2	21.5	11.5	33.10	0.99	0.110	1.00	0.230	1.30	0.320	0.280	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	4.3	1.7	6.57	0.21	0.020	0.21	0.056	0.23	0.051	0.050	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	591.0	582.1	2.9	8.9	9.5	1034	180.1	5670	3.3	3092
Standard Error	ND	ND	71.0	72.1	0.4	1.6	1.7	139	25.5	2416	0.2	1408
Median	ND	ND	570.0	560.3	2.9	8.7	8.0	965	175.0	2050	3.3	1350
Mode	ND	ND	ND	ND	ND	ND	ND	ND	280.0	ND	ND	ND
Standard Deviation	ND	ND	224.7	228.0	1.1	4.9	5.5	439	80.6	7640	0.8	4453
Sample Variance	ND	ND	50476.7	51997.6	1.3	24.4	30.2	192378	6497.0	58363933	0.6	19827307
Kurtosis	ND	ND	-1.0	-1.0	0.7	2.1	-0.5	0	-0.9	1	-0.9	4
Skewness	ND	ND	0.0	0.0	0.5	1.1	0.8	0	-0.3	1	-0.2	2
Range	0.0	0.0	670.0	685.3	4.0	17.3	16.2	1427	227.0	21880	2.3	13770
Minimum	0.0	0.0	240.0	220.0	1.1	2.7	2.9	383	53.0	120	2.1	230
Maximum	0.0	0.0	910.0	905.3	5.1	20.0	19.1	1810	280.0	22000	4.3	14000
Count	0	0	10	10	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	ND	ND	160.7	163.1	0.8	3.5	3.9	314	57.7	5465	0.6	3185

ND = No Data

Provisional MMSD Water Quality Data

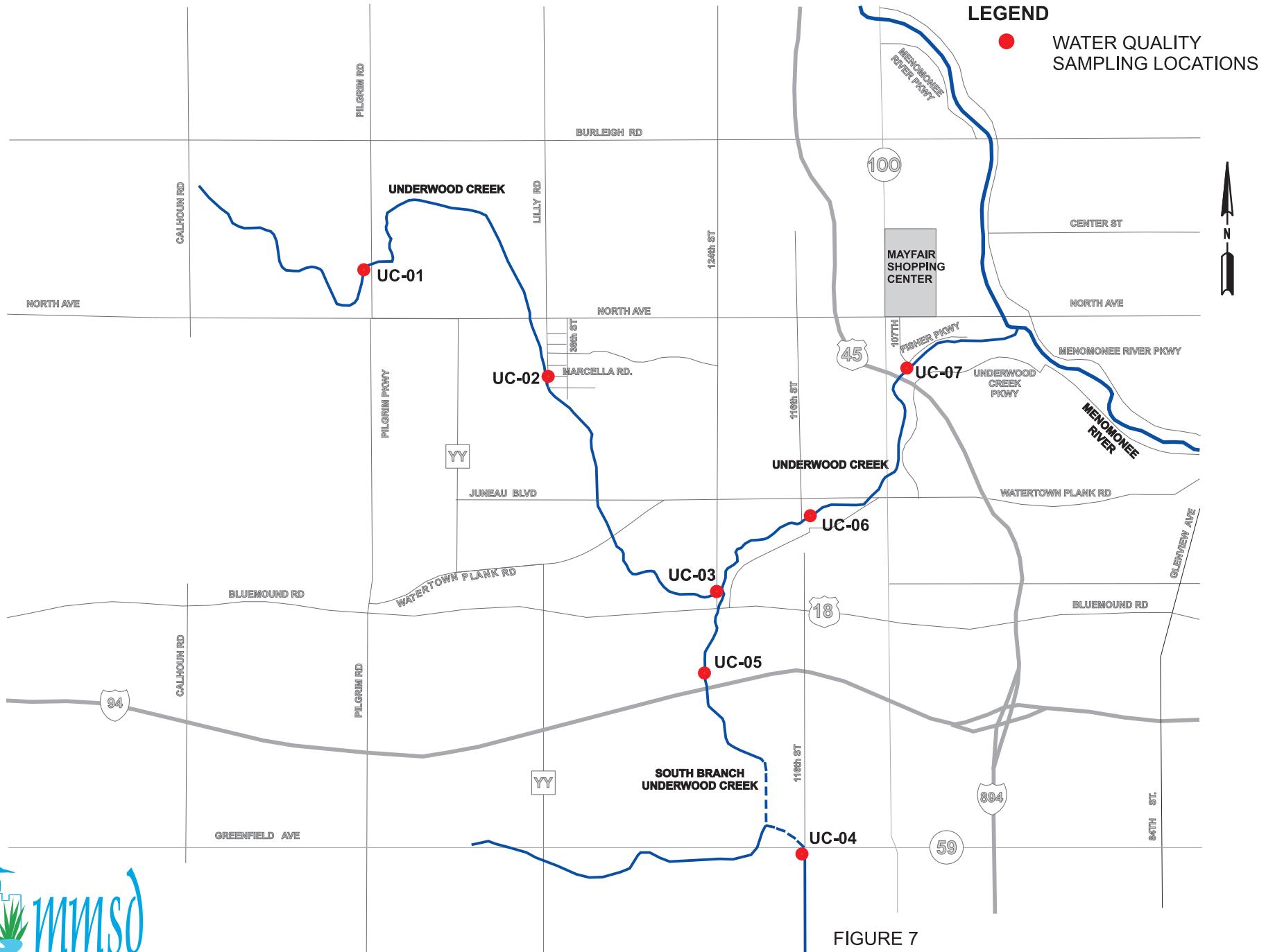
GREEN BAY AVENUE - SITE 5
LINCOLN CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	60.60	23.29	0.0	0.7	10.6	2.8	7.4	21.7	0.0	1.0	0.0	ND
Standard Error	5.74	2.61	0.0	0.7	0.8	0.3	1.2	3.0	0.0	0.2	0.0	ND
Median	61.00	24.00	0.0	0.0	10.0	2.7	7.7	17.5	0.0	1.2	0.0	ND
Mode	ND	ND	0.0	0.0	10.0	3.2	11.0	16.0	0.0	0.0	0.0	ND
Standard Deviation	18.17	8.24	0.0	2.3	2.5	0.8	3.5	9.4	0.1	0.6	0.0	ND
Sample Variance	330.04	67.89	0.0	5.3	6.2	0.6	12.5	88.9	0.0	0.4	0.0	ND
Kurtosis	-0.54	-0.25	ND	10.0	-0.4	-0.9	1.3	0.5	10.0	0.9	ND	ND
Skewness	-0.58	-0.20	ND	3.2	0.7	0.2	-1.2	1.1	3.2	-0.2	ND	ND
Range	54.00	27.10	0.0	7.3	7.5	2.4	11.0	30.0	0.3	2.2	0.0	0.0
Minimum	27.00	8.90	0.0	0.0	7.5	1.6	0.0	11.0	0.0	0.0	0.0	0.0
Maximum	81.00	36.00	0.0	7.3	15.0	4.0	11.0	41.0	0.3	2.2	0.0	0.0
Count	10	10	10	10	10	10	9	10	10	10	10	0
Confidence Level(95.0%)	13.00	5.89	0.0	1.7	1.8	0.6	2.7	6.7	0.1	0.5	0.0	ND

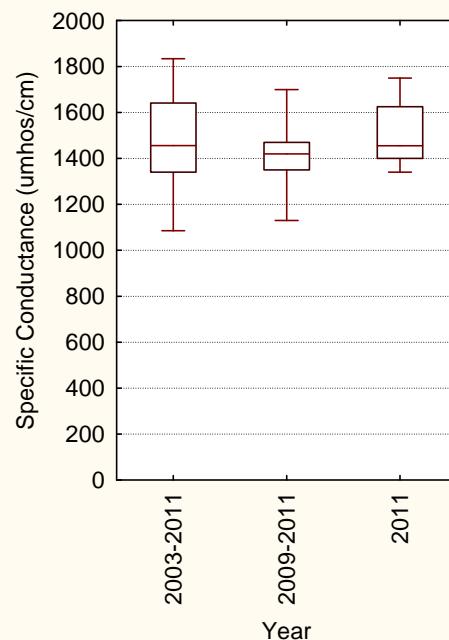
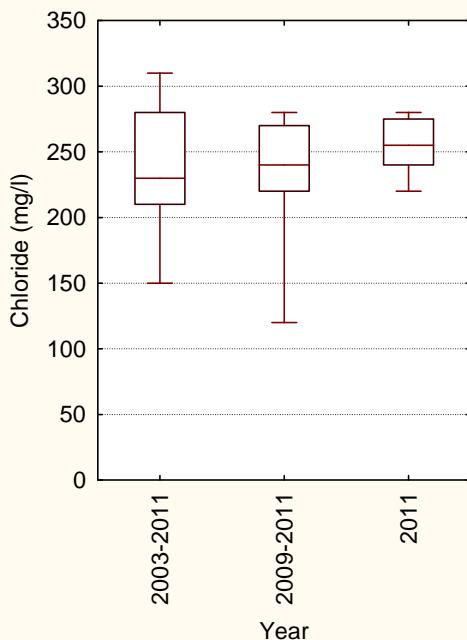
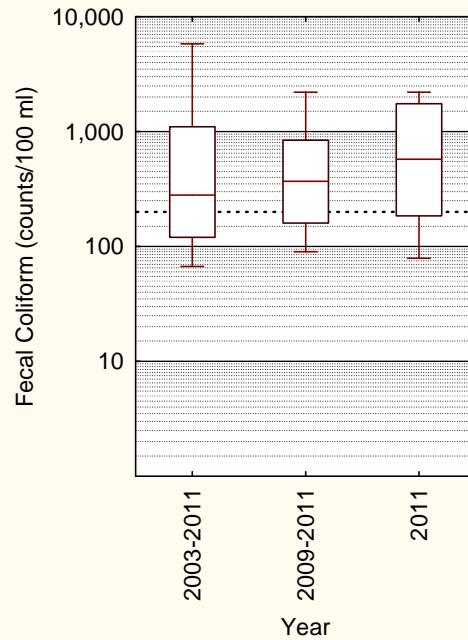
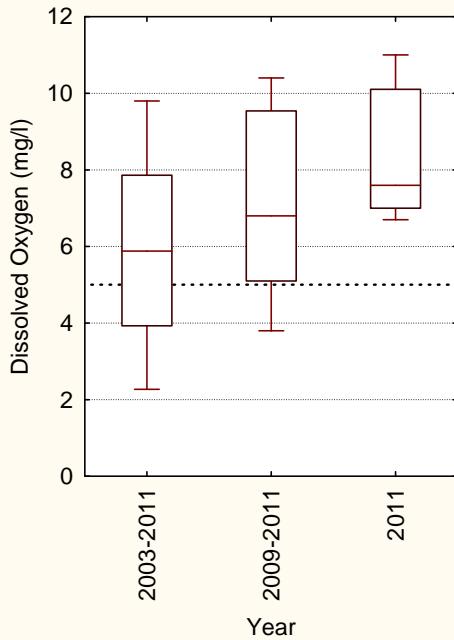
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	247	162	2.5	13.1	46.1	40.7	5.6	5.2
Standard Error	25	15	0.8	2.0	3.6	3.7	0.8	0.7
Median	250	155	2.8	14.0	46.0	41.0	5.6	5.5
Mode	ND	180	0.0	13.0	54.0	44.0	ND	3.8
Standard Deviation	80	48	2.7	6.4	11.3	11.8	2.4	2.1
Sample Variance	6379	2324	7.0	40.7	128.5	138.9	5.9	4.6
Kurtosis	0	1	1.1	0.9	-0.3	0.1	2.2	2.3
Skewness	0	0	1.0	0.4	-0.4	-0.2	1.0	1.0
Range	250	173	8.2	22.0	38.0	41.0	9.0	8.0
Minimum	100	67	0.0	4.0	25.0	19.0	2.0	2.0
Maximum	350	240	8.2	26.0	63.0	60.0	11.0	10.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	57	34	1.9	4.6	8.1	8.4	1.7	1.5

ND = No Data

Provisional MMSD Water Quality Data

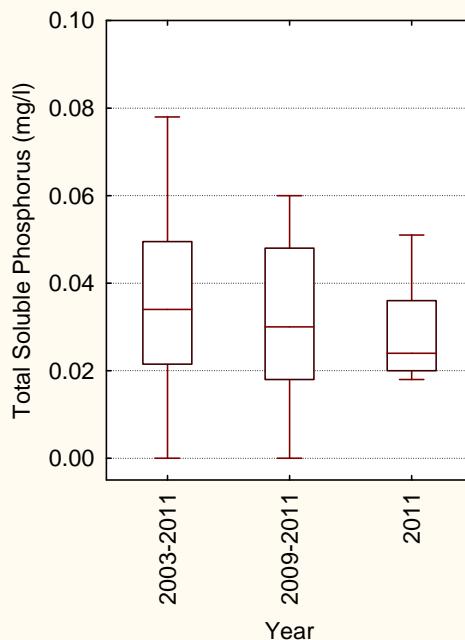
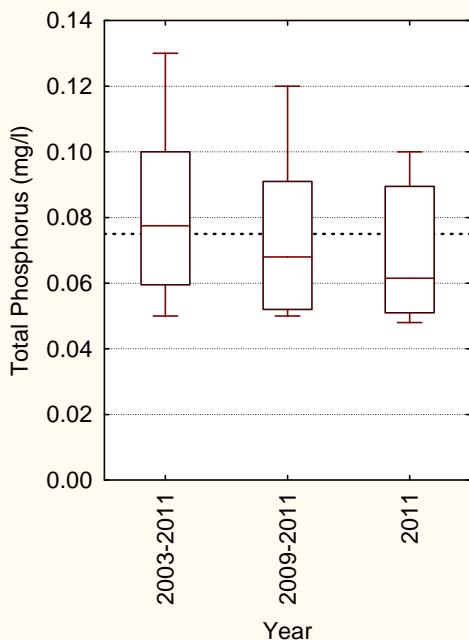
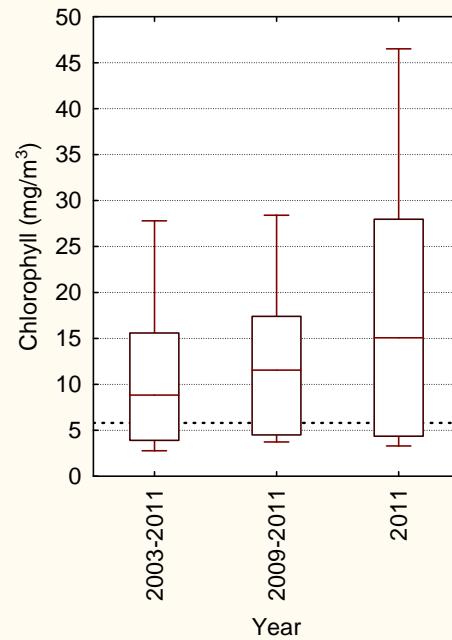
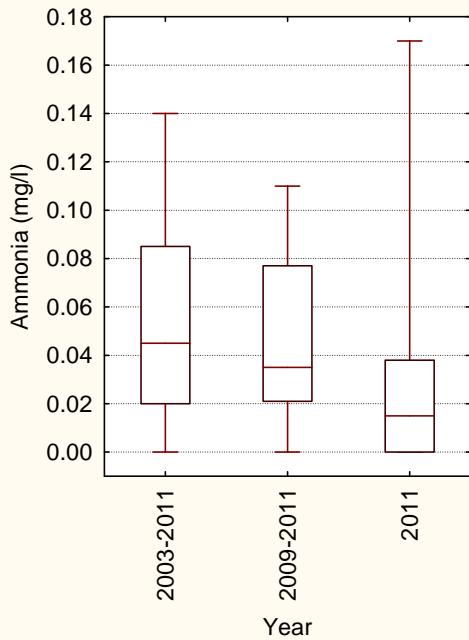


MMSD Water Quality Program Data
Underwood Creek at Wirth Park, Site UC-01



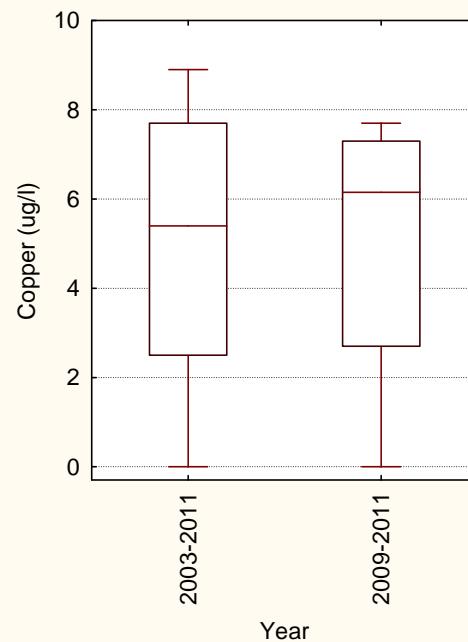
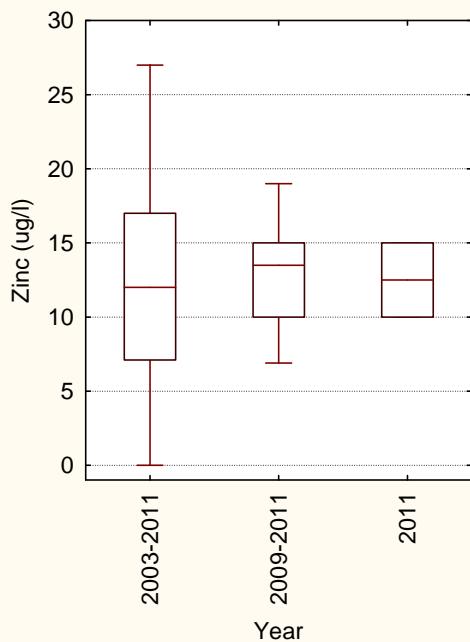
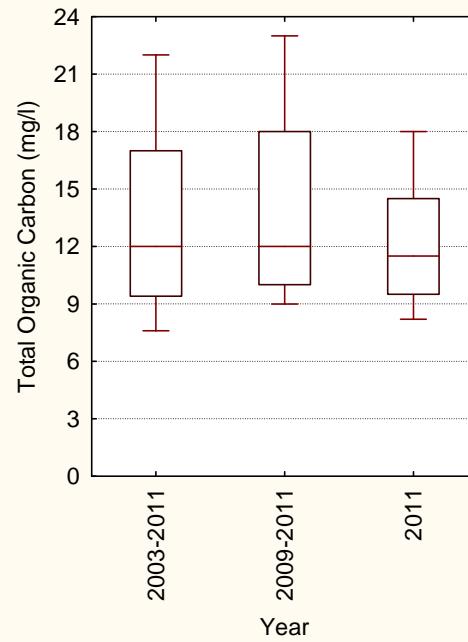
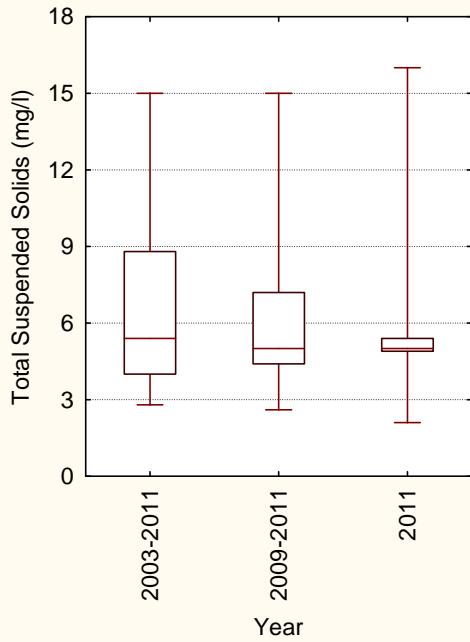
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Underwood Creek at Wirth Park, Site UC-01



— Median □ 25%-75% ▄ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Underwood Creek at Wirth Park, Site UC-01



— Median □ 25%-75% ━ 10%-90%

WIRTH PARK - SITE 1
UNDERWOOD CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.3	12.8	8.4	18.07	0.41	0.018	0.42	0.035	1.00	0.069	0.029	ND
Standard Error	0.1	1.7	0.6	5.67	0.14	0.004	0.14	0.020	0.14	0.007	0.004	ND
Median	7.4	12.9	7.6	15.05	0.24	0.017	0.25	0.015	0.91	0.062	0.024	ND
Mode	7.4	ND	7.6	ND	ND	ND	ND	0.000	ND	ND	0.018	ND
Standard Deviation	0.2	4.8	1.7	16.04	0.41	0.012	0.41	0.058	0.39	0.021	0.012	ND
Sample Variance	0.0	23.5	3.0	257.41	0.17	0.000	0.16	0.003	0.15	0.000	0.000	ND
Kurtosis	0.1	-1.9	-1.7	-0.27	3.48	-1.168	3.07	5.736	-1.48	-1.742	0.612	ND
Skewness	-1.2	0.0	0.6	0.96	1.87	-0.088	1.78	2.345	0.41	0.543	1.128	ND
Range	0.6	12.6	4.3	43.20	1.22	0.033	1.21	0.170	1.06	0.052	0.033	0.00
Minimum	6.9	6.4	6.7	3.30	0.08	0.000	0.09	0.000	0.54	0.048	0.018	0.00
Maximum	7.5	19.0	11.0	46.50	1.30	0.033	1.30	0.170	1.60	0.100	0.051	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.1	1.4	13.41	0.34	0.010	0.34	0.048	0.33	0.017	0.010	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	901.3	909.5	2.9	6.2	4.1	1506	255.0	912	2.7	813
Standard Error	ND	ND	28.9	29.4	0.5	1.7	0.6	53	7.8	301	0.2	284
Median	ND	ND	880.0	894.8	2.9	5.0	3.6	1455	255.0	575	2.8	415
Mode	ND	ND	1000.0	995.1	ND	4.9	ND	ND	250.0	ND	ND	ND
Standard Deviation	ND	ND	81.8	77.7	1.3	4.5	1.8	149	22.0	850	0.6	804
Sample Variance	ND	ND	6698.2	6044.3	1.8	19.9	3.3	22170	485.7	723002	0.3	646792
Kurtosis	ND	ND	-1.9	-2.4	-0.1	5.8	6.6	-1	-0.9	-2	-1.4	-1
Skewness	ND	ND	0.2	0.1	0.2	2.3	2.5	1	-0.4	1	-0.4	1
Range	0.0	0.0	200.0	177.2	4.0	13.9	5.8	410	60.0	2121	1.4	2138
Minimum	0.0	0.0	800.0	817.9	1.0	2.1	2.7	1340	220.0	79	1.9	62
Maximum	0.0	0.0	1000.0	995.1	5.0	16.0	8.4	1750	280.0	2200	3.3	2200
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	68.4	71.9	1.2	4.1	1.5	124	18.4	711	0.5	672

ND = No Data

Provisional MMSD Water Quality Data

WIRTH PARK - SITE 1
UNDERWOOD CREEK
WATER QUALITY DATA - 2011

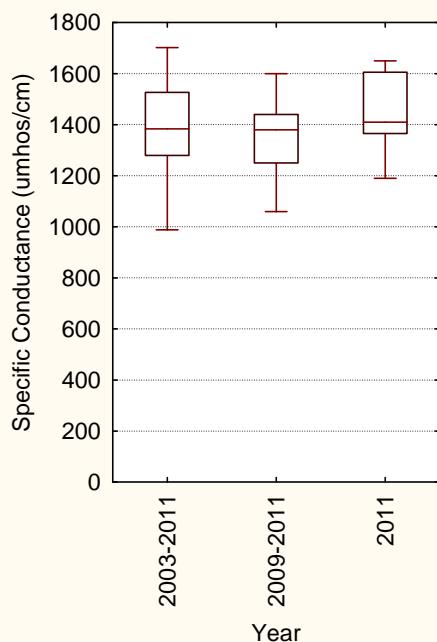
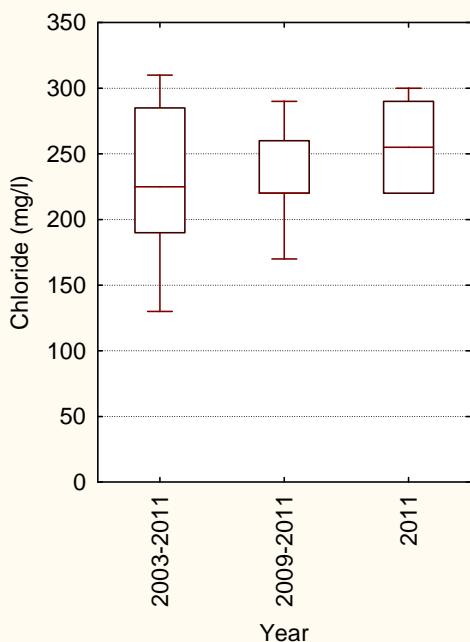
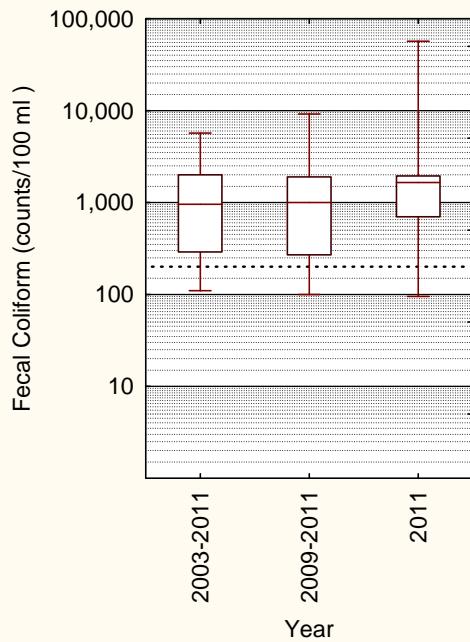
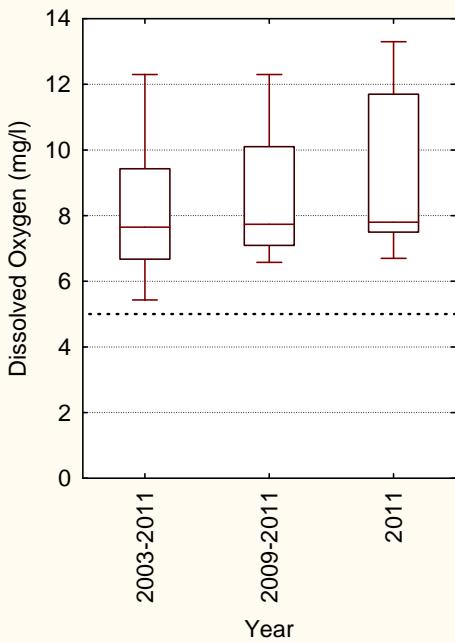
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	87.50	37.50	0.0	0.0	ND	ND	4.5	12.5	0.0	1.5	0.0	ND
Standard Error	12.50	6.50	0.0	0.0	ND	1.3	0.5	2.5	0.0	0.1	0.0	ND
Median	87.50	37.50	0.0	0.0	ND	3.1	4.5	12.5	0.0	1.5	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	17.68	9.19	0.0	0.0	ND	1.8	0.7	3.5	0.0	0.1	0.0	ND
Sample Variance	312.50	84.50	0.0	0.0	ND	3.1	0.5	12.5	0.0	0.0	0.0	ND
Kurtosis	ND											
Skewness	ND											
Range	25.00	13.00	0.0	0.0	0.0	2.5	1.0	5.0	0.0	0.2	0.0	0.0
Minimum	75.00	31.00	0.0	0.0	0.0	1.8	4.0	10.0	0.0	1.4	0.0	0.0
Maximum	100.00	44.00	0.0	0.0	0.0	4.3	5.0	15.0	0.0	1.6	0.0	0.0
Count	2	2	2	2	0	2	2	2	2	2	2	0
Confidence Level(95.0%)	158.83	82.59	0.0	0.0	ND	15.9	6.4	31.8	0.0	1.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	375	259	1.1	9.7	75.9	63.9	12.2	11.9
Standard Error	55	13	0.5	1.6	3.3	3.0	1.2	1.2
Median	375	255	0.0	10.0	74.5	63.0	11.5	11.5
Mode	ND	250	0.0	4.7	ND	ND	ND	ND
Standard Deviation	78	37	1.5	4.5	9.3	8.4	3.3	3.4
Sample Variance	6050	1384	2.3	20.6	87.3	71.3	11.0	11.7
Kurtosis	ND	2	-1.3	-1.8	-1.2	-0.7	-0.4	0.0
Skewness	ND	0	0.9	0.1	0.2	-0.2	0.7	0.6
Range	110	130	3.6	11.3	27.0	25.0	9.8	10.5
Minimum	320	190	0.0	4.7	63.0	50.0	8.2	7.5
Maximum	430	320	3.6	16.0	90.0	75.0	18.0	18.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	699	31	1.3	3.8	7.8	7.1	2.8	2.9

ND = No Data

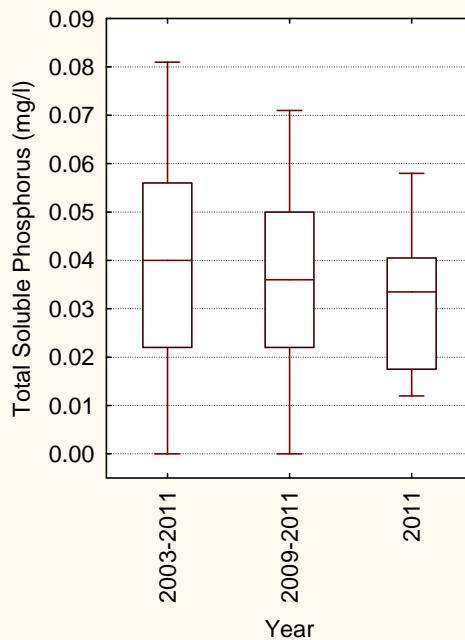
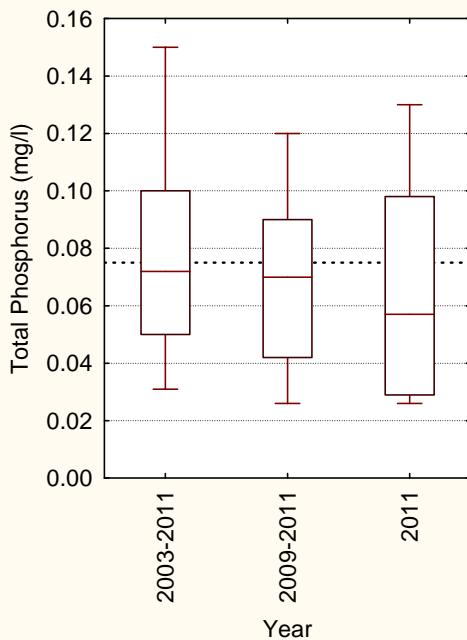
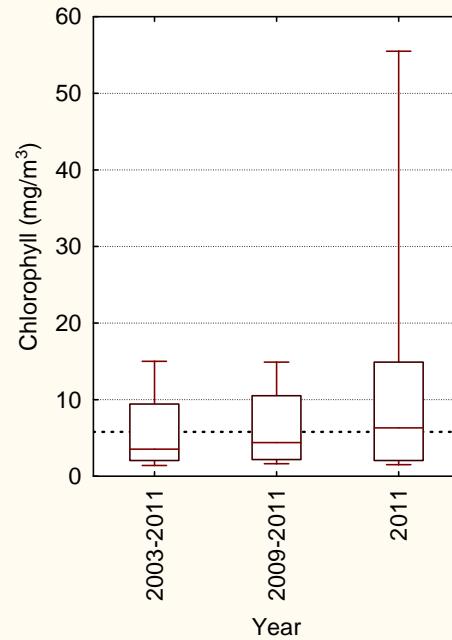
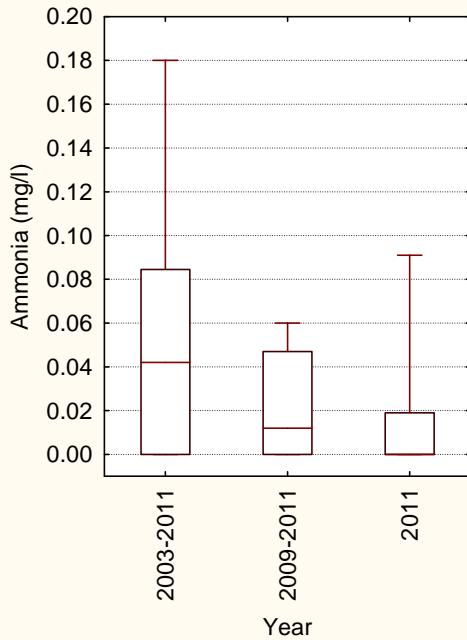
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Underwood Creek at Marcella St., Site UC-02



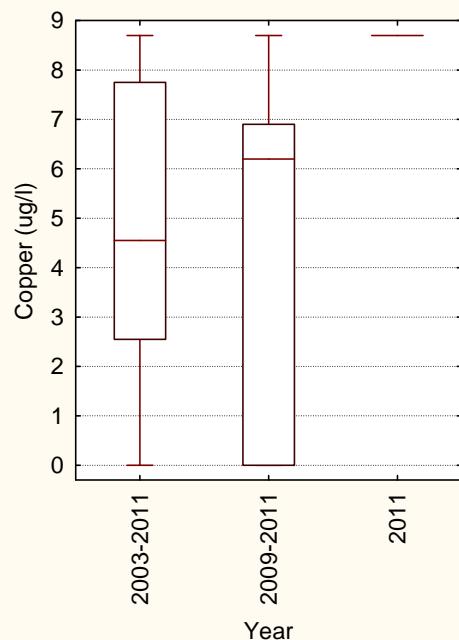
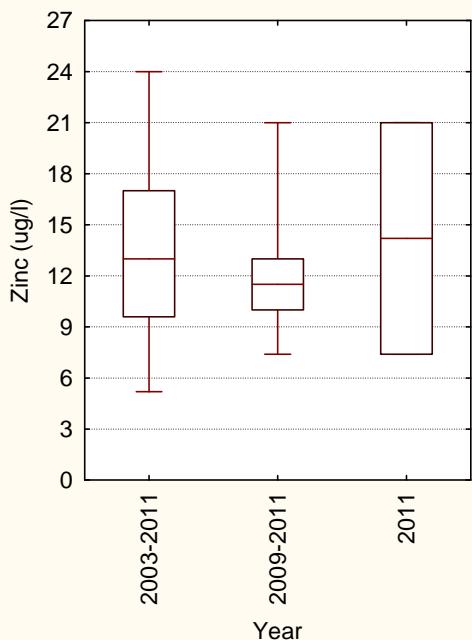
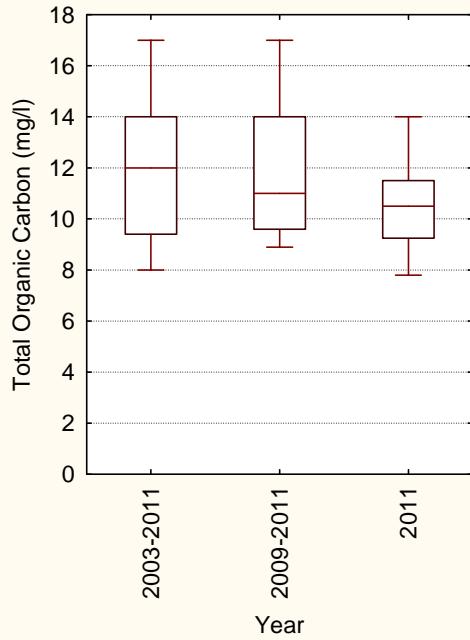
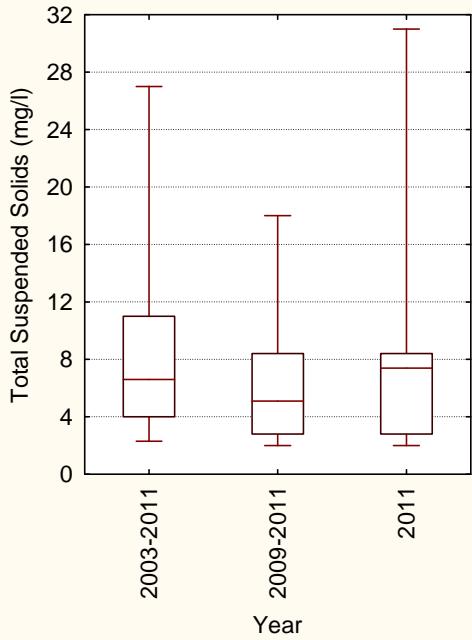
— Median □ 25%-75% □ 10%-90%
WQ Standard/Criterion

MMSD Water Quality Program Data
Underwood Creek at Marcella St., Site UC-02



— Median □ 25%-75% ┤ 10%-90%
WQ Standard/Criterion

MMSD Water Quality Program Data
Underwood Creek at Marcella St., Site UC-02



— Median □ 25%-75% ━ 10%-90%

MARCELLA STREET - SITE 2
UNDERWOOD CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	12.5	9.3	12.95	0.42	0.012	0.44	0.016	0.95	0.066	0.032	ND
Standard Error	0.1	1.8	0.9	6.38	0.09	0.003	0.09	0.012	0.11	0.014	0.006	ND
Median	7.9	12.2	7.8	6.32	0.41	0.009	0.42	0.000	0.96	0.057	0.034	ND
Mode	8.0	ND	7.7	ND	ND	ND	ND	0.000	0.54	0.026	ND	ND
Standard Deviation	0.3	5.1	2.6	18.06	0.25	0.010	0.26	0.033	0.30	0.041	0.016	ND
Sample Variance	0.1	25.8	6.9	326.00	0.06	0.000	0.07	0.001	0.09	0.002	0.000	ND
Kurtosis	-0.2	-1.9	-1.1	5.84	1.36	1.520	1.02	4.317	-0.56	-0.968	-0.388	ND
Skewness	-1.1	0.1	0.9	2.34	1.00	1.115	0.89	2.138	-0.18	0.736	0.249	ND
Range	0.7	13.1	6.6	53.99	0.78	0.032	0.79	0.091	0.86	0.104	0.046	0.00
Minimum	7.3	6.0	6.7	1.51	0.14	0.000	0.14	0.000	0.54	0.026	0.012	0.00
Maximum	8.0	19.1	13.3	55.50	0.92	0.032	0.93	0.091	1.40	0.130	0.058	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.2	2.2	15.09	0.21	0.008	0.21	0.028	0.25	0.034	0.013	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	866.3	865.3	3.3	8.9	6.2	1450	256.3	8212	3.2	9694
Standard Error	ND	ND	29.1	34.8	1.2	3.8	1.9	56	12.4	6974	0.3	8476
Median	ND	ND	850.0	872.6	2.1	7.4	3.7	1410	255.0	1650	3.2	1350
Mode	ND	ND	810.0	ND	1.5	2.8	ND	ND	220.0	ND	ND	ND
Standard Deviation	ND	ND	82.3	92.0	3.2	10.1	5.3	158	35.0	19726	0.8	23975
Sample Variance	ND	ND	6769.6	8462.2	10.2	102.2	27.8	24857	1226.8	389112842	0.6	574785341
Kurtosis	ND	ND	-1.2	-0.7	0.9	5.4	0.6	-1	-2.3	8	2.7	8
Skewness	ND	ND	0.2	-0.4	1.3	2.2	1.3	0	0.1	3	0.8	3
Range	0.0	0.0	240.0	262.8	9.2	29.0	14.4	460	80.0	56905	2.8	68860
Minimum	0.0	0.0	750.0	719.0	0.0	2.0	2.0	1190	220.0	95	2.0	140
Maximum	0.0	0.0	990.0	981.8	9.2	31.0	16.4	1650	300.0	57000	4.8	69000
Count	0	0	8	7	7	8	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	68.8	85.1	3.0	9.4	4.4	132	29.3	16491	0.7	20043

ND = No Data

Provisional MMSD Water Quality Data

MARCELLA STREET - SITE 2
UNDERWOOD CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	89.50	37.50	0.0	0.0	8.7	2.4	4.1	14.2	0.0	2.1	0.0	ND
Standard Error	20.50	8.50	0.0	0.0	0.0	0.5	0.0	6.8	0.0	0.5	0.0	ND
Median	89.50	37.50	0.0	0.0	8.7	2.4	4.1	14.2	0.0	2.1	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	28.99	12.02	0.0	0.0	ND	0.8	ND	9.6	0.0	0.6	0.0	ND
Sample Variance	840.50	144.50	0.0	0.0	ND	0.6	ND	92.5	0.0	0.4	0.0	ND
Kurtosis	ND											
Skewness	ND											
Range	41.00	17.00	0.0	0.0	0.0	1.1	0.0	13.6	0.0	0.9	0.0	0.0
Minimum	69.00	29.00	0.0	0.0	8.7	1.8	4.1	7.4	0.0	1.6	0.0	0.0
Maximum	110.00	46.00	0.0	0.0	8.7	2.9	4.1	21.0	0.0	2.5	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	260.48	108.00	0.0	0.0	ND	7.0	ND	86.4	0.0	5.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	375	268	1.2	7.9	75.8	65.1	10.5	10.5
Standard Error	85	15	0.6	1.6	3.7	3.5	0.7	0.7
Median	375	280	0.0	8.5	77.5	69.0	10.5	10.0
Mode	ND	280	0.0	12.0	ND	69.0	11.0	10.0
Standard Deviation	120	43	1.8	4.5	10.5	9.9	1.9	2.1
Sample Variance	14450	1821	3.2	20.6	109.4	98.7	3.7	4.4
Kurtosis	ND	2	-0.9	-0.5	-0.1	0.8	0.4	-0.3
Skewness	ND	-1	1.0	-0.6	-0.8	-1.2	0.5	0.3
Range	170	140	4.3	13.0	30.0	29.0	6.2	6.5
Minimum	290	180	0.0	0.0	57.0	46.0	7.8	7.5
Maximum	460	320	4.3	13.0	87.0	75.0	14.0	14.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1080	36	1.5	3.8	8.7	8.3	1.6	1.7

ND = No Data

Provisional MMSD Water Quality Data

124TH STREET AND BLUEMOUND ROAD - SITE 3
UNDERWOOD CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	12.9	10.9	8.71	0.34	0.009	0.35	0.016	0.63	0.037	0.018	ND
Standard Error	0.1	1.7	0.7	2.96	0.07	0.004	0.08	0.011	0.12	0.010	0.004	ND
Median	7.9	12.8	10.7	6.29	0.36	0.007	0.37	0.000	0.64	0.027	0.018	ND
Mode	7.8	ND	ND	ND	ND	0.000	0.43	0.000	ND	0.019	0.028	ND
Standard Deviation	0.3	4.8	2.0	8.38	0.21	0.011	0.21	0.030	0.34	0.027	0.012	ND
Sample Variance	0.1	23.1	4.1	70.26	0.04	0.000	0.05	0.001	0.12	0.001	0.000	ND
Kurtosis	0.0	-1.8	-1.5	1.96	-0.22	4.414	-0.49	5.589	0.72	5.022	-1.411	ND
Skewness	-0.4	-0.1	0.3	1.39	0.34	1.965	0.32	2.320	-0.61	2.157	-0.181	ND
Range	0.8	12.7	5.2	24.76	0.63	0.033	0.64	0.087	1.10	0.081	0.033	0.00
Minimum	7.4	6.2	8.4	1.34	0.07	0.000	0.08	0.000	0.00	0.019	0.000	0.00
Maximum	8.2	18.9	13.6	26.10	0.70	0.033	0.71	0.087	1.10	0.100	0.033	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.0	1.7	7.01	0.17	0.009	0.18	0.025	0.28	0.023	0.010	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	922.5	926.8	2.8	7.5	6.1	1519	256.3	1586	3.0	1081
Standard Error	ND	ND	57.7	68.8	1.0	3.8	2.2	94	16.0	583	0.2	367
Median	ND	ND	970.0	977.1	1.9	3.4	4.1	1600	270.0	1210	3.0	575
Mode	ND	ND	1000.0	ND	ND	ND	ND	ND	290.0	ND	ND	2700
Standard Deviation	ND	ND	163.3	182.1	2.5	10.0	6.3	267	45.3	1648	0.5	1037
Sample Variance	ND	ND	26678.6	33143.0	6.3	99.8	39.2	71089	2055.4	2716398	0.3	1076155
Kurtosis	ND	ND	4.0	5.5	4.6	6.7	6.9	6	2.5	2	-1.7	0
Skewness	ND	ND	-1.8	-2.2	2.1	2.6	2.6	-2	-1.5	1	0.0	1
Range	0.0	0.0	540.0	565.0	7.1	27.7	18.8	815	130.0	4790	1.4	2590
Minimum	0.0	0.0	560.0	530.0	1.1	2.3	2.5	895	160.0	210	2.3	110
Maximum	0.0	0.0	1100.0	1095.0	8.2	30.0	21.3	1710	290.0	5000	3.7	2700
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	136.6	168.4	2.3	9.2	5.2	223	37.9	1378	0.4	867

ND = No Data

Provisional MMSD Water Quality Data

124TH STREET AND BLUEMOUND ROAD - SITE 3
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2011

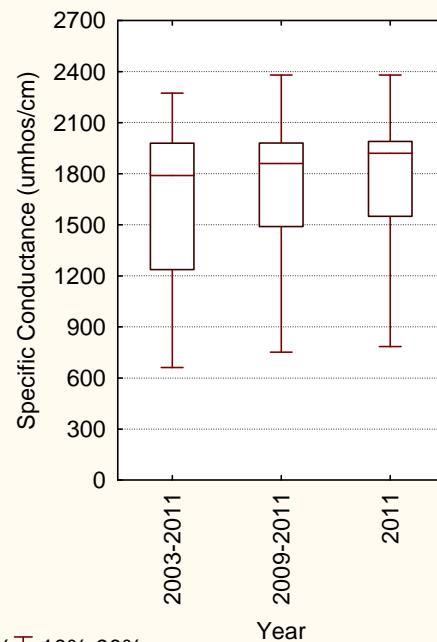
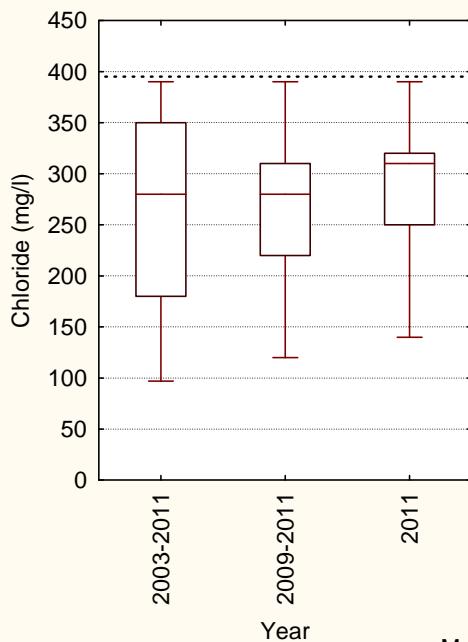
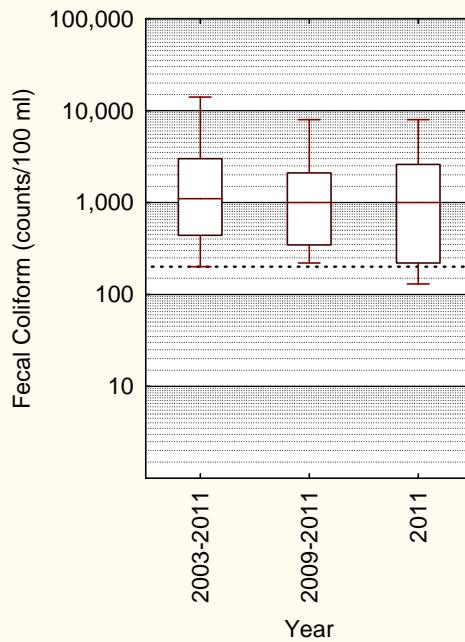
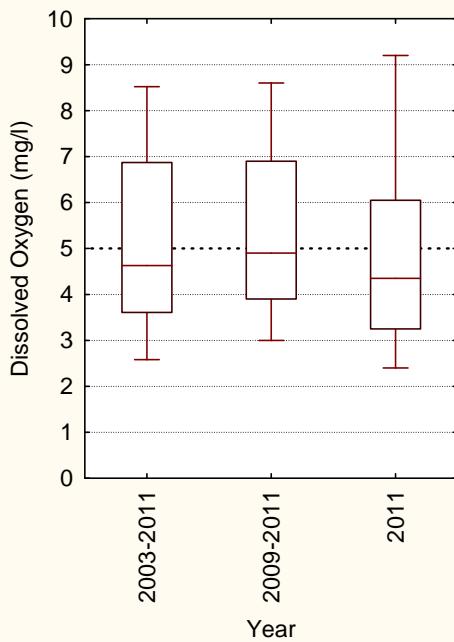
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	91.00	38.50	0.0	2.6	8.8	3.1	5.1	14.5	0.2	1.4	0.0	ND
Standard Error	39.00	16.50	0.0	2.6	0.0	0.4	0.6	5.5	0.2	0.3	0.0	ND
Median	91.00	38.50	0.0	2.6	8.8	3.1	5.1	14.5	0.2	1.4	0.0	ND
Mode	ND	ND	0.0	ND	0.0	ND						
Standard Deviation	55.15	23.33	0.0	3.7	ND	0.5	0.9	7.8	0.3	0.5	0.0	ND
Sample Variance	3042.00	544.50	0.0	13.5	ND	0.2	0.8	60.5	0.1	0.2	0.0	ND
Kurtosis	ND											
Skewness	ND											
Range	78.00	33.00	0.0	5.2	0.0	0.7	1.3	11.0	0.4	0.7	0.0	0.0
Minimum	52.00	22.00	0.0	0.0	8.8	2.7	4.4	9.0	0.0	1.0	0.0	0.0
Maximum	130.00	55.00	0.0	5.2	8.8	3.4	5.7	20.0	0.4	1.7	0.0	0.0
Count	2	2	2	2	1	2	2	2	2	2	2	0
Confidence Level(95.0%)	495.54	209.65	0.0	33.0	ND	4.4	8.3	69.9	2.5	4.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	385	279	0.4	6.1	76.4	68.4	8.3	8.1
Standard Error	165	21	0.4	1.4	5.1	5.1	0.8	0.7
Median	385	295	0.0	5.6	82.0	73.5	8.5	8.6
Mode	ND	310	0.0	ND	82.0	76.0	ND	8.6
Standard Deviation	233	59	1.1	4.1	14.4	14.3	2.2	2.1
Sample Variance	54450	3498	1.1	16.7	207.1	204.8	4.9	4.2
Kurtosis	ND	6	8.0	1.7	4.1	3.4	0.3	-0.5
Skewness	ND	-2	2.8	0.7	-2.0	-1.7	0.1	-0.3
Range	330	190	3.0	14.0	43.0	45.0	7.1	6.2
Minimum	220	140	0.0	0.0	44.0	37.0	4.9	4.8
Maximum	550	330	3.0	14.0	87.0	82.0	12.0	11.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	2097	49	0.9	3.4	12.0	12.0	1.8	1.7

ND = No Data

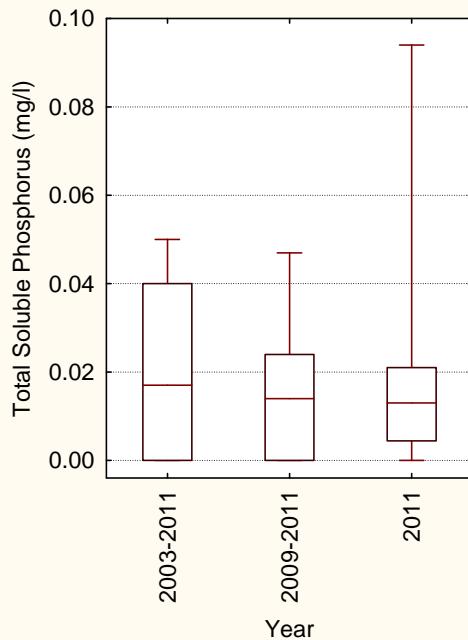
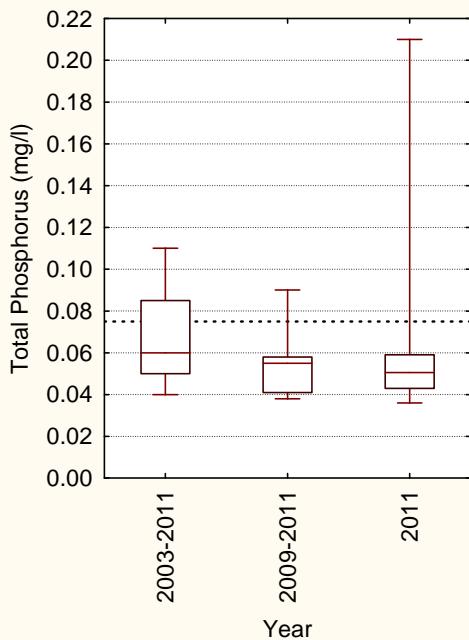
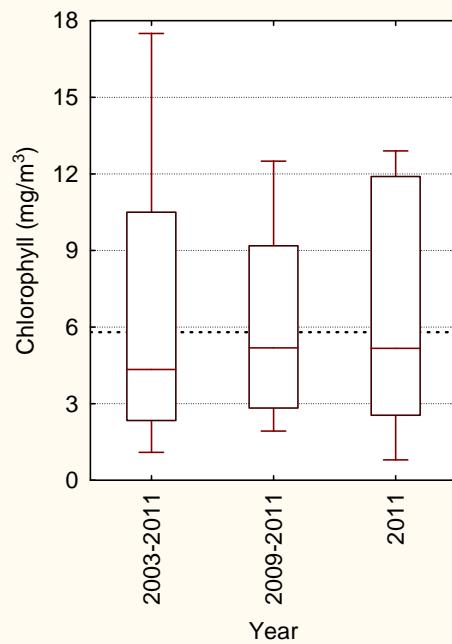
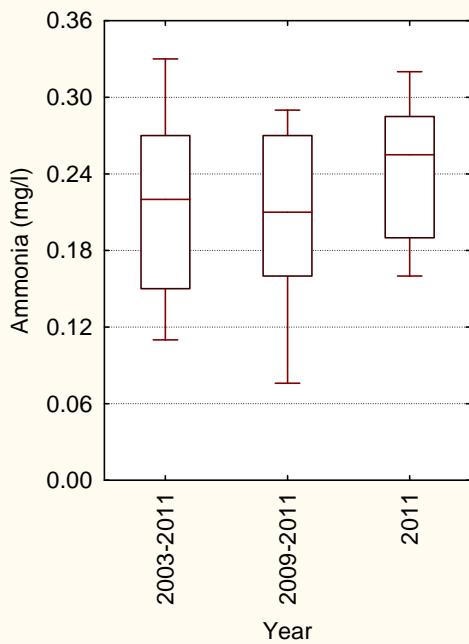
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Underwood Creek at 116th St. and Greenfield, Site UC-04



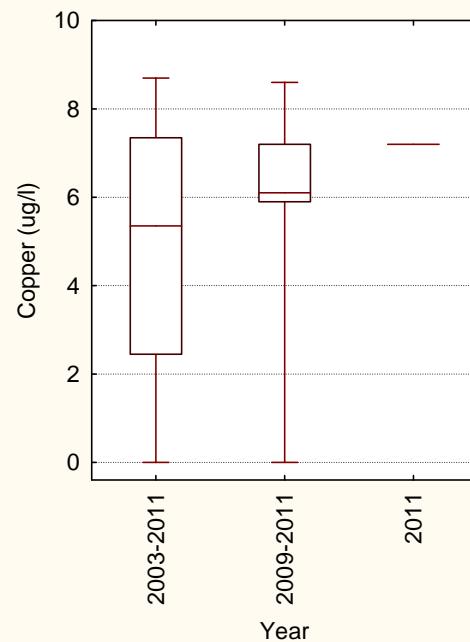
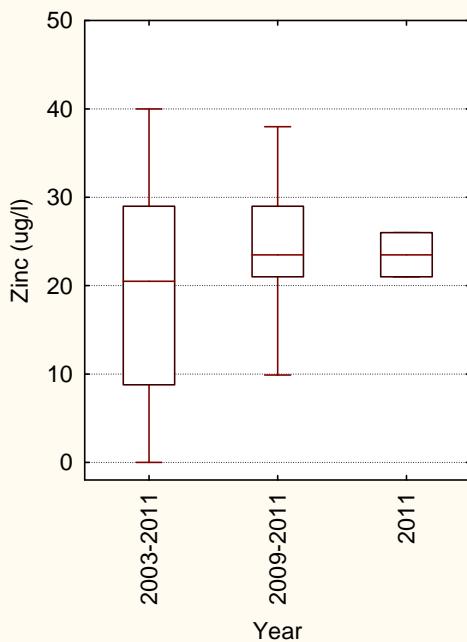
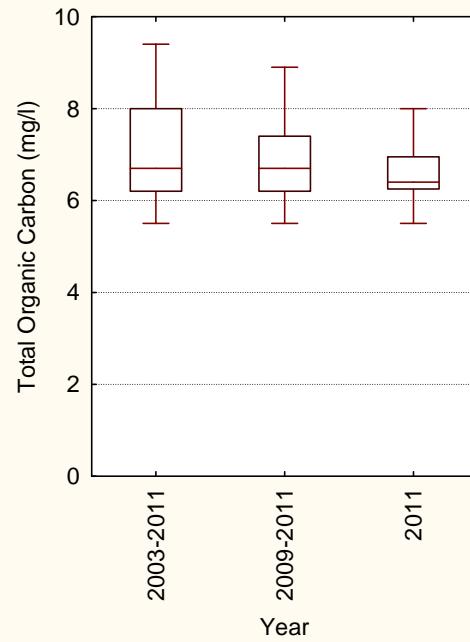
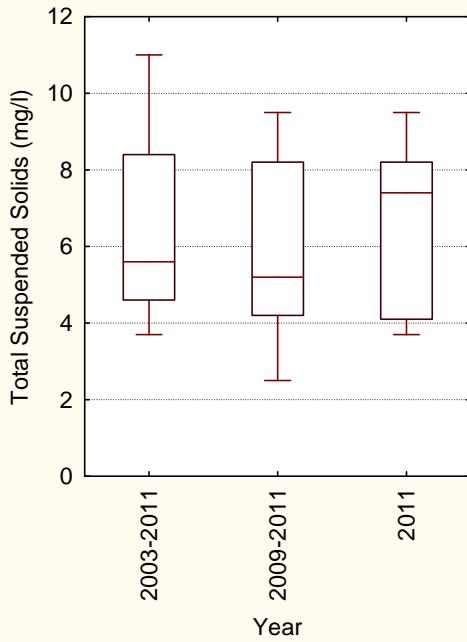
— Median □ 25%-75% █ 10%-90%
WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Underwood Creek at 116th St. and Greenfield, Site UC-04



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Underwood Creek at 116th St. and Greenfield, Site UC-04



— Median □ 25%-75% ━ 10%-90%

116TH STREET AND GREENFIELD AVENUE - SITE 4
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.2	12.8	4.9	6.62	0.48	0.046	0.52	0.243	1.33	0.069	0.021	ND
Standard Error	0.1	1.8	0.8	1.73	0.06	0.008	0.05	0.021	0.61	0.020	0.011	ND
Median	7.3	13.3	4.4	5.17	0.45	0.048	0.49	0.255	0.84	0.051	0.013	ND
Mode	7.4	ND	ND	ND	ND	ND	ND	ND	0.47	ND	0.000	ND
Standard Deviation	0.2	5.1	2.2	4.90	0.16	0.023	0.15	0.058	1.74	0.058	0.030	ND
Sample Variance	0.0	25.8	5.0	24.00	0.03	0.001	0.02	0.003	3.01	0.003	0.001	ND
Kurtosis	-0.7	-1.5	0.9	-2.01	3.89	-0.330	3.45	-1.302	7.68	7.513	6.333	ND
Skewness	-0.5	0.0	1.1	0.32	1.72	0.193	1.66	-0.323	2.75	2.712	2.425	ND
Range	0.6	14.0	6.8	12.10	0.53	0.070	0.49	0.160	5.13	0.174	0.094	0.00
Minimum	6.9	5.8	2.4	0.80	0.30	0.014	0.36	0.160	0.47	0.036	0.000	0.00
Maximum	7.5	19.8	9.2	12.90	0.83	0.084	0.85	0.320	5.60	0.210	0.094	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.2	1.9	4.10	0.13	0.019	0.13	0.048	1.45	0.048	0.025	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	1051.3	994.6	2.4	6.8	10.7	1761	286.3	2057	3.0	1768
Standard Error	ND	ND	106.3	107.9	0.5	0.8	1.6	178	26.8	1041	0.2	767
Median	ND	ND	1150.0	1095.9	3.0	7.4	10.4	1920	310.0	1000	3.0	960
Mode	ND	ND	1200.0	ND	ND	ND	ND	1920	310.0	ND	ND	ND
Standard Deviation	ND	ND	300.7	285.6	1.4	2.1	4.4	503	75.8	2753	0.6	2168
Sample Variance	ND	ND	90441.1	81557.7	2.0	4.6	19.6	253232	5741.1	7580824	0.4	4702364
Kurtosis	ND	ND	1.2	1.1	-0.3	-0.8	2.9	1	1.3	5	-0.4	5
Skewness	ND	ND	-1.3	-1.5	-0.8	-0.7	1.3	-1	-1.0	2	-0.1	2
Range	0.0	0.0	940.0	735.9	3.8	5.8	15.0	1595	250.0	7870	1.8	6660
Minimum	0.0	0.0	460.0	456.3	0.0	3.7	5.0	785	140.0	130	2.1	140
Maximum	0.0	0.0	1400.0	1192.2	3.8	9.5	20.0	2380	390.0	8000	3.9	6800
Count	0	0	8	7	7	7	8	8	8	7	7	8
Confidence Level(95.0%)	ND	ND	251.4	264.1	1.3	2.0	3.7	421	63.3	2546	0.6	1813

ND = No Data

Provisional MMSD Water Quality Data

116TH STREET AND GREENFIELD AVENUE - SITE 4
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	69.00	25.00	0.0	0.0	7.2	3.0	2.6	23.5	0.0	0.9	0.0	ND
Standard Error	2.00	0.00	0.0	0.0	0.0	1.0	0.0	2.5	0.0	0.1	0.0	ND
Median	69.00	25.00	0.0	0.0	7.2	3.0	2.6	23.5	0.0	0.9	0.0	ND
Mode	ND	25.00	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	2.83	0.00	0.0	0.0	ND	1.3	ND	3.5	0.0	0.1	0.0	ND
Sample Variance	8.00	0.00	0.0	0.0	ND	1.8	ND	12.5	0.0	0.0	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	4.00	0.00	0.0	0.0	0.0	1.9	0.0	5.0	0.0	0.1	0.0	0.0
Minimum	67.00	25.00	0.0	0.0	7.2	2.0	2.6	21.0	0.0	0.8	0.0	0.0
Maximum	71.00	25.00	0.0	0.0	7.2	3.9	2.6	26.0	0.0	0.9	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	25.41	0.00	0.0	0.0	ND	12.1	ND	31.8	0.0	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	275	281	0.8	12.8	74.4	67.6	6.6	6.3
Standard Error	5	26	0.5	0.7	5.9	5.9	0.3	0.3
Median	275	300	0.0	13.0	78.0	71.5	6.4	6.1
Mode	ND	350	0.0	13.0	ND	85.0	6.3	5.8
Standard Deviation	7	72	1.5	2.0	16.6	16.6	0.7	0.8
Sample Variance	50	5213	2.2	3.9	274.8	274.8	0.6	0.6
Kurtosis	ND	-1	1.4	3.7	-0.4	-0.4	1.3	0.6
Skewness	ND	-1	1.7	-1.7	-0.9	-0.8	0.8	0.6
Range	10	190	3.8	6.5	45.0	45.0	2.5	2.6
Minimum	270	160	0.0	8.5	47.0	40.0	5.5	5.1
Maximum	280	350	3.8	15.0	92.0	85.0	8.0	7.7
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	64	60	1.3	1.6	13.9	13.9	0.6	0.7

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY IN KRUEGER PARK - SITE 5
UNDERWOOD CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	13.4	10.5	21.17	0.60	0.031	0.64	0.052	0.49	0.323	0.256	ND
Standard Error	0.1	1.4	0.4	7.23	0.06	0.004	0.07	0.010	0.11	0.044	0.037	ND
Median	7.8	13.7	10.1	17.20	0.58	0.028	0.61	0.053	0.55	0.330	0.260	ND
Mode	7.8	ND	10.1	ND	ND	0.028	ND	ND	0.00	ND	ND	ND
Standard Deviation	0.2	3.9	1.0	20.45	0.18	0.010	0.20	0.028	0.32	0.117	0.097	ND
Sample Variance	0.0	15.5	1.0	418.39	0.03	0.000	0.04	0.001	0.10	0.014	0.009	ND
Kurtosis	-0.2	-1.0	-1.5	6.67	3.30	0.810	4.10	0.717	-0.69	-0.588	0.246	ND
Skewness	-1.2	-0.4	0.4	2.50	1.56	1.020	1.79	-0.523	-0.86	-0.258	-0.098	ND
Range	0.5	11.1	2.8	63.50	0.60	0.032	0.67	0.093	0.81	0.340	0.300	0.00
Minimum	7.4	6.9	9.2	6.80	0.40	0.018	0.43	0.000	0.00	0.140	0.100	0.00
Maximum	7.9	18.0	12.0	70.30	1.00	0.050	1.10	0.093	0.81	0.480	0.400	0.00
Count	8	8	8	8	8	8	8	8	8	7	7	0
Confidence Level(95.0%)	0.2	3.3	0.8	17.10	0.15	0.008	0.17	0.024	0.27	0.108	0.090	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	718.8	681.6	3.4	8.4	6.1	1278	216.6	956	2.6	1021
Standard Error	ND	ND	117.4	131.2	0.6	2.4	0.9	204	43.0	538	0.2	538
Median	ND	ND	720.0	572.0	3.0	7.2	5.5	1234	195.0	400	2.6	460
Mode	ND	ND	400.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	332.1	347.1	1.5	6.4	2.7	577	121.7	1520	0.6	1521
Sample Variance	ND	ND	110298.2	120462.2	2.2	40.5	7.1	332863	14805.4	2311767	0.4	2312355
Kurtosis	ND	ND	-0.6	0.0	3.2	4.7	1.2	-1	0.5	7	-0.1	7
Skewness	ND	ND	0.6	0.9	1.6	2.0	1.0	0	1.0	3	0.4	3
Range	0.0	0.0	920.0	924.9	4.6	19.0	8.3	1609	357.0	4545	1.9	4570
Minimum	0.0	0.0	380.0	371.1	1.8	3.0	3.0	641	93.0	55	1.7	130
Maximum	0.0	0.0	1300.0	1296.0	6.4	22.0	11.3	2250	450.0	4600	3.7	4700
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	277.7	321.0	1.4	5.9	2.2	482	101.7	1271	0.5	1271

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY IN KRUEGER PARK - SITE 5
UNDERWOOD CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	58.50	21.50	0.0	0.0	8.7	2.0	5.2	15.5	0.0	1.4	0.0	ND
Standard Error	1.50	0.50	0.0	0.0	0.0	0.4	0.0	2.5	0.0	0.0	0.0	ND
Median	58.50	21.50	0.0	0.0	8.7	2.0	5.2	15.5	0.0	1.4	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	2.12	0.71	0.0	0.0	ND	0.6	ND	3.5	0.0	0.1	0.0	ND
Sample Variance	4.50	0.50	0.0	0.0	ND	0.3	ND	12.5	0.0	0.0	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	3.00	1.00	0.0	0.0	0.0	0.8	0.0	5.0	0.0	0.1	0.0	0.0
Minimum	57.00	21.00	0.0	0.0	8.7	1.6	5.2	13.0	0.0	1.3	0.0	0.0
Maximum	60.00	22.00	0.0	0.0	8.7	2.4	5.2	18.0	0.0	1.4	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	19.06	6.35	0.0	0.0	ND	5.1	ND	31.8	0.0	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	235	180	2.0	10.8	47.0	43.4	3.5	3.4
Standard Error	5	16	0.5	1.2	3.3	3.1	0.5	0.4
Median	235	165	2.3	11.4	45.5	41.5	3.2	3.2
Mode	ND	240	0.0	13.0	55.0	ND	ND	5.1
Standard Deviation	7	45	1.3	3.4	9.3	8.8	1.4	1.2
Sample Variance	50	2000	1.6	11.9	87.1	78.3	1.8	1.4
Kurtosis	ND	-2	-0.4	-1.1	-1.5	-1.7	-0.5	-0.3
Skewness	ND	0	-1.0	-0.4	0.3	0.2	0.6	0.5
Range	10	110	3.4	9.8	26.0	24.0	3.9	3.4
Minimum	230	130	0.0	5.2	35.0	32.0	1.6	1.7
Maximum	240	240	3.4	15.0	61.0	56.0	5.5	5.1
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	64	37	1.1	2.9	7.8	7.4	1.1	1.0

ND = No Data

Provisional MMSD Water Quality Data

115TH STREET, SOUTH OF WATERTOWN PLANK ROAD - SITE 6
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.3	14.6	17.4	10.56	0.35	0.024	0.38	0.008	0.58	0.093	0.057	ND
Standard Error	0.1	1.8	1.0	1.28	0.08	0.003	0.08	0.008	0.11	0.018	0.016	ND
Median	8.3	15.8	17.4	10.03	0.27	0.026	0.29	0.000	0.60	0.101	0.050	ND
Mode	8.2	ND	ND	ND	0.26	ND	0.29	0.000	ND	0.120	ND	ND
Standard Deviation	0.2	5.1	2.9	3.63	0.23	0.007	0.22	0.024	0.30	0.050	0.044	ND
Sample Variance	0.0	25.9	8.2	13.20	0.05	0.000	0.05	0.001	0.09	0.002	0.002	ND
Kurtosis	-0.4	-1.7	1.2	0.55	1.47	-0.791	1.12	8.000	0.85	-1.220	-0.866	ND
Skewness	0.2	-0.4	-1.0	-0.09	1.26	-0.356	1.17	2.828	-0.91	0.093	0.682	ND
Range	0.6	13.1	8.7	11.91	0.70	0.022	0.69	0.067	0.95	0.140	0.117	0.00
Minimum	8.0	7.2	11.8	4.29	0.11	0.012	0.13	0.000	0.00	0.030	0.013	0.00
Maximum	8.6	20.3	20.5	16.20	0.81	0.034	0.82	0.067	0.95	0.170	0.130	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.3	2.4	3.04	0.19	0.006	0.19	0.020	0.25	0.042	0.037	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	887.5	864.1	3.5	7.3	4.9	1429	243.8	1509	2.8	1440
Standard Error	ND	ND	58.1	65.8	0.8	2.8	1.5	91	11.6	612	0.2	681
Median	ND	ND	910.0	896.0	2.6	3.8	3.2	1460	250.0	840	2.8	535
Mode	ND	ND	1000.0	ND	2.6	3.8	ND	1460	250.0	ND	ND	ND
Standard Deviation	ND	ND	164.5	174.0	2.1	7.3	4.2	257	32.9	1731	0.7	1926
Sample Variance	ND	ND	27050.0	30266.3	4.6	53.0	17.8	65870	1083.9	2995200	0.5	3708600
Kurtosis	ND	ND	-0.5	-0.8	-0.9	1.0	6.9	-1	-0.6	-1	-1.5	1
Skewness	ND	ND	-0.7	-0.4	0.9	1.5	2.6	-1	-0.8	1	-0.1	2
Range	0.0	0.0	460.0	478.0	5.4	19.3	12.5	720	90.0	4237	1.8	5200
Minimum	0.0	0.0	640.0	619.0	1.2	1.7	2.7	1020	190.0	63	1.8	100
Maximum	0.0	0.0	1100.0	1097.0	6.6	21.0	15.1	1740	280.0	4300	3.6	5300
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	137.5	160.9	2.0	6.7	3.5	215	27.5	1447	0.6	1610

ND = No Data

Provisional MMSD Water Quality Data

115TH STREET, SOUTH OF WATERTOWN PLANK ROAD - SITE 6
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2011

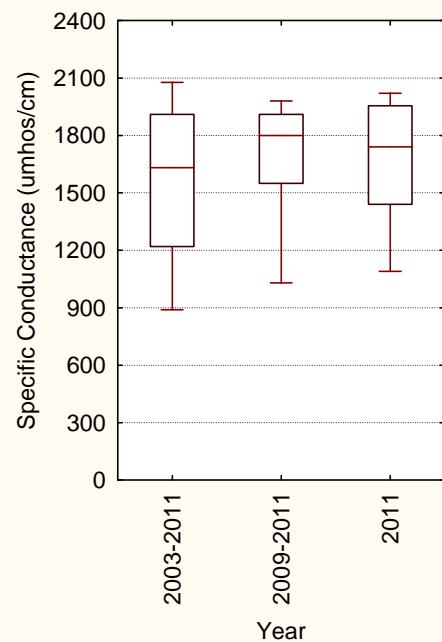
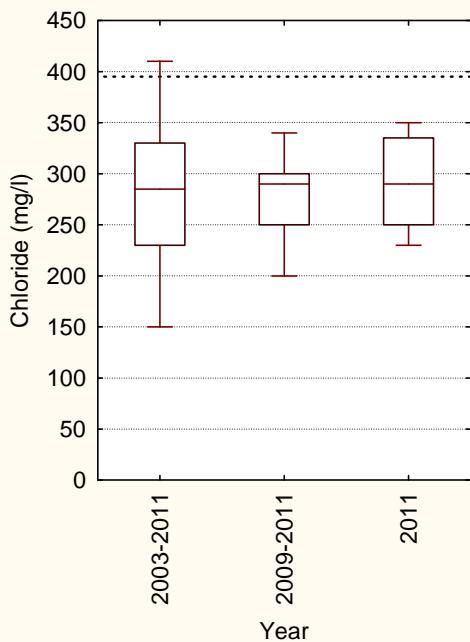
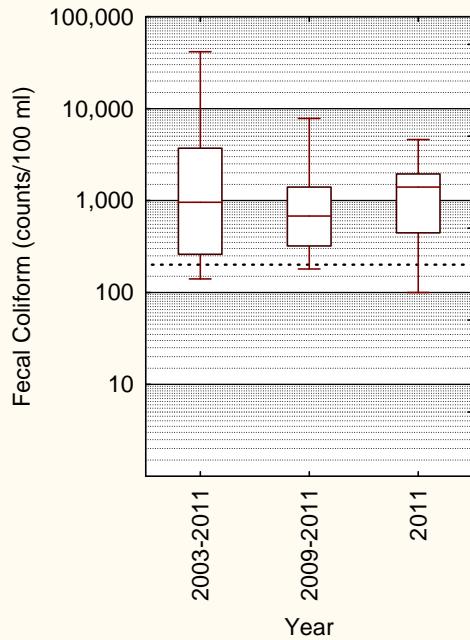
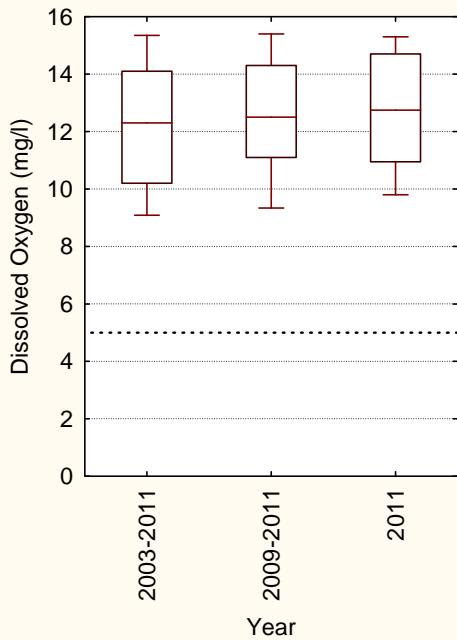
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	71.50	29.50	0.0	3.0	9.0	4.0	2.4	12.9	0.2	1.1	0.0	ND
Standard Error	12.50	5.50	0.0	3.0	0.0	0.1	0.0	4.1	0.2	0.4	0.0	ND
Median	71.50	29.50	0.0	3.0	9.0	4.0	2.4	12.9	0.2	1.1	0.0	ND
Mode	ND	ND	0.0	ND	0.0	ND						
Standard Deviation	17.68	7.78	0.0	4.2	ND	0.1	ND	5.8	0.2	0.6	0.0	ND
Sample Variance	312.50	60.50	0.0	18.0	ND	0.0	ND	33.6	0.0	0.3	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	25.00	11.00	0.0	6.0	0.0	0.1	0.0	8.2	0.3	0.8	0.0	0.0
Minimum	59.00	24.00	0.0	0.0	9.0	3.9	2.4	8.8	0.0	0.7	0.0	0.0
Maximum	84.00	35.00	0.0	6.0	9.0	4.0	2.4	17.0	0.3	1.5	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	158.83	69.88	0.0	38.1	ND	0.6	ND	52.1	1.9	5.1	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	295	245	1.1	8.1	66.4	60.3	6.1	5.9
Standard Error	55	17	0.5	1.1	4.1	4.2	0.7	0.7
Median	295	245	0.0	8.6	67.5	63.0	5.7	5.7
Mode	ND	240	0.0	5.0	ND	68.0	5.1	ND
Standard Deviation	78	47	1.5	3.1	11.6	11.8	2.0	1.9
Sample Variance	6050	2229	2.4	9.5	135.1	139.1	3.9	3.7
Kurtosis	ND	0	-1.4	-1.0	-0.3	0.0	2.0	2.9
Skewness	ND	-1	0.8	0.3	-0.6	-0.8	0.9	1.1
Range	110	140	3.6	8.6	34.0	36.0	6.8	6.8
Minimum	240	160	0.0	4.4	46.0	39.0	3.2	3.1
Maximum	350	300	3.6	13.0	80.0	75.0	10.0	9.9
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	699	39	1.3	2.6	9.7	9.9	1.7	1.6

ND = No Data

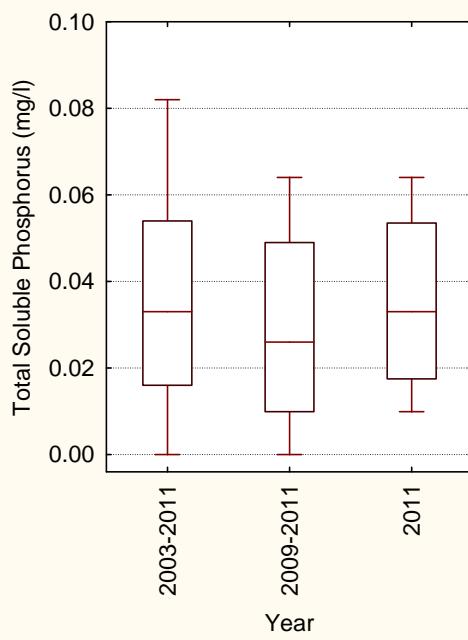
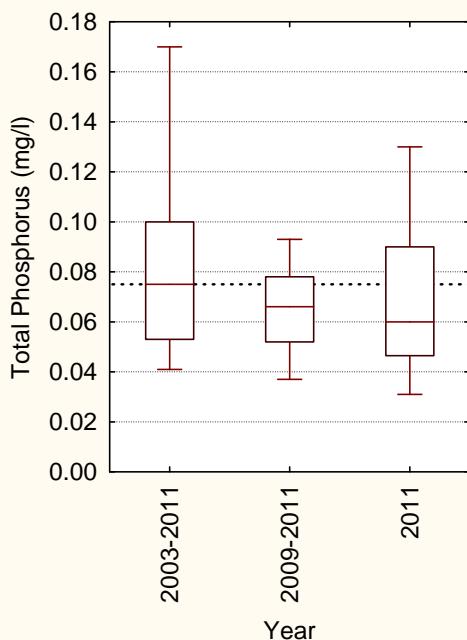
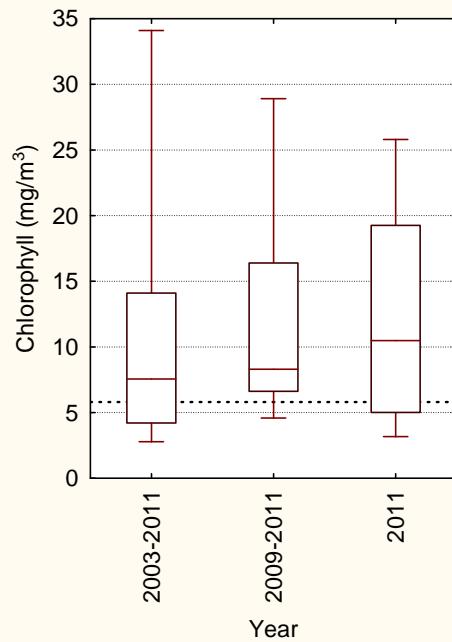
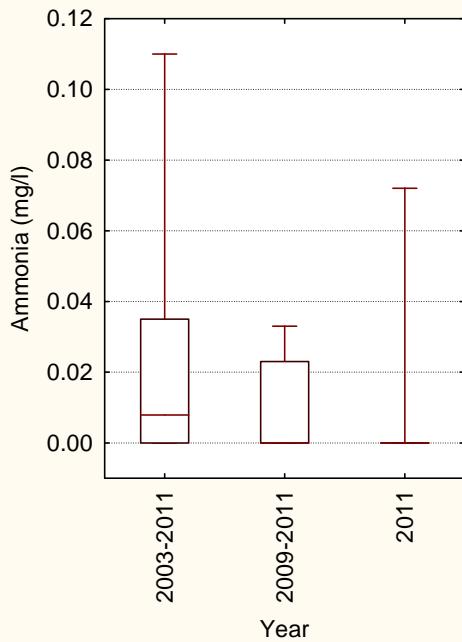
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Underwood Creek at 107th St. and Fisher Pkwy., Site UC-07



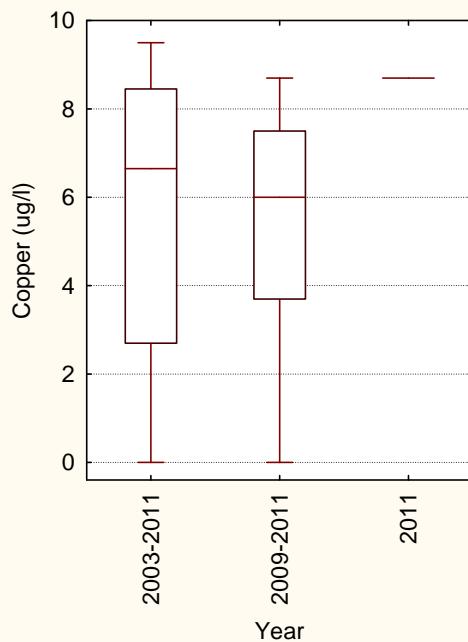
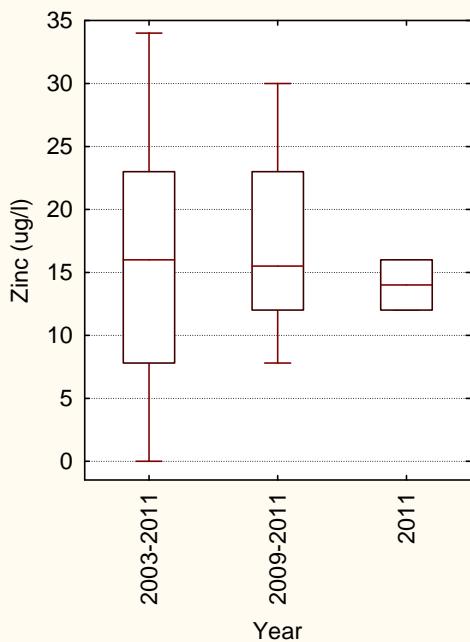
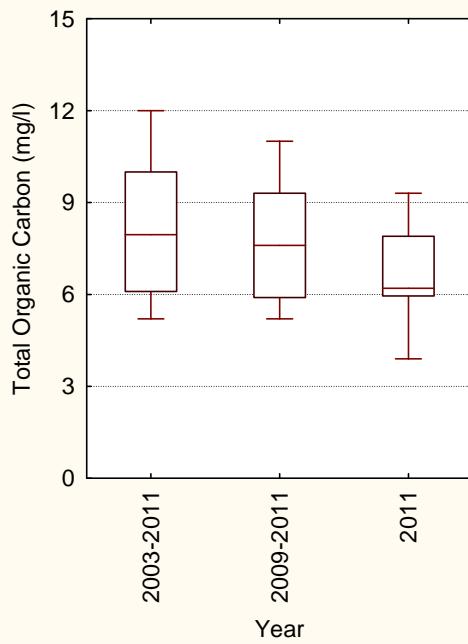
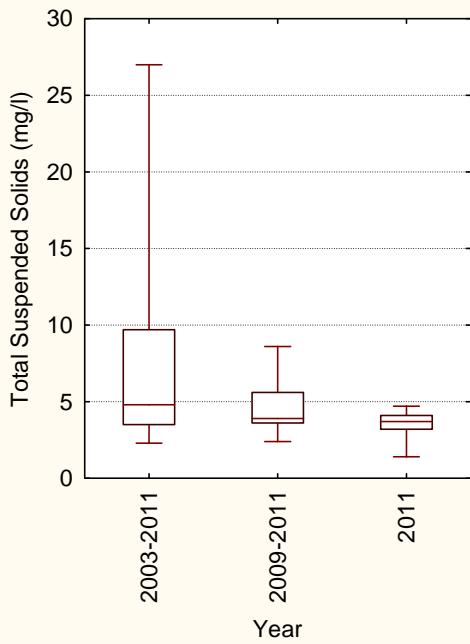
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Underwood Creek at 107th St. and Fisher Pkwy., Site UC-07



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Underwood Creek at 107th St. and Fisher Pkwy., Site UC-07



— Median □ 25%-75% ┤ 10%-90%

107TH STREET AND FISHER PARKWAY - SITE 7
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.3	14.7	12.7	12.31	0.27	0.015	0.29	0.009	0.60	0.069	0.035	ND
Standard Error	0.1	2.0	0.8	2.99	0.09	0.003	0.09	0.009	0.11	0.011	0.007	ND
Median	8.4	16.2	12.8	10.48	0.14	0.014	0.15	0.000	0.62	0.060	0.033	ND
Mode	8.4	ND	9.8	ND	0.14	0.015	0.15	0.000	0.60	ND	ND	ND
Standard Deviation	0.2	5.6	2.1	8.44	0.26	0.009	0.26	0.025	0.32	0.033	0.021	ND
Sample Variance	0.1	31.1	4.6	71.28	0.07	0.000	0.07	0.001	0.10	0.001	0.000	ND
Kurtosis	-0.3	-2.0	-1.2	-1.36	1.04	1.343	0.81	8.000	1.80	0.311	-1.537	ND
Skewness	-0.8	-0.4	-0.3	0.47	1.36	1.178	1.31	2.828	-0.54	0.861	0.252	ND
Range	0.7	13.6	5.5	22.62	0.70	0.029	0.72	0.072	1.10	0.099	0.054	0.00
Minimum	7.9	6.9	9.8	3.18	0.08	0.004	0.08	0.000	0.00	0.031	0.010	0.00
Maximum	8.6	20.5	15.3	25.80	0.78	0.033	0.80	0.072	1.10	0.130	0.064	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.7	1.8	7.06	0.21	0.008	0.22	0.021	0.26	0.027	0.017	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	992.5	987.9	1.9	3.5	4.8	1673	291.3	1536	3.0	1363
Standard Error	ND	ND	66.4	76.3	0.4	0.4	1.6	119	16.2	516	0.2	642
Median	ND	ND	1000.0	996.1	2.3	3.7	3.3	1740	290.0	1400	3.1	605
Mode	ND	ND	1000.0	ND	2.3	ND	ND	1740	250.0	1400	3.1	ND
Standard Deviation	ND	ND	187.7	202.0	0.9	1.0	4.4	337	45.8	1460	0.6	1816
Sample Variance	ND	ND	35221.4	40798.4	0.9	1.1	19.4	113707	2098.2	2132284	0.3	3297964
Kurtosis	ND	ND	-0.8	-1.3	3.3	3.4	7.7	0	-1.8	2	-0.1	4
Skewness	ND	ND	-0.6	-0.6	-1.7	-1.6	2.8	-1	0.0	1	-0.8	2
Range	0.0	0.0	490.0	487.8	2.8	3.3	13.0	930	120.0	4500	1.7	5280
Minimum	0.0	0.0	710.0	708.6	0.0	1.4	2.6	1090	230.0	100	2.0	120
Maximum	0.0	0.0	1200.0	1196.4	2.8	4.7	15.6	2020	350.0	4600	3.7	5400
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	156.9	186.8	0.9	1.0	3.7	282	38.3	1221	0.5	1518

ND = No Data

Provisional MMSD Water Quality Data

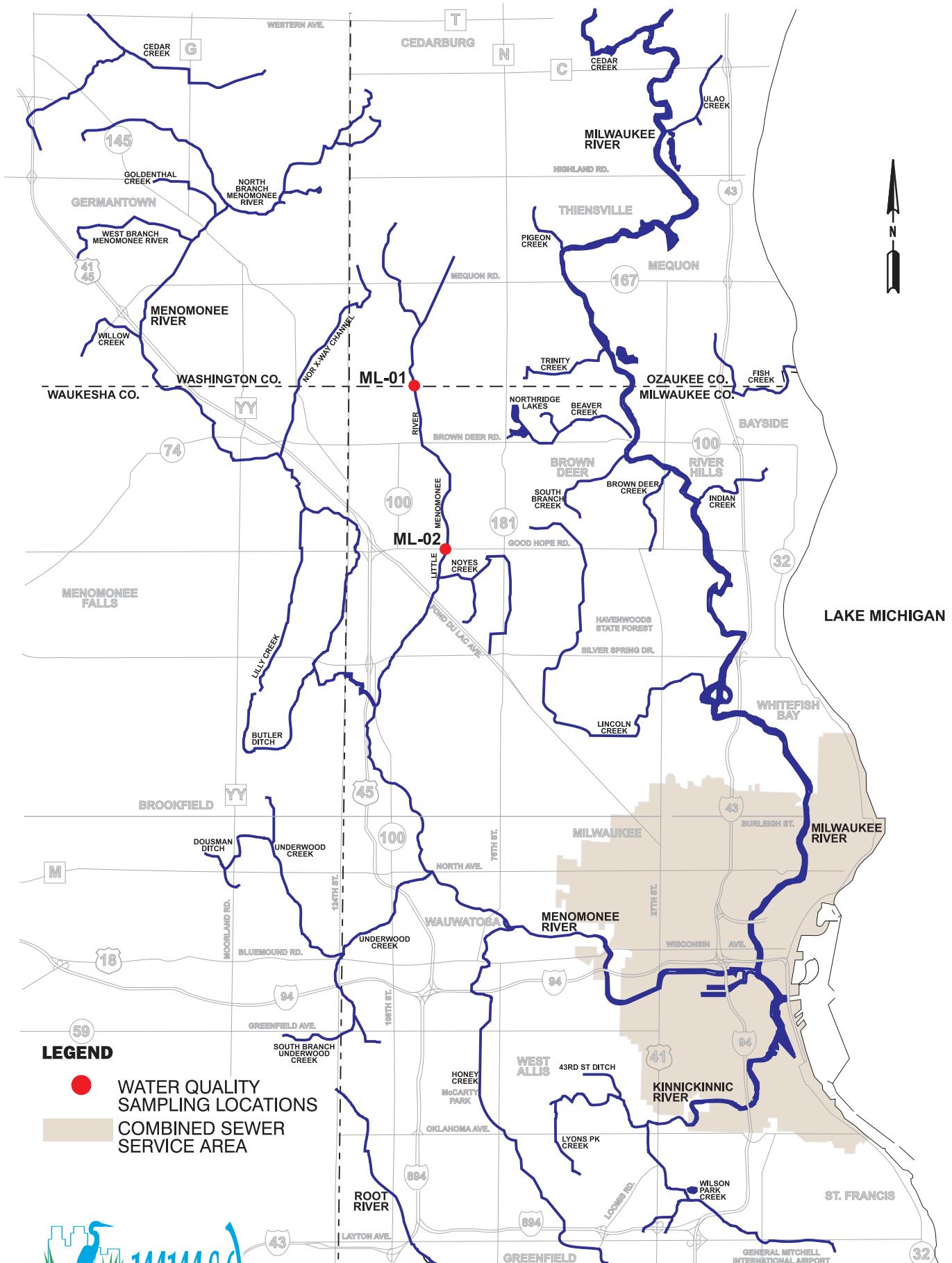
107TH STREET AND FISHER PARKWAY - SITE 7
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	70.00	29.00	0.0	0.0	8.7	2.0	1.8	14.0	0.0	1.2	0.0	ND
Standard Error	13.00	6.00	0.0	0.0	0.0	0.2	0.0	2.0	0.0	0.5	0.0	ND
Median	70.00	29.00	0.0	0.0	8.7	2.0	1.8	14.0	0.0	1.2	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	18.38	8.49	0.0	0.0	ND	0.4	ND	2.8	0.0	0.7	0.0	ND
Sample Variance	338.00	72.00	0.0	0.0	ND	0.1	ND	8.0	0.0	0.5	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	26.00	12.00	0.0	0.0	0.0	0.5	0.0	4.0	0.0	1.0	0.0	0.0
Minimum	57.00	23.00	0.0	0.0	8.7	1.7	1.8	12.0	0.0	0.7	0.0	0.0
Maximum	83.00	35.00	0.0	0.0	8.7	2.2	1.8	16.0	0.0	1.7	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	165.18	76.24	0.0	0.0	ND	3.2	ND	25.4	0.0	6.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	295	244	1.4	7.7	62.5	55.8	6.7	6.4
Standard Error	55	17	0.5	0.8	3.8	3.6	0.6	0.5
Median	295	255	1.1	8.2	64.0	57.0	6.2	6.1
Mode	ND	280	0.0	10.0	ND	66.0	7.9	5.9
Standard Deviation	78	48	1.5	2.2	10.8	10.1	1.7	1.5
Sample Variance	6050	2313	2.2	4.7	117.7	101.9	2.7	2.1
Kurtosis	ND	1	-2.3	-1.8	-0.1	0.2	0.2	0.8
Skewness	ND	-1	0.2	-0.3	-0.7	-0.8	0.0	-0.2
Range	110	140	3.4	5.5	33.0	29.0	5.4	4.9
Minimum	240	150	0.0	4.5	43.0	37.0	3.9	3.8
Maximum	350	290	3.4	10.0	76.0	66.0	9.3	8.7
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	699	40	1.2	1.8	9.1	8.4	1.4	1.2

ND = No Data

Provisional MMSD Water Quality Data

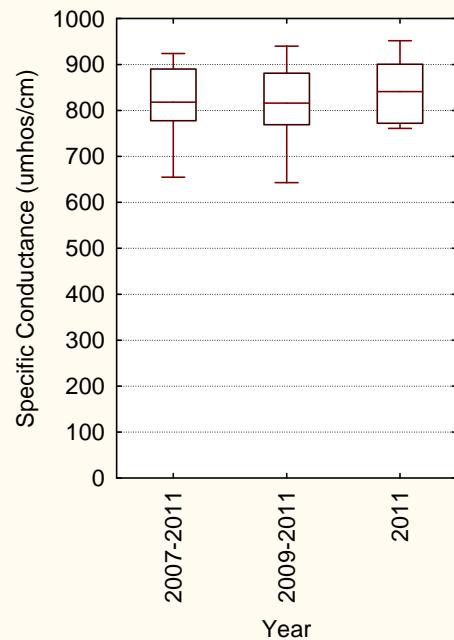
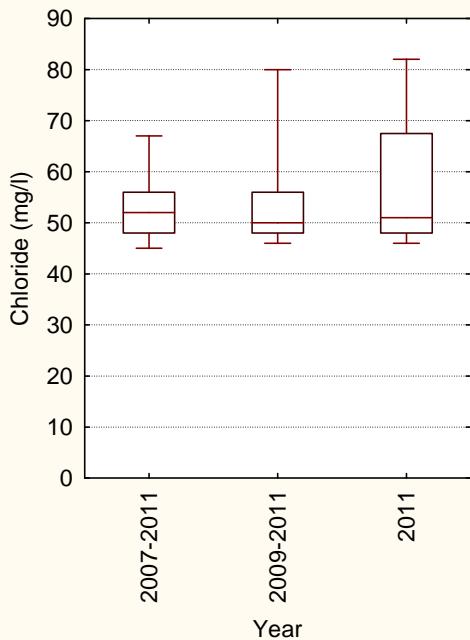
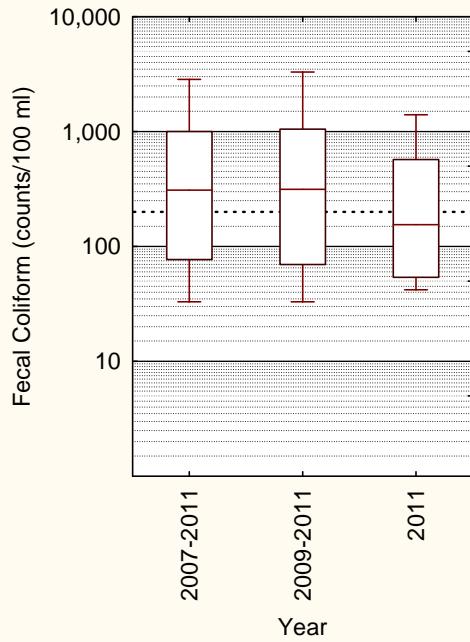
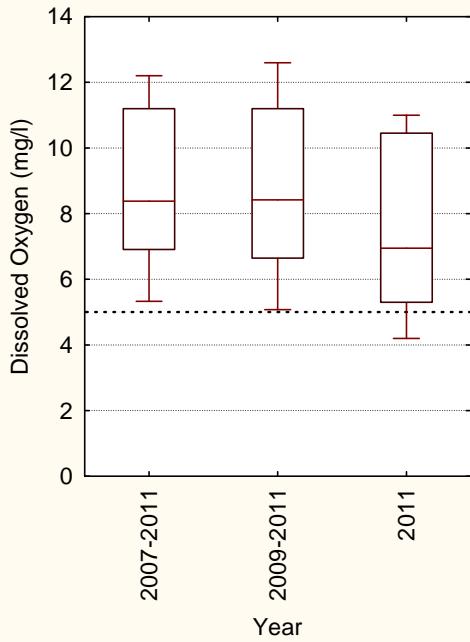


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Improving Water Quality

FIGURE 8
**LITTLE MENOMONEE RIVER (ML) SURVEY
WATER QUALITY SAMPLING LOCATIONS**
10/24/07

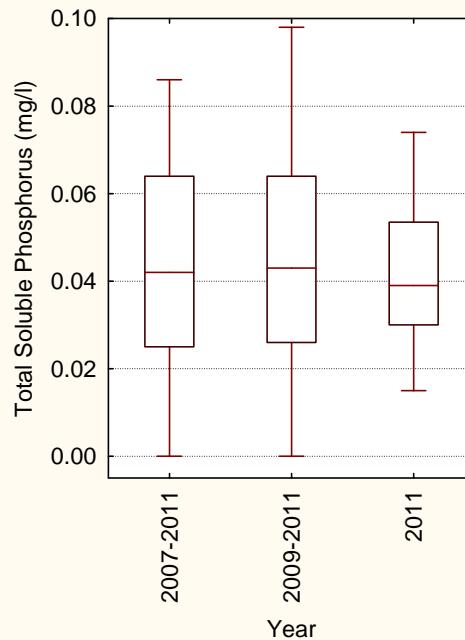
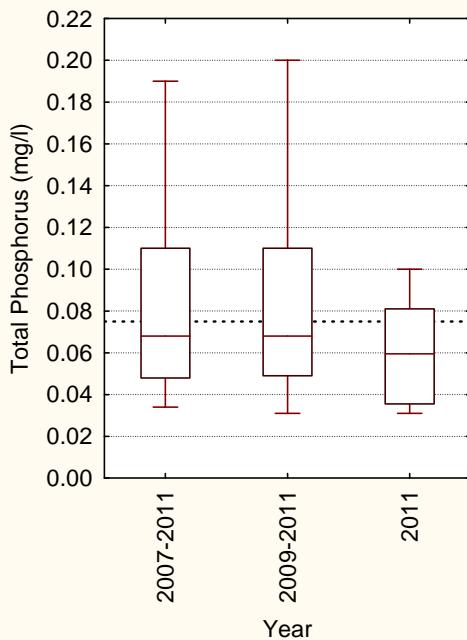
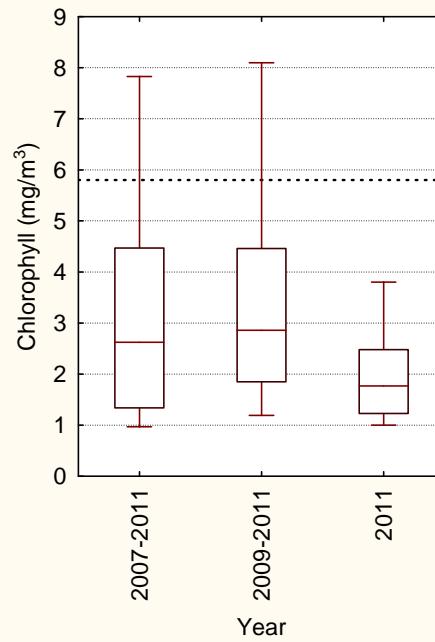
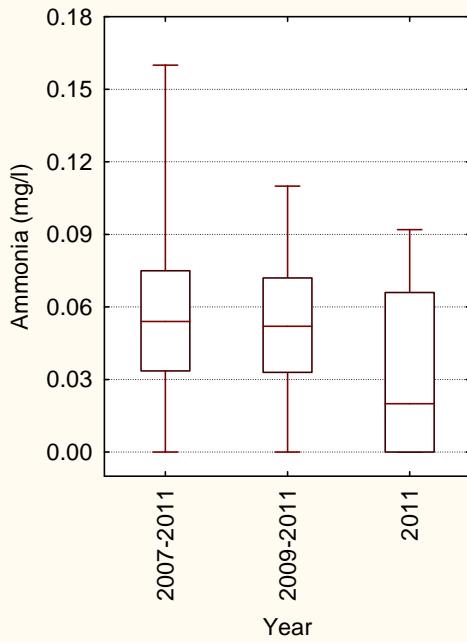
02-034(ML)REPORT

MMSD Water Quality Monitoring Program Data
Little Menomonee River at County Line Rd., Site ML-01



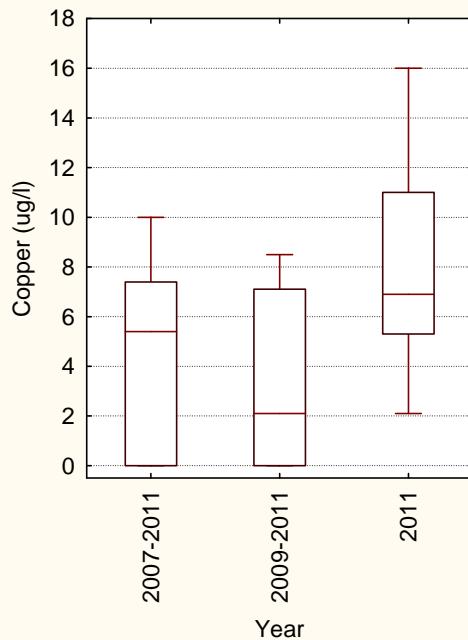
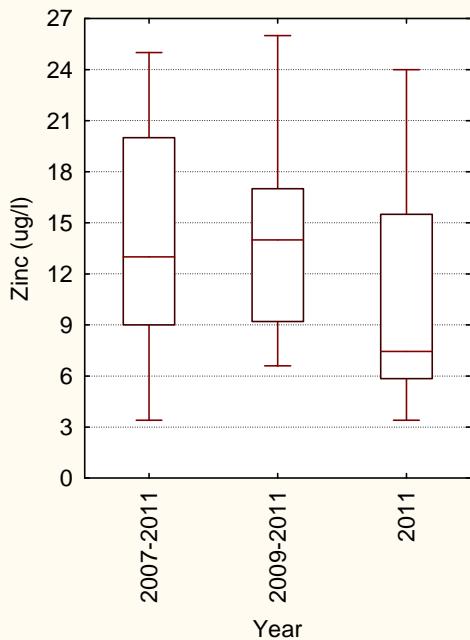
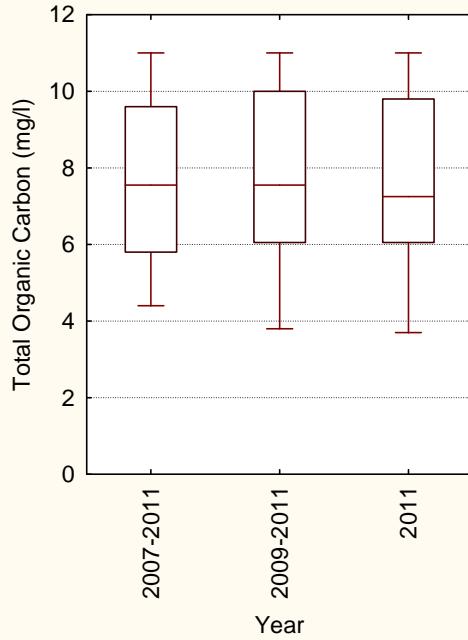
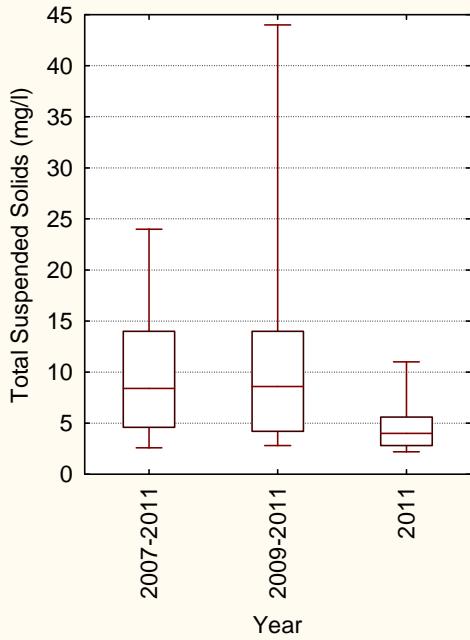
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Little Menominee River at County Line Rd., Site ML-01



— Median □ 25%-75% ─ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Little Menomonee River at County Line Rd., Site ML-01



— Median □ 25%-75% ━ 10%-90%

COUNTY LINE ROAD - SITE 1
LITTLE MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.4	10.1	7.6	2.15	2.04	0.026	2.07	0.059	0.58	0.200	0.160	ND
Standard Error	0.1	2.0	0.8	0.43	0.22	0.005	0.22	0.032	0.20	0.146	0.122	ND
Median	7.4	9.2	7.0	1.77	1.80	0.021	1.80	0.020	0.46	0.060	0.039	ND
Mode	7.4	ND	ND	ND	1.50	ND	1.50	0.000	0.00	ND	0.039	ND
Standard Deviation	0.2	7.0	2.8	1.49	0.77	0.016	0.78	0.107	0.67	0.505	0.423	ND
Sample Variance	0.0	49.6	7.8	2.23	0.59	0.000	0.61	0.011	0.44	0.255	0.179	ND
Kurtosis	-0.9	-1.4	-1.6	3.80	0.56	6.792	0.26	8.955	6.41	11.912	11.937	ND
Skewness	0.0	0.2	0.3	1.83	0.96	2.471	0.92	2.915	2.26	3.446	3.451	ND
Range	0.6	20.0	7.8	5.50	2.72	0.060	2.71	0.370	2.40	1.800	1.500	0.00
Minimum	7.1	1.0	4.1	0.55	0.98	0.013	0.99	0.000	0.00	0.000	0.000	0.00
Maximum	7.7	21.0	11.9	6.05	3.70	0.073	3.70	0.370	2.40	1.800	1.500	0.00
Count	12	12	12	12	12	12	12	11	11	12	12	0
Confidence Level(95.0%)	0.1	4.5	1.8	0.95	0.49	0.010	0.49	0.072	0.45	0.321	0.268	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	536.7	528.8	2.2	7.9	8.5	835	60.8	12787	2.4	3145
Standard Error	ND	ND	24.2	26.4	1.0	3.5	4.1	38	6.5	12474	0.3	2808
Median	ND	ND	530.0	527.8	1.5	4.0	3.7	841	51.0	155	2.2	160
Mode	ND	ND	530.0	527.8	0.0	2.2	ND	ND	52.0	ND	ND	210
Standard Deviation	ND	ND	83.9	91.5	3.5	12.2	13.5	133	22.4	43213	1.0	9727
Sample Variance	ND	ND	7042.4	8372.2	12.4	150.0	183.1	17698	500.9	1867340370	1.1	94613527
Kurtosis	ND	ND	0.2	1.0	9.8	10.8	10.4	3	4.0	12	4.6	12
Skewness	ND	ND	0.0	-0.4	3.0	3.2	3.2	-1	2.0	3	1.9	3
Range	0.0	0.0	310.0	352.5	13.0	43.9	47.0	551	74.0	149977	3.8	33974
Minimum	0.0	0.0	380.0	334.0	0.0	2.1	1.8	519	46.0	23	1.4	26
Maximum	0.0	0.0	690.0	686.5	13.0	46.0	48.8	1070	120.0	150000	5.2	34000
Count	0	0	12	12	12	12	11	12	12	12	12	12
Confidence Level(95.0%)	ND	ND	53.3	58.1	2.2	7.8	9.1	85	14.2	27456	0.7	6180

ND = No Data

Provisional MMSD Water Quality Data

COUNTY LINE ROAD - SITE 1
LITTLE MENOMONEE RIVER
WATER QUALITY DATA - 2011

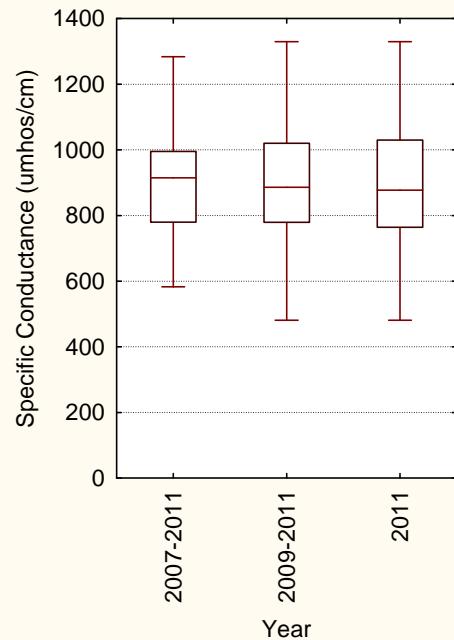
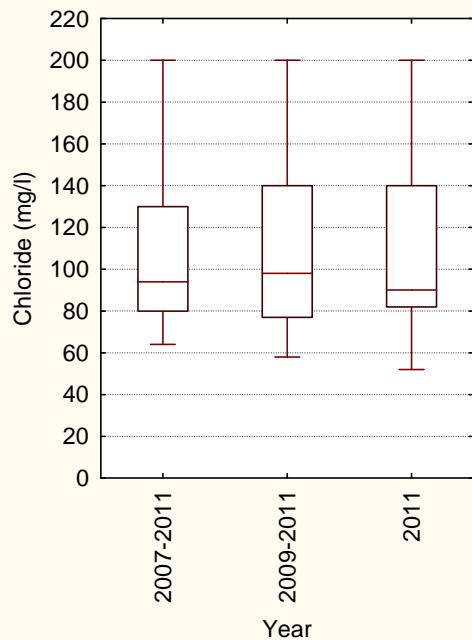
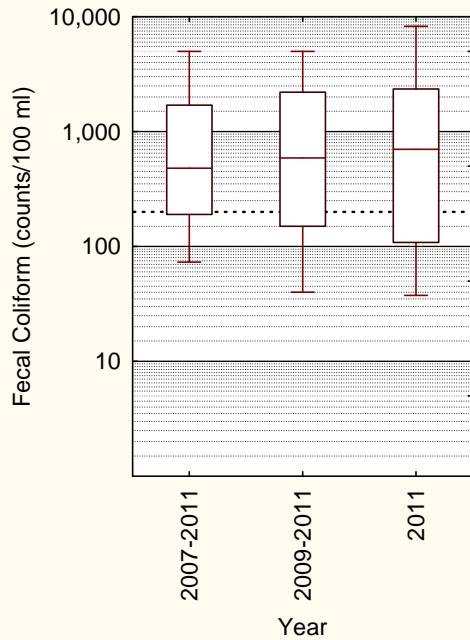
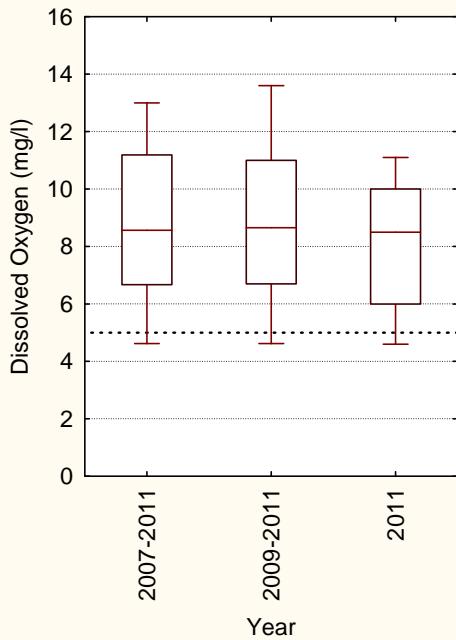
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	86.92	40.67	0.0	2.5	8.1	2.4	1.0	10.5	0.2	1.4	0.0	ND
Standard Error	5.00	2.34	0.0	1.4	1.4	0.4	0.4	2.4	0.1	0.3	0.0	ND
Median	89.00	42.50	0.0	0.0	6.9	2.2	1.1	7.5	0.0	1.6	0.0	ND
Mode	100.00	46.00	0.0	0.0	ND	1.3	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	17.31	8.12	0.0	4.9	4.3	1.4	1.1	8.3	0.3	0.9	0.0	ND
Sample Variance	299.72	65.88	0.0	24.3	18.2	2.0	1.2	68.8	0.1	0.9	0.0	ND
Kurtosis	3.19	7.51	ND	2.9	0.0	-0.2	-0.8	-0.2	0.5	-0.4	ND	ND
Skewness	-1.42	-2.57	ND	1.9	0.6	0.3	0.6	1.0	1.5	-0.2	ND	ND
Range	67.00	30.00	0.0	15.0	13.9	5.1	2.8	26.0	0.9	3.0	0.0	0.0
Minimum	43.00	17.00	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	110.00	47.00	0.0	15.0	16.0	5.1	2.8	26.0	0.9	3.0	0.0	0.0
Count	12	12	12	12	9	12	7	12	12	11	12	0
Confidence Level(95.0%)	11.00	5.16	0.0	3.1	3.3	0.9	1.0	5.3	0.2	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	387	277	1.1	5.3	79.7	71.3	8.4	8.0
Standard Error	22	14	1.1	0.9	7.6	7.9	1.4	1.3
Median	395	285	0.0	4.5	76.0	67.5	7.3	6.8
Mode	430	280	0.0	4.5	77.0	71.0	ND	ND
Standard Deviation	76	49	3.8	3.1	26.5	27.3	4.8	4.7
Sample Variance	5715	2370	14.1	9.7	701.2	744.0	23.5	21.8
Kurtosis	5	9	12.0	10.7	9.5	7.7	6.0	5.7
Skewness	-2	-3	3.5	3.2	2.9	2.2	2.2	2.1
Range	300	190	13.0	11.7	108.0	120.0	18.4	17.8
Minimum	180	130	0.0	3.3	52.0	30.0	3.6	3.2
Maximum	480	320	13.0	15.0	160.0	150.0	22.0	21.0
Count	12	12	12	12	12	12	12	12
Confidence Level(95.0%)	48	31	2.4	2.0	16.8	17.3	3.1	3.0

ND = No Data

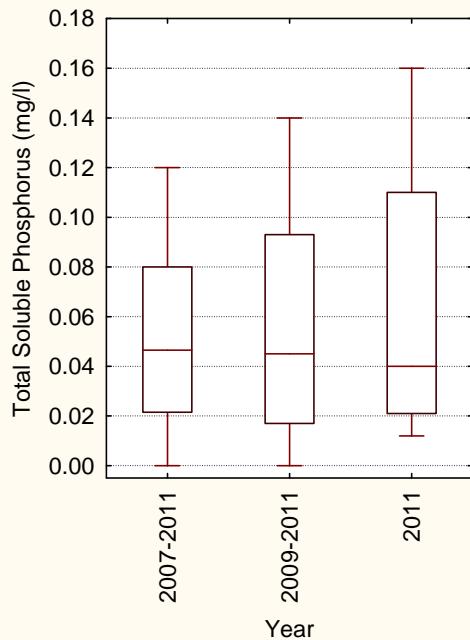
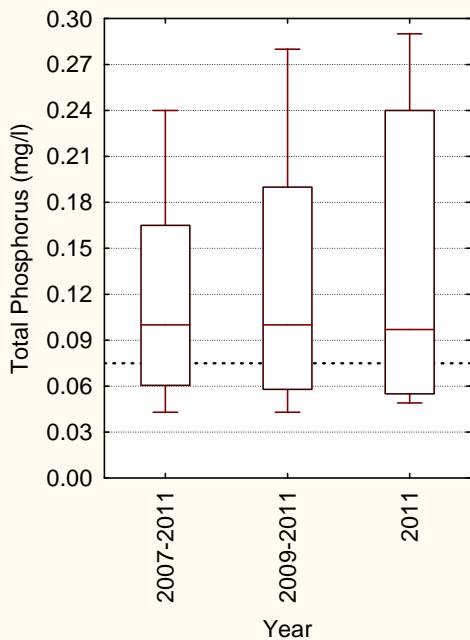
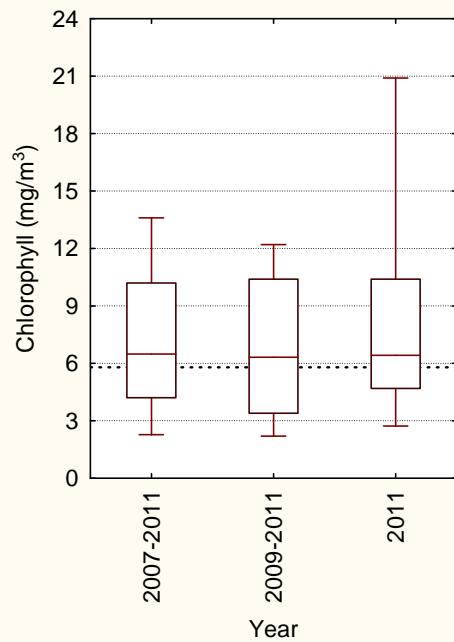
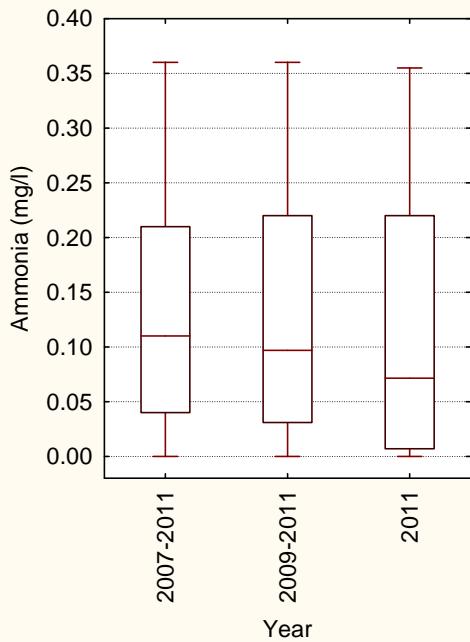
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Little Menomonee River at Granville Rd. and Good Hope Rd., Site ML-02



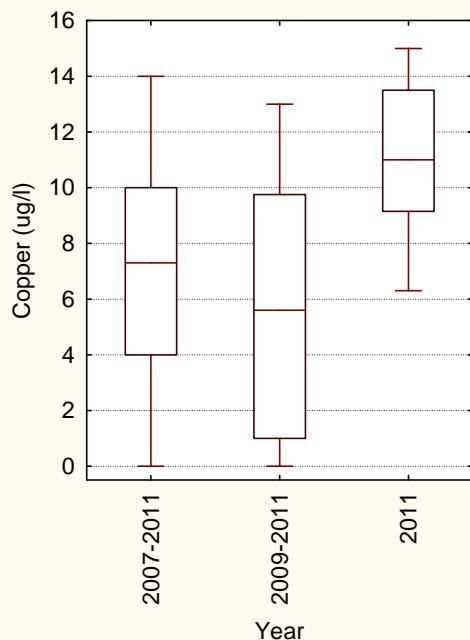
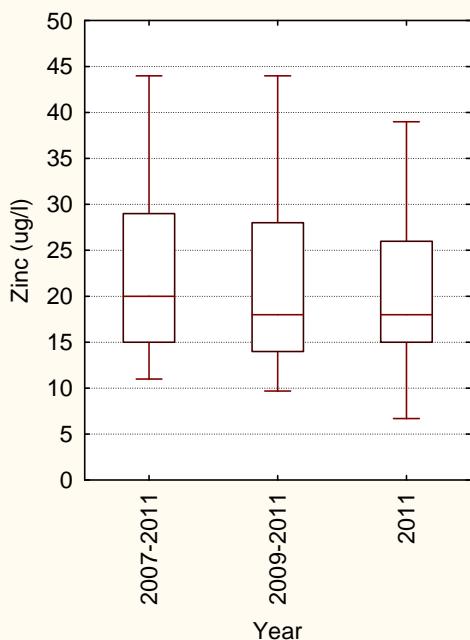
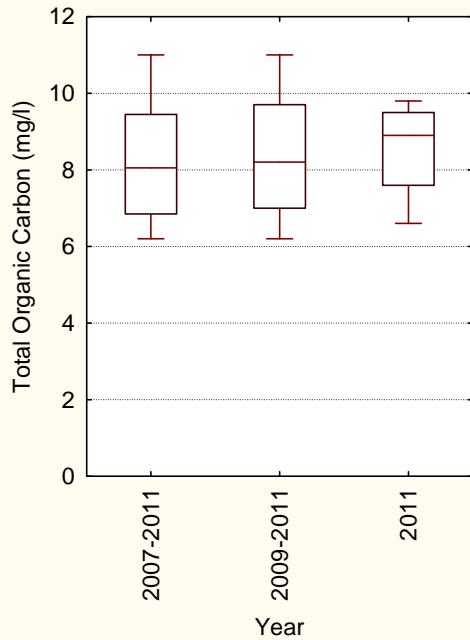
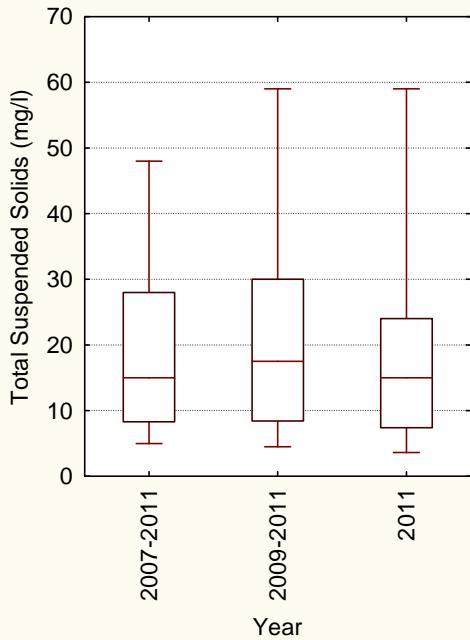
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Little Menomonee River at Granville Rd. and Good Hope Rd., Site ML-02



— Median □ 25%-75% █ 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Little Menomonee River at Granville Rd. and Good Hope Rd., Site ML-02



— Median □ 25%-75% ━ 10%-90%

GRANVILLE ROAD - SITE 2
LITTLE MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.5	11.7	8.1	8.94	1.05	0.039	1.09	0.130	0.86	0.154	0.073	ND
Standard Error	0.1	1.7	0.6	1.52	0.20	0.006	0.20	0.035	0.10	0.030	0.017	ND
Median	7.5	12.6	8.5	6.42	0.60	0.030	0.66	0.072	0.80	0.097	0.040	ND
Mode	7.2	22.0	9.1	ND	1.00	0.065	2.10	0.000	0.78	0.100	0.017	ND
Standard Deviation	0.3	7.9	3.0	6.98	0.91	0.026	0.90	0.156	0.44	0.135	0.080	ND
Sample Variance	0.1	62.5	8.8	48.68	0.82	0.001	0.80	0.024	0.19	0.018	0.006	ND
Kurtosis	-0.9	-1.3	-0.2	1.45	0.04	1.173	-0.04	0.895	0.55	1.795	5.290	ND
Skewness	0.4	-0.1	-0.3	1.47	1.03	1.098	1.00	1.264	-0.09	1.431	2.062	ND
Range	0.9	23.0	11.3	23.96	3.01	0.110	3.01	0.540	1.80	0.505	0.340	0.00
Minimum	7.1	-0.1	2.4	1.94	0.09	0.000	0.09	0.000	0.00	0.035	0.000	0.00
Maximum	8.0	22.9	13.7	25.90	3.10	0.110	3.10	0.540	1.80	0.540	0.340	0.00
Count	21	21	21	21	21	21	21	20	20	21	21	0
Confidence Level(95.0%)	0.1	3.6	1.3	3.18	0.41	0.012	0.41	0.073	0.21	0.062	0.036	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	608.6	580.0	7.2	28.6	28.1	992	139.9	7115	2.8	3125
Standard Error	ND	ND	72.9	75.0	3.0	10.3	8.9	140	34.8	5450	0.2	1786
Median	ND	ND	560.0	552.0	3.4	15.0	13.1	877	90.0	700	2.8	520
Mode	ND	ND	570.0	462.0	1.6	24.0	ND	ND	200.0	ND	ND	33
Standard Deviation	ND	ND	334.2	343.8	13.9	47.2	40.0	644	159.3	24374	1.0	8185
Sample Variance	ND	ND	111702.9	118190.0	194.1	2227.5	1601.3	414109	25373.7	594098506	0.9	66994342
Kurtosis	ND	ND	11.8	10.5	18.0	14.8	12.0	13	16.5	19	0.1	16
Skewness	ND	ND	3.1	2.8	4.1	3.7	3.3	3	3.9	4	0.4	4
Range	0.0	0.0	1700.0	1706.0	64.9	217.3	178.1	3216	766.0	109988	4.0	36967
Minimum	0.0	0.0	200.0	170.0	1.1	2.7	2.9	294	34.0	12	1.1	33
Maximum	0.0	0.0	1900.0	1876.0	66.0	220.0	181.0	3510	800.0	110000	5.0	37000
Count	0	0	21	21	21	21	20	21	21	20	20	21
Confidence Level(95.0%)	ND	ND	152.1	156.5	6.3	21.5	18.7	293	72.5	11407	0.5	3726

ND = No Data

Provisional MMSD Water Quality Data

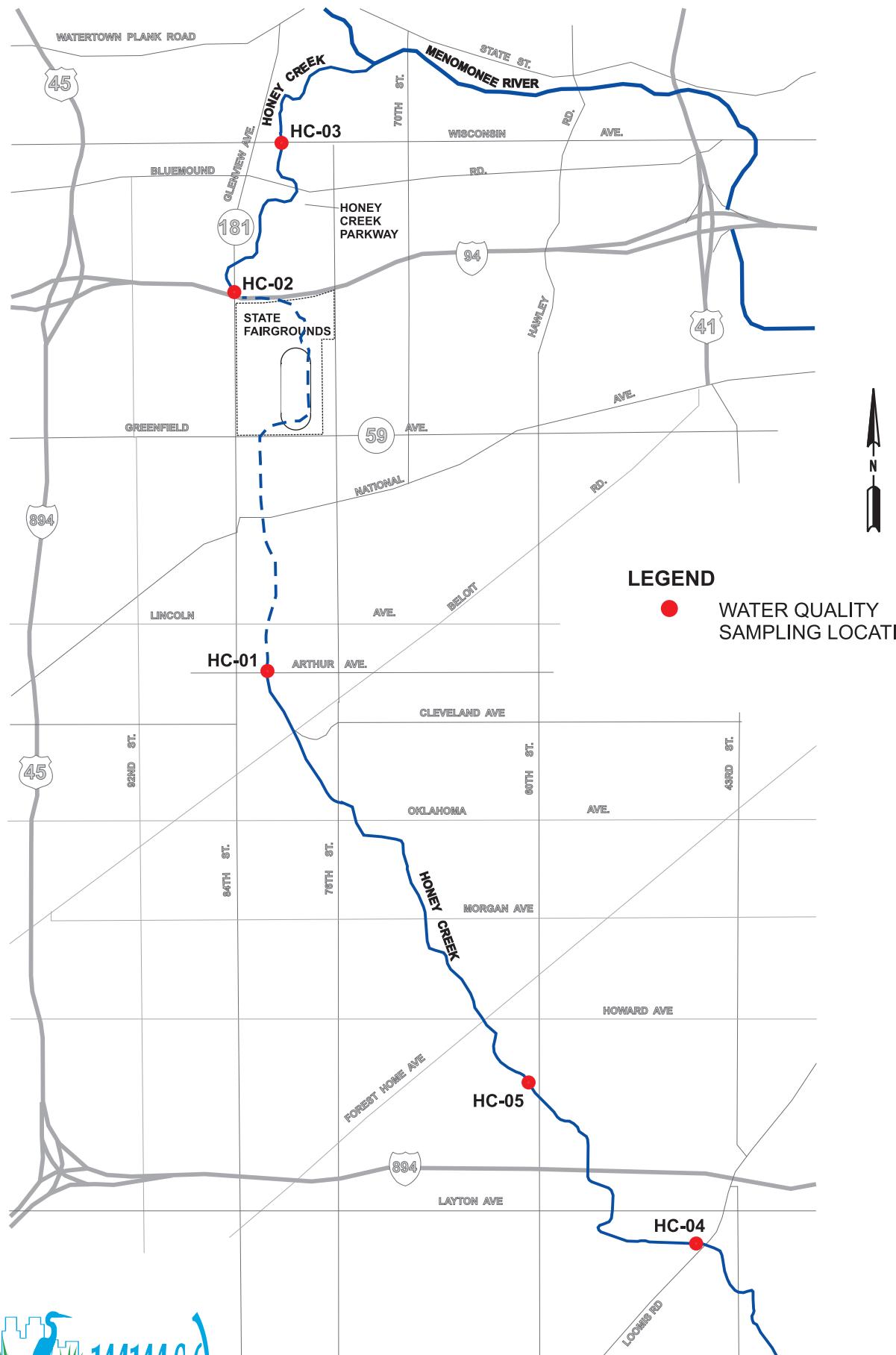
GRANVILLE ROAD - SITE 2
LITTLE MENOMONEE RIVER
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	73.24	32.11	0.0	3.5	11.3	3.1	1.3	20.4	0.1	1.1	0.0	ND
Standard Error	4.96	2.12	0.0	1.0	1.0	0.3	0.5	2.6	0.1	0.2	0.0	ND
Median	78.00	35.00	0.0	0.0	11.0	2.8	0.0	18.0	0.0	1.2	0.0	ND
Mode	88.00	40.00	0.0	0.0	11.0	2.3	0.0	18.0	0.0	0.0	0.0	ND
Standard Deviation	22.72	9.73	0.0	4.4	3.8	1.6	1.8	11.6	0.3	1.0	0.0	ND
Sample Variance	516.19	94.60	0.0	19.0	14.7	2.5	3.1	133.5	0.1	0.9	0.0	ND
Kurtosis	-0.18	-0.24	ND	-1.0	0.9	5.8	-1.7	0.4	5.5	-0.6	ND	ND
Skewness	-0.61	-0.77	ND	0.7	0.3	1.7	0.6	0.6	2.4	0.4	ND	ND
Range	89.00	35.70	0.0	13.0	16.0	8.4	4.0	45.0	1.0	3.0	0.0	0.0
Minimum	21.00	9.30	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	110.00	45.00	0.0	13.0	20.0	8.4	4.0	45.0	1.0	3.0	0.0	0.0
Count	21	21	21	21	16	21	13	20	20	20	21	0
Confidence Level(95.0%)	10.34	4.43	0.0	2.0	2.0	0.7	1.1	5.4	0.1	0.5	0.0	ND

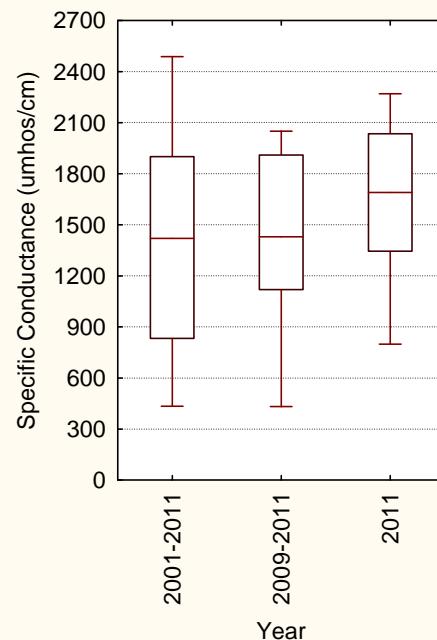
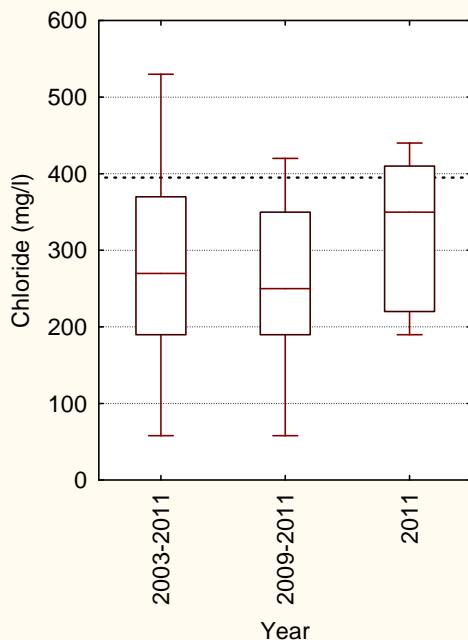
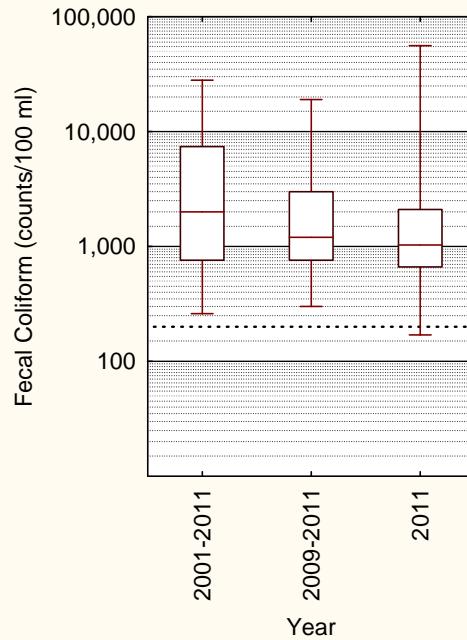
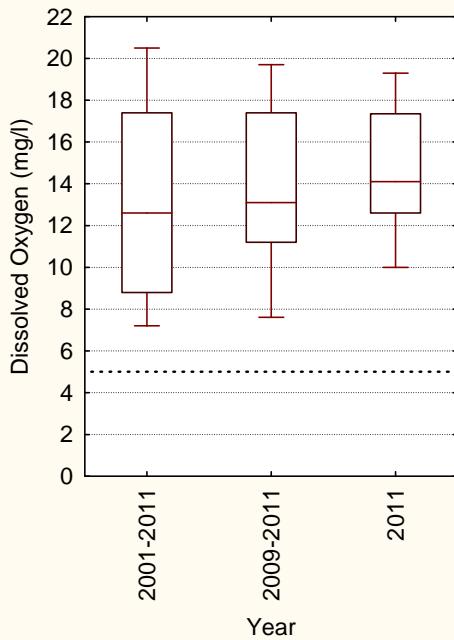
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	315	224	2.5	8.1	65.2	56.2	8.5	8.1
Standard Error	21	16	0.8	0.8	5.9	5.6	0.3	0.3
Median	350	250	2.1	6.3	66.0	58.0	8.9	8.1
Mode	380	260	0.0	7.9	68.0	58.0	9.8	8.1
Standard Deviation	96	75	3.5	3.7	27.0	25.5	1.5	1.5
Sample Variance	9161	5625	12.1	13.7	731.3	650.7	2.3	2.1
Kurtosis	0	1	5.5	0.1	7.5	5.6	0.1	-0.6
Skewness	-1	-1	2.2	1.1	2.0	1.4	0.0	0.0
Range	368	282	14.0	11.6	136.0	128.0	6.2	5.5
Minimum	92	38	0.0	4.4	24.0	12.0	5.8	5.5
Maximum	460	320	14.0	16.0	160.0	140.0	12.0	11.0
Count	21	21	21	21	21	21	21	21
Confidence Level(95.0%)	44	34	1.6	1.7	12.3	11.6	0.7	0.7

ND = No Data

Provisional MMSD Water Quality Data

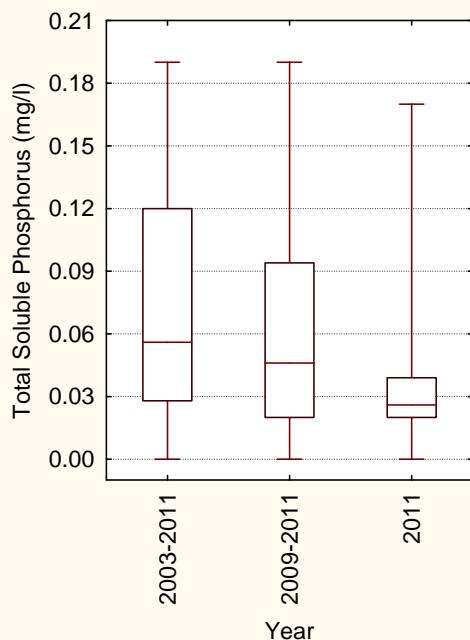
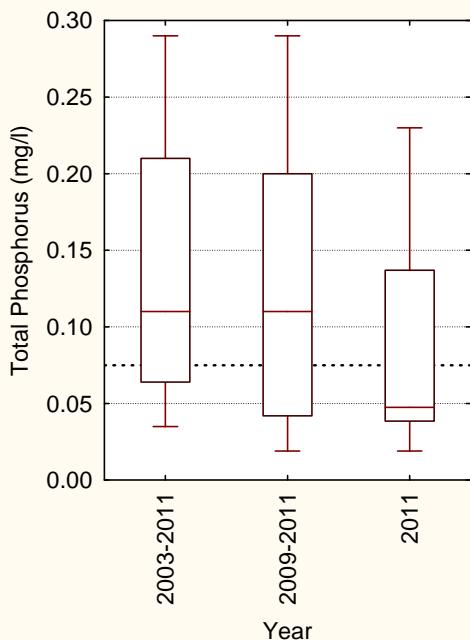
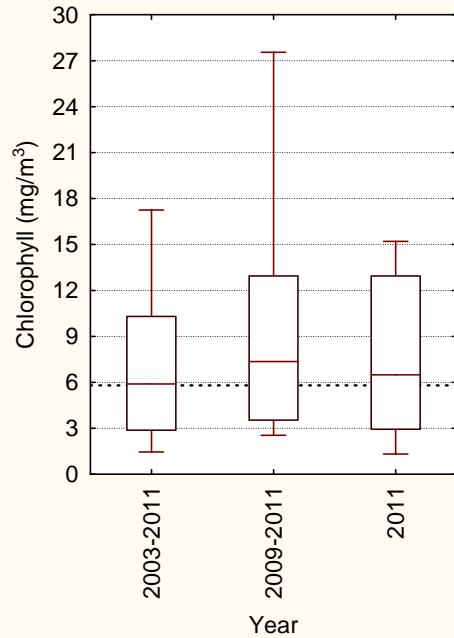
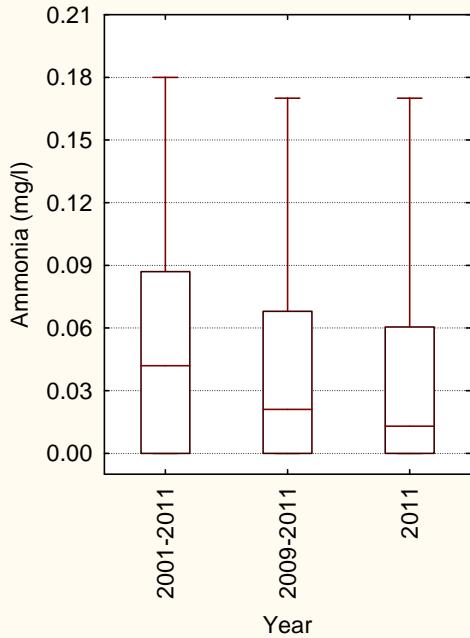


MMSD Water Quality Monitoring Program Data
Honey Creek at Arthur Ave., Site HC-01



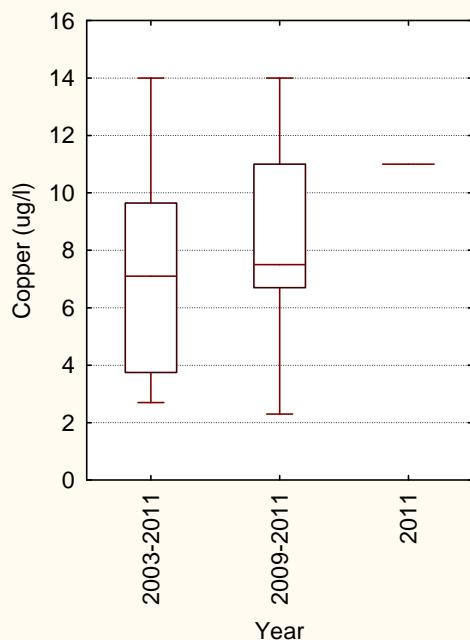
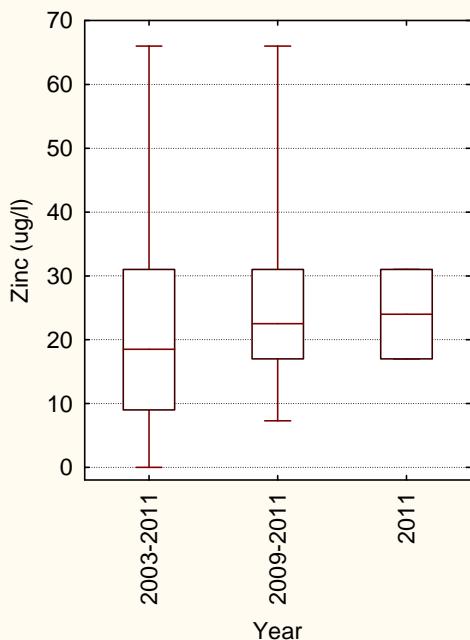
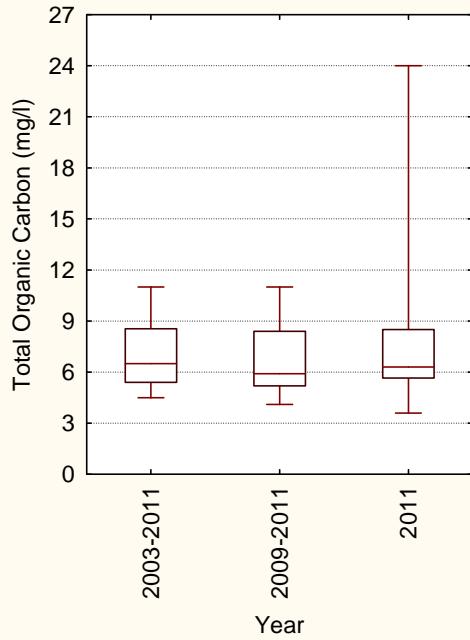
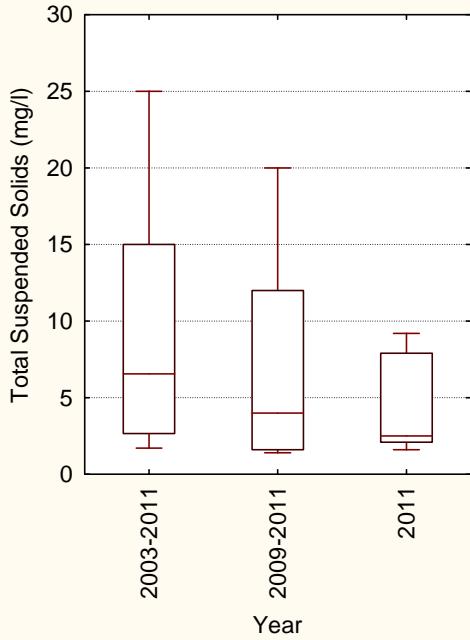
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
 Honey Creek at Arthur Ave., Site HC-01



— Median □ 25%-75% ─ 10%-90%
 ----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Honey Creek at Arthur Ave., Site HC-01



— Median □ 25%-75% ┌ 10%-90%

81ST STREET AND ARTHUR AVENUE (MCCARTY PARK) - SITE 1
 HONEY CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.2	13.2	14.7	7.66	0.47	0.018	0.49	0.040	0.70	0.087	0.043	ND
Standard Error	0.2	2.5	1.1	1.99	0.14	0.005	0.13	0.021	0.13	0.029	0.019	ND
Median	8.3	11.0	14.1	6.49	0.39	0.016	0.43	0.013	0.79	0.048	0.026	ND
Mode	8.3	ND	12.6	15.20	ND	ND	0.45	0.000	ND	ND	0.020	ND
Standard Deviation	0.5	7.0	3.1	5.63	0.38	0.013	0.38	0.059	0.37	0.083	0.053	ND
Sample Variance	0.3	49.1	9.8	31.75	0.15	0.000	0.15	0.003	0.13	0.007	0.003	ND
Kurtosis	0.3	0.8	-1.1	-1.73	0.62	-0.318	0.39	3.535	1.19	-0.015	6.765	ND
Skewness	0.1	1.1	0.1	0.40	1.19	0.531	1.08	1.838	-0.88	1.355	2.514	ND
Range	1.6	21.2	9.3	13.88	1.09	0.041	1.09	0.170	1.20	0.211	0.170	0.00
Minimum	7.5	5.6	10.0	1.32	0.11	0.000	0.11	0.000	0.00	0.019	0.000	0.00
Maximum	9.1	26.8	19.3	15.20	1.20	0.041	1.20	0.170	1.20	0.230	0.170	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.4	5.9	2.6	4.71	0.32	0.011	0.32	0.049	0.31	0.070	0.044	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	970.0	947.2	2.2	4.2	5.0	1651	323.8	7970	3.1	5565
Standard Error	ND	ND	100.1	114.6	0.6	1.2	1.4	174	35.9	6868	0.3	4497
Median	ND	ND	1100.0	1096.0	1.7	2.5	2.8	1690	350.0	1030	3.0	1075
Mode	ND	ND	1100.0	ND	ND	ND	ND	ND	190.0	ND	ND	ND
Standard Deviation	ND	ND	283.2	303.3	1.6	3.1	4.1	493	101.4	19425	0.7	12720
Sample Variance	ND	ND	80200.0	91999.8	2.5	9.3	16.5	242999	10283.9	377339857	0.5	161785857
Kurtosis	ND	ND	0.0	-0.7	-0.8	-0.7	0.1	-1	-1.7	8	3.6	8
Skewness	ND	ND	-1.1	-0.9	0.2	1.1	1.1	-1	-0.4	3	1.5	3
Range	0.0	0.0	820.0	825.5	4.6	7.6	10.8	1471	250.0	55830	2.5	36710
Minimum	0.0	0.0	480.0	472.1	0.0	1.6	1.8	799	190.0	170	2.2	290
Maximum	0.0	0.0	1300.0	1297.6	4.6	9.2	12.6	2270	440.0	56000	4.7	37000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	236.8	280.5	1.5	2.8	3.4	412	84.8	16240	0.6	10634

ND = No Data

Provisional MMSD Water Quality Data

81ST STREET AND ARTHUR AVENUE (MCCARTY PARK) - SITE 1
 HONEY CREEK
 WATER QUALITY DATA - 2011

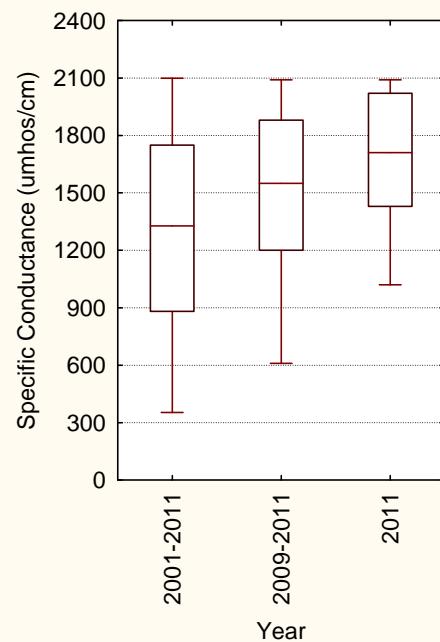
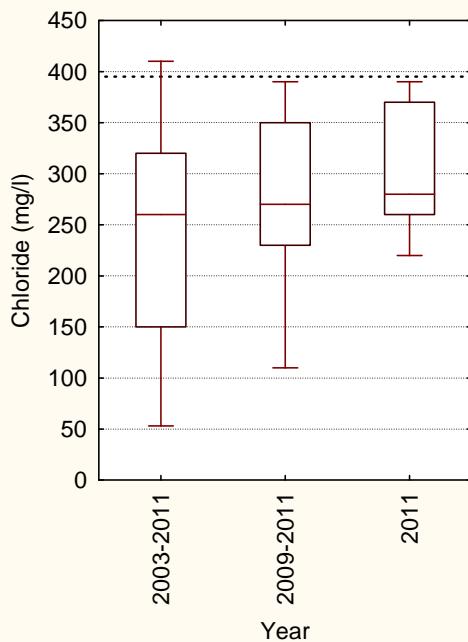
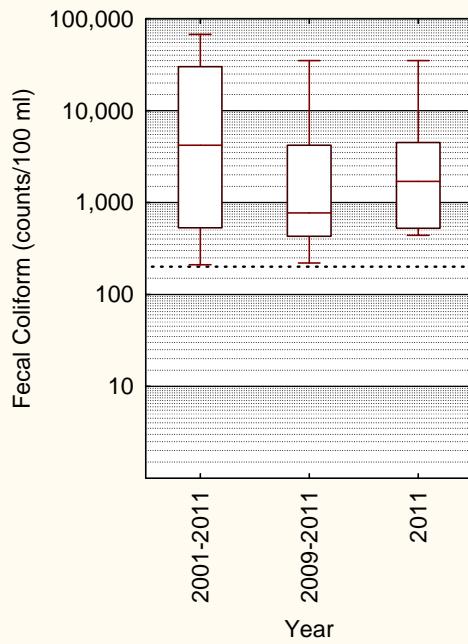
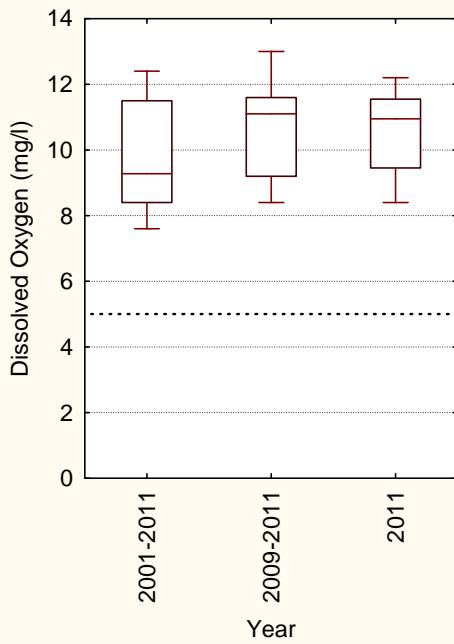
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	44.00	20.50	0.0	2.5	11.0	2.8	5.2	24.0	0.0	0.7	0.0	ND
Standard Error	3.00	0.50	0.0	2.5	0.0	0.2	0.0	7.0	0.0	0.7	0.0	ND
Median	44.00	20.50	0.0	2.5	11.0	2.8	5.2	24.0	0.0	0.7	0.0	ND
Mode	ND	ND	0.0	ND	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	4.24	0.71	0.0	3.5	ND	0.3	ND	9.9	0.0	0.9	0.0	ND
Sample Variance	18.00	0.50	0.0	12.5	ND	0.1	ND	98.0	0.0	0.8	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	6.00	1.00	0.0	5.0	0.0	0.4	0.0	14.0	0.0	1.3	0.0	0.0
Minimum	41.00	20.00	0.0	0.0	11.0	2.6	5.2	17.0	0.0	0.0	0.0	0.0
Maximum	47.00	21.00	0.0	5.0	11.0	3.0	5.2	31.0	0.0	1.3	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	38.12	6.35	0.0	31.8	ND	2.5	ND	88.9	0.0	8.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	195	198	3.2	12.3	54.4	45.6	8.6	8.3
Standard Error	5	24	1.9	4.0	4.2	5.5	2.3	2.2
Median	195	210	1.3	8.7	56.0	49.5	6.3	6.2
Mode	ND	110	0.0	ND	ND	ND	ND	ND
Standard Deviation	7	67	5.4	11.4	12.0	15.6	6.5	6.2
Sample Variance	50	4507	29.3	128.9	143.1	242.3	42.1	37.8
Kurtosis	ND	-2	6.1	5.7	-0.3	-1.3	6.2	6.4
Skewness	ND	0	2.4	2.3	-0.4	-0.4	2.4	2.5
Range	10	170	16.0	34.3	37.0	42.0	20.4	19.1
Minimum	190	110	0.0	4.7	34.0	23.0	3.6	3.9
Maximum	200	280	16.0	39.0	71.0	65.0	24.0	23.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	64	56	4.5	9.5	10.0	13.0	5.4	5.1

ND = No Data

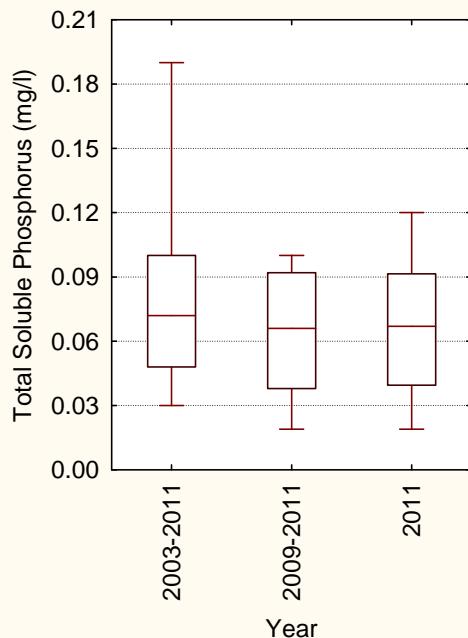
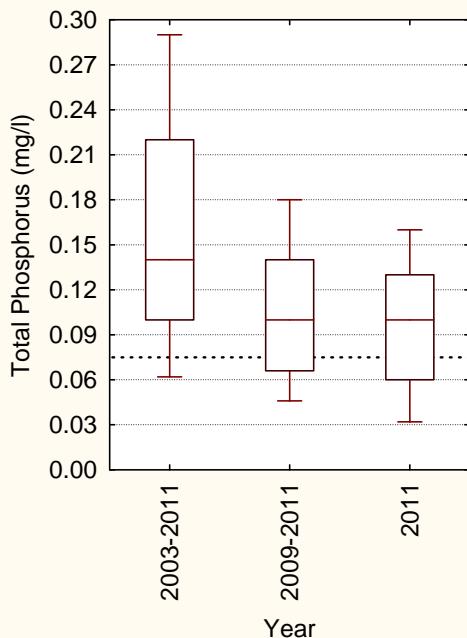
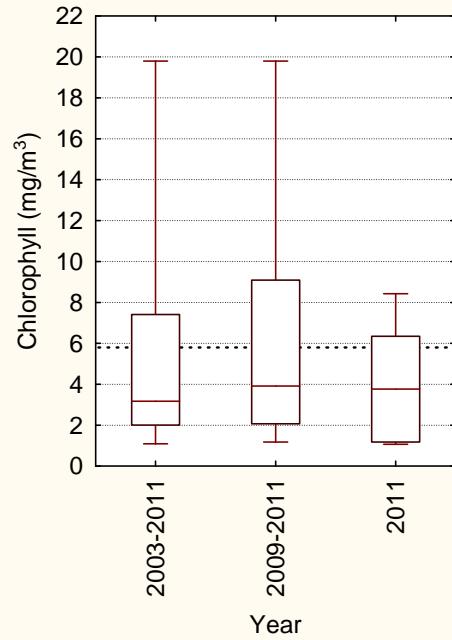
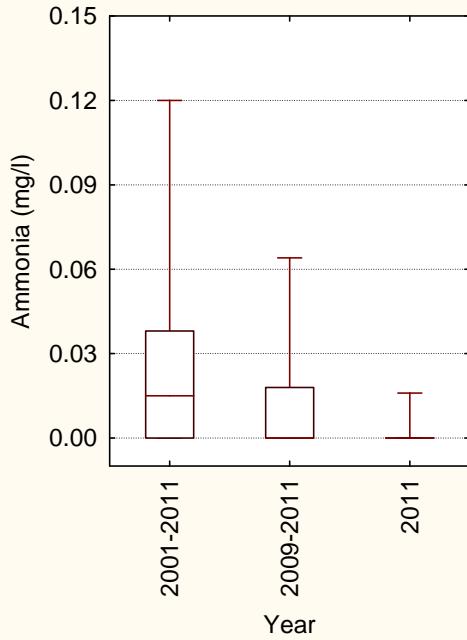
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Honey Creek at 84th St., Site HC-02



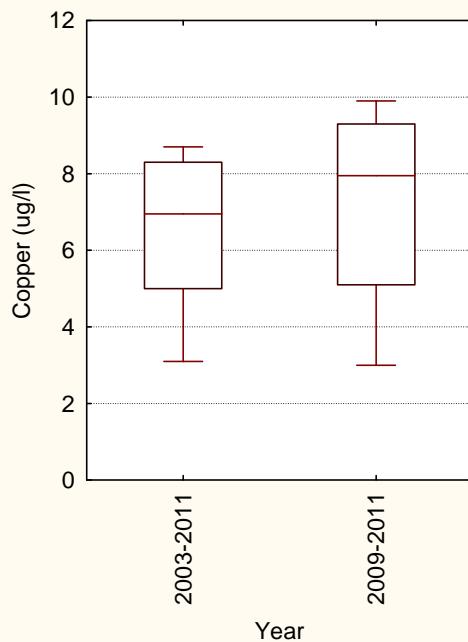
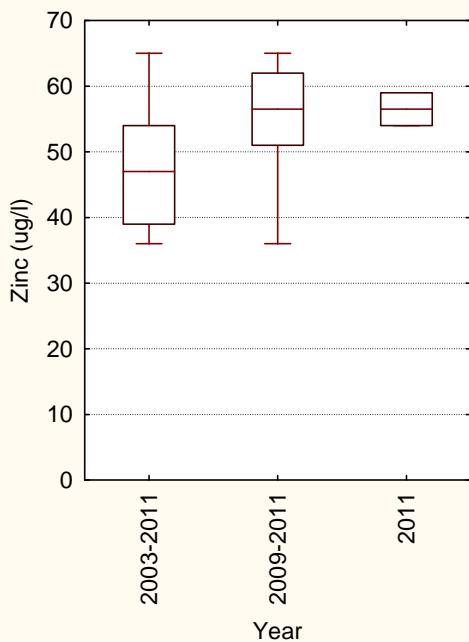
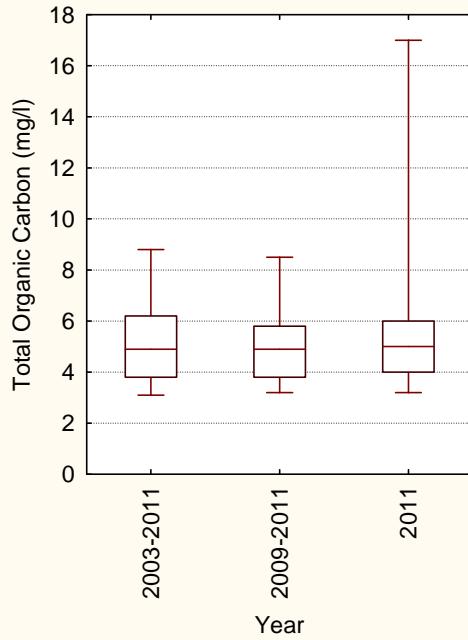
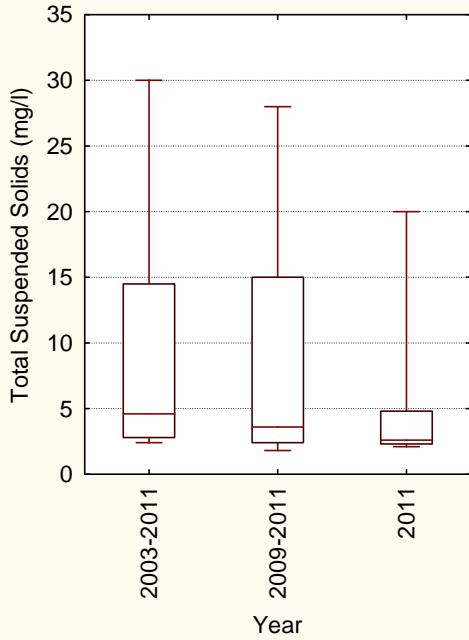
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Honey Creek at 84th St., Site HC-02



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Honey Creek at 84th St., Site HC-02



— Median □ 25%-75% □ 10%-90%

84TH STREET AND O'CONNER STREET - SITE 2
HONEY CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.8	10.6	4.01	1.02	0.013	1.04	0.002	0.58	0.097	0.067	ND
Standard Error	0.1	1.6	0.5	1.06	0.13	0.003	0.13	0.002	0.10	0.015	0.012	ND
Median	8.0	14.4	11.0	3.77	0.98	0.011	0.99	0.000	0.68	0.100	0.067	ND
Mode	8.0	ND	ND	ND	ND	ND	ND	0.000	0.77	0.100	ND	ND
Standard Deviation	0.2	4.4	1.3	2.99	0.36	0.010	0.38	0.006	0.29	0.044	0.035	ND
Sample Variance	0.1	19.5	1.8	8.97	0.13	0.000	0.14	0.000	0.08	0.002	0.001	ND
Kurtosis	0.7	-0.3	-1.0	-0.98	0.81	-1.727	1.57	8.000	1.61	-1.008	-1.141	ND
Skewness	-1.0	-0.2	-0.6	0.66	0.80	0.159	1.06	2.828	-1.30	-0.050	0.085	ND
Range	0.7	14.0	3.8	7.36	1.10	0.025	1.18	0.016	0.88	0.128	0.101	0.00
Minimum	7.5	6.7	8.4	1.07	0.60	0.000	0.62	0.000	0.00	0.032	0.019	0.00
Maximum	8.2	20.6	12.2	8.43	1.70	0.025	1.80	0.016	0.88	0.160	0.120	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	3.7	1.1	2.50	0.30	0.008	0.32	0.005	0.24	0.037	0.029	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	987.5	981.9	1.7	5.3	4.1	1679	303.8	6111	3.3	3792
Standard Error	ND	ND	76.2	89.0	0.6	2.5	0.8	133	22.6	4170	0.2	2235
Median	ND	ND	980.0	967.9	1.3	2.6	2.8	1710	280.0	1700	3.2	1130
Mode	ND	ND	1200.0	ND	0.0	ND	ND	ND	260.0	ND	ND	ND
Standard Deviation	ND	ND	215.5	235.6	1.7	6.6	2.4	376	63.9	11793	0.6	6322
Sample Variance	ND	ND	46450.0	55503.5	2.9	42.9	5.6	141413	4083.9	139086555	0.4	39969848
Kurtosis	ND	ND	0.2	-0.5	1.1	6.6	-1.1	0	-1.7	8	0.7	7
Skewness	ND	ND	-0.7	-0.7	1.1	2.5	0.9	-1	0.3	3	1.0	3
Range	0.0	0.0	610.0	612.5	4.8	17.9	5.8	1070	170.0	34560	1.9	18901
Minimum	0.0	0.0	590.0	585.2	0.0	2.1	2.1	1020	220.0	440	2.6	99
Maximum	0.0	0.0	1200.0	1197.7	4.8	20.0	7.9	2090	390.0	35000	4.5	19000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	180.2	217.9	1.6	6.1	2.0	314	53.4	9860	0.5	5285

ND = No Data

Provisional MMSD Water Quality Data

84TH STREET AND O'CONNER STREET - SITE 2
HONEY CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	58.50	29.00	0.0	2.6	ND	2.6	4.7	56.5	0.0	1.2	0.0	ND
Standard Error	5.50	1.00	0.0	2.6	ND	0.1	0.9	2.5	0.0	0.2	0.0	ND
Median	58.50	29.00	0.0	2.6	ND	2.6	4.7	56.5	0.0	1.2	0.0	ND
Mode	ND	ND	0.0	ND	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	7.78	1.41	0.0	3.6	ND	0.1	1.3	3.5	0.0	0.2	0.0	ND
Sample Variance	60.50	2.00	0.0	13.0	ND	0.0	1.8	12.5	0.0	0.0	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	11.00	2.00	0.0	5.1	0.0	0.2	1.9	5.0	0.0	0.3	0.0	0.0
Minimum	53.00	28.00	0.0	0.0	0.0	2.5	3.7	54.0	0.0	1.0	0.0	0.0
Maximum	64.00	30.00	0.0	5.1	0.0	2.7	5.6	59.0	0.0	1.3	0.0	0.0
Count	2	2	2	2	0	2	2	2	2	2	2	0
Confidence Level(95.0%)	69.88	12.71	0.0	32.4	ND	1.3	12.1	31.8	0.0	1.9	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	265	231	1.8	7.1	59.5	53.3	6.3	6.1
Standard Error	15	16	1.5	3.3	2.7	3.6	1.6	1.5
Median	265	240	0.0	4.7	60.5	55.5	5.0	5.0
Mode	ND	230	0.0	0.0	ND	ND	ND	ND
Standard Deviation	21	45	4.2	9.3	7.7	10.1	4.5	4.1
Sample Variance	450	2041	17.7	87.3	59.4	101.1	19.8	16.9
Kurtosis	ND	0	7.2	4.1	-1.5	-0.5	6.8	6.8
Skewness	ND	-1	2.7	1.9	-0.2	-0.7	2.5	2.5
Range	30	130	12.0	28.0	21.0	29.0	13.8	12.7
Minimum	250	150	0.0	0.0	48.0	36.0	3.2	3.3
Maximum	280	280	12.0	28.0	69.0	65.0	17.0	16.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	191	38	3.5	7.8	6.4	8.4	3.7	3.4

ND = No Data

Provisional MMSD Water Quality Data

80TH STREET AND WISCONSIN AVENUE - SITE 3
HONEY CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.2	14.2	12.9	7.34	0.73	0.013	0.74	0.066	0.72	0.081	0.055	ND
Standard Error	0.1	2.0	0.7	3.94	0.18	0.003	0.18	0.062	0.18	0.013	0.011	ND
Median	8.2	13.7	12.7	3.68	0.64	0.011	0.65	0.000	0.69	0.089	0.055	ND
Mode	8.2	ND	ND	ND	ND	ND	ND	0.000	ND	0.120	ND	ND
Standard Deviation	0.3	5.8	2.1	11.15	0.52	0.009	0.52	0.176	0.51	0.038	0.032	ND
Sample Variance	0.1	33.6	4.3	124.33	0.27	0.000	0.27	0.031	0.26	0.001	0.001	ND
Kurtosis	-0.1	-0.7	0.7	7.10	2.23	-1.329	2.17	7.930	3.67	-1.346	-0.991	ND
Skewness	0.4	0.5	1.0	2.62	1.21	0.138	1.17	2.813	1.28	-0.500	0.060	ND
Range	0.8	17.0	6.2	33.93	1.73	0.026	1.72	0.500	1.80	0.098	0.091	0.00
Minimum	7.8	6.8	10.7	0.47	0.08	0.000	0.08	0.000	0.00	0.022	0.009	0.00
Maximum	8.6	23.8	16.9	34.40	1.80	0.026	1.80	0.500	1.80	0.120	0.100	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.8	1.7	9.32	0.44	0.008	0.43	0.147	0.42	0.032	0.027	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	997.5	992.7	2.1	4.4	4.9	1748	323.8	5424	3.1	3767
Standard Error	ND	ND	62.3	72.4	0.8	1.2	1.0	133	22.6	3839	0.3	2668
Median	ND	ND	1000.0	997.3	1.4	2.9	4.9	1720	290.0	1450	3.2	760
Mode	ND	ND	1200.0	ND	0.0	ND	ND	1720	290.0	ND	ND	ND
Standard Deviation	ND	ND	176.1	191.5	2.0	3.1	2.7	377	63.9	10858	0.8	7547
Sample Variance	ND	ND	31021.4	36676.1	4.1	9.8	7.4	142250	4083.9	117894725	0.6	56964186
Kurtosis	ND	ND	-0.8	-1.3	-1.2	-1.1	0.2	-1	-1.0	7	0.5	7
Skewness	ND	ND	-0.5	-0.5	0.6	1.0	0.7	0	0.9	3	0.2	3
Range	0.0	0.0	480.0	482.5	5.1	7.4	8.1	1070	170.0	31921	2.6	21904
Minimum	0.0	0.0	720.0	715.8	0.0	1.7	1.8	1270	260.0	79	1.9	96
Maximum	0.0	0.0	1200.0	1198.3	5.1	9.1	9.9	2340	430.0	32000	4.5	22000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	147.2	177.1	1.9	2.9	2.3	315	53.4	9077	0.7	6310

ND = No Data

Provisional MMSD Water Quality Data

80TH STREET AND WISCONSIN AVENUE - SITE 3
 HONEY CREEK
 WATER QUALITY DATA - 2011

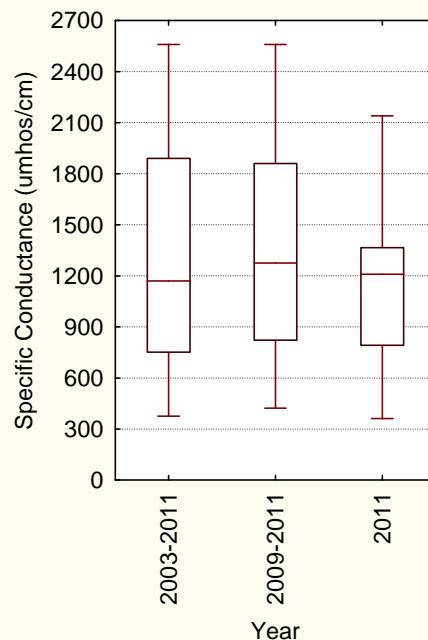
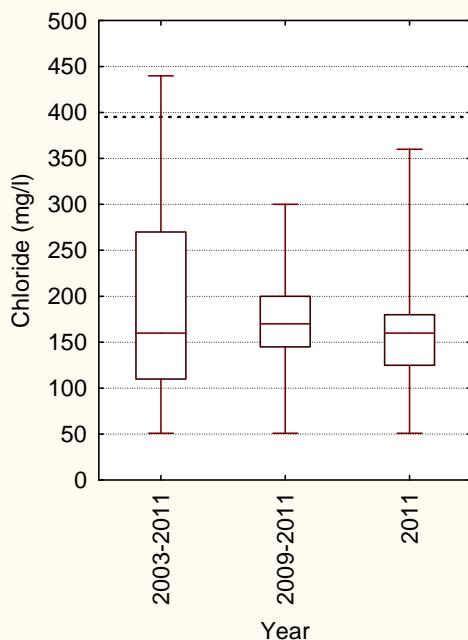
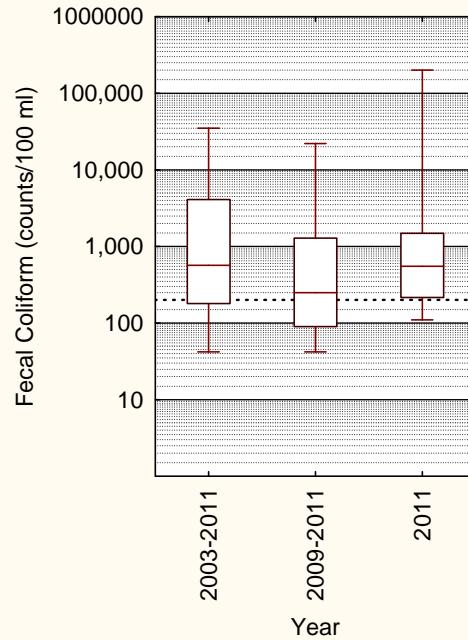
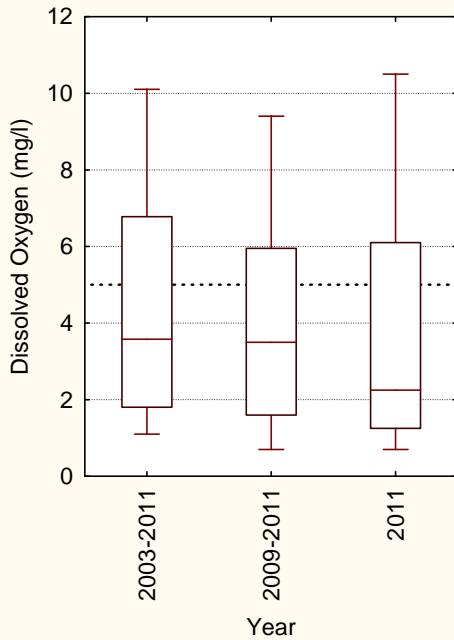
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	61.00	30.00	0.0	2.7	11.0	3.1	2.0	38.5	0.0	1.1	0.0	ND
Standard Error	2.00	3.00	0.0	2.7	0.0	0.3	0.0	8.5	0.0	0.3	0.0	ND
Median	61.00	30.00	0.0	2.7	11.0	3.1	2.0	38.5	0.0	1.1	0.0	ND
Mode	ND	ND	0.0	ND	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	2.83	4.24	0.0	3.8	ND	0.4	ND	12.0	0.0	0.4	0.0	ND
Sample Variance	8.00	18.00	0.0	14.6	ND	0.1	ND	144.5	0.0	0.1	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	4.00	6.00	0.0	5.4	0.0	0.5	0.0	17.0	0.0	0.5	0.0	0.0
Minimum	59.00	27.00	0.0	0.0	11.0	2.8	2.0	30.0	0.0	0.8	0.0	0.0
Maximum	63.00	33.00	0.0	5.4	11.0	3.3	2.0	47.0	0.0	1.3	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	25.41	38.12	0.0	34.3	ND	3.2	ND	108.0	0.0	3.2	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	ND	224	2.4	8.6	58.3	52.1	6.4	6.0
Standard Error	15	17	1.3	2.6	2.7	3.2	1.2	1.1
Median	275	230	1.2	6.7	57.0	52.0	5.9	5.4
Mode	ND	ND	0.0	ND	ND	ND	ND	ND
Standard Deviation	21	47	3.7	7.3	7.6	9.0	3.3	3.0
Sample Variance	450	2227	14.0	53.2	58.2	81.8	10.8	8.9
Kurtosis	ND	-2	4.9	2.7	0.0	-1.5	5.5	6.0
Skewness	ND	0	2.1	1.4	-0.3	-0.2	2.2	2.3
Range	30	120	11.0	24.0	24.0	24.0	10.7	9.8
Minimum	260	160	0.0	0.0	45.0	39.0	3.3	3.2
Maximum	290	280	11.0	24.0	69.0	63.0	14.0	13.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	191	39	3.1	6.1	6.4	7.6	2.7	2.5

ND = No Data

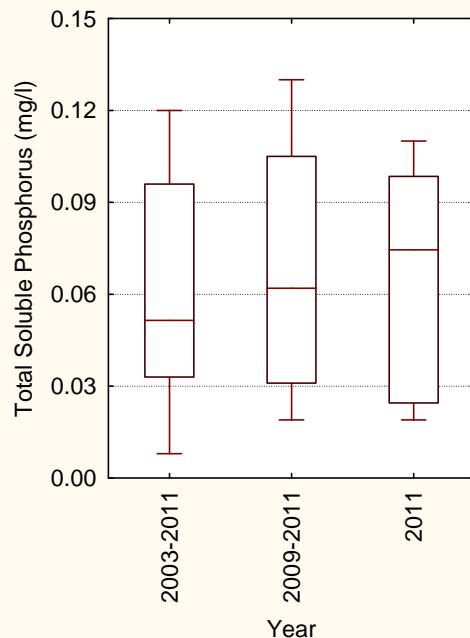
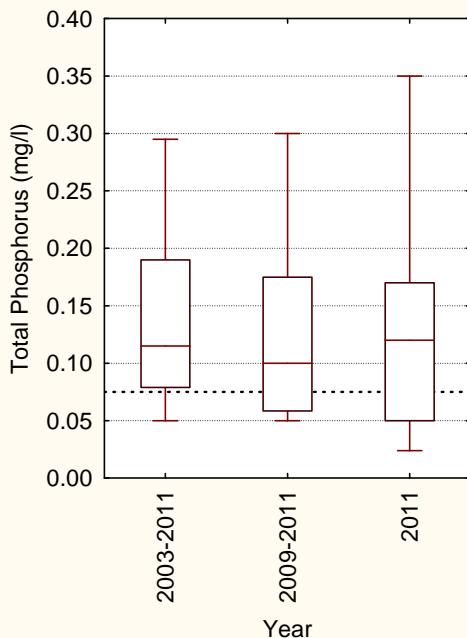
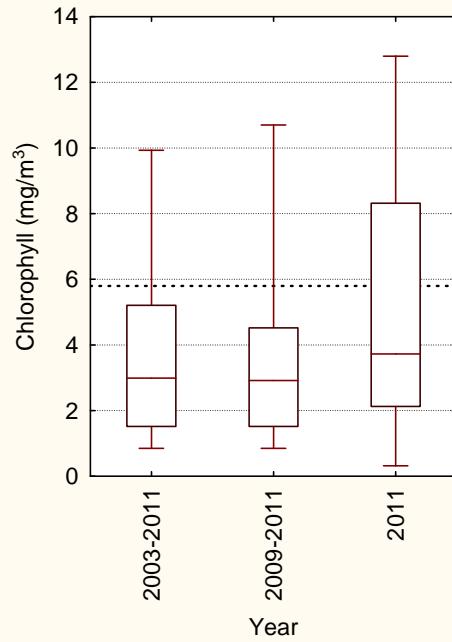
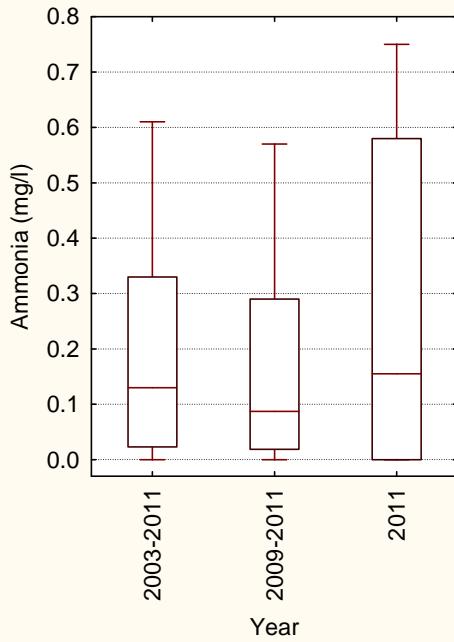
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Honey Creek at Loomis Rd., Site HC-04



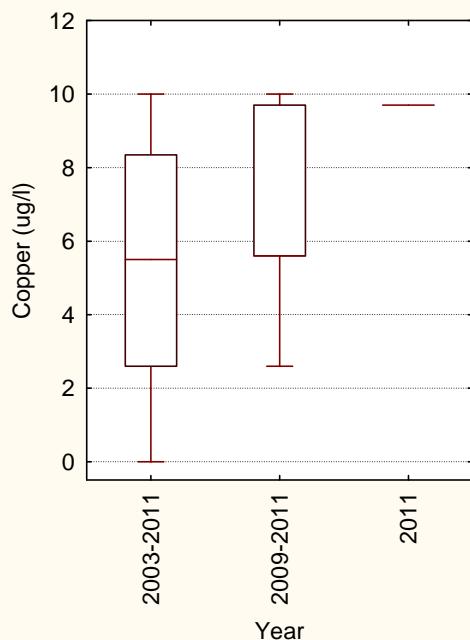
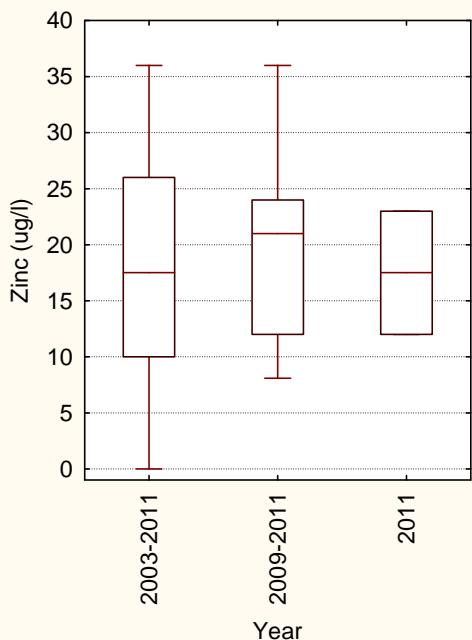
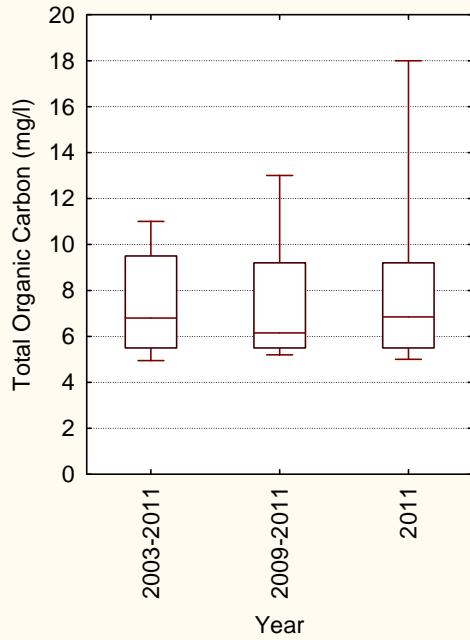
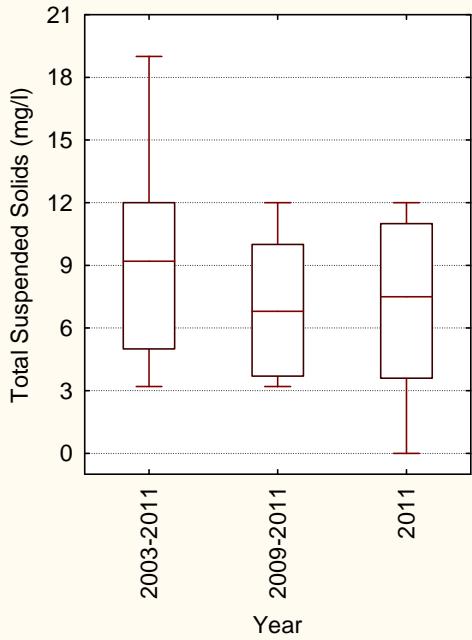
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Honey Creek at Loomis Rd., Site HC-04



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Honey Creek at Loomis Rd., Site HC-04



— Median □ 25%-75% ━ 10%-90%

45TH STREET AND LOOMIS ROAD - SITE 4
HONEY CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.2	13.5	3.8	5.18	0.53	0.038	0.56	0.278	1.03	0.132	0.066	ND
Standard Error	0.1	1.9	1.4	1.56	0.26	0.009	0.26	0.113	0.16	0.037	0.013	ND
Median	7.3	13.4	2.3	3.73	0.31	0.041	0.36	0.155	1.15	0.120	0.075	ND
Mode	7.4	ND	ND	ND	ND	ND	ND	0.000	1.50	0.050	ND	ND
Standard Deviation	0.3	5.3	3.9	4.42	0.74	0.024	0.73	0.320	0.46	0.104	0.038	ND
Sample Variance	0.1	28.3	15.0	19.58	0.55	0.001	0.53	0.102	0.21	0.011	0.001	ND
Kurtosis	-0.6	-1.5	0.0	-0.37	6.52	-0.520	6.30	-1.933	-1.97	2.367	-2.131	ND
Skewness	-0.7	0.1	1.3	0.94	2.47	-0.057	2.42	0.441	-0.34	1.378	-0.242	ND
Range	1.0	14.2	9.8	12.48	2.30	0.075	2.30	0.750	1.12	0.326	0.091	0.00
Minimum	6.6	6.4	0.7	0.32	0.00	0.000	0.00	0.000	0.38	0.024	0.019	0.00
Maximum	7.6	20.6	10.5	12.80	2.30	0.075	2.30	0.750	1.50	0.350	0.110	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.5	3.2	3.70	0.62	0.020	0.61	0.267	0.38	0.087	0.032	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	558.8	551.2	3.4	7.3	6.4	1155	167.6	25576	3.0	30469
Standard Error	ND	ND	95.7	110.8	0.9	1.6	1.5	187	31.7	24919	0.4	29933
Median	ND	ND	495.0	426.4	3.4	7.5	5.6	1210	160.0	550	2.7	420
Mode	ND	ND	690.0	ND	3.4	ND	ND	ND	180.0	ND	ND	ND
Standard Deviation	ND	ND	270.7	293.1	2.3	4.3	4.4	530	89.5	70481	1.0	84664
Sample Variance	ND	ND	73269.6	85900.5	5.3	18.3	19.1	280509	8016.6	4967582370	1.1	7168032098
Kurtosis	ND	ND	1.5	0.9	1.2	-0.2	1.1	1	3.5	8	4.5	8
Skewness	ND	ND	1.1	1.0	0.5	-0.8	1.1	0	1.4	3	2.0	3
Range	0.0	0.0	870.0	872.0	7.4	12.0	13.0	1778	309.0	199890	3.3	239900
Minimum	0.0	0.0	230.0	218.0	0.0	0.0	2.1	362	51.0	110	2.0	100
Maximum	0.0	0.0	1100.0	1090.0	7.4	12.0	15.1	2140	360.0	200000	5.3	240000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	226.3	271.1	2.1	4.0	3.7	443	74.9	58924	0.9	70781

ND = No Data

Provisional MMSD Water Quality Data

45TH STREET AND LOOMIS ROAD - SITE 4
HONEY CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	52.50	26.00	0.0	0.0	9.7	3.1	3.7	17.5	0.0	1.4	0.0	ND
Standard Error	18.50	12.00	0.0	0.0	0.0	0.5	0.9	5.5	0.0	0.1	0.0	ND
Median	52.50	26.00	0.0	0.0	9.7	3.1	3.7	17.5	0.0	1.4	0.0	ND
Mode	ND	ND	0.0	0.0	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	26.16	16.97	0.0	0.0	ND	0.7	1.3	7.8	0.0	0.2	0.0	ND
Sample Variance	684.50	288.00	0.0	0.0	ND	0.5	1.8	60.5	0.0	0.0	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	37.00	24.00	0.0	0.0	0.0	1.0	1.9	11.0	0.0	0.3	0.0	0.0
Minimum	34.00	14.00	0.0	0.0	9.7	2.6	2.7	12.0	0.0	1.2	0.0	0.0
Maximum	71.00	38.00	0.0	0.0	9.7	3.6	4.6	23.0	0.0	1.5	0.0	0.0
Count	2	2	2	2	1	2	2	2	2	2	2	0
Confidence Level(95.0%)	235.06	152.47	0.0	0.0	ND	6.4	12.1	69.9	0.0	1.9	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	235	202	3.6	14.2	55.1	46.6	8.3	7.4
Standard Error	95	34	1.8	4.0	7.0	7.7	1.5	1.2
Median	235	190	2.4	10.9	49.5	42.0	6.9	6.0
Mode	ND	ND	0.0	ND	ND	ND	ND	ND
Standard Deviation	134	96	5.2	11.3	19.9	21.8	4.3	3.3
Sample Variance	18050	9150	26.6	128.2	394.4	473.4	18.5	11.1
Kurtosis	ND	-1	6.7	2.7	-1.1	-1.6	4.4	4.8
Skewness	ND	0	2.5	1.4	0.4	0.3	2.0	2.1
Range	190	266	16.0	38.0	58.0	59.0	13.0	10.3
Minimum	140	74	0.0	0.0	28.0	19.0	5.0	4.7
Maximum	330	340	16.0	38.0	86.0	78.0	18.0	15.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1207	80	4.3	9.5	16.6	18.2	3.6	2.8

ND = No Data

Provisional MMSD Water Quality Data

MARCY LANE AND 61ST STREET - SITE 5
HONEY CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	11.8	9.3	4.98	0.55	0.031	0.59	0.179	1.22	0.110	0.052	ND
Standard Error	0.1	2.2	1.4	1.20	0.15	0.007	0.16	0.090	0.35	0.030	0.016	ND
Median	7.9	9.9	9.8	4.44	0.50	0.021	0.55	0.080	0.83	0.088	0.032	ND
Mode	7.9	ND	ND	ND	ND	ND	ND	0.000	ND	ND	ND	ND
Standard Deviation	0.4	6.1	4.0	3.40	0.43	0.020	0.45	0.256	0.98	0.085	0.045	ND
Sample Variance	0.2	37.1	16.1	11.59	0.18	0.000	0.20	0.065	0.96	0.007	0.002	ND
Kurtosis	-0.5	-1.3	3.1	1.43	1.77	-1.983	1.93	2.418	-0.86	1.217	0.839	ND
Skewness	-0.2	0.6	-1.5	1.14	1.01	0.591	1.08	1.626	0.66	1.263	1.325	ND
Range	1.2	16.3	12.9	10.42	1.40	0.047	1.48	0.720	2.80	0.246	0.128	0.00
Minimum	7.2	5.1	0.7	1.38	0.00	0.011	0.02	0.000	0.00	0.034	0.012	0.00
Maximum	8.4	21.4	13.6	11.80	1.40	0.058	1.50	0.720	2.80	0.280	0.140	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	5.1	3.4	2.85	0.36	0.016	0.38	0.214	0.82	0.071	0.038	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	1010.0	1024.7	2.4	5.3	6.1	1818	356.3	144209	4.0	68173
Standard Error	ND	ND	90.1	100.9	0.6	0.8	1.4	164	55.0	86378	0.5	31754
Median	ND	ND	895.0	915.1	2.2	4.9	5.3	1640	290.0	5400	3.7	4300
Mode	ND	ND	870.0	ND	ND	4.9	ND	ND	290.0	600000	5.8	ND
Standard Deviation	ND	ND	254.9	266.9	1.5	2.2	4.0	464	155.6	259134	1.4	95262
Sample Variance	ND	ND	64971.4	71241.7	2.2	4.7	15.8	214964	24226.8	67150654666	1.9	9074864575
Kurtosis	ND	ND	0.7	0.0	2.0	-1.4	4.2	0	0.0	1	-0.6	-1
Skewness	ND	ND	1.4	1.1	0.4	0.1	1.9	1	1.3	2	-0.1	1
Range	0.0	0.0	730.0	726.8	5.0	5.5	12.3	1250	400.0	599952	4.1	239930
Minimum	0.0	0.0	770.0	765.1	0.0	2.6	2.7	1430	220.0	48	1.7	70
Maximum	0.0	0.0	1500.0	1491.9	5.0	8.1	15.0	2680	620.0	600000	5.8	240000
Count	0	0	8	7	7	7	8	8	8	9	9	9
Confidence Level(95.0%)	ND	ND	213.1	246.9	1.4	2.0	3.3	388	130.1	199188	1.1	73225

ND = No Data

Provisional MMSD Water Quality Data

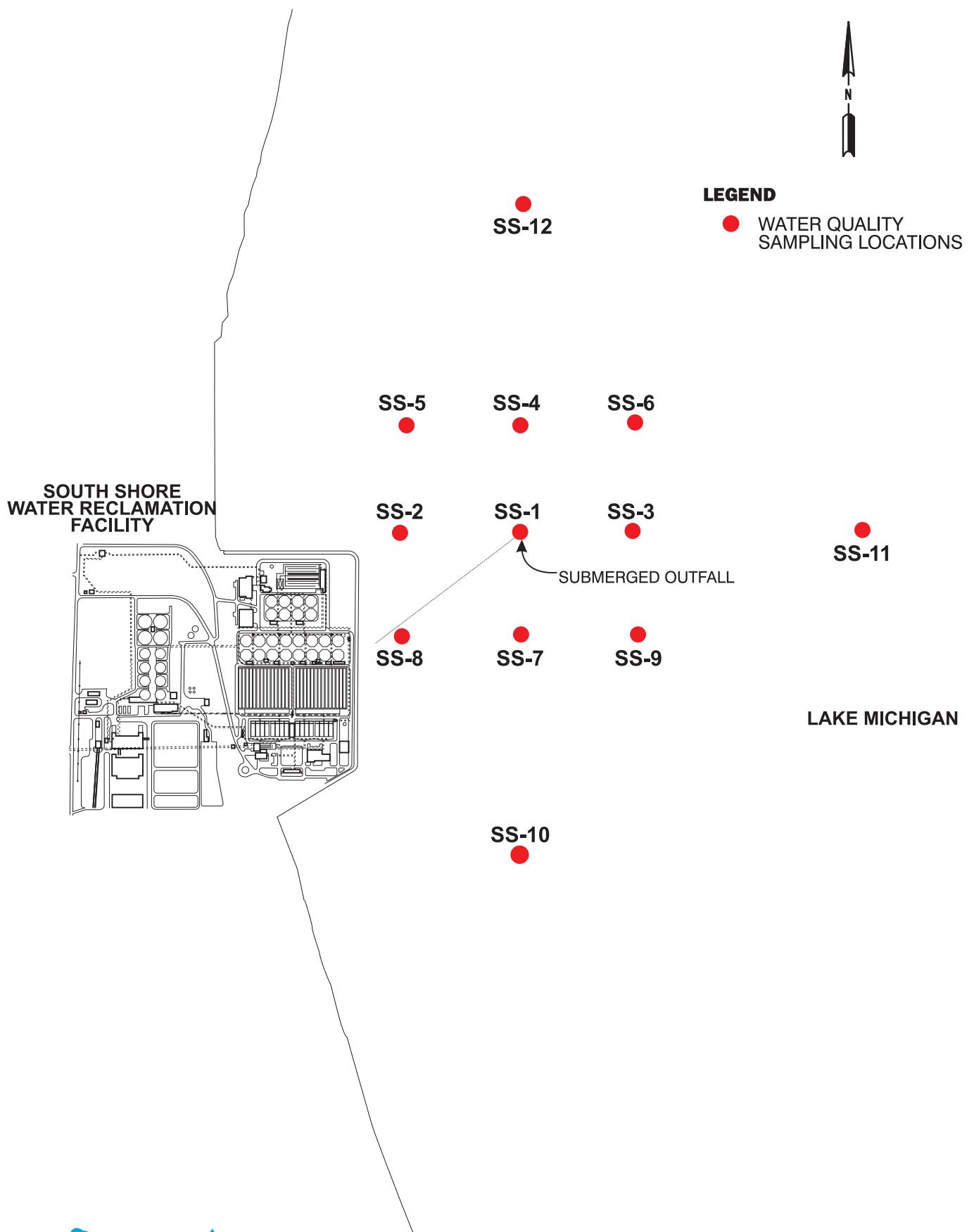
MARCY LANE AND 61ST STREET - SITE 5
HONEY CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	65.50	32.00	0.0	3.6	10.0	2.5	3.6	17.5	0.0	1.2	0.0	ND
Standard Error	4.50	3.00	0.0	3.6	0.0	0.2	0.0	0.5	0.0	0.2	0.0	ND
Median	65.50	32.00	0.0	3.6	10.0	2.5	3.6	17.5	0.0	1.2	0.0	ND
Mode	ND	ND	0.0	ND	ND	ND	ND	ND	0.0	ND	0.0	ND
Standard Deviation	6.36	4.24	0.0	5.0	ND	0.3	ND	0.7	0.0	0.3	0.0	ND
Sample Variance	40.50	18.00	0.0	25.2	ND	0.1	ND	0.5	0.0	0.1	0.0	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Range	9.00	6.00	0.0	7.1	0.0	0.4	0.0	1.0	0.0	0.4	0.0	0.0
Minimum	61.00	29.00	0.0	0.0	10.0	2.3	3.6	17.0	0.0	1.0	0.0	0.0
Maximum	70.00	35.00	0.0	7.1	10.0	2.7	3.6	18.0	0.0	1.4	0.0	0.0
Count	2	2	2	2	1	2	1	2	2	2	2	0
Confidence Level(95.0%)	57.18	38.12	0.0	45.1	ND	2.5	ND	6.4	0.0	2.5	0.0	ND

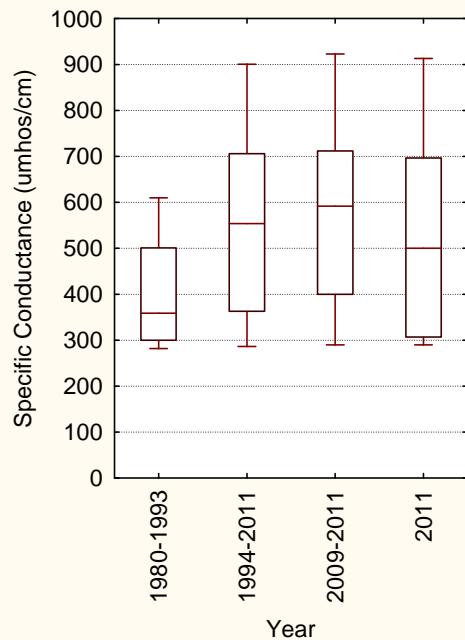
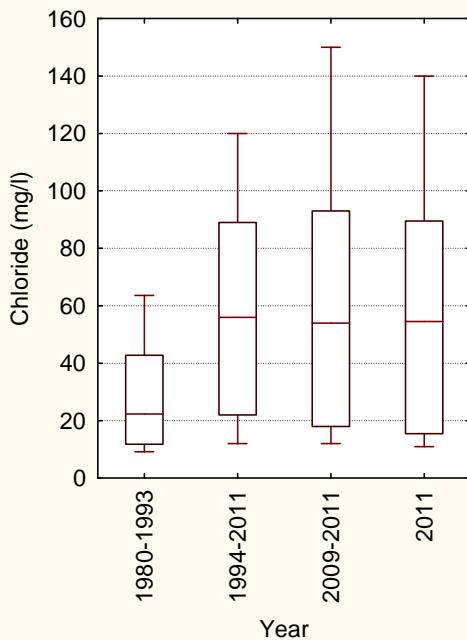
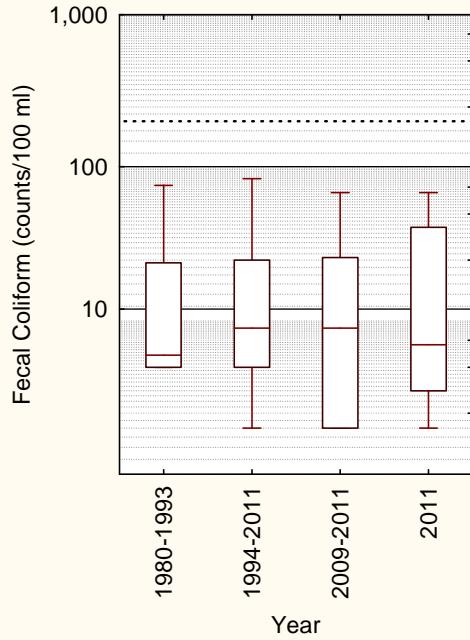
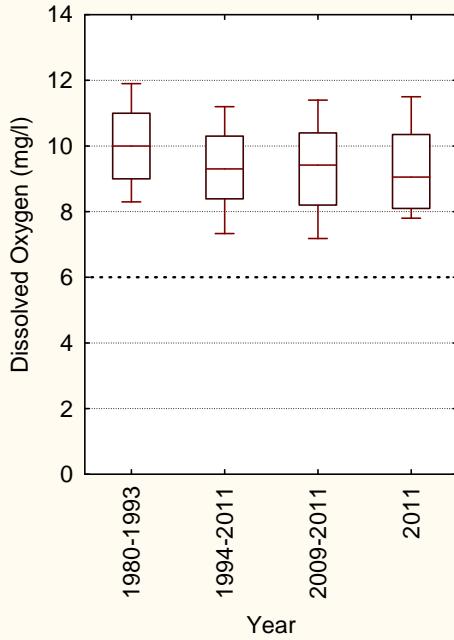
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	295	211	3.4	13.2	58.9	49.4	9.5	8.6
Standard Error	25	13	1.5	2.8	2.7	2.7	1.1	0.8
Median	295	200	2.6	11.5	60.0	48.0	7.8	7.7
Mode	ND	200	0.0	ND	60.0	48.0	13.0	12.0
Standard Deviation	35	37	4.2	7.8	7.8	7.7	3.2	2.4
Sample Variance	1250	1384	17.6	61.6	60.1	59.4	10.4	5.7
Kurtosis	ND	0	1.7	-0.7	3.6	1.0	-2.0	-1.4
Skewness	ND	0	1.4	0.7	-1.6	-0.5	0.6	0.7
Range	50	120	12.0	21.2	26.0	25.0	7.7	5.9
Minimum	270	150	0.0	4.8	42.0	35.0	6.3	6.1
Maximum	320	270	12.0	26.0	68.0	60.0	14.0	12.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	318	31	3.5	6.6	6.5	6.4	2.7	2.0

ND = No Data

Provisional MMSD Water Quality Data

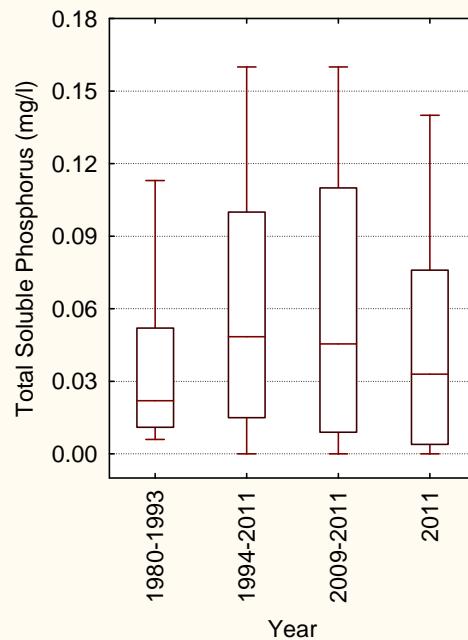
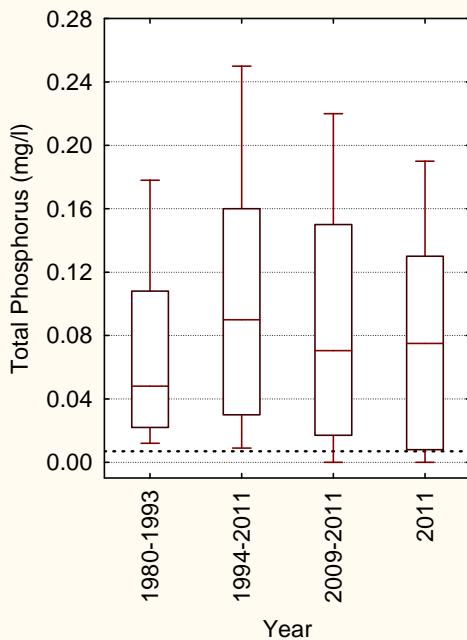
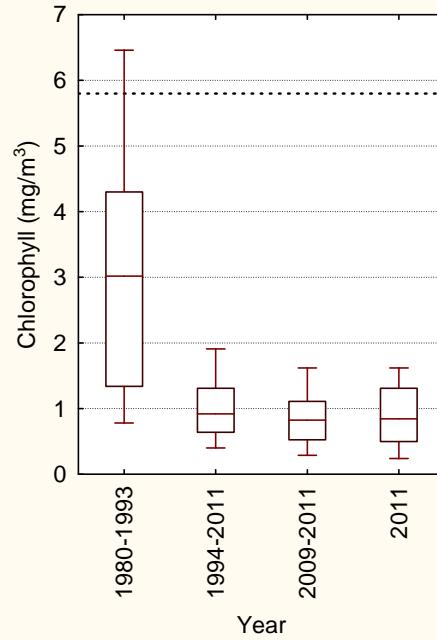
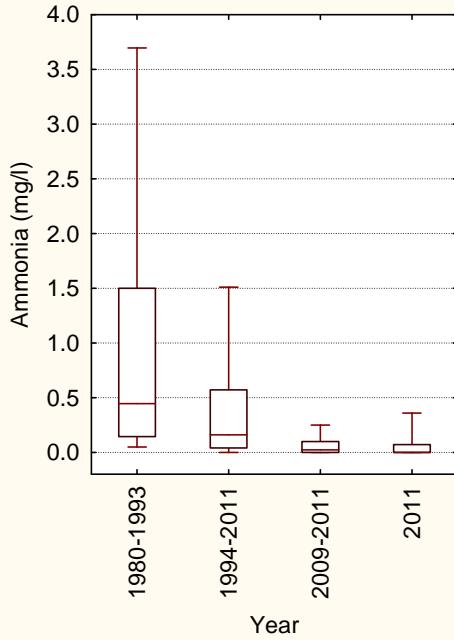


MMSD Water Quality Monitoring Program Data
South Shore, Site SS-01



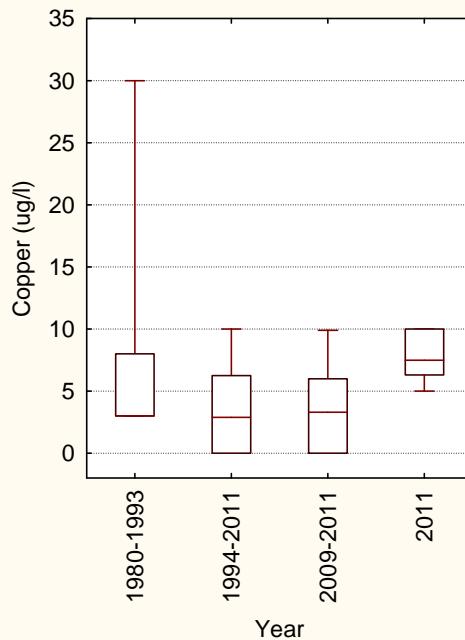
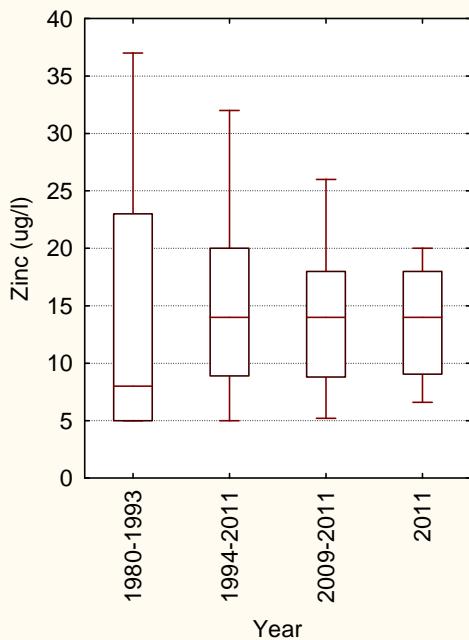
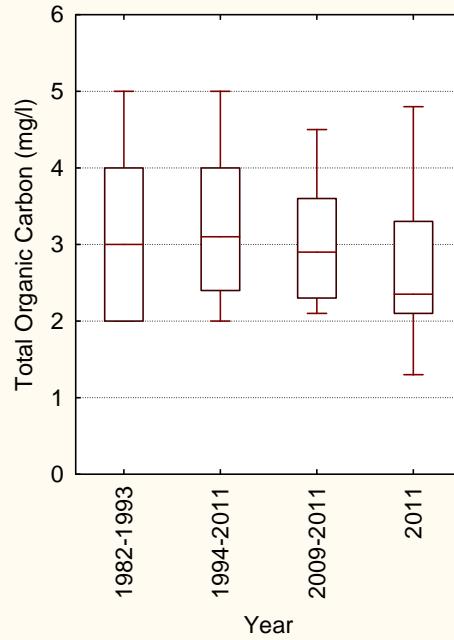
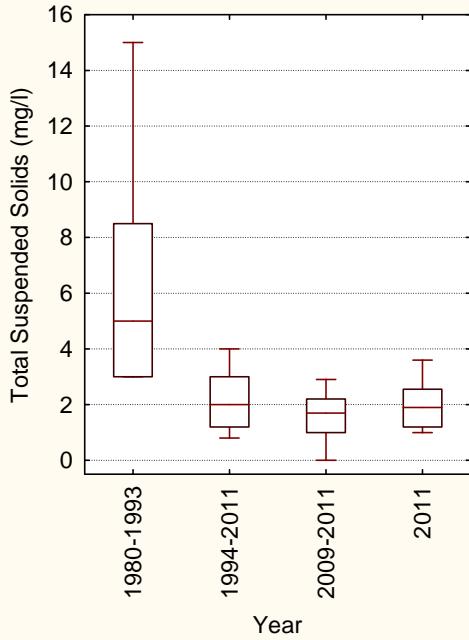
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-01



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-01



— Median □ 25%-75% □ 10%-90%

SOUTH SHORE - SITE 1
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	13.8	9.4	0.89	2.08	0.046	2.13	0.089	0.51	0.103	0.072	2.86
Standard Error	0.1	0.9	0.3	0.08	0.29	0.012	0.29	0.033	0.09	0.022	0.019	0.24
Median	7.5	14.9	9.1	0.85	1.80	0.012	1.85	0.000	0.43	0.075	0.033	2.85
Mode	7.0	15.7	8.1	1.62	2.50	0.012	1.60	0.000	0.00	0.000	0.000	1.30
Standard Deviation	0.4	5.2	1.8	0.49	1.71	0.072	1.74	0.200	0.55	0.131	0.115	1.46
Sample Variance	0.2	27.1	3.3	0.24	2.93	0.005	3.04	0.040	0.30	0.017	0.013	2.14
Kurtosis	-1.2	-1.0	1.6	-1.12	-0.15	6.000	-0.21	11.747	1.07	4.490	6.630	-0.43
Skewness	0.3	-0.1	1.0	0.24	0.89	2.307	0.86	3.231	1.14	2.121	2.641	0.45
Range	1.5	17.8	8.6	1.61	5.55	0.327	5.65	0.990	2.00	0.520	0.470	5.27
Minimum	6.9	3.7	6.1	0.18	0.25	0.003	0.25	0.000	0.00	0.000	0.000	0.83
Maximum	8.4	21.5	14.7	1.79	5.80	0.330	5.90	0.990	2.00	0.520	0.470	6.10
Count	36	36	36	36	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.2	1.8	0.6	0.17	0.58	0.024	0.59	0.068	0.19	0.044	0.039	0.49

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	3.3	9.7	289.2	287.1	0.8	2.0	2.0	558	61.9	71	0.9	ND
Standard Error	0.5	0.7	33.1	33.1	0.2	0.4	0.3	45	8.6	56	0.3	ND
Median	2.9	11.0	260.0	256.4	1.1	1.9	1.3	500	54.5	5	0.7	ND
Mode	ND	11.0	180.0	ND	0.0	2.4	1.3	ND	11.0	3	0.5	ND
Standard Deviation	1.7	2.4	114.8	114.5	0.8	1.3	1.6	270	51.6	193	0.9	ND
Sample Variance	2.9	5.9	13172.0	13121.2	0.6	1.6	2.4	72643	2663.7	37268	0.8	ND
Kurtosis	0.1	2.2	0.5	0.5	-1.6	0.9	3.0	1	0.8	12	0.4	ND
Skewness	1.0	-1.8	1.0	1.0	0.1	0.7	1.8	1	1.1	3	0.9	ND
Range	5.2	7.3	360.0	361.2	2.0	4.8	6.3	1050	189.0	680	2.8	0
Minimum	1.4	3.9	180.0	176.4	0.0	0.0	0.4	280	11.0	0	0.0	0
Maximum	6.6	11.2	540.0	537.6	2.0	4.8	6.8	1330	200.0	680	2.8	0
Count	11	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	1.1	1.5	72.9	72.8	0.5	0.8	0.5	91	17.5	123	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 1
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	42.53	17.11	0.0	1.9	7.9	2.5	2.6	13.5	0.1	1.1	0.0	ND
Standard Error	1.32	0.70	0.0	0.5	0.4	0.3	0.4	0.8	0.0	0.2	0.0	ND
Median	42.00	16.00	0.0	0.0	7.5	2.4	3.4	14.0	0.0	1.1	0.0	ND
Mode	34.00	13.00	0.0	0.0	10.0	0.0	0.0	16.0	0.0	0.0	0.0	ND
Standard Deviation	7.94	4.21	0.1	3.1	2.2	2.0	2.2	5.0	0.2	1.2	0.0	ND
Sample Variance	63.11	17.70	0.0	9.9	4.7	3.9	4.8	25.2	0.0	1.4	0.0	ND
Kurtosis	-0.21	0.32	36.0	-0.2	-0.4	8.9	-1.8	-1.0	7.1	1.7	ND	ND
Skewness	0.71	0.85	6.0	1.2	-0.2	2.3	-0.2	-0.2	2.8	1.3	ND	ND
Range	29.00	16.00	0.6	9.4	8.9	11.0	5.3	17.5	0.7	4.5	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	3.1	0.0	0.0	4.5	0.0	0.0	0.0	0.0
Maximum	62.00	28.00	0.6	9.4	12.0	11.0	5.3	22.0	0.7	4.5	0.0	0.0
Count	36	36	36	36	24	36	26	36	36	36	36	0
Confidence Level(95.0%)	2.69	1.42	0.0	1.1	0.9	0.7	0.9	1.7	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	177	138	1.3	5.2	35.1	32.3	2.9	ND
Standard Error	6	4	0.5	0.7	1.4	1.1	0.3	ND
Median	175	140	0.0	4.5	32.5	30.0	2.4	ND
Mode	140	130	0.0	3.4	31.0	28.0	2.1	ND
Standard Deviation	36	11	1.7	2.3	8.1	6.8	1.5	ND
Sample Variance	1261	119	2.8	5.1	66.3	46.4	2.3	ND
Kurtosis	0	-1	-1.7	3.3	1.7	1.3	2.1	ND
Skewness	1	0	0.6	1.7	1.4	1.3	1.3	ND
Range	130	30	4.0	8.0	32.0	27.0	7.0	0.0
Minimum	140	120	0.0	3.0	26.0	24.0	0.0	0.0
Maximum	270	150	4.0	11.0	58.0	51.0	7.0	0.0
Count	36	9	12	12	36	36	36	0
Confidence Level(95.0%)	12	8	1.1	1.4	2.8	2.3	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 2
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	13.3	10.9	0.80	0.48	0.004	0.49	0.001	0.04	0.006	0.003	1.58
Standard Error	0.0	1.0	0.4	0.16	0.03	0.000	0.03	0.001	0.02	0.001	0.001	0.10
Median	8.0	14.3	10.8	0.71	0.39	0.004	0.40	0.000	0.00	0.000	0.000	1.55
Mode	8.0	21.4	11.9	ND	0.39	0.000	0.51	0.000	0.00	0.000	0.000	2.10
Standard Deviation	0.2	5.8	2.3	0.56	0.20	0.002	0.20	0.004	0.14	0.007	0.006	0.61
Sample Variance	0.1	33.8	5.2	0.31	0.04	0.000	0.04	0.000	0.02	0.000	0.000	0.37
Kurtosis	0.6	-0.9	-0.1	-0.62	-0.80	1.320	-0.80	16.044	14.28	-0.633	0.114	-1.01
Skewness	0.5	-0.3	0.2	0.61	0.73	-0.032	0.73	4.118	3.75	0.839	1.375	0.25
Range	1.0	19.1	8.9	1.64	0.61	0.009	0.62	0.017	0.70	0.022	0.017	2.16
Minimum	7.6	2.3	6.8	0.14	0.24	0.000	0.24	0.000	0.00	0.000	0.000	0.54
Maximum	8.6	21.4	15.7	1.78	0.85	0.009	0.86	0.017	0.70	0.022	0.017	2.70
Count	36	36	36	12	36	36	36	36	36	35	35	36
Confidence Level(95.0%)	0.1	2.0	0.8	0.36	0.07	0.001	0.07	0.001	0.05	0.003	0.002	0.20

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.6	9.0	185.0	183.7	0.3	1.3	1.8	325	14.9	2	0.2	ND
Standard Error	1.0	0.4	5.4	5.4	0.2	0.6	0.3	6	0.7	1	0.1	ND
Median	8.7	9.5	180.0	179.4	0.0	0.0	1.0	323	13.5	0	0.0	ND
Mode	9.5	9.5	180.0	170.0	0.0	0.0	2.8	302	12.0	0	0.0	ND
Standard Deviation	3.5	1.5	18.8	18.8	0.5	2.0	2.0	38	4.5	5	0.4	ND
Sample Variance	12.5	2.1	354.5	352.2	0.3	3.9	4.1	1478	20.1	27	0.2	ND
Kurtosis	-1.6	9.4	0.4	0.1	0.3	1.9	4.5	1	0.4	9	2.5	ND
Skewness	-0.6	-3.0	0.2	0.3	1.4	1.6	2.2	1	1.1	3	1.7	ND
Range	9.0	5.4	70.0	67.7	1.4	6.0	8.0	151	16.0	18	1.3	0
Minimum	1.0	4.6	150.0	150.0	0.0	0.0	0.4	282	10.0	0	0.0	0
Maximum	10.0	10.0	220.0	217.7	1.4	6.0	8.4	433	26.0	18	1.3	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	2.2	0.9	12.0	11.9	0.3	1.3	0.7	13	1.5	3	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 2
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.25	13.33	0.0	1.3	5.0	0.8	2.8	8.5	0.0	1.4	0.0	ND
Standard Error	0.49	0.22	0.0	0.7	0.4	0.2	0.9	1.0	0.0	0.4	0.0	ND
Median	34.50	13.00	0.0	0.0	4.6	0.8	2.9	8.1	0.0	1.4	0.0	ND
Mode	34.00	13.00	0.0	0.0	ND	0.0	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	1.71	0.78	0.0	2.4	1.0	0.8	2.8	3.4	0.0	1.3	0.0	ND
Sample Variance	2.93	0.61	0.0	5.7	0.9	0.6	7.9	11.9	0.0	1.8	0.0	ND
Kurtosis	-1.06	0.92	ND	0.3	3.2	2.0	-1.2	0.7	ND	5.1	ND	ND
Skewness	0.58	0.67	ND	1.4	1.7	1.1	0.3	0.8	ND	1.8	ND	ND
Range	5.00	3.00	0.0	6.2	2.4	2.7	7.7	11.7	0.0	5.0	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	4.2	0.0	0.0	4.3	0.0	0.0	0.0	0.0
Maximum	38.00	15.00	0.0	6.2	6.6	2.7	7.7	16.0	0.0	5.0	0.0	0.0
Count	12	12	12	12	5	12	10	12	12	12	12	0
Confidence Level(95.0%)	1.09	0.49	0.0	1.5	1.2	0.5	2.0	2.2	0.0	0.8	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	143	117	ND	ND	29.2	27.2	1.9	ND
Standard Error	2	2	ND	ND	0.4	0.4	0.1	ND
Median	140	120	ND	ND	29.0	28.0	2.0	ND
Mode	140	120	ND	ND	31.0	28.0	2.1	ND
Standard Deviation	7	5	ND	ND	2.4	2.6	0.8	ND
Sample Variance	42	25	ND	ND	5.9	6.7	0.7	ND
Kurtosis	0	-2	ND	ND	-0.6	-0.5	3.2	ND
Skewness	0	-1	ND	ND	-0.4	-0.6	-0.2	ND
Range	20	10	0.0	0.0	9.0	9.0	4.4	0.0
Minimum	130	110	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	150	120	0.0	0.0	33.0	31.0	4.4	0.0
Count	12	9	0	0	36	36	36	0
Confidence Level(95.0%)	4	4	ND	ND	0.8	0.9	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 3
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	13.1	10.9	0.72	0.38	0.003	0.38	0.000	0.01	0.004	0.001	1.54
Standard Error	0.0	1.0	0.3	0.17	0.02	0.000	0.02	0.000	0.01	0.001	0.001	0.08
Median	8.0	14.3	10.8	0.64	0.35	0.003	0.35	0.000	0.00	0.000	0.000	1.45
Mode	8.0	21.5	8.4	ND	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.2	5.8	1.8	0.59	0.12	0.002	0.12	0.000	0.07	0.007	0.003	0.51
Sample Variance	0.1	33.7	3.3	0.35	0.01	0.000	0.01	0.000	0.00	0.000	0.000	0.26
Kurtosis	5.2	-1.0	-0.8	0.91	-0.83	0.215	-0.82	ND	36.00	6.123	20.753	-1.19
Skewness	-1.9	-0.1	0.2	1.03	0.58	0.101	0.61	ND	6.00	2.473	4.526	0.36
Range	1.2	19.3	6.3	1.95	0.40	0.008	0.41	0.000	0.40	0.030	0.017	1.58
Minimum	7.2	2.2	8.3	0.12	0.24	0.000	0.24	0.000	0.00	0.000	0.000	0.82
Maximum	8.4	21.5	14.6	2.07	0.64	0.008	0.65	0.000	0.40	0.030	0.017	2.40
Count	36	36	36	12	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.1	2.0	0.6	0.38	0.04	0.001	0.04	0.000	0.02	0.002	0.001	0.17

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.1	10.8	179.2	178.2	0.1	1.0	1.7	322	12.3	0	0.0	ND
Standard Error	1.0	0.7	6.0	5.9	0.1	0.5	0.3	13	0.4	0	0.0	ND
Median	6.6	11.7	180.0	180.0	0.0	0.0	0.9	294	12.0	0	0.0	ND
Mode	12.0	12.0	170.0	200.0	0.0	0.0	0.7	292	10.0	0	0.0	ND
Standard Deviation	3.6	2.4	20.7	20.4	0.3	1.6	1.7	81	2.2	1	0.1	ND
Sample Variance	12.6	5.5	426.5	417.4	0.1	2.6	2.8	6483	5.0	1	0.0	ND
Kurtosis	-0.3	4.0	-0.2	-0.3	12.0	1.1	4.0	12	1.0	12	12.0	ND
Skewness	0.3	-2.2	-0.5	-0.4	3.5	1.5	2.1	4	1.1	3	3.5	ND
Range	10.9	8.1	70.0	68.6	1.2	4.4	6.3	385	9.0	3	0.5	0
Minimum	1.1	4.7	140.0	140.0	0.0	0.0	0.4	277	10.0	0	0.0	0
Maximum	12.0	12.8	210.0	208.6	1.2	4.4	6.8	662	19.0	3	0.5	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	2.3	1.5	13.1	13.0	0.2	1.0	0.6	27	0.8	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 3
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.75	13.08	0.0	1.3	6.7	0.7	2.1	8.6	0.0	1.6	0.0	ND
Standard Error	0.41	0.26	0.0	0.7	0.4	0.2	0.8	0.8	0.0	0.5	0.0	ND
Median	34.00	13.00	0.0	0.0	7.2	0.8	1.7	8.2	0.0	1.3	0.0	ND
Mode	34.00	13.00	0.0	0.0	7.4	0.0	0.0	10.0	0.0	0.0	0.0	ND
Standard Deviation	1.42	0.90	0.0	2.3	1.1	0.6	2.3	2.9	0.1	1.6	0.0	ND
Sample Variance	2.02	0.81	0.0	5.5	1.2	0.3	5.5	8.4	0.0	2.6	0.0	ND
Kurtosis	-0.39	0.53	ND	0.3	-2.0	-0.6	-2.5	-0.5	12.0	0.2	ND	ND
Skewness	-0.16	0.71	ND	1.5	-0.2	0.2	0.2	0.6	3.5	1.0	ND	ND
Range	5.00	3.00	0.0	6.0	2.8	1.7	5.0	8.9	0.3	4.8	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	5.4	0.0	0.0	5.1	0.0	0.0	0.0	0.0
Maximum	37.00	15.00	0.0	6.0	8.2	1.7	5.0	14.0	0.3	4.8	0.0	0.0
Count	12	12	12	12	10	12	8	12	12	12	12	0
Confidence Level(95.0%)	0.90	0.57	0.0	1.5	0.8	0.4	2.0	1.8	0.1	1.0	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	142	117	ND	ND	28.7	26.9	1.8	ND
Standard Error	2	2	ND	ND	0.4	0.4	0.1	ND
Median	140	120	ND	ND	29.0	28.0	1.9	ND
Mode	140	110	ND	ND	31.0	29.0	1.8	ND
Standard Deviation	6	7	ND	ND	2.1	2.2	0.6	ND
Sample Variance	33	50	ND	ND	4.5	4.9	0.4	ND
Kurtosis	1	0	ND	ND	-0.6	-0.6	2.8	ND
Skewness	0	1	ND	ND	-0.5	-0.6	-1.4	ND
Range	20	20	0.0	0.0	8.0	8.0	3.0	0.0
Minimum	130	110	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	150	130	0.0	0.0	32.0	30.0	3.0	0.0
Count	12	9	0	0	36	36	36	0
Confidence Level(95.0%)	4	5	ND	ND	0.7	0.7	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 4
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.3	10.7	0.76	0.64	0.007	0.65	0.001	0.03	0.016	0.012	1.74
Standard Error	0.1	1.0	0.3	0.15	0.10	0.001	0.11	0.001	0.02	0.007	0.005	0.11
Median	7.9	14.9	10.8	0.67	0.47	0.005	0.47	0.000	0.00	0.004	0.000	1.70
Mode	7.9	18.2	11.5	0.24	0.33	0.003	0.53	0.000	0.00	0.000	0.000	2.00
Standard Deviation	0.3	5.8	1.9	0.51	0.63	0.007	0.63	0.006	0.12	0.040	0.033	0.65
Sample Variance	0.1	33.6	3.7	0.26	0.39	0.000	0.40	0.000	0.02	0.002	0.001	0.43
Kurtosis	1.5	-1.1	-0.6	0.46	13.71	4.738	13.26	36.000	20.37	24.964	26.934	1.92
Skewness	-1.2	-0.2	0.1	0.89	3.53	2.313	3.50	6.000	4.49	4.725	4.949	1.08
Range	1.5	19.3	7.7	1.65	3.25	0.031	3.25	0.033	0.65	0.230	0.190	3.00
Minimum	6.9	2.2	7.0	0.24	0.25	0.000	0.25	0.000	0.00	0.000	0.000	0.90
Maximum	8.4	21.5	14.7	1.89	3.50	0.031	3.50	0.033	0.65	0.230	0.190	3.90
Count	36	36	36	12	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.1	2.0	0.6	0.32	0.21	0.002	0.21	0.002	0.04	0.013	0.011	0.22

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.5	9.6	195.8	194.4	0.2	1.4	1.8	344	18.9	2	0.2	ND
Standard Error	1.2	0.8	10.0	10.0	0.2	0.5	0.3	16	2.9	1	0.1	ND
Median	5.5	11.0	190.0	188.6	0.0	1.1	1.0	318	14.0	0	0.0	ND
Mode	11.0	11.0	170.0	170.0	0.0	0.0	1.0	301	12.0	0	0.0	ND
Standard Deviation	4.0	2.6	34.8	34.6	0.6	1.6	1.8	97	17.6	3	0.4	ND
Sample Variance	16.0	7.0	1208.3	1198.2	0.3	2.7	3.2	9387	309.5	10	0.1	ND
Kurtosis	-1.8	0.1	4.8	5.1	3.4	1.3	4.2	12	21.5	0	-0.8	ND
Skewness	0.0	-1.3	1.9	2.0	2.2	1.4	2.1	3	4.4	1	1.1	ND
Range	10.0	7.7	130.0	130.0	1.6	4.9	7.5	480	100.0	8	0.9	0
Minimum	1.0	4.3	160.0	159.0	0.0	0.0	0.4	281	10.0	0	0.0	0
Maximum	11.0	12.0	290.0	289.0	1.6	4.9	8.0	761	110.0	8	0.9	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	2.5	1.7	22.1	22.0	0.4	1.0	0.6	33	6.0	2	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 4
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.50	13.25	0.0	1.3	5.8	0.7	2.9	9.1	0.0	1.4	0.0	ND
Standard Error	0.57	0.35	0.0	0.7	0.4	0.2	0.9	1.2	0.0	0.5	0.0	ND
Median	35.00	13.00	0.0	0.0	5.8	0.9	4.6	7.4	0.0	1.4	0.0	ND
Mode	34.00	13.00	0.0	0.0	ND	0.0	0.0	12.0	0.0	0.0	0.0	ND
Standard Deviation	1.98	1.22	0.0	2.4	1.1	0.6	2.7	4.0	0.0	1.8	0.0	ND
Sample Variance	3.91	1.48	0.0	5.8	1.2	0.4	7.5	16.1	0.0	3.3	0.0	ND
Kurtosis	0.97	1.33	ND	-0.2	-0.4	-1.1	-2.5	-0.6	ND	7.0	ND	ND
Skewness	1.02	1.25	ND	1.3	0.4	0.0	-0.2	0.7	ND	2.4	ND	ND
Range	7.00	4.00	0.0	5.7	3.2	1.8	5.7	12.6	0.0	6.7	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	4.4	0.0	0.0	4.4	0.0	0.0	0.0	0.0
Maximum	40.00	16.00	0.0	5.7	7.6	1.8	5.7	17.0	0.0	6.7	0.0	0.0
Count	12	12	12	12	7	12	9	12	12	12	12	0
Confidence Level(95.0%)	1.26	0.77	0.0	1.5	1.0	0.4	2.1	2.5	0.0	1.2	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	144	118	ND	ND	29.7	27.8	1.9	ND
Standard Error	3	1	ND	ND	0.5	0.5	0.1	ND
Median	140	120	ND	ND	30.0	28.0	1.9	ND
Mode	140	120	ND	ND	30.0	29.0	1.9	ND
Standard Deviation	9	4	ND	ND	3.1	2.7	0.7	ND
Sample Variance	81	19	ND	ND	9.9	7.5	0.5	ND
Kurtosis	0	1	ND	ND	11.5	7.1	5.2	ND
Skewness	1	-2	ND	ND	2.7	1.9	-0.1	ND
Range	30	10	0.0	0.0	18.0	15.0	4.3	0.0
Minimum	130	110	0.0	0.0	26.0	24.0	0.0	0.0
Maximum	160	120	0.0	0.0	44.0	39.0	4.3	0.0
Count	12	9	0	0	36	36	36	0
Confidence Level(95.0%)	6	3	ND	ND	1.1	0.9	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 5
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	13.4	10.9	ND	0.45	0.004	0.46	0.000	0.01	0.006	0.003	1.64
Standard Error	0.0	1.0	0.3	ND	0.02	0.000	0.03	0.000	0.01	0.001	0.001	0.09
Median	8.0	15.3	11.2	ND	0.44	0.005	0.44	0.000	0.00	0.004	0.000	1.65
Mode	8.0	15.7	11.4	ND	0.40	0.000	0.50	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.2	5.8	2.0	ND	0.15	0.002	0.15	0.000	0.06	0.007	0.005	0.53
Sample Variance	0.0	33.9	3.9	ND	0.02	0.000	0.02	0.000	0.00	0.000	0.000	0.28
Kurtosis	0.7	-0.9	-0.5	ND	-0.26	-0.104	-0.23	ND	36.00	-1.425	-0.492	-1.04
Skewness	0.4	-0.3	0.1	ND	0.55	-0.208	0.58	ND	6.00	0.392	1.159	0.24
Range	0.9	19.0	8.0	0.00	0.56	0.009	0.57	0.000	0.35	0.019	0.014	1.79
Minimum	7.6	2.4	7.2	0.00	0.22	0.000	0.22	0.000	0.00	0.000	0.000	0.81
Maximum	8.5	21.4	15.2	0.00	0.78	0.009	0.79	0.000	0.35	0.019	0.014	2.60
Count	36	36	36	0	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.1	2.0	0.7	ND	0.05	0.001	0.05	0.000	0.02	0.002	0.002	0.18

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.6	9.2	180.8	179.7	0.1	1.2	1.7	319	14.2	1	0.2	ND
Standard Error	1.0	0.1	6.3	6.2	0.1	0.4	0.3	5	0.6	1	0.1	ND
Median	9.0	9.1	180.0	177.2	0.0	0.6	0.9	314	13.0	0	0.0	ND
Mode	9.0	9.0	170.0	170.0	0.0	0.0	0.6	328	13.0	0	0.0	ND
Standard Deviation	3.5	0.3	21.9	21.6	0.3	1.5	1.8	31	3.4	2	0.3	ND
Sample Variance	12.3	0.1	481.1	467.0	0.1	2.4	3.1	964	11.9	4	0.1	ND
Kurtosis	-1.5	1.2	0.2	0.1	12.0	1.2	3.5	6	1.0	1	0.3	ND
Skewness	-0.7	1.3	0.1	0.2	3.5	1.4	2.0	2	1.1	2	1.5	ND
Range	8.9	1.0	80.0	78.3	1.1	4.6	6.5	157	13.0	5	0.7	0
Minimum	1.1	9.0	140.0	140.0	0.0	0.0	0.3	285	10.0	0	0.0	0
Maximum	10.0	10.0	220.0	218.3	1.1	4.6	6.8	442	23.0	5	0.7	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	2.2	0.2	13.9	13.7	0.2	1.0	0.6	11	1.2	1	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 5
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.08	13.17	0.0	1.3	6.3	0.6	2.9	9.0	0.0	1.4	0.0	ND
Standard Error	0.40	0.24	0.0	0.7	0.6	0.1	0.8	1.1	0.0	0.5	0.0	ND
Median	34.50	13.00	0.0	0.0	6.5	0.9	3.0	8.5	0.0	1.2	0.0	ND
Mode	34.00	13.00	0.0	0.0	ND	0.0	0.0	12.0	0.0	0.0	0.0	ND
Standard Deviation	1.38	0.83	0.0	2.3	1.8	0.5	2.5	3.9	0.1	1.6	0.0	ND
Sample Variance	1.90	0.70	0.0	5.3	3.2	0.2	6.5	15.2	0.0	2.6	0.0	ND
Kurtosis	0.13	1.15	ND	0.0	0.8	-1.5	-1.9	-0.8	12.0	5.0	ND	ND
Skewness	1.07	0.77	ND	1.4	0.0	-0.5	0.0	0.3	3.5	1.9	ND	ND
Range	4.00	3.00	0.0	5.8	6.3	1.3	6.1	12.5	0.3	5.8	0.0	0.0
Minimum	34.00	12.00	0.0	0.0	3.2	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Maximum	38.00	15.00	0.0	5.8	9.5	1.3	6.1	16.0	0.3	5.8	0.0	0.0
Count	12	12	12	12	9	12	9	12	12	12	12	0
Confidence Level(95.0%)	0.88	0.53	0.0	1.5	1.4	0.3	2.0	2.5	0.1	1.0	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	143	122	ND	ND	29.2	27.4	1.8	ND
Standard Error	1	4	ND	ND	0.4	0.3	0.1	ND
Median	140	120	ND	ND	29.5	28.0	2.0	ND
Mode	140	120	ND	ND	32.0	30.0	2.1	ND
Standard Deviation	5	11	ND	ND	2.1	2.1	0.6	ND
Sample Variance	24	119	ND	ND	4.5	4.2	0.4	ND
Kurtosis	-2	7	ND	ND	-1.4	-1.4	3.0	ND
Skewness	1	2	ND	ND	-0.1	-0.2	-2.0	ND
Range	10	40	0.0	0.0	6.0	6.0	2.6	0.0
Minimum	140	110	0.0	0.0	26.0	24.0	0.0	0.0
Maximum	150	150	0.0	0.0	32.0	30.0	2.6	0.0
Count	12	9	0	0	36	36	36	0
Confidence Level(95.0%)	3	8	ND	ND	0.7	0.7	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 6
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	13.1	10.9	ND	0.41	0.003	0.41	0.000	0.03	0.006	0.001	1.63
Standard Error	0.0	1.0	0.3	ND	0.03	0.000	0.03	0.000	0.02	0.002	0.001	0.08
Median	8.0	14.6	11.4	ND	0.40	0.003	0.41	0.000	0.00	0.000	0.000	1.50
Mode	8.0	21.5	11.5	ND	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.30
Standard Deviation	0.2	6.0	1.8	ND	0.16	0.002	0.16	0.000	0.11	0.013	0.004	0.48
Sample Variance	0.0	35.8	3.4	ND	0.03	0.000	0.03	0.000	0.01	0.000	0.000	0.23
Kurtosis	-0.2	-1.1	-0.8	ND	3.91	1.507	3.84	ND	8.87	13.342	7.141	-1.31
Skewness	-0.1	-0.2	0.1	ND	1.54	0.064	1.53	ND	3.20	3.359	2.877	0.39
Range	0.6	19.3	6.6	0.00	0.78	0.008	0.78	0.000	0.44	0.067	0.017	1.40
Minimum	7.7	2.2	8.2	0.00	0.22	0.000	0.22	0.000	0.00	0.000	0.000	1.00
Maximum	8.3	21.5	14.8	0.00	1.00	0.008	1.00	0.000	0.44	0.067	0.017	2.40
Count	36	36	36	0	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.1	2.0	0.6	ND	0.05	0.001	0.05	0.000	0.04	0.004	0.001	0.16

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.6	11.0	179.2	178.0	0.2	1.2	1.8	304	12.8	2	0.2	ND
Standard Error	1.1	0.7	6.3	6.2	0.1	0.5	0.3	3	0.4	1	0.1	ND
Median	6.4	11.8	180.0	175.6	0.0	0.6	0.8	300	12.0	0	0.0	ND
Mode	12.0	12.0	180.0	160.0	0.0	0.0	0.6	293	14.0	0	0.0	ND
Standard Deviation	4.0	2.3	21.9	21.6	0.5	1.6	2.0	19	2.6	4	0.4	ND
Sample Variance	15.7	5.4	481.1	466.9	0.3	2.7	3.9	376	6.5	12	0.1	ND
Kurtosis	-0.8	3.5	-0.4	-0.3	2.9	1.2	5.8	4	1.0	2	1.2	ND
Skewness	0.4	-2.1	0.1	0.2	2.1	1.5	2.3	2	1.1	2	1.7	ND
Range	11.9	7.9	70.0	70.0	1.4	4.6	8.9	100	10.2	10	1.0	0
Minimum	1.1	5.1	140.0	140.0	0.0	0.0	0.4	276	9.8	0	0.0	0
Maximum	13.0	13.0	210.0	210.0	1.4	4.6	9.4	376	20.0	10	1.0	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	2.5	1.5	13.9	13.7	0.3	1.0	0.7	7	0.9	2	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 6
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.92	13.00	0.0	1.3	5.3	0.7	3.1	8.4	0.0	1.7	0.0	ND
Standard Error	0.42	0.25	0.0	0.7	0.6	0.2	1.0	1.1	0.0	0.6	0.0	ND
Median	35.00	13.00	0.0	0.0	5.1	0.8	3.8	7.8	0.0	1.3	0.0	ND
Mode	36.00	12.00	0.0	0.0	ND	0.0	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	1.44	0.85	0.0	2.3	1.4	0.6	3.1	3.9	0.0	2.2	0.0	ND
Sample Variance	2.08	0.73	0.0	5.4	2.0	0.3	9.6	15.5	0.0	4.7	0.0	ND
Kurtosis	0.45	-1.65	ND	-0.1	0.9	-1.5	-2.2	-0.5	ND	3.3	ND	ND
Skewness	0.61	0.00	ND	1.4	1.0	0.0	0.0	0.7	ND	1.8	ND	ND
Range	5.00	2.00	0.0	5.7	3.9	1.6	7.1	12.1	0.0	7.2	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	3.8	0.0	0.0	3.9	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	5.7	7.7	1.6	7.1	16.0	0.0	7.2	0.0	0.0
Count	12	12	12	12	6	12	9	12	12	12	12	0
Confidence Level(95.0%)	0.92	0.54	0.0	1.5	1.5	0.4	2.4	2.5	0.0	1.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	141	113	ND	ND	28.9	27.1	1.8	ND
Standard Error	1	2	ND	ND	0.3	0.3	0.1	ND
Median	140	110	ND	ND	30.0	28.0	2.0	ND
Mode	140	110	ND	ND	31.0	29.0	2.1	ND
Standard Deviation	5	5	ND	ND	2.1	2.1	0.6	ND
Sample Variance	27	25	ND	ND	4.3	4.4	0.3	ND
Kurtosis	2	-2	ND	ND	-1.0	-0.1	4.0	ND
Skewness	0	1	ND	ND	-0.5	-0.9	-2.1	ND
Range	20	10	0.0	0.0	7.0	8.0	2.4	0.0
Minimum	130	110	0.0	0.0	25.0	22.0	0.0	0.0
Maximum	150	120	0.0	0.0	32.0	30.0	2.4	0.0
Count	12	9	0	0	36	36	36	0
Confidence Level(95.0%)	3	4	ND	ND	0.7	0.7	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 7
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	12.6	11.2	0.80	0.50	0.008	0.51	0.017	0.05	0.009	0.005	1.75
Standard Error	0.0	0.7	0.3	0.09	0.04	0.002	0.04	0.009	0.02	0.002	0.001	0.08
Median	8.0	12.2	11.1	0.70	0.35	0.004	0.36	0.000	0.00	0.008	0.000	1.70
Mode	8.0	10.6	11.0	1.48	0.35	0.000	0.28	0.000	0.00	0.000	0.000	2.60
Standard Deviation	0.3	5.4	2.0	0.54	0.27	0.014	0.28	0.067	0.15	0.013	0.007	0.64
Sample Variance	0.1	28.7	3.9	0.29	0.08	0.000	0.08	0.004	0.02	0.000	0.000	0.41
Kurtosis	-0.2	-0.8	-0.1	-0.50	-0.17	14.366	-0.33	16.276	6.40	6.381	1.238	-1.52
Skewness	0.0	-0.1	0.2	0.46	0.97	3.860	0.91	4.165	2.80	2.134	1.419	0.14
Range	1.1	19.2	8.2	2.13	1.00	0.072	1.00	0.340	0.60	0.068	0.028	2.05
Minimum	7.5	2.3	7.4	0.00	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.75
Maximum	8.6	21.5	15.6	2.13	1.20	0.072	1.20	0.340	0.60	0.068	0.028	2.80
Count	57	57	57	33	57	57	57	57	57	57	57	57
Confidence Level(95.0%)	0.1	1.4	0.5	0.19	0.07	0.004	0.07	0.018	0.04	0.003	0.002	0.17

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.2	10.1	187.5	186.3	0.1	1.2	1.5	324	16.5	1	0.2	ND
Standard Error	0.8	0.3	4.8	4.7	0.1	0.4	0.2	6	0.9	0	0.1	ND
Median	5.6	10.4	180.0	180.0	0.0	1.2	0.9	305	13.0	0	0.0	ND
Mode	10.0	10.0	180.0	170.0	0.0	0.0	0.5	292	11.0	0	0.0	ND
Standard Deviation	3.4	1.2	16.6	16.3	0.3	1.5	1.4	47	6.7	2	0.3	ND
Sample Variance	11.3	1.6	275.0	264.9	0.1	2.2	1.9	2243	45.2	4	0.1	ND
Kurtosis	-1.3	16.7	-0.5	-0.5	12.0	2.8	6.1	2	-0.7	5	1.2	ND
Skewness	0.2	-4.0	0.8	0.8	3.5	1.6	2.4	1	0.8	2	1.3	ND
Range	9.7	5.9	50.0	48.0	1.0	5.0	6.2	208	23.2	8	0.9	0
Minimum	1.3	5.1	170.0	170.0	0.0	0.0	0.3	274	9.8	0	0.0	0
Maximum	11.0	11.0	220.0	218.0	1.0	5.0	6.6	482	33.0	8	0.9	0
Count	19	19	12	12	12	12	57	57	57	19	19	0
Confidence Level(95.0%)	1.6	0.6	10.5	10.3	0.2	1.0	0.4	13	1.8	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 7
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.32	13.26	0.0	1.1	6.6	0.9	3.0	10.1	0.1	1.2	0.0	ND
Standard Error	0.60	0.25	0.0	0.5	0.5	0.2	0.7	1.5	0.0	0.3	0.0	ND
Median	34.00	13.00	0.0	0.0	6.8	1.1	2.8	8.0	0.0	1.1	0.0	ND
Mode	37.00	13.00	0.0	0.0	6.8	0.0	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	2.63	1.10	0.0	2.1	1.8	0.7	2.6	6.3	0.1	1.1	0.0	ND
Sample Variance	6.89	1.20	0.0	4.5	3.1	0.4	6.7	40.3	0.0	1.3	0.0	ND
Kurtosis	-0.34	-0.91	ND	0.7	-0.8	-1.5	-1.8	2.7	1.0	4.0	ND	ND
Skewness	0.66	0.54	ND	1.6	-0.2	-0.4	-0.1	1.7	1.6	1.5	ND	ND
Range	9.00	3.00	0.0	5.5	5.8	1.8	6.7	24.1	0.4	4.7	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.3	0.0	0.0	3.9	0.0	0.0	0.0	0.0
Maximum	41.00	15.00	0.0	5.5	9.1	1.8	6.7	28.0	0.4	4.7	0.0	0.0
Count	19	19	19	19	14	19	15	19	19	19	19	0
Confidence Level(95.0%)	1.27	0.53	0.0	1.0	1.0	0.3	1.4	3.1	0.1	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	144	112	ND	ND	29.1	27.2	1.8	ND
Standard Error	2	2	ND	ND	0.4	0.4	0.1	ND
Median	140	110	ND	ND	29.0	27.0	2.0	ND
Mode	150	120	ND	ND	29.0	27.0	2.1	ND
Standard Deviation	10	9	ND	ND	2.4	2.4	0.6	ND
Sample Variance	91	76	ND	ND	6.0	5.8	0.4	ND
Kurtosis	-1	-2	ND	ND	-0.9	-0.4	3.0	ND
Skewness	0	0	ND	ND	-0.3	-0.6	-2.0	ND
Range	30	21	0.0	0.0	9.0	9.0	2.4	0.0
Minimum	130	99	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	160	120	0.0	0.0	33.0	31.0	2.4	0.0
Count	19	24	0	0	36	36	36	0
Confidence Level(95.0%)	5	4	ND	ND	0.8	0.8	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 8
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	13.3	10.8	ND	0.47	0.004	0.48	0.002	0.00	0.005	0.002	1.68
Standard Error	0.0	1.0	0.4	ND	0.05	0.001	0.05	0.001	0.00	0.001	0.001	0.10
Median	8.0	14.3	10.8	ND	0.36	0.004	0.36	0.000	0.00	0.000	0.000	1.60
Mode	8.0	6.6	13.1	ND	0.28	0.004	0.28	0.000	0.00	0.000	0.000	2.60
Standard Deviation	0.3	5.7	2.3	ND	0.28	0.003	0.28	0.007	0.00	0.008	0.005	0.61
Sample Variance	0.1	32.8	5.3	ND	0.08	0.000	0.08	0.000	0.00	0.000	0.000	0.37
Kurtosis	0.0	-1.0	0.1	ND	3.42	14.467	3.34	11.403	ND	2.805	4.524	-1.19
Skewness	-0.2	-0.2	0.2	ND	1.85	3.091	1.84	3.459	ND	1.741	2.308	0.31
Range	1.1	19.0	9.4	0.00	1.18	0.019	1.18	0.032	0.00	0.030	0.020	2.02
Minimum	7.5	2.5	6.6	0.00	0.22	0.000	0.22	0.000	0.00	0.000	0.000	0.78
Maximum	8.6	21.5	16.0	0.00	1.40	0.019	1.40	0.032	0.00	0.030	0.020	2.80
Count	36	36	36	0	36	36	36	36	36	35	35	36
Confidence Level(95.0%)	0.1	1.9	0.8	ND	0.09	0.001	0.09	0.002	0.00	0.003	0.002	0.21

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	5.0	8.8	184.2	182.7	0.0	1.5	2.0	317	14.9	2	0.3	ND
Standard Error	0.8	0.4	4.7	4.7	0.0	0.6	0.4	7	1.0	1	0.1	ND
Median	4.7	9.0	180.0	179.1	0.0	1.4	1.2	300	12.5	0	0.0	ND
Mode	ND	9.0	170.0	170.0	0.0	0.0	0.6	300	11.0	0	0.0	ND
Standard Deviation	2.9	1.5	16.2	16.3	0.0	2.0	2.2	43	5.8	3	0.3	ND
Sample Variance	8.2	2.2	262.9	267.1	0.0	4.1	5.0	1843	33.6	7	0.1	ND
Kurtosis	-0.8	10.7	1.1	1.0	ND	4.4	5.2	6	3.3	1	-0.8	ND
Skewness	0.5	-3.2	1.3	1.3	ND	1.9	2.4	2	1.9	1	0.8	ND
Range	8.5	5.8	50.0	52.0	0.0	6.9	8.8	205	24.1	8	0.9	0
Minimum	1.0	4.2	170.0	166.5	0.0	0.0	0.4	279	9.9	0	0.0	0
Maximum	9.5	10.0	220.0	218.5	0.0	6.9	9.2	484	34.0	8	0.9	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	1.8	0.9	10.3	10.4	0.0	1.3	0.8	15	2.0	2	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 8
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.17	13.17	0.0	1.3	5.9	0.7	3.0	7.2	0.3	1.4	0.0	ND
Standard Error	0.49	0.17	0.0	0.7	0.6	0.2	0.9	0.6	0.1	0.4	0.0	ND
Median	35.00	13.00	0.0	0.0	5.3	1.1	2.7	7.3	0.0	1.2	0.0	ND
Mode	36.00	13.00	0.0	0.0	4.9	0.0	0.0	8.6	0.0	0.0	0.0	ND
Standard Deviation	1.70	0.58	0.0	2.4	1.9	0.6	2.7	2.0	0.4	1.5	0.0	ND
Sample Variance	2.88	0.33	0.0	5.7	3.5	0.4	7.4	4.2	0.1	2.2	0.0	ND
Kurtosis	-0.61	0.65	ND	0.1	-0.3	-2.0	-1.6	-1.0	-0.4	6.0	ND	ND
Skewness	0.49	0.06	ND	1.4	-0.3	-0.4	0.2	-0.2	1.0	2.1	ND	ND
Range	5.00	2.00	0.0	6.0	5.7	1.4	6.7	6.2	1.0	5.5	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	2.5	0.0	0.0	3.8	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	6.0	8.2	1.4	6.7	10.0	1.0	5.5	0.0	0.0
Count	12	12	12	12	9	12	10	12	11	12	12	0
Confidence Level(95.0%)	1.08	0.37	0.0	1.5	1.4	0.4	1.9	1.3	0.2	0.9	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	143	121	ND	ND	29.0	27.2	1.8	ND
Standard Error	1	1	ND	ND	0.4	0.4	0.1	ND
Median	140	120	ND	ND	29.0	27.5	2.0	ND
Mode	140	120	ND	ND	32.0	30.0	2.0	ND
Standard Deviation	5	3	ND	ND	2.6	2.6	0.7	ND
Sample Variance	24	11	ND	ND	7.0	6.7	0.4	ND
Kurtosis	-2	9	ND	ND	-1.0	-0.5	2.5	ND
Skewness	1	3	ND	ND	-0.1	-0.5	-1.8	ND
Range	10	10	0.0	0.0	10.0	10.0	2.8	0.0
Minimum	140	120	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	150	130	0.0	0.0	34.0	32.0	2.8	0.0
Count	12	9	0	0	36	36	36	0
Confidence Level(95.0%)	3	3	ND	ND	0.9	0.9	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 9
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	13.2	10.8	ND	0.44	0.003	0.44	0.000	0.03	0.002	0.001	1.72
Standard Error	0.0	1.0	0.3	ND	0.05	0.000	0.05	0.000	0.02	0.001	0.000	0.09
Median	8.0	14.2	11.1	ND	0.32	0.003	0.32	0.000	0.00	0.000	0.000	1.55
Mode	8.0	18.2	11.5	ND	0.26	0.000	0.32	0.000	0.00	0.000	0.000	2.40
Standard Deviation	0.2	5.8	1.7	ND	0.32	0.002	0.32	0.003	0.11	0.004	0.003	0.57
Sample Variance	0.0	33.7	2.9	ND	0.10	0.000	0.10	0.000	0.01	0.000	0.000	0.32
Kurtosis	2.5	-1.1	-0.8	ND	17.48	1.515	17.22	36.000	8.48	1.449	5.695	2.59
Skewness	-1.3	-0.2	0.1	ND	3.75	0.303	3.72	6.000	3.16	1.579	2.677	1.27
Range	0.9	19.2	6.4	0.00	1.77	0.008	1.77	0.016	0.40	0.016	0.011	2.70
Minimum	7.4	2.3	8.1	0.00	0.23	0.000	0.23	0.000	0.00	0.000	0.000	1.00
Maximum	8.3	21.5	14.5	0.00	2.00	0.008	2.00	0.016	0.40	0.016	0.011	3.70
Count	36	36	36	0	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.1	2.0	0.6	ND	0.11	0.001	0.11	0.001	0.04	0.001	0.001	0.19

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	5.2	11.3	180.0	178.9	0.1	1.1	1.6	318	14.0	1	0.1	ND
Standard Error	0.6	0.6	4.1	4.1	0.1	0.4	0.3	11	1.7	0	0.1	ND
Median	6.0	11.9	180.0	176.9	0.0	0.5	0.8	292	12.0	0	0.0	ND
Mode	7.0	12.0	170.0	170.0	0.0	0.0	0.7	291	10.0	0	0.0	ND
Standard Deviation	2.1	2.0	14.1	14.1	0.3	1.5	1.8	67	10.4	1	0.2	ND
Sample Variance	4.4	3.8	200.0	199.4	0.1	2.1	3.3	4431	107.3	1	0.0	ND
Kurtosis	-0.4	11.6	0.6	0.5	12.0	1.8	7.1	11	32.4	3	2.6	ND
Skewness	-0.9	-3.4	0.9	1.0	3.5	1.5	2.6	3	5.6	2	2.1	ND
Range	6.0	6.9	50.0	48.9	1.1	4.5	8.2	316	63.0	3	0.5	0
Minimum	1.0	5.1	160.0	160.0	0.0	0.0	0.5	276	10.0	0	0.0	0
Maximum	7.0	12.0	210.0	208.9	1.1	4.5	8.7	592	73.0	3	0.5	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	1.3	1.2	9.0	9.0	0.2	0.9	0.6	23	3.5	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 9
WATER QUALITY DATA - 2011

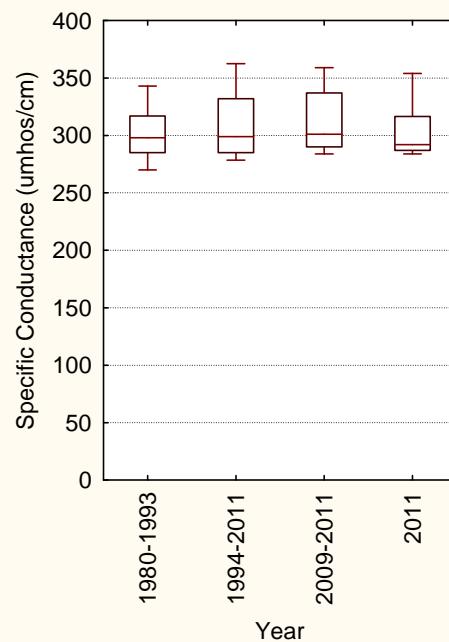
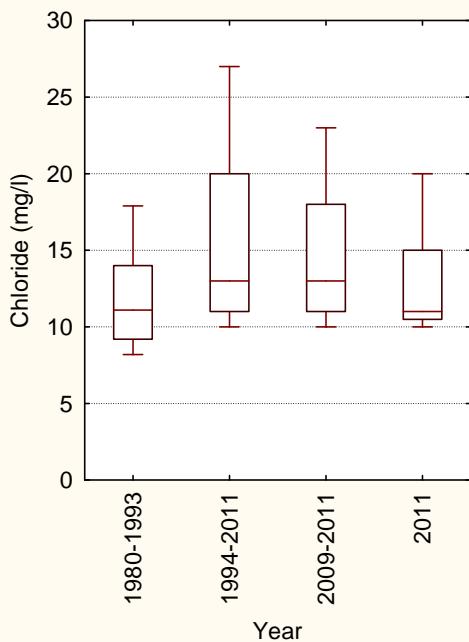
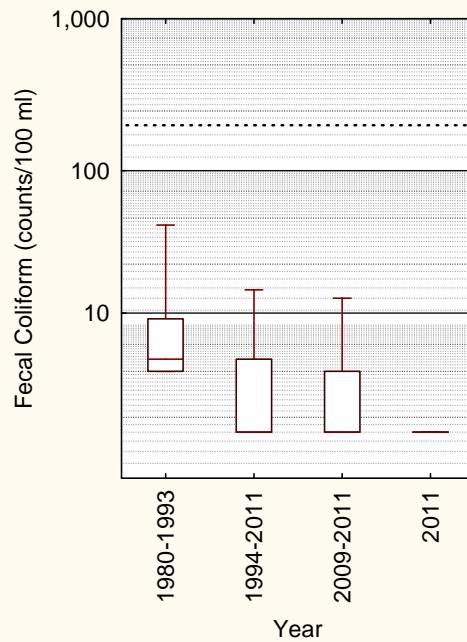
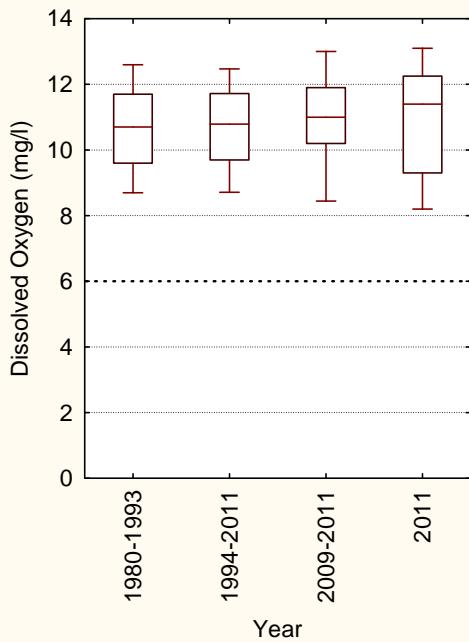
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.75	13.00	0.0	1.3	5.4	0.8	3.1	8.3	0.1	1.2	0.0	ND
Standard Error	0.39	0.21	0.0	0.7	0.4	0.2	0.9	1.0	0.0	0.4	0.0	ND
Median	34.00	13.00	0.0	0.0	5.5	0.9	3.1	7.8	0.0	1.2	0.0	ND
Mode	34.00	13.00	0.0	0.0	ND	0.0	0.0	12.0	0.0	0.0	0.0	ND
Standard Deviation	1.36	0.74	0.0	2.3	1.2	0.7	2.7	3.5	0.1	1.5	0.0	ND
Sample Variance	1.84	0.55	0.0	5.3	1.4	0.5	7.1	12.5	0.0	2.2	0.0	ND
Kurtosis	-1.44	-0.86	ND	0.0	-1.3	-0.9	-1.9	-1.4	3.4	4.2	ND	ND
Skewness	0.28	0.00	ND	1.4	0.4	0.3	-0.1	0.2	2.2	1.8	ND	ND
Range	4.00	2.00	0.0	5.8	3.1	2.0	6.3	10.6	0.4	5.1	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	4.1	0.0	0.0	3.4	0.0	0.0	0.0	0.0
Maximum	37.00	14.00	0.0	5.8	7.2	2.0	6.3	14.0	0.4	5.1	0.0	0.0
Count	12	12	12	12	7	12	9	12	12	12	12	0
Confidence Level(95.0%)	0.86	0.47	0.0	1.5	1.1	0.4	2.1	2.2	0.1	0.9	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	140	116	ND	ND	28.8	27.1	1.7	ND
Standard Error	2	2	ND	ND	0.4	0.4	0.1	ND
Median	140	110	ND	ND	30.0	28.0	1.9	ND
Mode	140	110	ND	ND	30.0	28.0	1.9	ND
Standard Deviation	6	7	ND	ND	2.4	2.3	0.6	ND
Sample Variance	36	53	ND	ND	5.7	5.1	0.4	ND
Kurtosis	1	0	ND	ND	0.8	0.3	2.9	ND
Skewness	0	1	ND	ND	0.3	-0.1	-1.8	ND
Range	20	20	0.0	0.0	12.0	11.0	2.7	0.0
Minimum	130	110	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	150	130	0.0	0.0	36.0	33.0	2.7	0.0
Count	12	9	0	0	36	36	36	0
Confidence Level(95.0%)	4	6	ND	ND	0.8	0.8	0.2	ND

ND = No Data

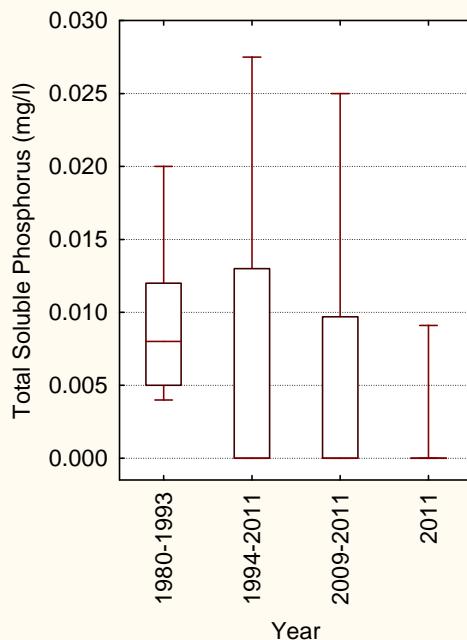
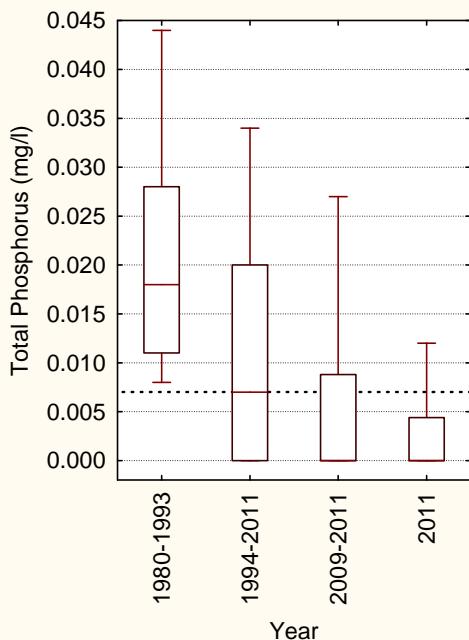
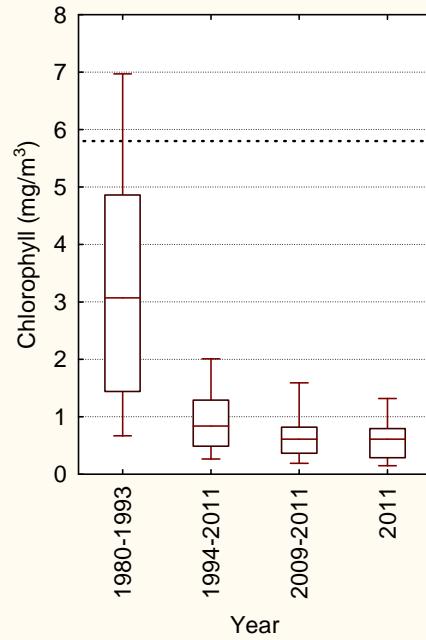
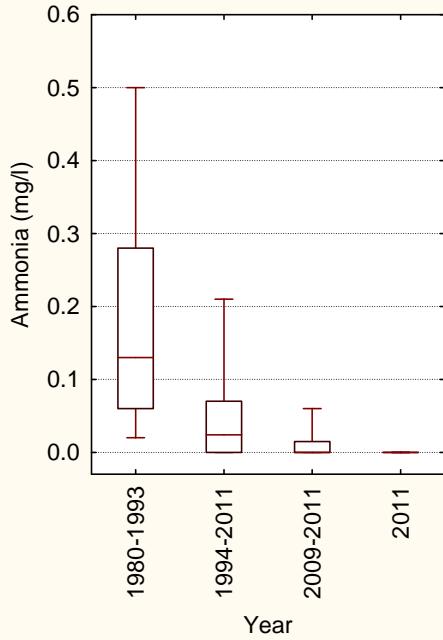
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-10



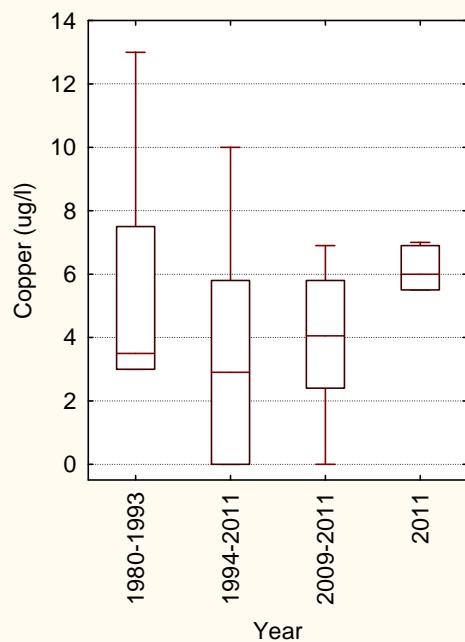
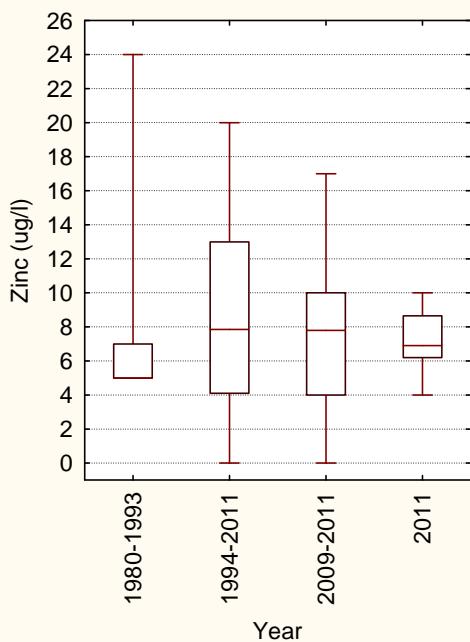
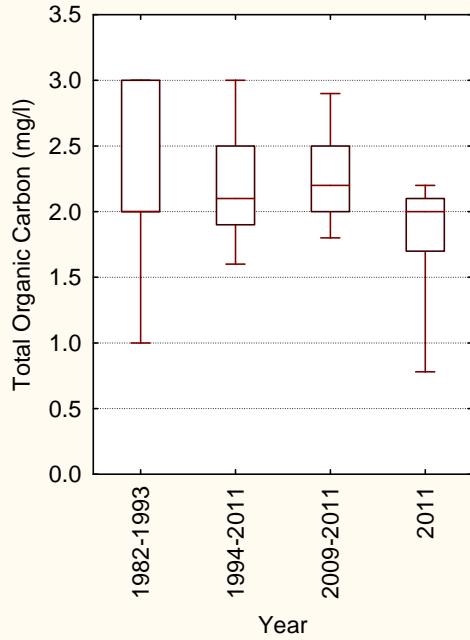
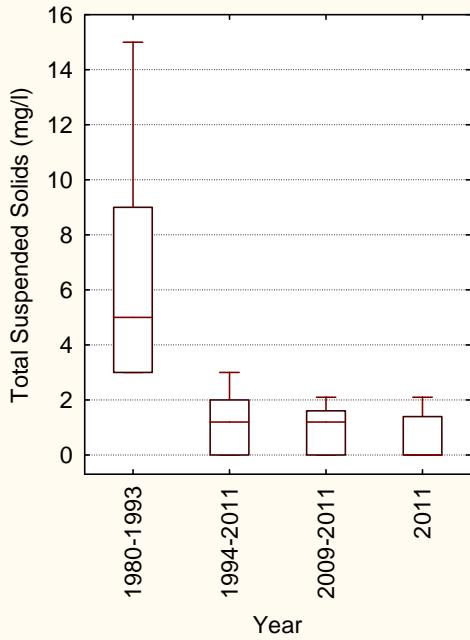
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-10



— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-10



— Median □ 25%-75% □ 10%-90%

SOUTH SHORE - SITE 10
WATER QUALITY DATA 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	13.2	10.9	0.66	0.37	0.003	0.37	0.006	0.05	0.003	0.001	1.66
Standard Error	0.0	1.0	0.4	0.13	0.02	0.000	0.02	0.006	0.03	0.001	0.001	0.09
Median	8.0	14.5	11.4	0.61	0.31	0.003	0.32	0.000	0.00	0.000	0.000	1.60
Mode	8.0	21.5	11.4	0.61	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.10
Standard Deviation	0.2	5.8	2.1	0.44	0.15	0.001	0.15	0.035	0.16	0.005	0.004	0.55
Sample Variance	0.0	33.8	4.5	0.20	0.02	0.000	0.02	0.001	0.03	0.000	0.000	0.30
Kurtosis	-0.5	-1.0	0.0	0.57	0.75	0.361	0.72	35.744	14.03	0.488	3.556	-1.12
Skewness	0.1	-0.2	0.1	0.91	1.37	-0.938	1.37	5.970	3.73	1.446	2.275	0.30
Range	0.7	19.1	8.7	1.44	0.53	0.006	0.52	0.210	0.79	0.016	0.012	1.80
Minimum	7.7	2.4	7.2	0.15	0.20	0.000	0.21	0.000	0.00	0.000	0.000	0.80
Maximum	8.4	21.5	15.9	1.59	0.73	0.006	0.73	0.210	0.79	0.016	0.012	2.60
Count	36	36	36	12	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.1	2.0	0.7	0.28	0.05	0.000	0.05	0.012	0.06	0.002	0.001	0.18

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.0	9.6	175.8	175.0	0.1	0.8	1.5	303	12.8	0	0.0	ND
Standard Error	0.9	0.4	6.9	6.8	0.1	0.3	0.2	4	0.6	0	0.0	ND
Median	5.7	9.9	180.0	178.4	0.0	0.0	0.9	292	11.0	0	0.0	ND
Mode	10.0	10.0	180.0	ND	0.0	0.0	0.7	290	11.0	0	0.0	ND
Standard Deviation	3.2	1.4	23.9	23.6	0.3	1.2	1.4	25	3.3	1	0.1	ND
Sample Variance	10.1	1.8	572.0	555.5	0.1	1.5	1.9	618	11.0	1	0.0	ND
Kurtosis	-1.4	9.3	1.8	1.8	12.0	2.4	4.1	0	0.2	12	12.0	ND
Skewness	0.1	-2.9	-1.1	-1.1	3.5	1.6	2.1	1	1.2	3	3.5	ND
Range	8.8	5.5	90.0	88.4	1.0	3.8	5.3	84	10.0	3	0.5	0
Minimum	1.2	5.5	120.0	120.0	0.0	0.0	0.4	275	10.0	0	0.0	0
Maximum	10.0	11.0	210.0	208.4	1.0	3.8	5.6	359	20.0	3	0.5	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	2.0	0.9	15.2	15.0	0.2	0.8	0.5	8	1.1	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality data

SOUTH SHORE - SITE 10
WATER QUALITY DATA 2011

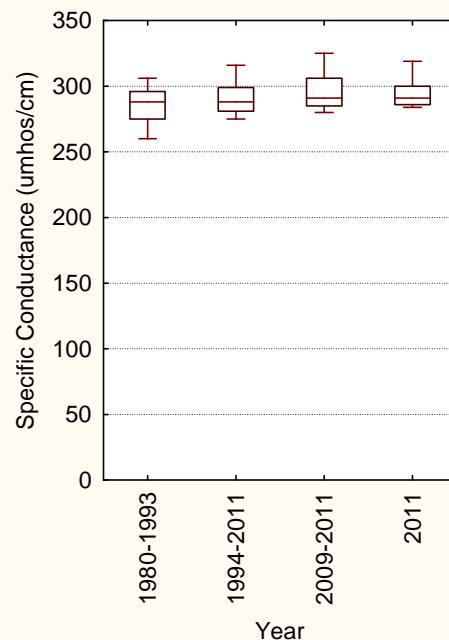
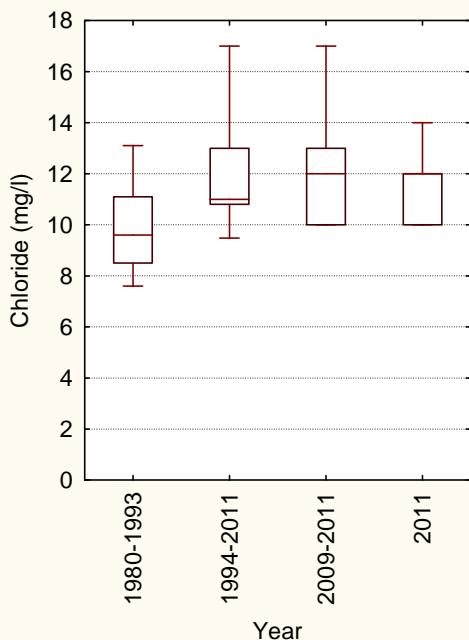
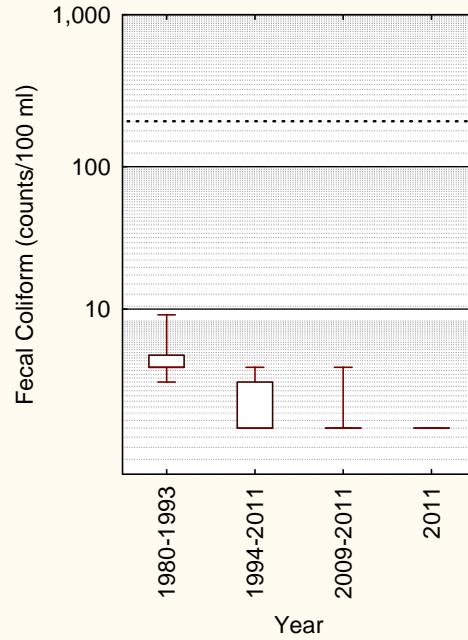
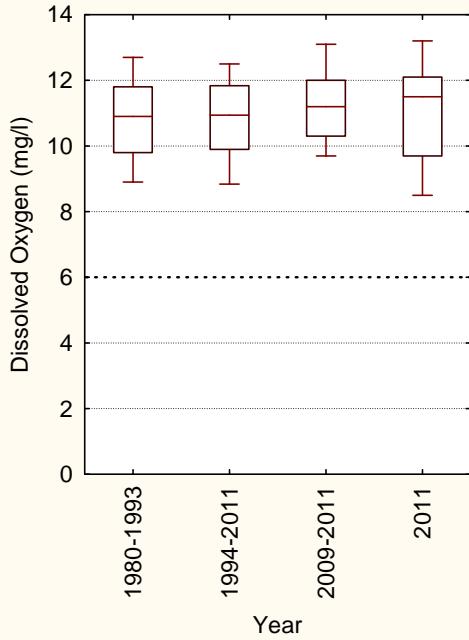
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.82	13.09	0.0	1.3	6.3	0.5	1.8	7.3	0.0	1.5	0.0	ND
Standard Error	0.52	0.16	0.0	0.7	0.4	0.1	0.7	0.8	0.0	0.6	0.0	ND
Median	34.00	13.00	0.0	0.0	6.0	0.6	1.0	6.9	0.0	1.0	0.0	ND
Mode	34.00	13.00	0.0	0.0	5.8	0.0	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	1.72	0.54	0.0	2.3	1.3	0.5	2.1	2.6	0.0	2.2	0.0	ND
Sample Variance	2.96	0.29	0.0	5.3	1.7	0.2	4.4	6.9	0.0	4.7	0.0	ND
Kurtosis	-0.10	1.86	ND	0.4	3.8	-1.9	-2.1	1.0	ND	8.5	ND	ND
Skewness	0.48	0.15	ND	1.5	1.6	0.1	0.4	0.6	ND	2.8	ND	ND
Range	6.00	2.00	0.0	6.0	5.1	1.2	4.5	9.7	0.0	7.9	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	4.5	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	6.0	9.6	1.2	4.5	13.0	0.0	7.9	0.0	0.0
Count	11	11	12	12	11	12	8	12	12	12	12	0
Confidence Level(95.0%)	1.16	0.36	0.0	1.5	0.9	0.3	1.8	1.7	0.0	1.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	142	118	0.0	2.6	28.9	27.3	1.7	ND
Standard Error	2	1	0.0	0.3	0.4	0.3	0.1	ND
Median	140	120	0.0	2.9	29.0	27.0	2.0	ND
Mode	140	120	0.0	2.5	26.0	30.0	2.0	ND
Standard Deviation	6	4	0.0	0.9	2.2	2.1	0.6	ND
Sample Variance	36	19	0.0	0.9	5.1	4.4	0.4	ND
Kurtosis	0	1	ND	6.3	-1.5	-1.3	2.7	ND
Skewness	0	-2	ND	-2.2	0.1	-0.2	-1.9	ND
Range	20	10	0.0	3.8	6.0	6.0	2.2	0.0
Minimum	130	110	0.0	0.0	26.0	24.0	0.0	0.0
Maximum	150	120	0.0	3.8	32.0	30.0	2.2	0.0
Count	11	9	12	12	36	36	36	0
Confidence Level(95.0%)	4	3	0.0	0.6	0.8	0.7	0.2	ND

ND = No Data

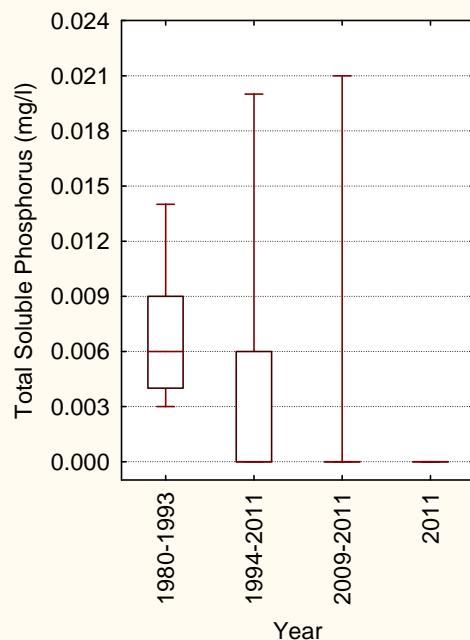
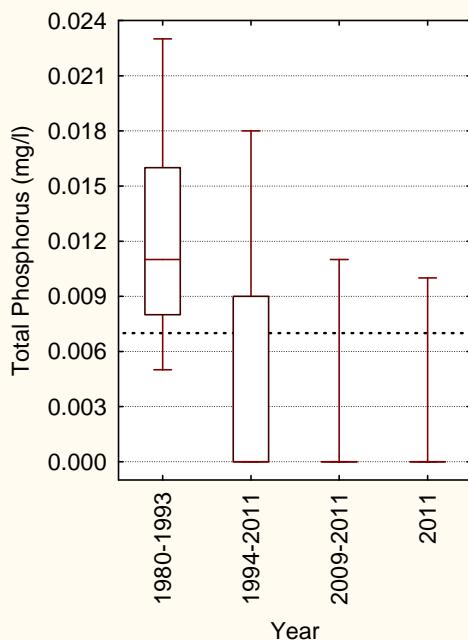
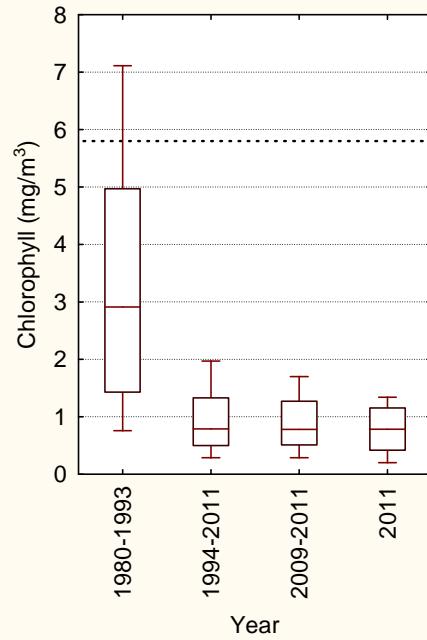
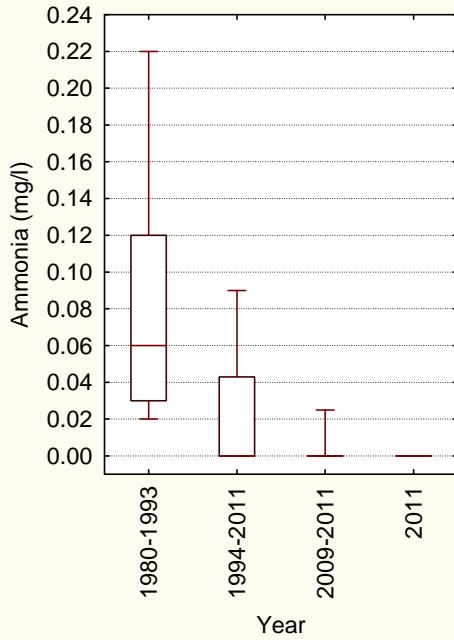
Provisional MMSD Water Quality data

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-11



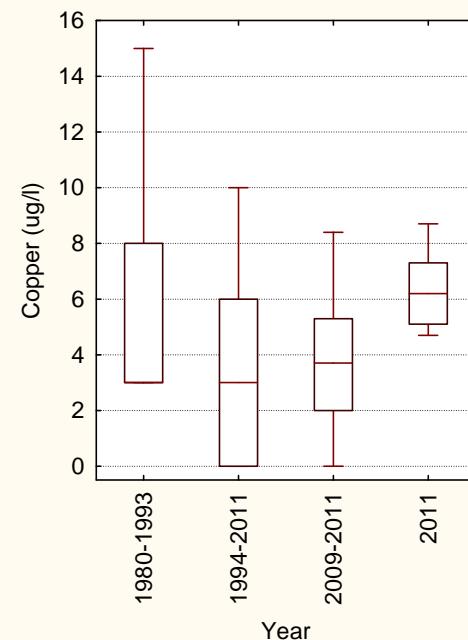
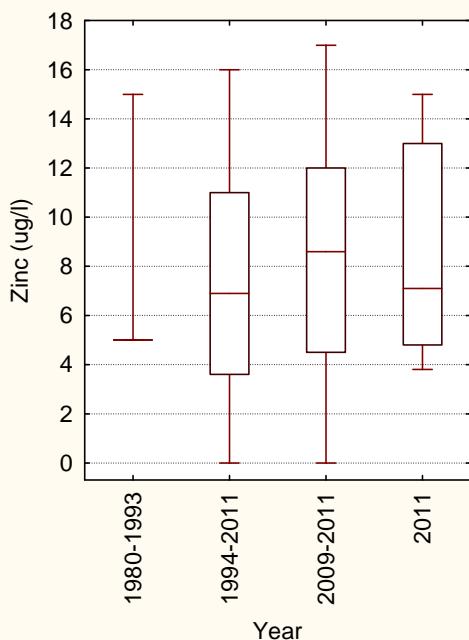
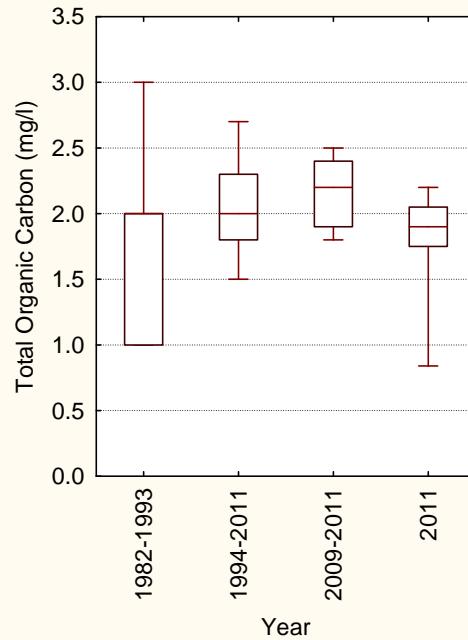
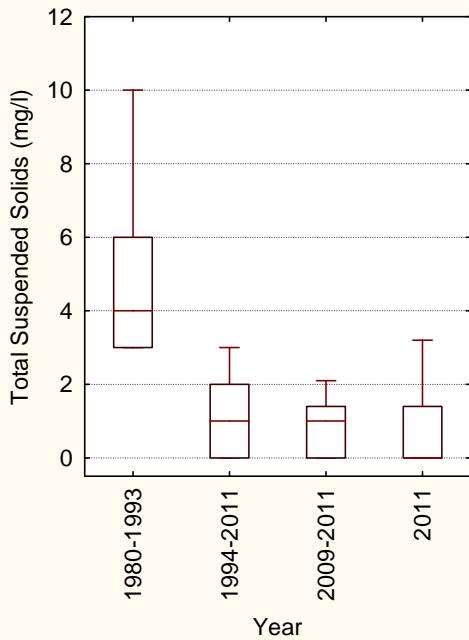
— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-11



— Median □ 25%-75% □ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-11



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

SOUTH SHORE - SITE 11
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	12.4	11.2	0.79	0.35	0.003	0.36	0.001	0.03	0.002	0.001	1.70
Standard Error	0.0	0.7	0.2	0.08	0.01	0.000	0.01	0.001	0.01	0.001	0.000	0.06
Median	8.1	13.7	11.5	0.79	0.33	0.003	0.33	0.000	0.00	0.000	0.000	1.60
Mode	8.0	14.8	11.6	0.56	0.25	0.000	0.33	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.1	5.6	1.6	0.46	0.11	0.002	0.11	0.006	0.10	0.004	0.004	0.47
Sample Variance	0.0	31.1	2.6	0.21	0.01	0.000	0.01	0.000	0.01	0.000	0.000	0.22
Kurtosis	-0.7	-0.9	-1.0	-1.17	1.02	1.186	1.16	25.887	10.35	2.436	15.657	-1.23
Skewness	0.3	-0.1	-0.2	-0.05	1.20	0.339	1.23	5.193	3.46	1.957	4.120	0.32
Range	0.5	19.2	5.6	1.56	0.42	0.009	0.43	0.031	0.40	0.016	0.017	1.62
Minimum	7.9	2.3	8.4	0.00	0.24	0.000	0.24	0.000	0.00	0.000	0.000	0.98
Maximum	8.4	21.4	14.0	1.56	0.66	0.009	0.67	0.031	0.40	0.016	0.017	2.60
Count	57	57	57	32	57	57	57	57	57	56	56	57
Confidence Level(95.0%)	0.0	1.5	0.4	0.17	0.03	0.000	0.03	0.002	0.03	0.001	0.001	0.12

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	7.1	11.5	179.2	178.2	0.1	0.9	1.4	297	12.0	0	0.0	ND
Standard Error	0.8	0.5	3.6	3.4	0.1	0.4	0.2	2	0.4	0	0.0	ND
Median	7.2	12.0	180.0	180.0	0.0	0.0	0.7	291	12.0	0	0.0	ND
Mode	7.8	12.0	180.0	180.0	0.0	0.0	0.6	286	10.0	0	0.0	ND
Standard Deviation	3.6	2.1	12.4	11.9	0.3	1.4	1.6	17	2.9	0	0.1	ND
Sample Variance	13.0	4.5	153.8	140.8	0.1	2.0	2.6	306	8.4	0	0.0	ND
Kurtosis	-0.6	7.1	-0.6	-0.6	12.0	1.4	9.0	5	8.1	19	19.0	ND
Skewness	0.1	-2.7	-0.2	-0.1	3.5	1.5	3.0	2	2.7	4	4.4	ND
Range	11.8	8.4	40.0	38.4	1.0	4.2	7.3	82	13.0	2	0.3	0
Minimum	1.2	4.6	160.0	160.0	0.0	0.0	0.4	275	10.0	0	0.0	0
Maximum	13.0	13.0	200.0	198.4	1.0	4.2	7.7	357	23.0	2	0.3	0
Count	19	19	12	12	12	12	57	57	57	19	19	0
Confidence Level(95.0%)	1.7	1.0	7.9	7.5	0.2	0.9	0.4	5	0.8	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 11
WATER QUALITY DATA - 2011

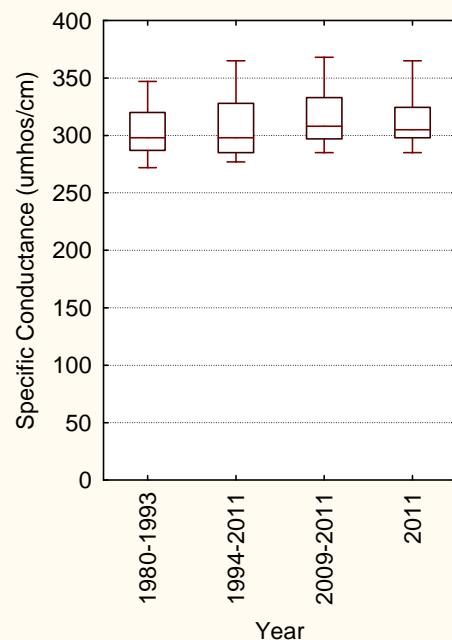
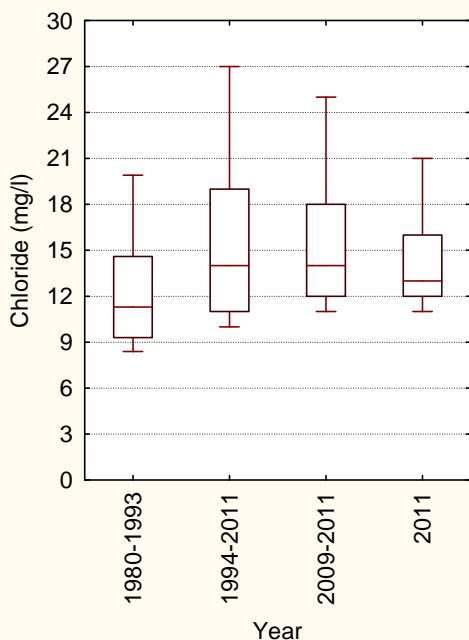
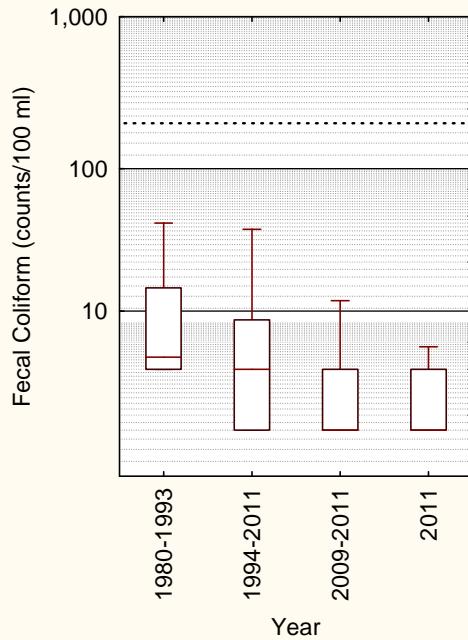
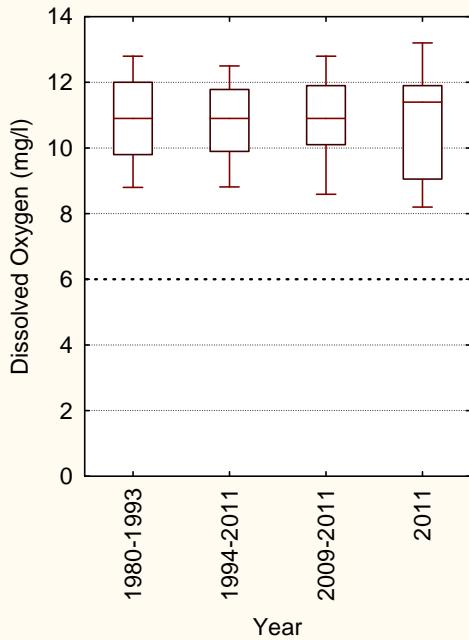
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.79	12.74	0.1	1.1	6.4	1.2	1.7	8.7	0.1	1.4	0.0	ND
Standard Error	0.44	0.20	0.1	0.5	0.5	0.3	0.7	1.2	0.0	0.3	0.0	ND
Median	34.00	13.00	0.0	0.0	6.2	0.9	0.0	7.1	0.0	1.2	0.0	ND
Mode	34.00	12.00	0.0	0.0	ND	0.0	0.0	14.0	0.0	0.0	0.0	ND
Standard Deviation	1.90	0.87	0.5	2.1	1.6	1.3	2.2	5.1	0.2	1.4	0.0	ND
Sample Variance	3.62	0.76	0.3	4.6	2.7	1.8	5.0	26.4	0.0	2.1	0.0	ND
Kurtosis	2.03	0.99	19.0	1.4	-0.9	9.8	0.2	0.2	8.7	8.2	ND	ND
Skewness	1.26	1.14	4.4	1.7	0.2	2.8	1.1	0.6	2.9	2.4	ND	ND
Range	8.00	3.00	2.3	6.5	5.2	6.0	6.4	21.0	0.7	6.3	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	40.00	15.00	2.3	6.5	8.9	6.0	6.4	21.0	0.7	6.3	0.0	0.0
Count	19	19	19	19	13	19	11	19	19	18	19	0
Confidence Level(95.0%)	0.92	0.42	0.3	1.0	1.0	0.6	1.5	2.5	0.1	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	141	108	0.0	2.1	28.2	26.5	1.7	ND
Standard Error	2	1	0.0	0.4	0.3	0.3	0.1	ND
Median	140	110	0.0	2.6	28.5	27.0	1.9	ND
Mode	140	110	0.0	0.0	27.0	28.0	1.9	ND
Standard Deviation	7	6	0.0	1.3	1.9	2.0	0.6	ND
Sample Variance	43	41	0.0	1.8	3.7	4.0	0.4	ND
Kurtosis	4	0	ND	-0.6	-1.2	-0.8	2.8	ND
Skewness	1	0	ND	-1.0	0.1	-0.4	-1.9	ND
Range	30	20	0.0	3.7	7.0	8.0	2.2	0.0
Minimum	130	100	0.0	0.0	25.0	22.0	0.0	0.0
Maximum	160	120	0.0	3.7	32.0	30.0	2.2	0.0
Count	19	24	12	12	36	36	36	0
Confidence Level(95.0%)	3	3	0.0	0.9	0.7	0.7	0.2	ND

ND = No Data

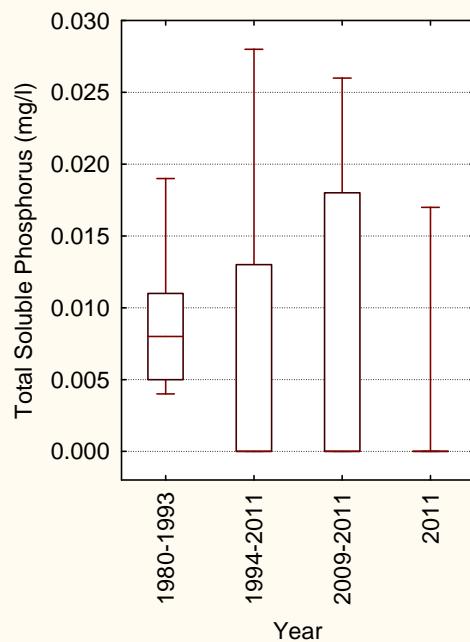
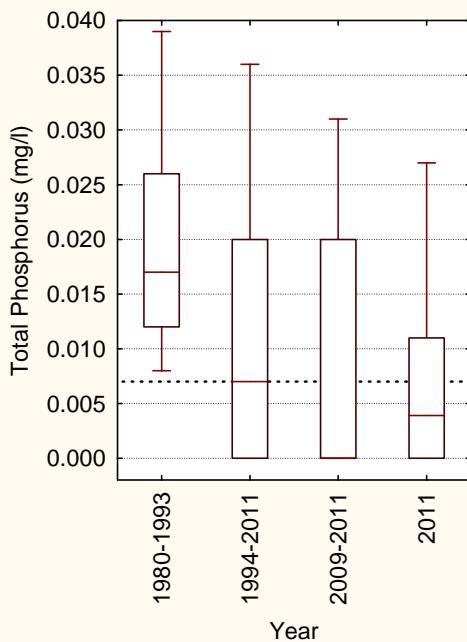
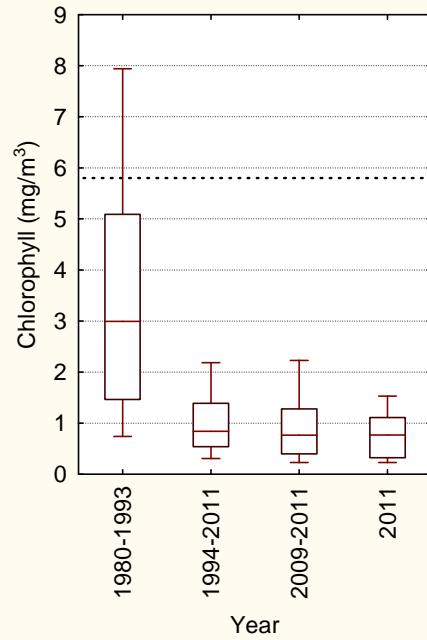
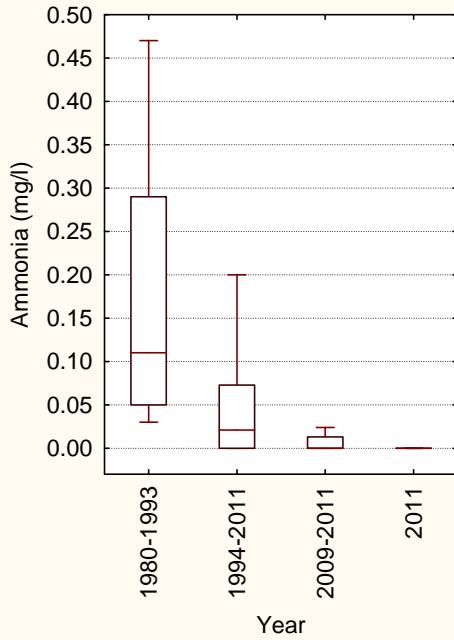
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-12



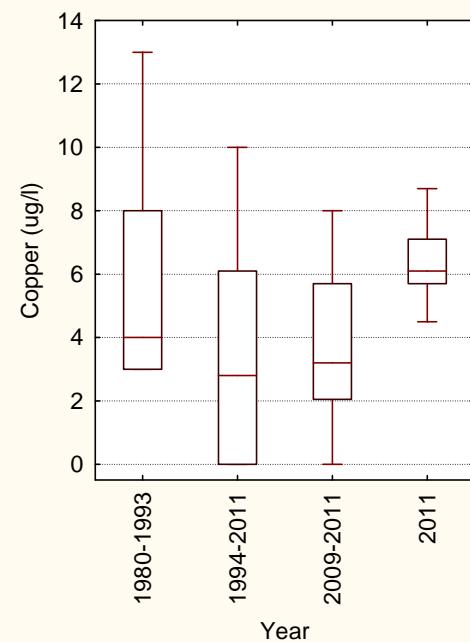
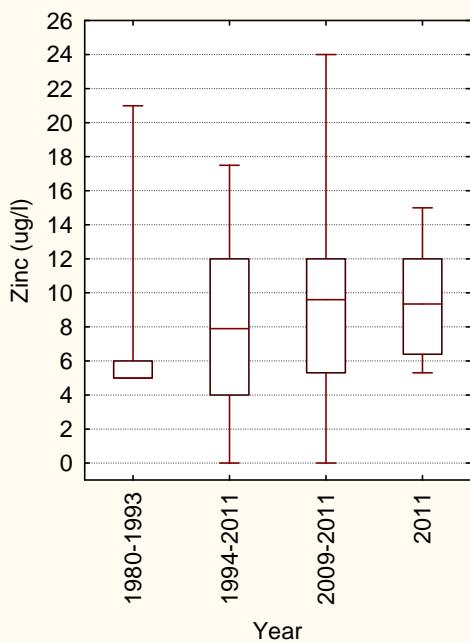
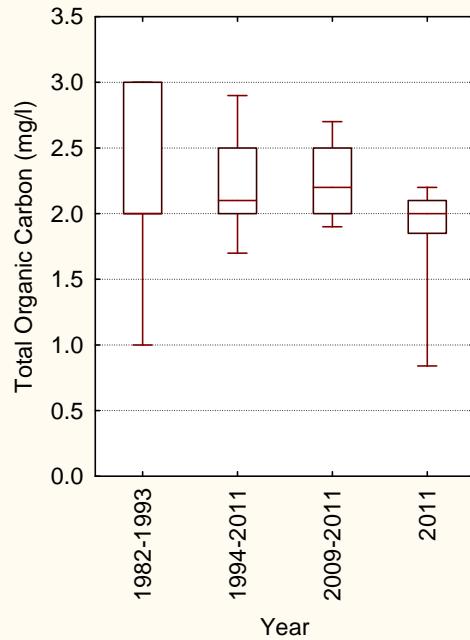
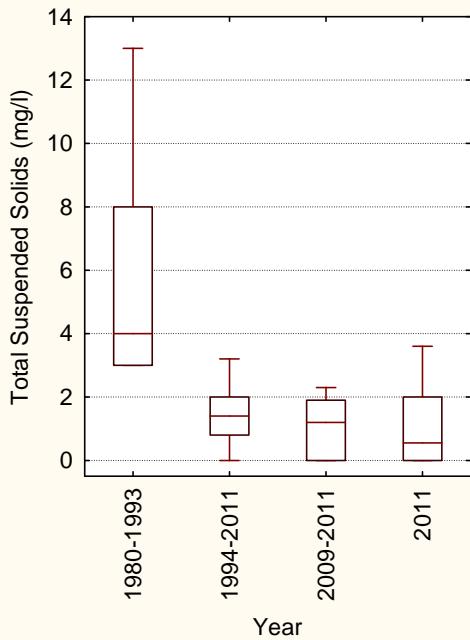
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-12



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
South Shore, Site SS-12



— Median □ 25%-75% █ 10%-90%

SOUTH SHORE - SITE 12
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.2	10.8	0.84	0.48	0.004	0.49	0.001	0.08	0.008	0.003	1.74
Standard Error	0.0	1.0	0.3	0.18	0.03	0.001	0.04	0.001	0.06	0.002	0.001	0.08
Median	7.9	14.7	11.4	0.77	0.44	0.004	0.44	0.000	0.00	0.004	0.000	1.80
Mode	7.8	20.7	11.4	ND	0.54	0.000	0.55	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	5.9	1.9	0.64	0.21	0.003	0.21	0.004	0.34	0.010	0.007	0.49
Sample Variance	0.1	34.3	3.6	0.41	0.04	0.000	0.05	0.000	0.12	0.000	0.000	0.24
Kurtosis	-0.9	-1.0	-0.7	1.87	1.75	1.781	2.19	16.408	31.56	1.888	5.458	-1.19
Skewness	-0.3	-0.3	0.1	1.31	1.46	1.073	1.57	4.149	5.51	1.471	2.356	0.14
Range	0.7	19.1	6.7	2.17	0.78	0.012	0.88	0.019	2.00	0.038	0.031	1.65
Minimum	7.5	2.2	8.0	0.20	0.22	0.000	0.22	0.000	0.00	0.000	0.000	0.95
Maximum	8.2	21.3	14.7	2.37	1.00	0.012	1.10	0.019	2.00	0.038	0.031	2.60
Count	33	36	36	12	36	36	36	36	36	36	36	36
Confidence Level(95.0%)	0.1	2.0	0.6	0.41	0.07	0.001	0.07	0.001	0.12	0.003	0.002	0.17

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.2	9.7	190.0	188.7	0.2	1.3	1.9	316	14.5	1	0.2	ND
Standard Error	1.2	0.7	5.4	5.2	0.1	0.5	0.3	5	0.7	1	0.1	ND
Median	6.0	10.9	185.0	182.5	0.0	0.6	1.0	305	13.0	0	0.0	ND
Mode	11.0	10.9	180.0	180.0	0.0	0.0	2.3	298	12.0	0	0.0	ND
Standard Deviation	4.1	2.5	18.6	18.0	0.5	1.7	1.8	30	4.0	2	0.3	ND
Sample Variance	16.7	6.3	345.5	324.7	0.2	2.7	3.4	871	15.9	4	0.1	ND
Kurtosis	-1.7	1.5	0.9	1.0	2.9	1.0	2.6	6	1.8	-1	-1.0	ND
Skewness	0.3	-1.6	0.8	0.9	2.1	1.3	1.8	2	1.5	1	1.0	ND
Range	10.8	7.7	70.0	67.9	1.3	5.0	7.0	153	16.0	5	0.7	0
Minimum	1.2	3.8	160.0	160.0	0.0	0.0	0.5	277	10.0	0	0.0	0
Maximum	12.0	11.5	230.0	227.9	1.3	5.0	7.4	430	26.0	5	0.7	0
Count	12	12	12	12	12	12	36	36	36	12	12	0
Confidence Level(95.0%)	2.6	1.6	11.8	11.4	0.3	1.1	0.6	10	1.3	1	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 12
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.92	13.08	0.0	1.3	6.4	0.8	2.2	9.3	0.0	1.9	0.0	ND
Standard Error	0.38	0.19	0.0	0.7	0.4	0.2	0.9	1.1	0.0	0.5	0.0	ND
Median	34.50	13.00	0.0	0.0	6.1	0.9	1.8	9.4	0.0	1.6	0.0	ND
Mode	34.00	13.00	0.0	0.0	ND	0.0	0.0	12.0	0.0	1.2	0.0	ND
Standard Deviation	1.31	0.67	0.0	2.3	1.3	0.7	2.5	3.7	0.1	1.6	0.0	ND
Sample Variance	1.72	0.45	0.0	5.5	1.8	0.4	6.2	14.0	0.0	2.5	0.0	ND
Kurtosis	-0.97	-0.19	ND	0.0	-0.2	-0.8	-1.1	-0.7	12.0	1.2	ND	ND
Skewness	0.47	-0.09	ND	1.4	0.6	0.2	0.6	0.1	3.5	1.3	ND	ND
Range	4.00	2.00	0.0	5.8	4.2	2.0	6.2	11.9	0.3	5.1	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	4.5	0.0	0.0	3.1	0.0	0.0	0.0	0.0
Maximum	37.00	14.00	0.0	5.8	8.7	2.0	6.2	15.0	0.3	5.1	0.0	0.0
Count	12	12	12	12	9	12	7	12	12	12	12	0
Confidence Level(95.0%)	0.83	0.42	0.0	1.5	1.0	0.4	2.3	2.4	0.1	1.0	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	142	116	0.0	2.7	28.7	27.0	1.8	ND
Standard Error	1	2	0.0	0.4	0.3	0.3	0.1	ND
Median	140	120	0.0	3.0	29.0	27.5	2.0	ND
Mode	140	120	0.0	0.0	31.0	29.0	2.0	ND
Standard Deviation	4	5	0.0	1.3	2.0	1.9	0.6	ND
Sample Variance	15	28	0.0	1.8	3.9	3.8	0.4	ND
Kurtosis	3	-3	ND	1.4	-1.2	-0.8	3.0	ND
Skewness	2	0	ND	-1.5	-0.4	-0.7	-2.0	ND
Range	10	10	0.0	4.1	6.0	6.0	2.3	0.0
Minimum	140	110	0.0	0.0	25.0	23.0	0.0	0.0
Maximum	150	120	0.0	4.1	31.0	29.0	2.3	0.0
Count	12	9	12	12	36	36	36	0
Confidence Level(95.0%)	2	4	0.0	0.8	0.7	0.7	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

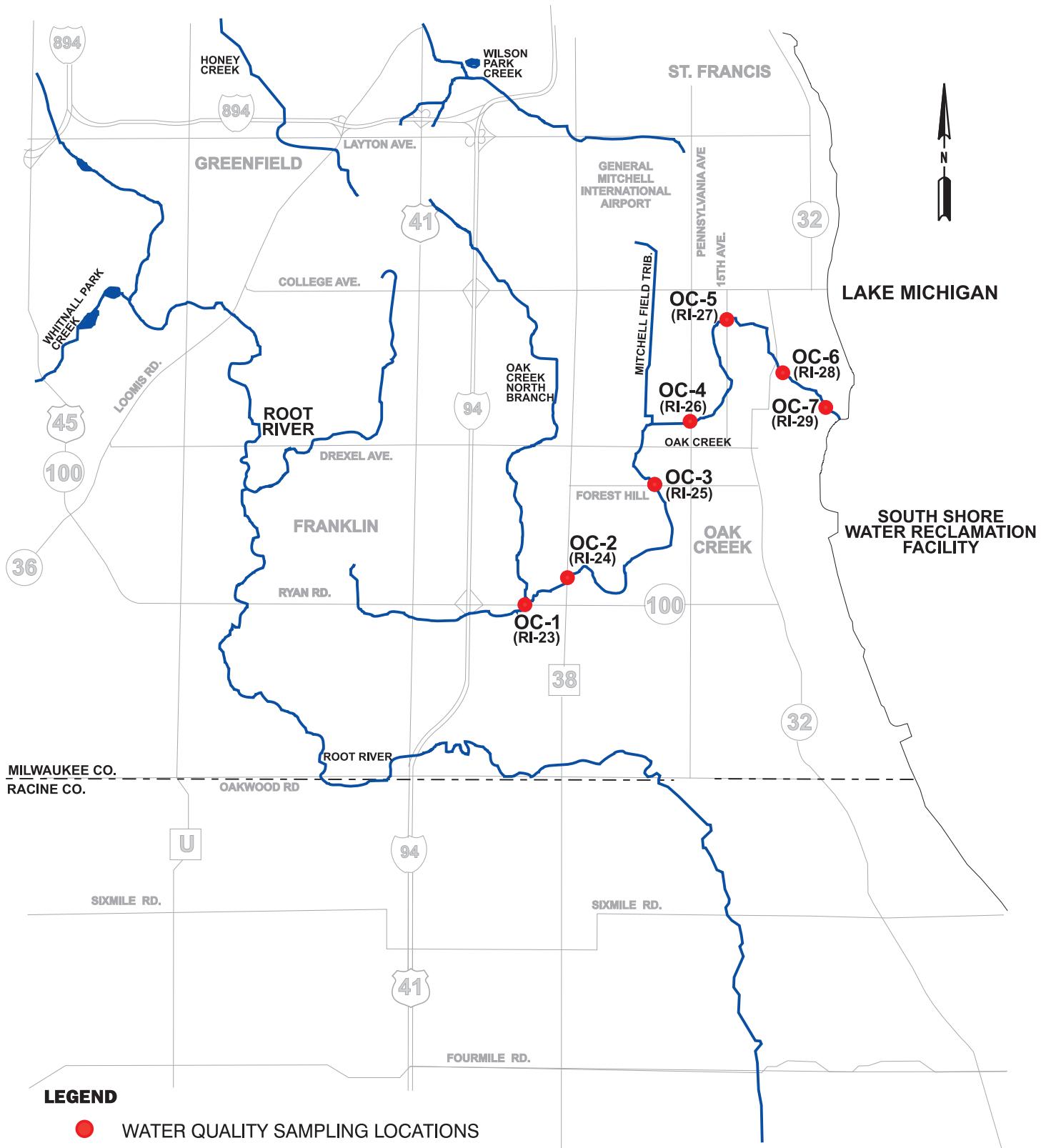
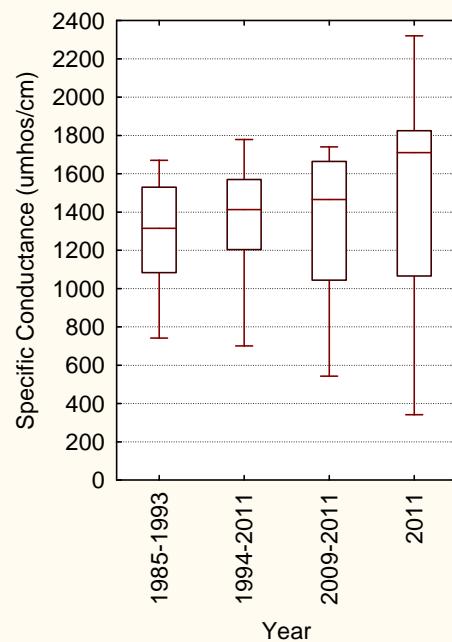
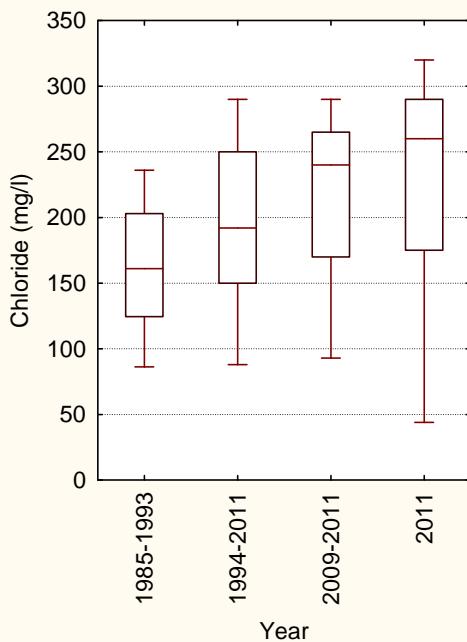
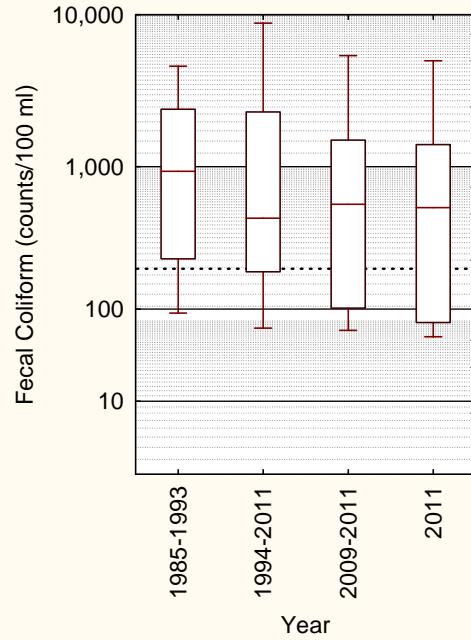
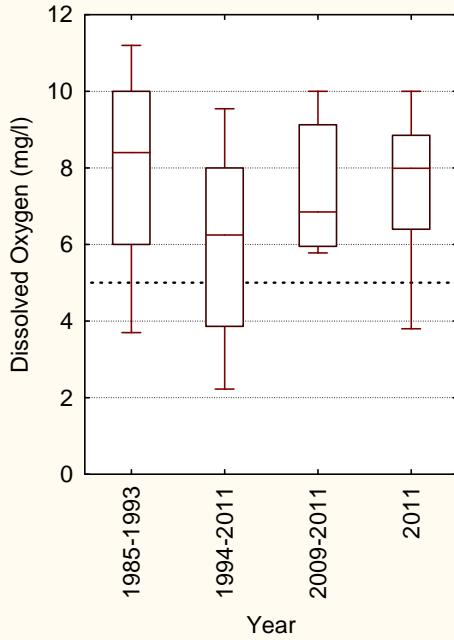


FIGURE 11
OAK CREEK (OC) SURVEY
WATER QUALITY SAMPLING LOCATIONS

7/28/09

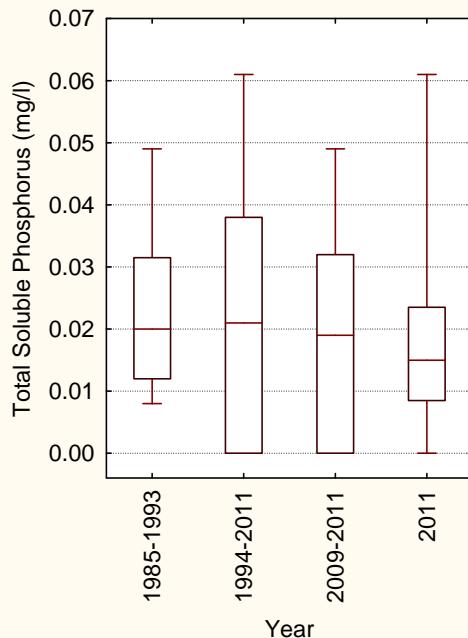
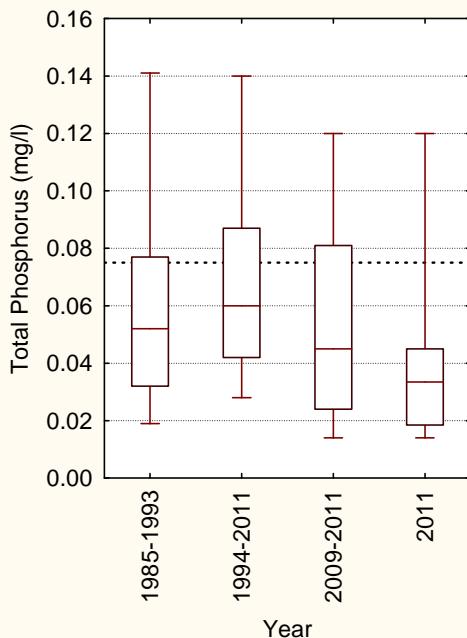
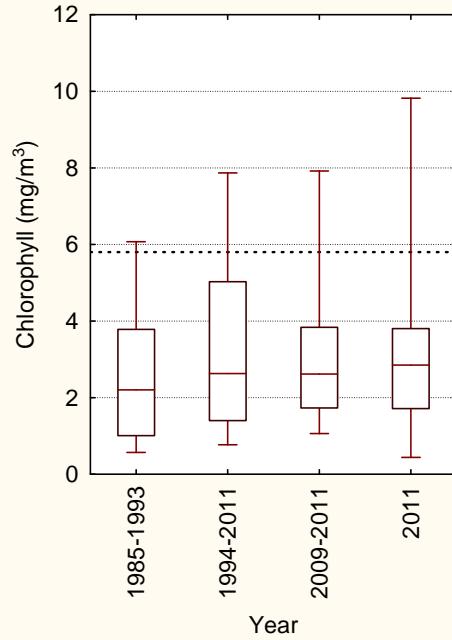
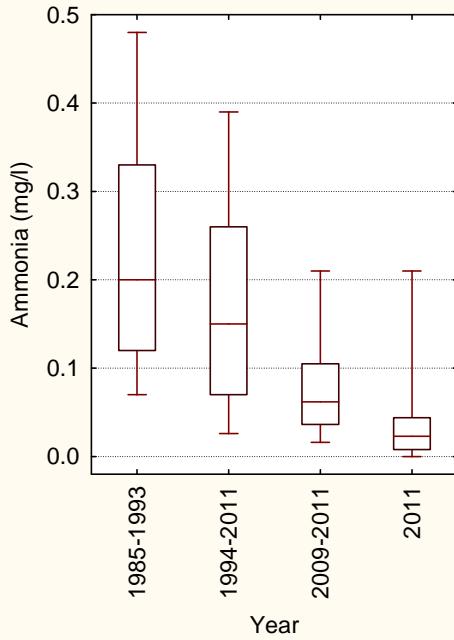
02-034 pg10 REPORT

MMSD Water Quality Monitoring Program Data
Oak Creek at Ryan Rd., Site OC-01



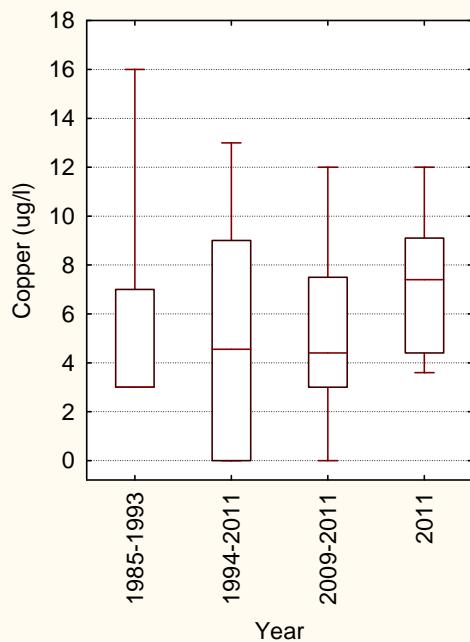
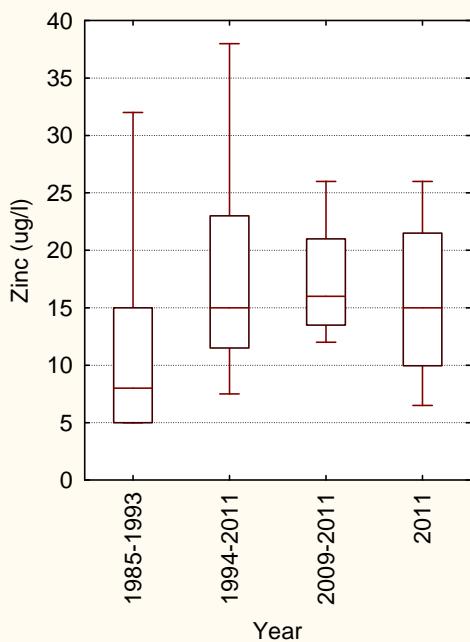
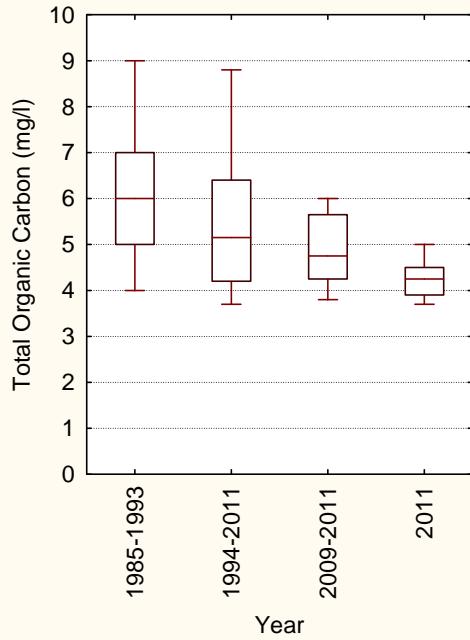
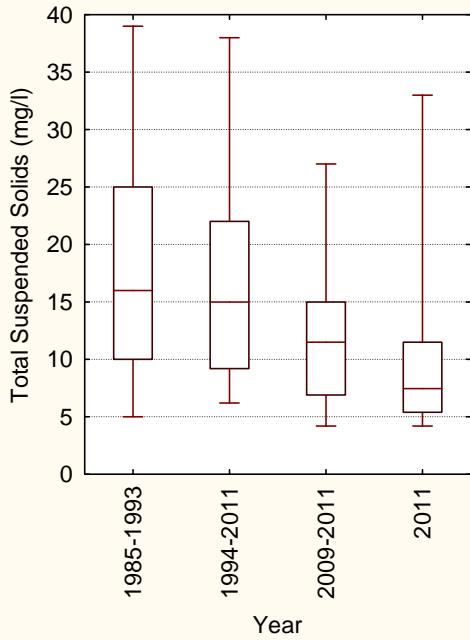
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Ryan Rd., Site OC-01



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Ryan Rd., Site OC-01



— Median □ 25%-75% ━ 10%-90%

RYAN ROAD - SITE 1
OAK CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.4	12.7	7.5	3.38	0.45	0.016	0.47	0.045	0.29	0.041	0.019	ND
Standard Error	0.1	1.8	0.7	1.01	0.08	0.004	0.08	0.024	0.12	0.012	0.007	ND
Median	7.4	11.6	8.0	2.85	0.43	0.012	0.44	0.023	0.20	0.034	0.015	ND
Mode	7.4	ND	ND	ND	0.43	ND	ND	0.000	0.00	0.045	0.019	ND
Standard Deviation	0.2	5.0	2.0	2.86	0.23	0.012	0.23	0.069	0.33	0.034	0.019	ND
Sample Variance	0.0	24.8	3.9	8.17	0.05	0.000	0.06	0.005	0.11	0.001	0.000	ND
Kurtosis	0.0	-1.5	0.7	4.43	-0.68	0.629	-0.71	6.572	-1.87	5.170	3.715	ND
Skewness	-0.1	0.5	-0.9	1.89	0.68	0.873	0.70	2.489	0.38	2.142	1.766	ND
Range	0.6	12.6	6.2	9.38	0.63	0.039	0.63	0.210	0.79	0.106	0.061	0.00
Minimum	7.1	7.8	3.8	0.44	0.20	0.000	0.21	0.000	0.00	0.014	0.000	0.00
Maximum	7.7	20.4	10.0	9.82	0.83	0.039	0.84	0.210	0.79	0.120	0.061	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.2	1.6	2.39	0.19	0.010	0.20	0.058	0.28	0.029	0.016	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	813.8	803.0	2.7	10.7	14.0	1483	226.8	1134	2.6	ND
Standard Error	ND	ND	121.4	123.4	1.0	3.3	4.2	241	35.1	587	0.3	ND
Median	ND	ND	980.0	971.3	2.2	7.5	8.8	1710	260.0	530	2.7	ND
Mode	ND	ND	1000.0	ND	ND	4.2	ND	ND	250.0	1400	3.1	ND
Standard Deviation	ND	ND	343.3	349.1	2.7	9.5	11.8	682	99.4	1661	0.7	ND
Sample Variance	ND	ND	117855.4	121847.3	7.5	89.4	138.8	464488	9873.1	2759749	0.5	ND
Kurtosis	ND	ND	0.0	0.1	5.0	5.8	5.8	0	0.3	5	-1.5	ND
Skewness	ND	ND	-1.4	-1.4	2.0	2.3	2.3	-1	-1.3	2	0.1	ND
Range	0.0	0.0	880.0	908.8	9.0	28.8	35.3	1979	276.0	4941	1.9	0
Minimum	0.0	0.0	220.0	187.0	0.0	4.2	6.4	341	44.0	59	1.8	0
Maximum	0.0	0.0	1100.0	1095.8	9.0	33.0	41.7	2320	320.0	5000	3.7	0
Count	0	0	8	8	8	8	8	570	83.1	1389	0.6	ND
Confidence Level(95.0%)	ND	ND	287.0	291.8	2.3	7.9	9.8					

ND = No Data

Provisional MMSD Water Quality Data

RYAN ROAD - SITE 1
OAK CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	78.50	39.63	0.0	1.9	7.1	2.6	4.4	15.7	0.0	0.6	0.0	ND
Standard Error	12.75	6.77	0.0	1.3	1.1	0.2	0.9	2.6	0.0	0.2	0.0	ND
Median	94.00	47.00	0.0	0.0	7.4	2.7	5.6	15.0	0.0	0.4	0.0	ND
Mode	100.00	ND	0.0	0.0	ND	3.1	ND	18.0	0.0	0.0	0.0	ND
Standard Deviation	36.07	19.15	0.0	3.6	2.9	0.6	2.4	7.3	0.0	0.6	0.0	ND
Sample Variance	1301.14	366.55	0.0	12.8	8.7	0.4	5.7	53.7	0.0	0.4	0.0	ND
Kurtosis	-0.16	-0.18	ND	0.2	-0.4	2.3	0.6	-1.3	ND	-1.7	ND	ND
Skewness	-1.30	-1.18	ND	1.5	0.5	-1.2	-1.2	0.3	ND	0.5	ND	ND
Range	89.00	51.00	0.0	8.3	8.4	2.1	6.5	19.5	0.0	1.5	0.0	0.0
Minimum	21.00	9.00	0.0	0.0	3.6	1.3	0.0	6.5	0.0	0.0	0.0	0.0
Maximum	110.00	60.00	0.0	8.3	12.0	3.4	6.5	26.0	0.0	1.5	0.0	0.0
Count	8	8	8	8	7	8	7	8	8	8	8	0
Confidence Level(95.0%)	30.16	16.01	0.0	3.0	2.7	0.5	2.2	6.1	0.0	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	363	226	0.3	4.7	60.5	56.5	4.3	4.3
Standard Error	61	35	0.3	0.6	8.0	8.1	0.2	0.2
Median	435	270	0.0	4.2	69.0	65.0	4.3	4.4
Mode	450	270	0.0	ND	ND	ND	ND	4.6
Standard Deviation	171	99	0.9	1.7	22.6	23.0	0.4	0.5
Sample Variance	29333	9808	0.8	3.0	511.7	528.0	0.2	0.3
Kurtosis	0	0	8.0	2.2	-0.1	-0.1	-0.1	-1.7
Skewness	-1	-1	2.8	1.5	-1.2	-1.2	0.5	-0.1
Range	441	250	2.6	5.2	62.0	63.0	1.3	1.4
Minimum	89	50	0.0	3.1	22.0	18.0	3.7	3.6
Maximum	530	300	2.6	8.3	84.0	81.0	5.0	5.0
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	143	83	0.8	1.5	18.9	19.2	0.4	0.4

ND = No Data

Provisional MMSD Water Quality Data

HIGHWAY 38 - SITE 2
OAK CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	12.8	9.1	4.85	0.29	0.014	0.30	0.020	0.39	0.058	0.025	ND
Standard Error	0.1	2.2	0.9	1.40	0.03	0.004	0.03	0.011	0.12	0.016	0.006	ND
Median	7.7	12.0	9.2	3.40	0.29	0.011	0.30	0.008	0.44	0.053	0.028	ND
Mode	8.0	ND	7.5	ND	ND	ND	ND	0.000	0.00	ND	ND	ND
Standard Deviation	0.3	6.1	2.4	3.96	0.08	0.012	0.09	0.030	0.35	0.045	0.017	ND
Sample Variance	0.1	37.7	5.9	15.67	0.01	0.000	0.01	0.001	0.12	0.002	0.000	ND
Kurtosis	-1.5	-1.3	-0.8	0.26	-0.61	-0.464	-0.23	2.517	-1.77	1.843	-1.253	ND
Skewness	-0.4	0.3	-0.4	1.27	0.33	0.832	0.37	1.688	-0.04	1.280	-0.138	ND
Range	0.8	17.3	6.9	11.27	0.25	0.034	0.28	0.084	0.87	0.135	0.048	0.00
Minimum	7.2	4.6	5.0	0.73	0.18	0.000	0.18	0.000	0.00	0.015	0.000	0.00
Maximum	8.0	21.9	11.9	12.00	0.43	0.034	0.46	0.084	0.87	0.150	0.048	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	5.1	2.0	3.31	0.07	0.010	0.08	0.025	0.29	0.038	0.014	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	800.0	782.3	4.0	17.7	16.9	1320	221.1	1182	2.5	ND
Standard Error	ND	ND	105.6	112.6	2.2	9.8	7.5	203	29.1	688	0.3	ND
Median	ND	ND	925.0	915.6	1.8	7.9	9.8	1530	250.0	345	2.5	ND
Mode	ND	ND	ND	ND	1.0	ND	ND	ND	250.0	ND	ND	ND
Standard Deviation	ND	ND	298.8	318.5	6.1	27.8	21.3	574	82.3	1945	0.8	ND
Sample Variance	ND	ND	89257.1	101470.8	37.6	774.8	454.1	329792	6773.0	3781428	0.6	ND
Kurtosis	ND	ND	-0.1	0.3	7.6	7.6	6.7	0	1.3	4	-0.6	ND
Skewness	ND	ND	-1.2	-1.3	2.7	2.7	2.5	-1	-1.3	2	0.2	ND
Range	0.0	0.0	810.0	892.4	18.0	82.4	63.5	1766	261.0	5565	2.2	0
Minimum	0.0	0.0	290.0	204.0	1.0	3.6	4.7	374	59.0	35	1.5	0
Maximum	0.0	0.0	1100.0	1096.4	19.0	86.0	68.2	2140	320.0	5600	3.7	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	249.8	266.3	5.1	23.3	17.8	480	68.8	1626	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

HIGHWAY 38 - SITE 2
OAK CREEK
WATER QUALITY DATA - 2011

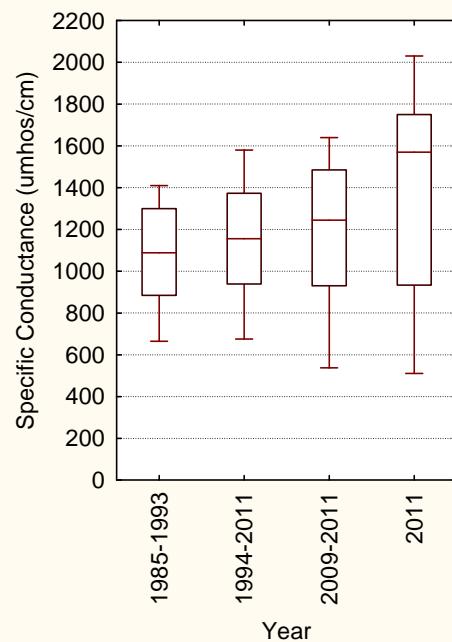
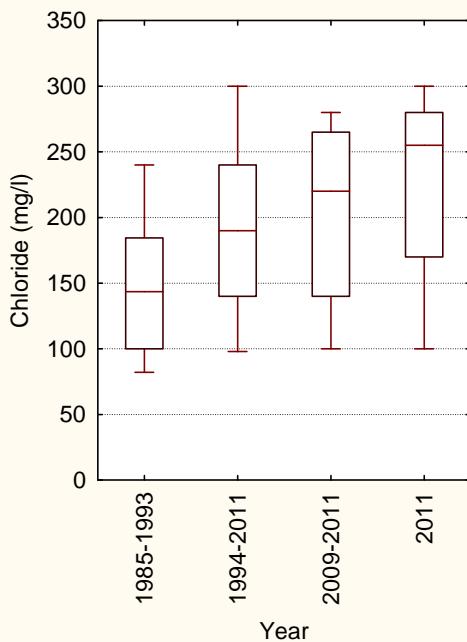
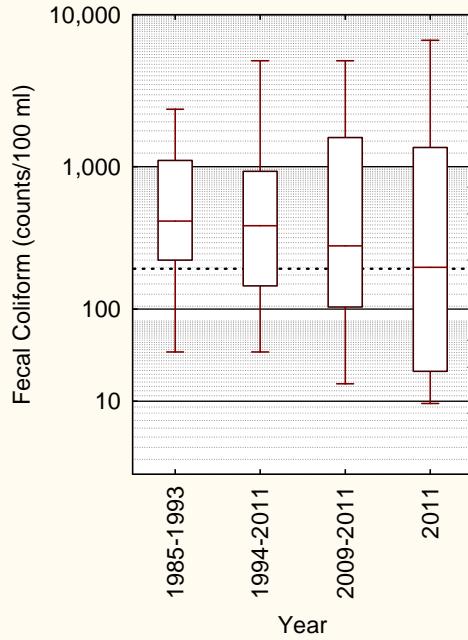
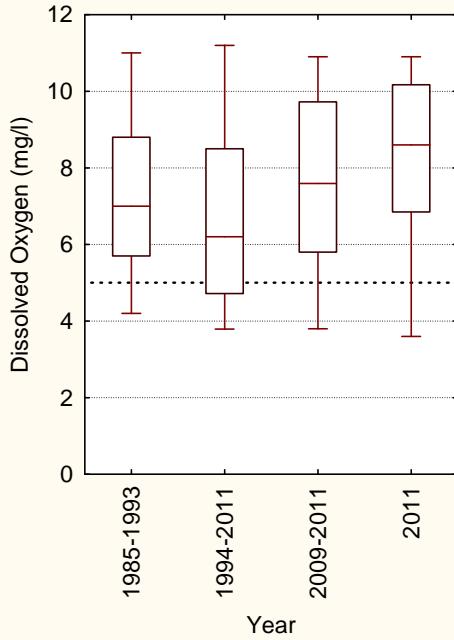
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	69.88	34.50	0.0	2.3	7.7	2.9	3.6	16.6	0.1	0.7	0.0	ND
Standard Error	9.84	5.02	0.0	1.1	1.9	0.3	0.8	4.1	0.1	0.2	0.0	ND
Median	80.50	41.00	0.0	0.0	5.8	2.9	3.5	12.0	0.0	0.8	0.0	ND
Mode	ND	42.00	0.0	0.0	ND	2.0	6.2	22.0	0.0	0.0	0.0	ND
Standard Deviation	27.84	14.20	0.0	3.2	4.6	0.8	2.2	11.5	0.1	0.6	0.0	ND
Sample Variance	774.98	201.71	0.0	10.4	21.3	0.6	4.9	131.9	0.0	0.4	0.0	ND
Kurtosis	-0.33	-0.06	ND	-1.9	-1.7	-0.9	-0.2	2.5	8.0	-1.6	ND	ND
Skewness	-1.15	-1.30	ND	0.7	0.8	0.3	-0.3	1.6	2.8	0.0	ND	ND
Range	72.00	36.00	0.0	7.1	10.6	2.1	6.2	34.6	0.4	1.6	0.0	0.0
Minimum	24.00	10.00	0.0	0.0	3.4	2.0	0.0	6.4	0.0	0.0	0.0	0.0
Maximum	96.00	46.00	0.0	7.1	14.0	4.1	6.2	41.0	0.4	1.6	0.0	0.0
Count	8	8	8	8	6	8	7	8	8	8	8	0
Confidence Level(95.0%)	23.27	11.87	0.0	2.7	4.8	0.6	2.0	9.6	0.1	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	316	210	0.7	5.2	61.0	55.5	5.4	5.4
Standard Error	45	31	0.5	0.7	7.6	7.6	0.2	0.2
Median	370	260	0.0	4.4	69.0	63.0	5.5	5.2
Mode	390	260	0.0	4.2	70.0	65.0	5.5	5.2
Standard Deviation	128	87	1.4	2.0	21.4	21.4	0.5	0.5
Sample Variance	16284	7504	2.0	4.0	457.1	458.0	0.3	0.3
Kurtosis	0	0	1.6	0.6	0.2	0.1	-0.8	-0.5
Skewness	-1	-1	1.7	1.1	-1.1	-1.1	-0.1	0.8
Range	330	219	3.6	5.9	63.0	63.0	1.6	1.4
Minimum	100	51	0.0	3.2	23.0	18.0	4.6	4.9
Maximum	430	270	3.6	9.1	86.0	81.0	6.2	6.3
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	107	72	1.2	1.7	17.9	17.9	0.4	0.4

ND = No Data

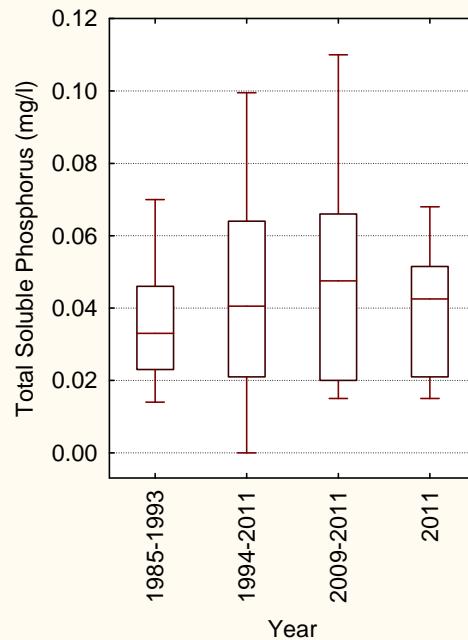
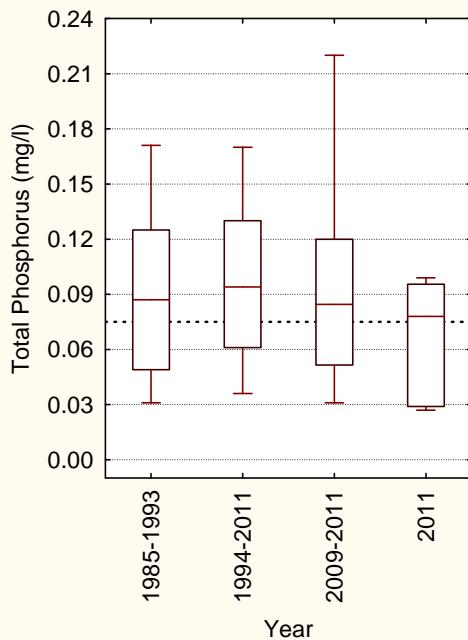
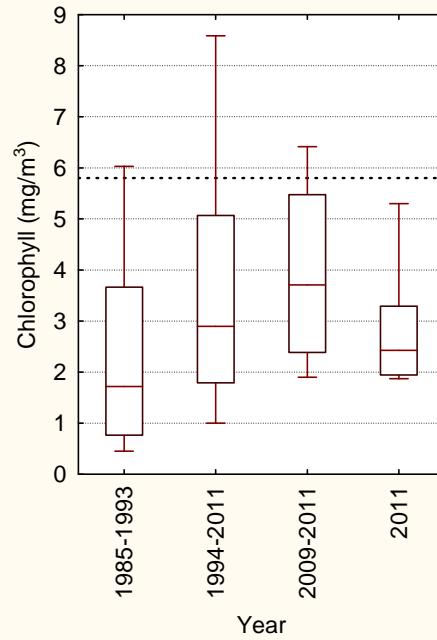
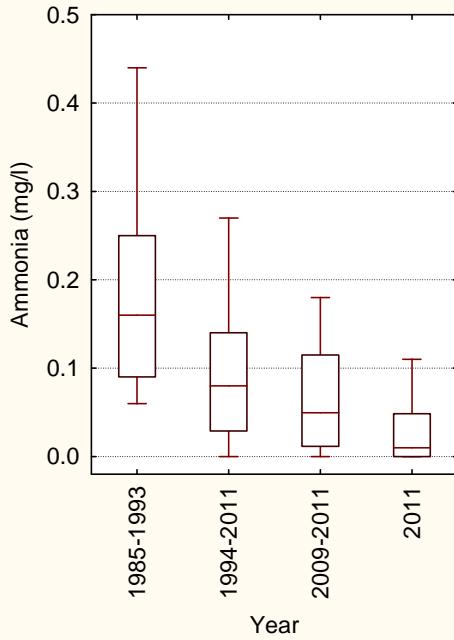
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Oak Creek at Forest Hill Rd., Site OC-03



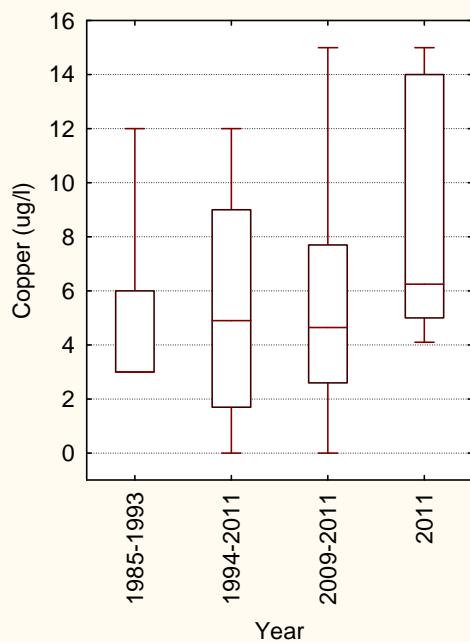
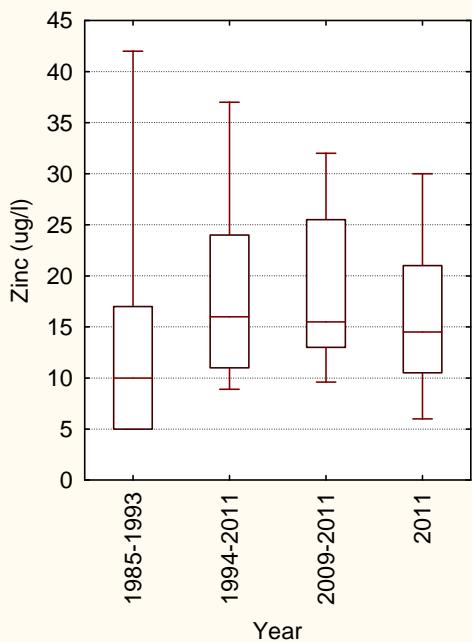
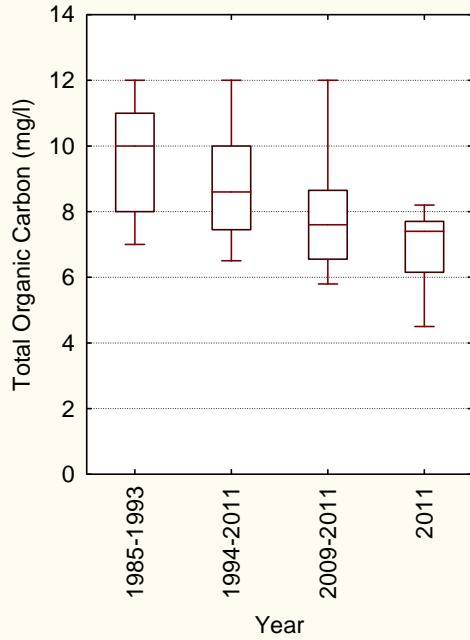
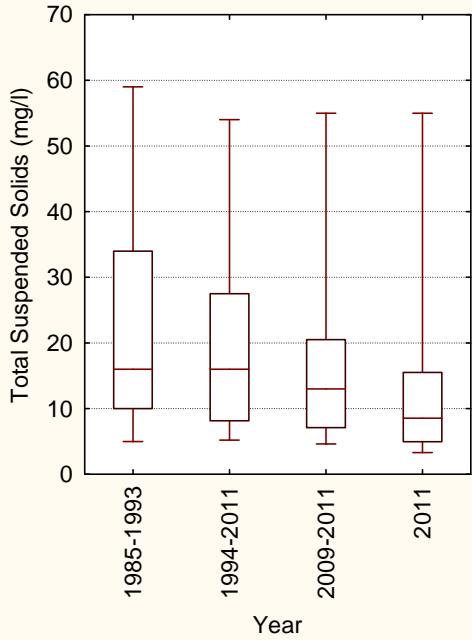
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Forest Hill Rd., Site OC-03



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Forest Hill Rd., Site OC-03



— Median □ 25%-75% ━ 10%-90%

FOREST HILL ROAD - SITE 3
OAK CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	13.2	8.2	2.81	0.26	0.016	0.27	0.028	0.53	0.066	0.039	ND
Standard Error	0.1	2.2	0.9	0.41	0.03	0.005	0.04	0.014	0.10	0.011	0.007	ND
Median	7.6	12.1	8.6	2.43	0.23	0.013	0.24	0.010	0.51	0.078	0.043	ND
Mode	7.8	ND	ND	ND	0.22	ND	0.22	0.000	0.74	0.027	ND	ND
Standard Deviation	0.2	6.3	2.4	1.17	0.09	0.014	0.10	0.039	0.28	0.032	0.019	ND
Sample Variance	0.1	39.7	6.0	1.37	0.01	0.000	0.01	0.002	0.08	0.001	0.000	ND
Kurtosis	-1.3	-1.0	0.5	2.50	0.21	0.268	0.38	1.906	0.89	-2.133	-1.091	ND
Skewness	-0.4	0.4	-0.9	1.56	0.25	0.862	0.47	1.478	-0.66	-0.439	0.056	ND
Range	0.6	18.1	7.3	3.43	0.30	0.043	0.33	0.110	0.91	0.072	0.053	0.00
Minimum	7.2	4.8	3.6	1.87	0.11	0.000	0.12	0.000	0.00	0.027	0.015	0.00
Maximum	7.8	22.9	10.9	5.30	0.41	0.043	0.45	0.110	0.91	0.099	0.068	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	5.3	2.0	0.98	0.08	0.012	0.08	0.033	0.23	0.027	0.016	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	761.3	746.7	3.0	14.5	16.7	1381	226.3	1244	2.2	ND
Standard Error	ND	ND	98.2	102.2	1.0	6.0	5.4	201	28.3	843	0.4	ND
Median	ND	ND	890.0	878.7	2.0	8.6	9.9	1570	255.0	205	2.3	ND
Mode	ND	ND	ND	ND	ND	ND	ND	ND	280.0	280	2.4	ND
Standard Deviation	ND	ND	277.6	289.2	2.7	17.0	15.3	568	80.2	2384	1.0	ND
Sample Variance	ND	ND	77069.6	83622.3	7.5	290.5	235.4	323029	6426.8	5684656	1.0	ND
Kurtosis	ND	ND	-0.3	-0.3	5.7	6.1	3.2	-1	-0.3	5	-0.8	ND
Skewness	ND	ND	-1.2	-1.2	2.3	2.4	1.8	-1	-1.2	2	0.4	ND
Range	0.0	0.0	690.0	706.5	8.3	51.7	44.7	1519	200.0	6791	2.9	0
Minimum	0.0	0.0	310.0	285.0	1.1	3.3	5.6	511	100.0	9	1.0	0
Maximum	0.0	0.0	1000.0	991.5	9.4	55.0	50.2	2030	300.0	6800	3.8	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	232.1	241.8	2.3	14.2	12.8	475	67.0	1993	0.8	ND

ND = No Data

Provisional MMSD Water Quality Data

FOREST HILL ROAD - SITE 3
OAK CREEK
WATER QUALITY DATA - 2011

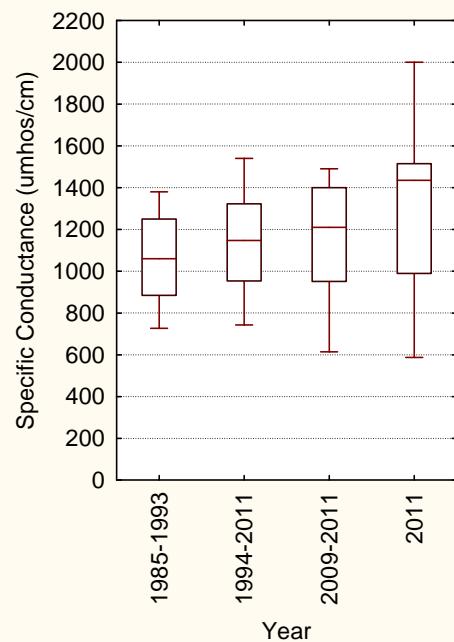
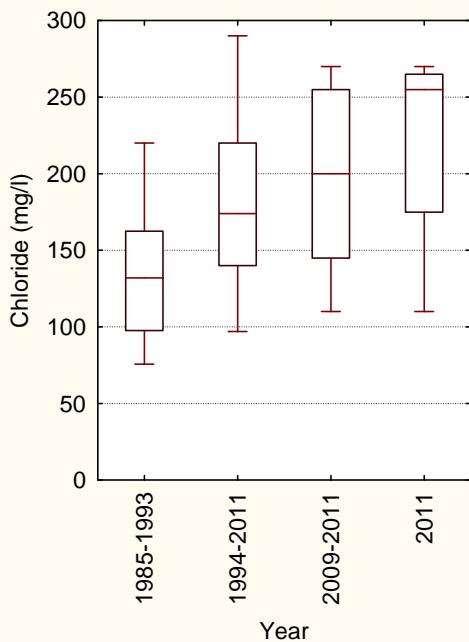
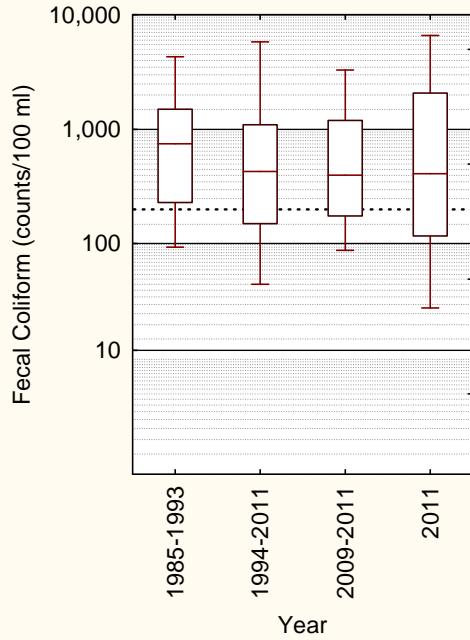
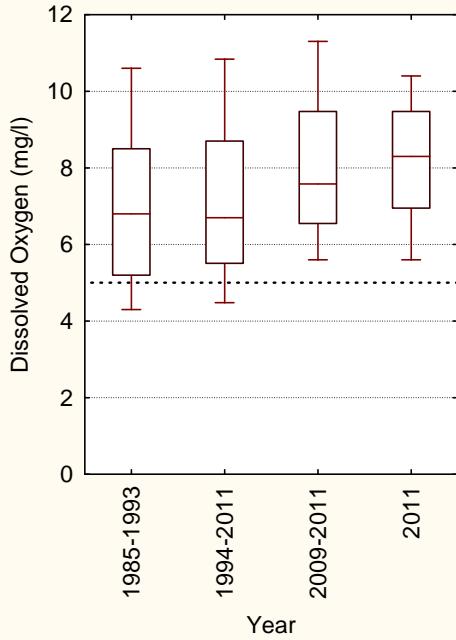
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	69.88	33.75	0.0	1.7	8.4	3.1	4.2	16.0	0.0	0.9	0.0	ND
Standard Error	10.20	4.98	0.0	1.1	2.0	0.2	1.0	2.7	0.0	0.3	0.0	ND
Median	82.00	39.00	0.0	0.0	6.3	3.2	4.1	14.5	0.0	0.7	0.0	ND
Mode	ND	39.00	0.0	0.0	ND	ND	ND	ND	0.0	0.7	0.0	ND
Standard Deviation	28.85	14.09	0.0	3.1	4.8	0.7	2.7	7.7	0.0	0.8	0.0	ND
Sample Variance	832.41	198.50	0.0	9.5	23.2	0.5	7.3	59.1	0.0	0.7	0.0	ND
Kurtosis	-0.43	-0.14	ND	0.4	-1.8	-1.2	0.1	0.2	ND	0.1	ND	ND
Skewness	-1.12	-1.25	ND	1.5	0.8	0.0	0.0	0.7	ND	0.9	ND	ND
Range	73.00	36.00	0.0	7.3	10.9	1.9	8.3	24.0	0.0	2.4	0.0	0.0
Minimum	24.00	10.00	0.0	0.0	4.1	2.1	0.0	6.0	0.0	0.0	0.0	0.0
Maximum	97.00	46.00	0.0	7.3	15.0	4.0	8.3	30.0	0.0	2.4	0.0	0.0
Count	8	8	8	8	6	8	7	8	8	8	8	0
Confidence Level(95.0%)	24.12	11.78	0.0	2.6	5.1	0.6	2.5	6.4	0.0	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	314	212	0.7	5.3	59.1	52.4	6.9	6.9
Standard Error	46	32	0.4	0.6	7.5	7.0	0.4	0.4
Median	360	260	0.0	5.0	69.5	62.5	7.4	7.2
Mode	400	270	0.0	ND	74.0	66.0	7.6	ND
Standard Deviation	129	91	1.2	1.6	21.2	19.8	1.2	1.0
Sample Variance	16684	8225	1.5	2.5	451.6	391.7	1.6	1.0
Kurtosis	0	0	0.0	-0.6	-0.3	-0.3	0.7	0.1
Skewness	-1	-1	1.4	0.4	-1.2	-1.2	-1.2	-1.0
Range	330	225	2.7	4.7	53.0	49.0	3.7	3.0
Minimum	100	55	0.0	3.1	23.0	19.0	4.5	5.0
Maximum	430	280	2.7	7.8	76.0	68.0	8.2	8.0
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	108	76	1.0	1.3	17.8	16.5	1.0	0.9

ND = No Data

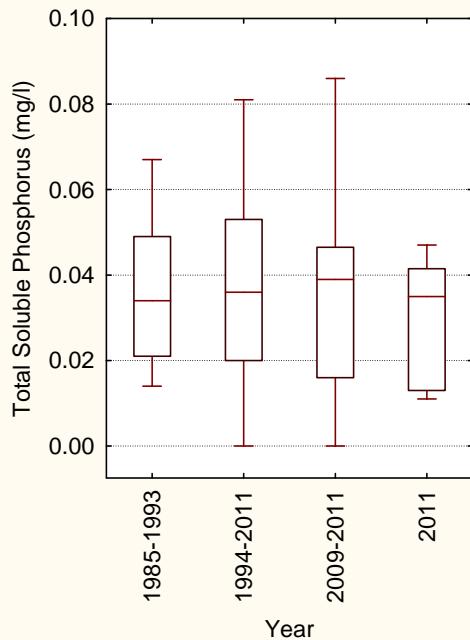
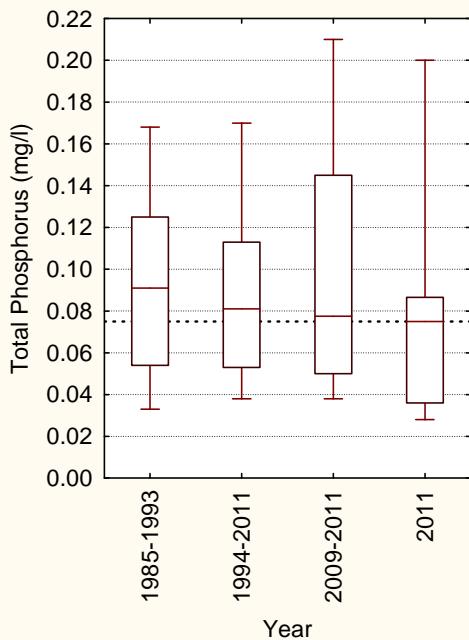
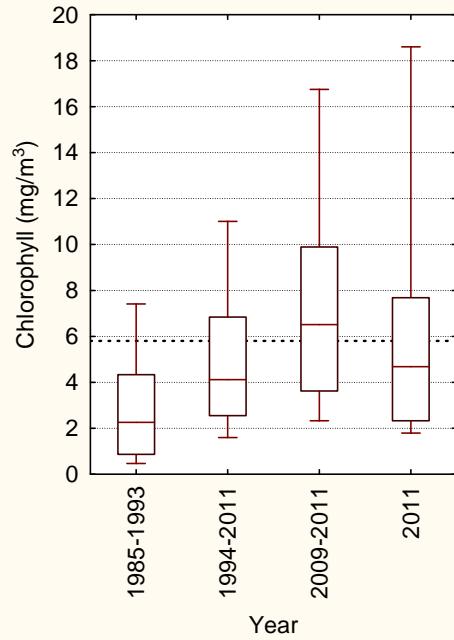
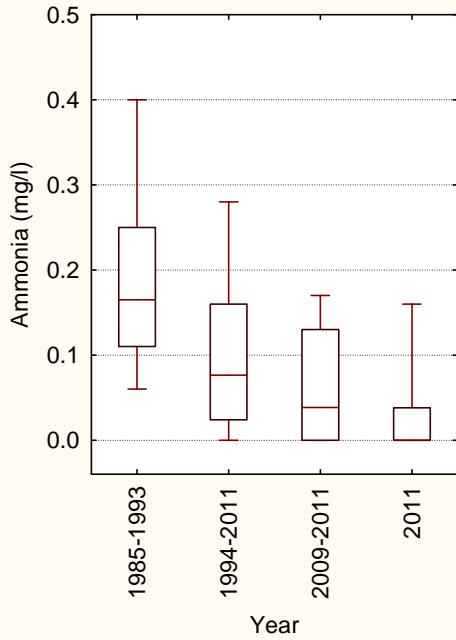
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Oak Creek at Pennsylvania Ave., Site OC-04



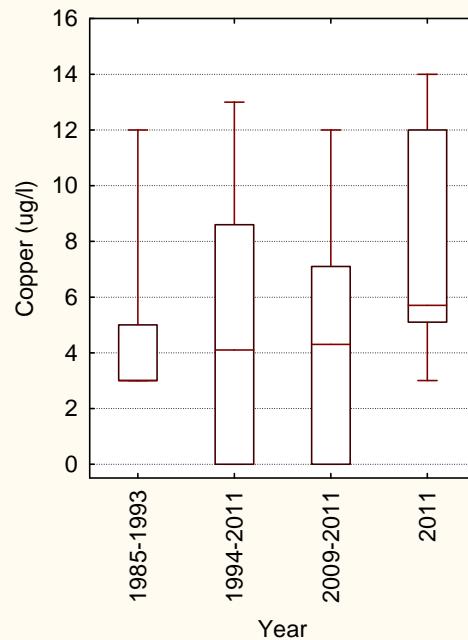
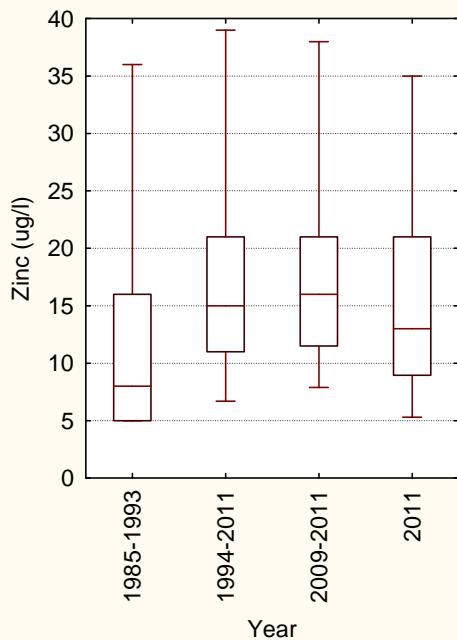
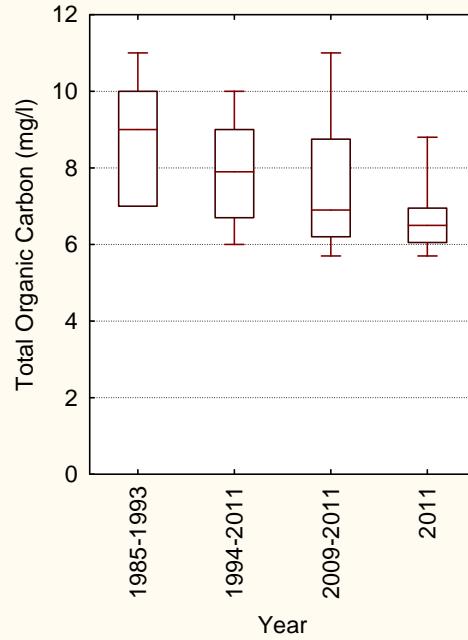
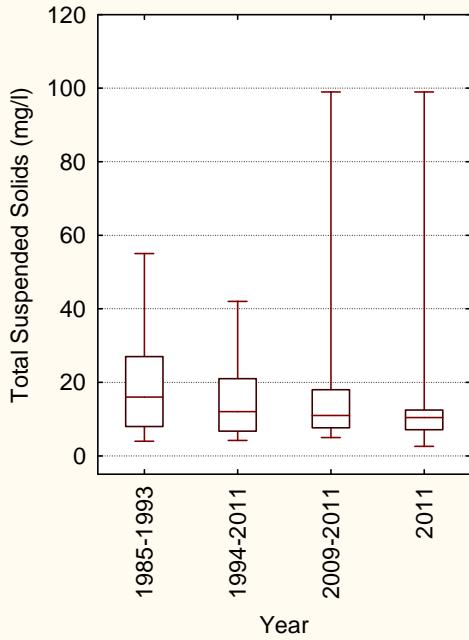
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Pennsylvania Ave., Site OC-04



— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Pennsylvania Ave., Site OC-04



— Median □ 25%-75% █ 10%-90%

PENNSYLVANIA AVENUE - SITE 4
 OAK CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	13.2	8.2	6.22	0.31	0.023	0.34	0.030	0.60	0.078	0.030	ND
Standard Error	0.1	2.1	0.6	1.97	0.04	0.007	0.05	0.020	0.14	0.019	0.005	ND
Median	7.7	12.3	8.3	4.68	0.27	0.014	0.30	0.000	0.51	0.075	0.035	ND
Mode	7.8	ND	ND	ND	ND	0.011	ND	0.000	ND	ND	ND	ND
Standard Deviation	0.2	6.0	1.7	5.56	0.12	0.020	0.13	0.056	0.39	0.055	0.015	ND
Sample Variance	0.1	35.7	2.8	30.95	0.01	0.000	0.02	0.003	0.15	0.003	0.000	ND
Kurtosis	-1.5	-1.2	-1.2	3.84	-0.89	-1.823	-0.71	5.658	1.02	3.932	-2.034	ND
Skewness	-0.6	0.3	-0.2	1.87	0.56	0.487	0.58	2.327	0.46	1.771	-0.387	ND
Range	0.6	17.0	4.8	16.81	0.35	0.051	0.38	0.160	1.30	0.172	0.036	0.00
Minimum	7.2	5.0	5.6	1.79	0.16	0.000	0.17	0.000	0.00	0.028	0.011	0.00
Maximum	7.8	22.0	10.4	18.60	0.51	0.051	0.55	0.160	1.30	0.200	0.047	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	5.0	1.4	4.65	0.10	0.017	0.11	0.046	0.32	0.046	0.012	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	748.8	728.6	4.4	20.2	21.2	1308	221.3	1479	2.6	ND
Standard Error	ND	ND	80.4	87.2	2.3	11.3	9.7	168	24.5	824	0.3	ND
Median	ND	ND	830.0	821.1	2.2	10.4	11.0	1435	255.0	410	2.6	ND
Mode	ND	ND	860.0	849.0	ND	11.0	ND	1490	270.0	ND	ND	ND
Standard Deviation	ND	ND	227.4	246.7	6.4	32.0	27.5	474	69.4	2332	0.9	ND
Sample Variance	ND	ND	51698.2	60852.3	41.2	1025.5	757.0	224841	4812.5	5437830	0.7	ND
Kurtosis	ND	ND	0.2	-0.2	7.1	7.7	6.5	0	-0.1	3	-0.9	ND
Skewness	ND	ND	-1.1	-1.1	2.6	2.8	2.5	-1	-1.4	2	-0.1	ND
Range	0.0	0.0	660.0	664.2	20.0	96.4	82.0	1413	160.0	6574	2.4	0
Minimum	0.0	0.0	340.0	326.0	0.0	2.6	5.3	587	110.0	26	1.4	0
Maximum	0.0	0.0	1000.0	990.2	20.0	99.0	87.2	2000	270.0	6600	3.8	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	190.1	206.2	5.4	26.8	23.0	396	58.0	1950	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

PENNSYLVANIA AVENUE - SITE 4
 OAK CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	74.00	35.50	0.0	2.0	7.6	2.6	4.5	15.8	0.0	1.1	0.0	ND
Standard Error	9.49	4.60	0.0	1.3	1.8	0.2	1.4	3.4	0.0	0.3	0.0	ND
Median	84.00	40.50	0.0	0.0	5.7	2.7	3.4	13.0	0.0	1.3	0.0	ND
Mode	ND	ND	0.0	0.0	5.7	ND	ND	ND	0.0	0.0	0.0	ND
Standard Deviation	26.84	13.01	0.0	3.5	4.4	0.4	3.8	9.7	0.0	0.7	0.0	ND
Sample Variance	720.57	169.14	0.0	12.2	19.0	0.2	14.1	93.5	0.0	0.5	0.0	ND
Kurtosis	-0.15	-0.21	ND	-0.8	-1.2	-1.3	-0.9	1.2	ND	-1.1	ND	ND
Skewness	-1.21	-1.22	ND	1.2	0.8	0.3	0.7	1.2	ND	-0.7	ND	ND
Range	71.00	33.00	0.0	7.5	11.0	1.2	9.8	29.7	0.0	1.8	0.0	0.0
Minimum	28.00	14.00	0.0	0.0	3.0	2.1	0.0	5.3	0.0	0.0	0.0	0.0
Maximum	99.00	47.00	0.0	7.5	14.0	3.3	9.8	35.0	0.0	1.8	0.0	0.0
Count	8	8	8	7	6	7	7	8	8	8	8	0
Confidence Level(95.0%)	22.44	10.87	0.0	3.2	4.6	0.4	3.5	8.1	0.0	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	331	231	1.6	6.5	62.3	55.6	6.7	6.6
Standard Error	42	32	0.8	0.8	6.9	6.7	0.3	0.3
Median	370	280	0.0	5.9	71.0	64.5	6.5	6.4
Mode	410	280	0.0	ND	ND	26.0	ND	6.6
Standard Deviation	118	89	2.2	2.4	19.6	18.8	1.0	0.9
Sample Variance	14013	7953	5.0	5.6	385.9	355.1	0.9	0.7
Kurtosis	0	0	-1.3	-1.1	-0.4	-0.4	3.3	4.1
Skewness	-1	-1	0.9	0.4	-1.2	-1.2	1.7	1.8
Range	310	217	5.2	6.6	47.0	45.0	3.1	2.8
Minimum	130	83	0.0	3.4	31.0	26.0	5.7	5.7
Maximum	440	300	5.2	10.0	78.0	71.0	8.8	8.5
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	99	75	1.9	2.0	16.4	15.8	0.8	0.7

ND = No Data

Provisional MMSD Water Quality Data

15TH AVENUE - SITE 5
OAK CREEK
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.6	13.2	8.6	5.43	0.42	0.020	0.43	0.026	0.50	0.062	0.023	ND
Standard Error	0.1	2.0	0.6	2.07	0.04	0.006	0.05	0.017	0.10	0.014	0.004	ND
Median	7.6	12.4	8.6	3.32	0.45	0.015	0.46	0.000	0.50	0.053	0.027	ND
Mode	7.8	ND	ND	ND	ND	ND	ND	0.000	0.36	ND	ND	ND
Standard Deviation	0.2	5.6	1.8	5.85	0.12	0.016	0.13	0.049	0.28	0.041	0.012	ND
Sample Variance	0.1	31.1	3.2	34.23	0.02	0.000	0.02	0.002	0.08	0.002	0.000	ND
Kurtosis	-1.2	-1.1	-0.9	7.02	-1.40	-1.824	-1.55	5.769	0.30	3.243	-1.838	ND
Skewness	-0.3	0.3	-0.1	2.60	-0.53	0.307	-0.35	2.349	-0.36	1.686	-0.261	ND
Range	0.6	15.9	5.1	17.88	0.33	0.041	0.36	0.140	0.87	0.122	0.031	0.00
Minimum	7.2	5.4	5.8	1.72	0.22	0.000	0.23	0.000	0.00	0.028	0.008	0.00
Maximum	7.8	21.3	10.9	19.60	0.55	0.041	0.59	0.140	0.87	0.150	0.038	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.7	1.5	4.89	0.10	0.013	0.11	0.041	0.24	0.034	0.010	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	752.5	736.2	3.7	16.3	17.9	1311	215.0	1070	2.9	ND
Standard Error	ND	ND	86.3	92.3	1.5	7.6	7.5	173	23.6	396	0.2	ND
Median	ND	ND	845.0	837.0	1.7	8.1	9.0	1425	245.0	680	2.8	ND
Mode	ND	ND	ND	ND	ND	6.1	ND	1370	250.0	ND	ND	ND
Standard Deviation	ND	ND	244.0	261.1	4.4	21.5	21.3	488	66.8	1049	0.4	ND
Sample Variance	ND	ND	59535.7	68151.7	19.1	463.5	452.3	238607	4457.1	1099433	0.2	ND
Kurtosis	ND	ND	-0.3	-0.1	5.9	6.6	5.5	0	0.5	5	1.7	ND
Skewness	ND	ND	-1.2	-1.2	2.4	2.5	2.3	-1	-1.4	2	-0.5	ND
Range	0.0	0.0	640.0	701.9	12.8	64.6	61.8	1491	180.0	3180	1.4	0
Minimum	0.0	0.0	360.0	292.0	1.2	3.4	5.9	529	90.0	120	2.1	0
Maximum	0.0	0.0	1000.0	993.9	14.0	68.0	67.7	2020	270.0	3300	3.5	0
Count	0	0	8	8	8	8	8	8	8	7	7	0
Confidence Level(95.0%)	ND	ND	204.0	218.3	3.7	18.0	17.8	408	55.8	970	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

15TH AVENUE - SITE 5
OAK CREEK
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	78.13	35.88	0.0	2.7	9.7	3.0	3.6	14.7	0.0	0.7	0.0	ND
Standard Error	10.56	4.82	0.0	1.3	1.1	0.4	1.2	2.9	0.0	0.2	0.0	ND
Median	91.00	41.00	0.0	0.0	10.4	2.7	3.1	12.0	0.0	0.9	0.0	ND
Mode	100.00	ND	0.0	0.0	11.0	ND	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	29.87	13.62	0.0	3.7	3.2	1.1	3.2	8.3	0.1	0.7	0.0	ND
Sample Variance	892.41	185.55	0.0	13.9	10.3	1.3	10.0	68.1	0.0	0.5	0.0	ND
Kurtosis	-0.18	-0.21	ND	-1.7	-0.9	-0.3	-0.7	0.3	8.0	-1.5	ND	ND
Skewness	-1.31	-1.20	ND	0.8	-0.3	1.0	0.4	1.0	2.8	0.2	ND	ND
Range	70.00	35.00	0.0	8.0	9.3	3.1	8.6	24.8	0.3	1.7	0.0	0.0
Minimum	30.00	13.00	0.0	0.0	4.7	1.8	0.0	5.2	0.0	0.0	0.0	0.0
Maximum	100.00	48.00	0.0	8.0	14.0	4.9	8.6	30.0	0.3	1.7	0.0	0.0
Count	8	8	8	8	8	8	7	8	8	8	8	0
Confidence Level(95.0%)	24.97	11.39	0.0	3.1	2.7	1.0	2.9	6.9	0.1	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	343	239	0.8	5.6	63.4	57.8	5.8	5.7
Standard Error	46	34	0.5	0.8	7.2	7.2	0.3	0.3
Median	395	280	0.0	4.8	71.0	65.5	5.8	5.8
Mode	ND	280	0.0	ND	71.0	ND	6.0	6.0
Standard Deviation	131	96	1.5	2.3	20.5	20.4	0.8	0.7
Sample Variance	17136	9241	2.4	5.2	419.4	414.8	0.6	0.5
Kurtosis	0	0	0.3	0.5	-0.1	-0.1	0.7	1.2
Skewness	-1	-1	1.5	1.1	-1.3	-1.3	0.6	-0.5
Range	320	250	3.6	6.8	53.0	53.0	2.5	2.5
Minimum	130	70	0.0	3.1	28.0	23.0	4.7	4.3
Maximum	450	320	3.6	9.9	81.0	76.0	7.2	6.8
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	109	80	1.3	1.9	17.1	17.0	0.6	0.6

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY (E. of HWY 32) - SITE 6
 OAK CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	13.3	9.8	4.76	0.38	0.016	0.39	0.016	0.27	0.050	0.019	ND
Standard Error	0.1	1.8	0.6	1.34	0.05	0.005	0.05	0.014	0.11	0.011	0.004	ND
Median	7.8	12.8	9.2	3.27	0.39	0.012	0.39	0.000	0.20	0.039	0.020	ND
Mode	8.0	ND	ND	ND	0.47	ND	ND	0.000	0.00	ND	ND	ND
Standard Deviation	0.3	5.1	1.6	3.78	0.14	0.013	0.15	0.039	0.30	0.032	0.012	ND
Sample Variance	0.1	26.3	2.7	14.27	0.02	0.000	0.02	0.001	0.09	0.001	0.000	ND
Kurtosis	-1.2	-1.2	-1.7	5.58	-2.04	-0.619	-2.04	7.193	-2.17	0.277	-0.751	ND
Skewness	-0.6	0.2	0.5	2.29	0.01	0.655	0.11	2.660	0.29	1.089	-0.155	ND
Range	0.7	14.7	4.3	11.69	0.35	0.039	0.38	0.110	0.68	0.089	0.035	0.00
Minimum	7.3	6.0	7.9	1.91	0.21	0.000	0.22	0.000	0.00	0.021	0.000	0.00
Maximum	8.0	20.7	12.2	13.60	0.56	0.039	0.60	0.110	0.68	0.110	0.035	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.3	1.4	3.16	0.11	0.011	0.12	0.032	0.25	0.027	0.010	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	760.0	748.0	3.0	12.0	14.7	1329	214.6	1243	2.9	ND
Standard Error	ND	ND	87.5	91.6	1.2	4.8	5.5	170	22.7	455	0.2	ND
Median	ND	ND	860.0	854.2	2.1	7.9	8.1	1440	240.0	970	3.0	ND
Mode	ND	ND	860.0	ND	0.0	ND	ND	1440	240.0	460	2.7	ND
Standard Deviation	ND	ND	247.4	259.2	3.4	13.7	15.5	481	64.3	1288	0.5	ND
Sample Variance	ND	ND	61200.0	67162.9	11.6	187.8	239.8	231601	4128.3	1659788	0.2	ND
Kurtosis	ND	ND	-0.2	-0.1	1.1	4.3	3.4	0	0.3	5	1.6	ND
Skewness	ND	ND	-1.2	-1.3	1.4	2.1	1.9	-1	-1.4	2	-0.7	ND
Range	0.0	0.0	650.0	685.1	9.7	41.0	45.3	1451	173.0	4113	1.7	0
Minimum	0.0	0.0	350.0	307.0	0.0	2.0	3.4	569	97.0	87	1.9	0
Maximum	0.0	0.0	1000.0	992.1	9.7	43.0	48.7	2020	270.0	4200	3.6	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	206.8	216.7	2.8	11.5	12.9	402	53.7	1077	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY (E. of HWY 32) - SITE 6
 OAK CREEK
 WATER QUALITY DATA - 2011

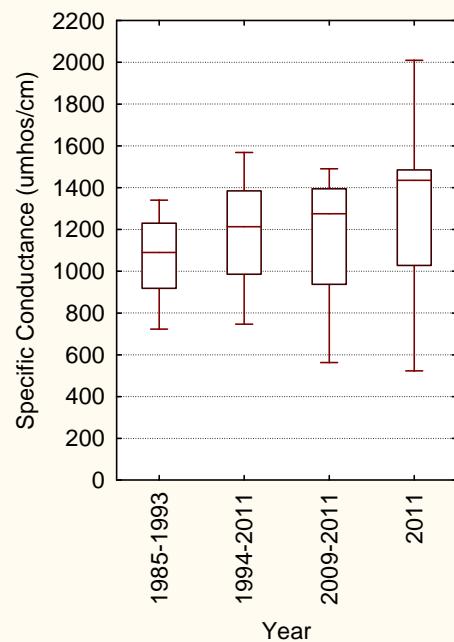
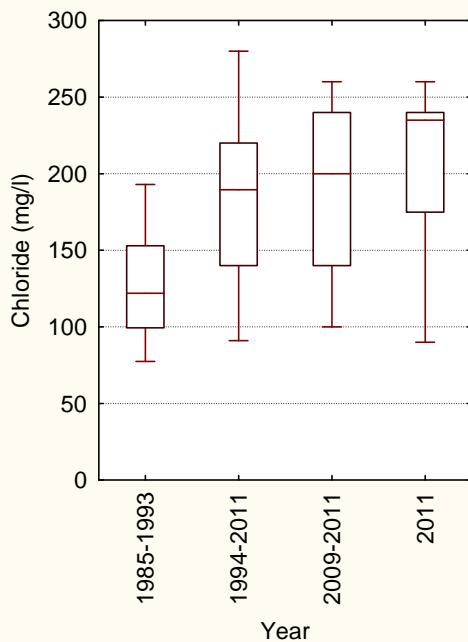
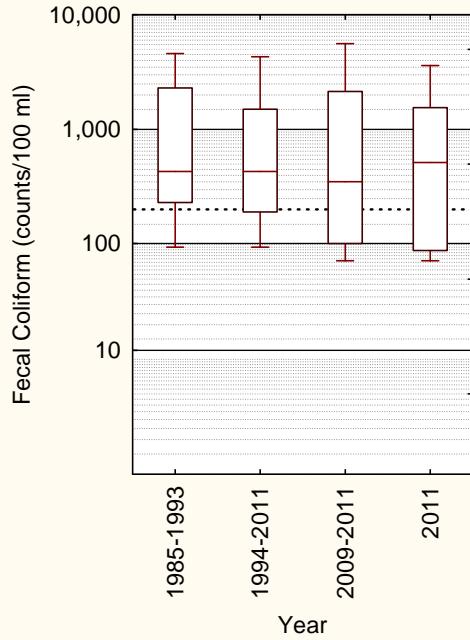
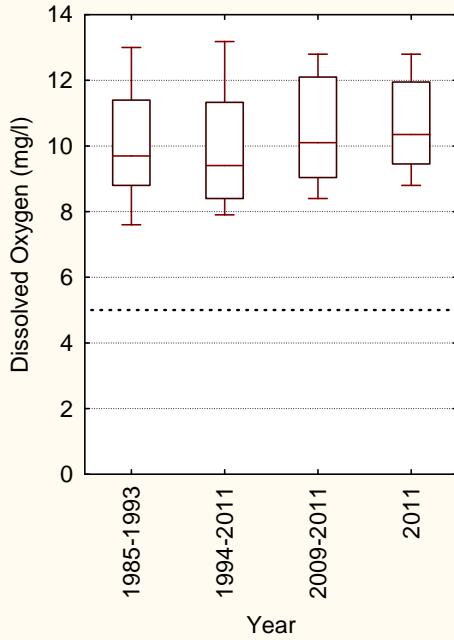
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	82.13	36.88	0.0	1.9	7.5	2.7	5.7	13.6	0.0	0.6	0.0	ND
Standard Error	11.24	5.01	0.0	1.2	1.4	0.3	1.5	2.4	0.0	0.3	0.0	ND
Median	97.50	43.00	0.0	0.0	6.1	2.6	5.1	11.0	0.0	0.4	0.0	ND
Mode	100.00	ND	0.0	0.0	ND	ND	ND	ND	0.0	0.0	0.0	ND
Standard Deviation	31.79	14.16	0.0	3.5	3.8	0.9	4.2	6.9	0.0	0.8	0.0	ND
Sample Variance	1010.70	200.41	0.0	12.4	14.3	0.7	17.8	47.5	0.0	0.6	0.0	ND
Kurtosis	-0.17	-0.17	ND	0.1	0.0	1.6	-1.3	-1.0	ND	-1.1	ND	ND
Skewness	-1.29	-1.27	ND	1.4	0.7	1.2	0.2	0.6	ND	0.8	ND	ND
Range	79.00	36.00	0.0	7.9	11.0	2.7	12.0	19.8	0.0	1.8	0.0	0.0
Minimum	31.00	13.00	0.0	0.0	3.0	1.7	0.0	5.2	0.0	0.0	0.0	0.0
Maximum	110.00	49.00	0.0	7.9	14.0	4.4	12.0	25.0	0.0	1.8	0.0	0.0
Count	8	8	8	8	7	8	8	8	8	8	8	0
Confidence Level(95.0%)	26.58	11.84	0.0	2.9	3.5	0.7	3.5	5.8	0.0	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	356	246	0.8	5.1	64.0	58.5	5.4	5.3
Standard Error	49	34	0.5	0.7	7.1	7.1	0.3	0.3
Median	420	290	0.0	4.5	72.5	67.5	5.4	5.5
Mode	ND	290	0.0	ND	ND	68.0	ND	5.5
Standard Deviation	139	95	1.5	1.9	20.0	20.0	0.8	0.7
Sample Variance	19370	9046	2.2	3.7	402.0	400.3	0.6	0.5
Kurtosis	0	0	0.0	-0.3	-0.1	-0.1	-1.1	-0.8
Skewness	-1	-1	1.4	0.9	-1.3	-1.3	0.2	-0.6
Range	340	251	3.2	5.5	50.0	50.0	2.3	2.1
Minimum	130	79	0.0	2.9	30.0	25.0	4.3	4.1
Maximum	470	330	3.2	8.4	80.0	75.0	6.6	6.2
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	116	80	1.2	1.6	16.8	16.7	0.7	0.6

ND = No Data

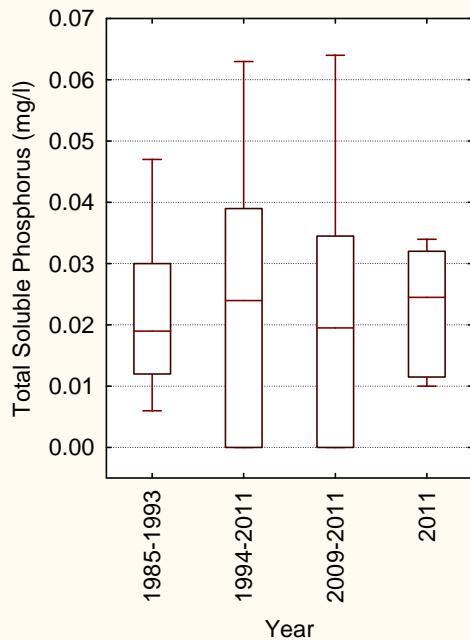
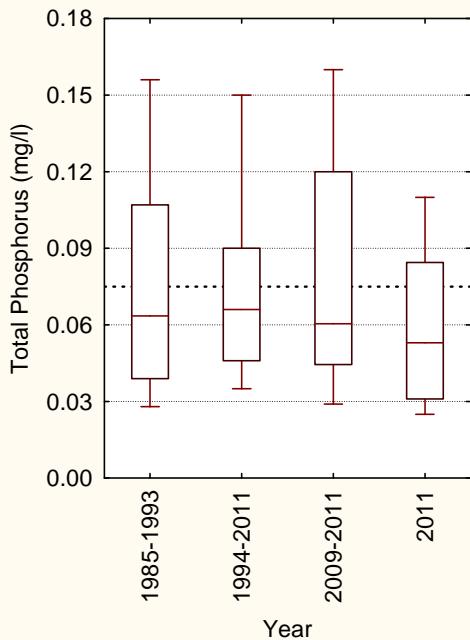
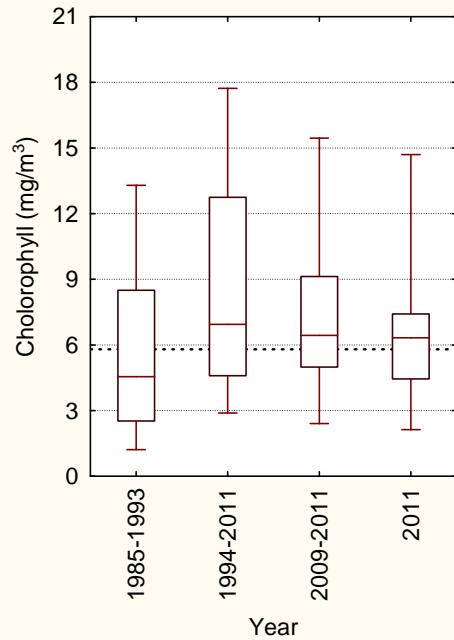
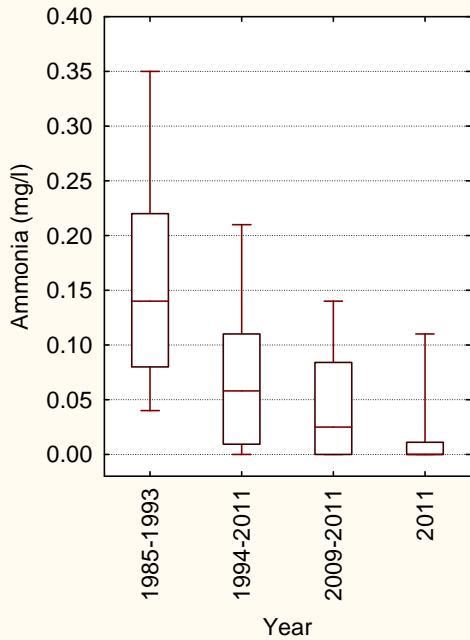
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Oak Creek at Oak Creek Pkwy., Site OC-07



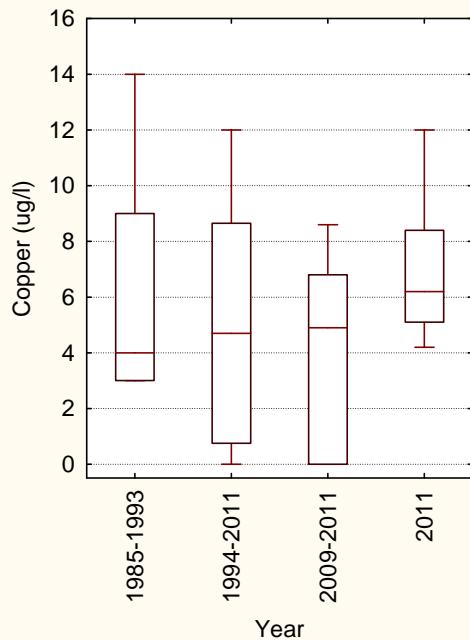
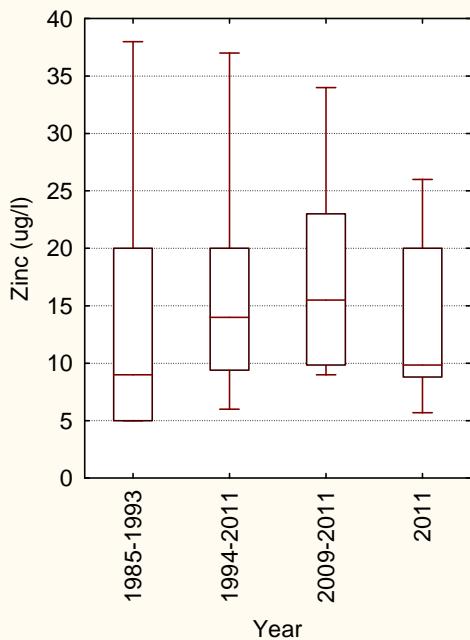
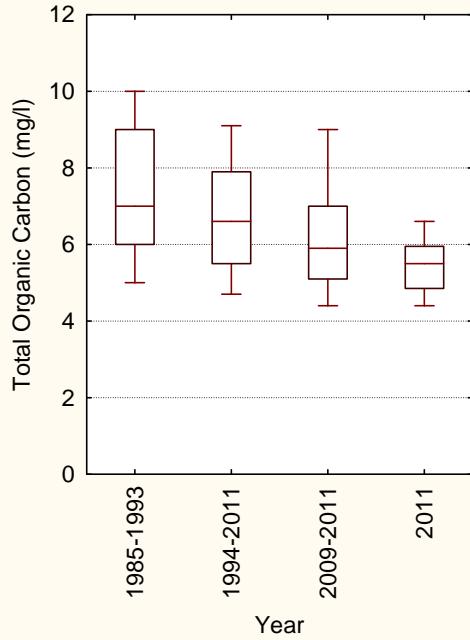
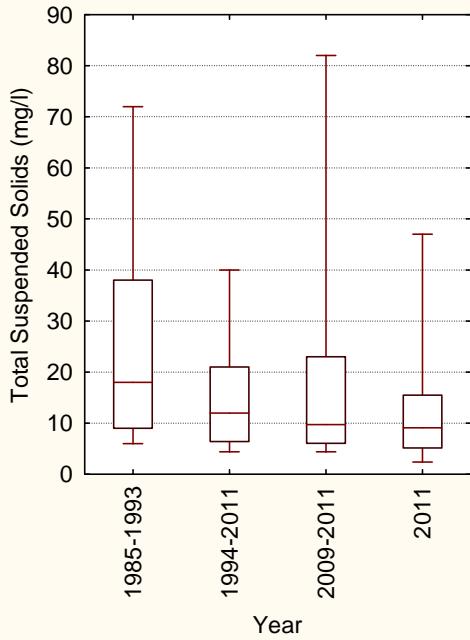
— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Oak Creek Pkwy., Site OC-07



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Oak Creek at Oak Creek Pkwy., Site OC-07



— Median □ 25%-75% ┌ 10%-90%

PARKWAY (E. of LAKE DR. EXTENDED) - SITE 7
 OAK CREEK
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.8	10.6	6.65	0.34	0.016	0.36	0.017	0.42	0.059	0.023	ND
Standard Error	0.1	2.1	0.5	1.33	0.04	0.005	0.04	0.014	0.10	0.011	0.004	ND
Median	8.0	13.1	10.4	6.33	0.34	0.012	0.35	0.000	0.48	0.053	0.025	ND
Mode	8.1	ND	ND	ND	ND	ND	ND	0.000	0.00	ND	ND	ND
Standard Deviation	0.3	5.9	1.5	3.75	0.11	0.013	0.12	0.039	0.29	0.031	0.010	ND
Sample Variance	0.1	34.5	2.1	14.06	0.01	0.000	0.02	0.001	0.08	0.001	0.000	ND
Kurtosis	-1.2	-1.1	-1.5	3.24	-1.97	0.205	-1.95	7.027	-0.66	-1.195	-2.061	ND
Skewness	-0.7	0.2	0.3	1.46	0.05	0.827	0.16	2.627	-0.68	0.481	-0.234	ND
Range	0.8	16.8	4.0	12.57	0.29	0.040	0.32	0.110	0.78	0.085	0.024	0.00
Minimum	7.4	5.6	8.8	2.13	0.20	0.000	0.21	0.000	0.00	0.025	0.010	0.00
Maximum	8.2	22.3	12.8	14.70	0.49	0.040	0.53	0.110	0.78	0.110	0.034	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.9	1.2	3.13	0.10	0.011	0.10	0.032	0.24	0.026	0.009	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	748.8	735.1	3.6	13.6	18.9	1304	206.3	997	2.6	ND
Standard Error	ND	ND	86.5	91.0	1.3	5.2	7.4	170	21.7	439	0.2	ND
Median	ND	ND	840.0	832.5	2.3	9.1	10.2	1435	235.0	515	2.6	ND
Mode	ND	ND	810.0	ND	ND	ND	ND	ND	240.0	ND	ND	ND
Standard Deviation	ND	ND	244.8	257.4	3.6	14.6	21.0	480	61.4	1241	0.7	ND
Sample Variance	ND	ND	59926.8	66265.2	13.1	213.3	439.2	230129	3769.6	1539528	0.5	ND
Kurtosis	ND	ND	-0.1	0.0	1.7	4.7	3.5	0	0.6	2	-1.9	ND
Skewness	ND	ND	-1.2	-1.3	1.5	2.1	1.9	-1	-1.4	2	0.1	ND
Range	0.0	0.0	670.0	708.7	11.0	44.6	60.5	1487	170.0	3530	1.7	0
Minimum	0.0	0.0	330.0	283.0	0.0	2.4	4.6	523	90.0	70	1.8	0
Maximum	0.0	0.0	1000.0	991.7	11.0	47.0	65.1	2010	260.0	3600	3.6	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	204.7	215.2	3.0	12.2	17.5	401	51.3	1037	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

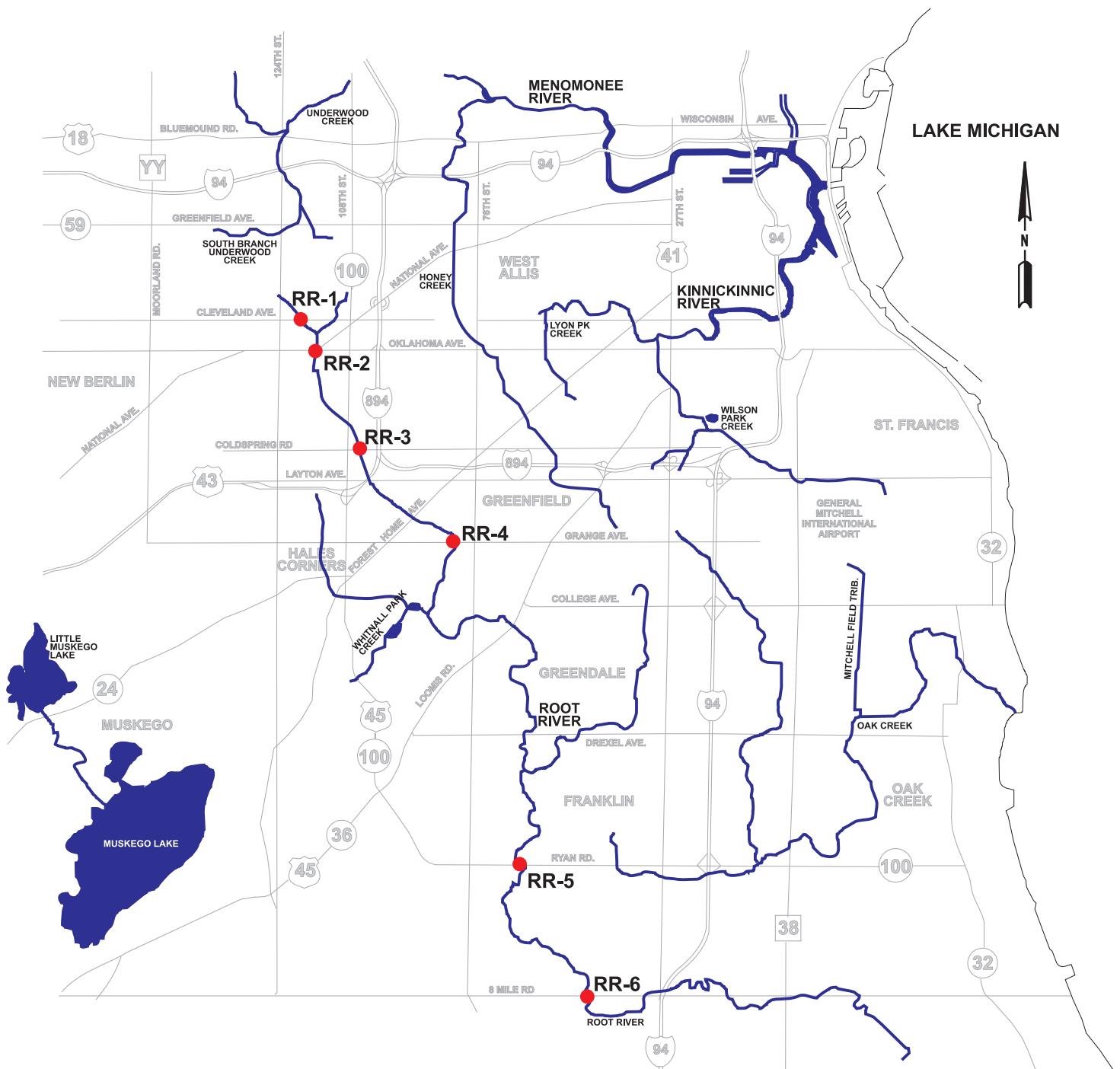
PARKWAY (E. of LAKE DR. EXTENDED) - SITE 7
 OAK CREEK
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	78.63	35.88	0.1	1.6	7.0	2.9	4.9	13.6	0.0	1.4	0.0	ND
Standard Error	10.58	4.80	0.1	1.0	1.2	0.4	1.4	2.6	0.0	0.5	0.0	ND
Median	92.50	42.50	0.0	0.0	6.2	2.6	5.6	9.9	0.0	1.0	0.0	ND
Mode	99.00	43.00	0.0	0.0	ND	ND	ND	20.0	0.0	0.8	0.0	ND
Standard Deviation	29.91	13.59	0.2	3.0	2.8	1.1	3.7	7.3	0.0	1.5	0.0	ND
Sample Variance	894.84	184.70	0.0	8.7	8.1	1.2	13.9	53.3	0.0	2.3	0.0	ND
Kurtosis	-0.20	-0.03	8.0	1.2	1.3	2.2	-1.6	-1.0	ND	6.2	ND	ND
Skewness	-1.30	-1.29	2.8	1.6	1.2	1.4	-0.1	0.8	ND	2.3	ND	ND
Range	70.00	35.00	0.6	7.4	7.8	3.4	10.0	20.3	0.0	5.0	0.0	0.0
Minimum	30.00	12.00	0.0	0.0	4.2	1.8	0.0	5.7	0.0	0.0	0.0	0.0
Maximum	100.00	47.00	0.6	7.4	12.0	5.2	10.0	26.0	0.0	5.0	0.0	0.0
Count	8	8	8	8	6	8	7	8	8	8	8	0
Confidence Level(95.0%)	25.01	11.36	0.2	2.5	3.0	0.9	3.4	6.1	0.0	1.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	346	239	0.9	5.6	63.4	57.9	5.5	5.2
Standard Error	47	33	0.6	0.7	7.1	7.0	0.3	0.3
Median	410	280	0.0	5.4	73.5	67.5	5.5	5.3
Mode	420	280	0.0	ND	75.0	70.0	ND	ND
Standard Deviation	134	93	1.6	1.8	20.2	19.8	0.7	0.8
Sample Variance	17913	8650	2.7	3.4	407.1	393.3	0.6	0.6
Kurtosis	0	0	0.0	-0.4	0.3	0.1	-1.0	-1.5
Skewness	-1	-1	1.4	0.4	-1.5	-1.4	0.1	-0.2
Range	340	239	3.6	5.4	49.0	48.0	2.2	2.1
Minimum	120	71	0.0	3.2	27.0	23.0	4.4	4.1
Maximum	460	310	3.6	8.6	76.0	71.0	6.6	6.2
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	112	78	1.4	1.5	16.9	16.6	0.6	0.6

ND = No Data

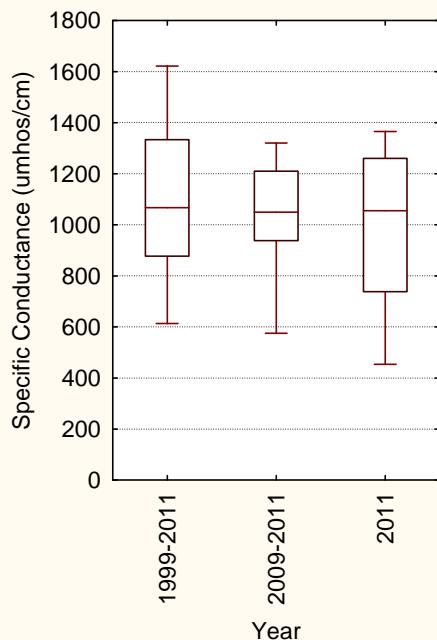
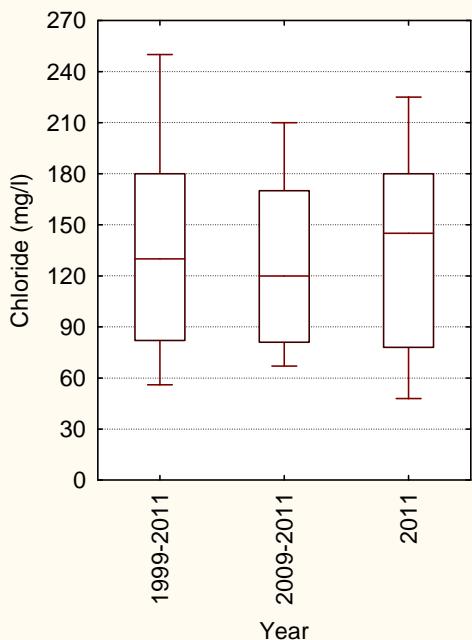
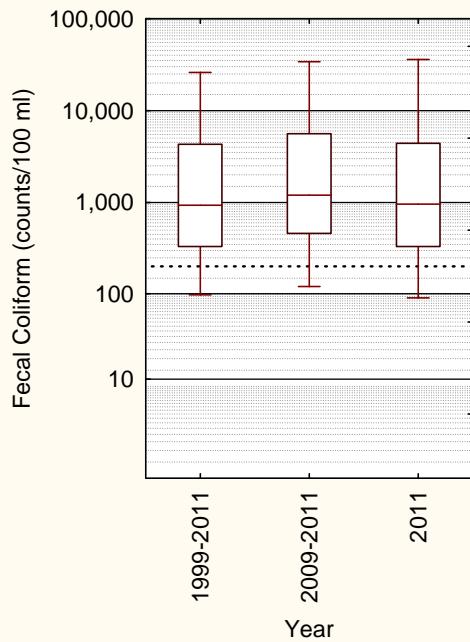
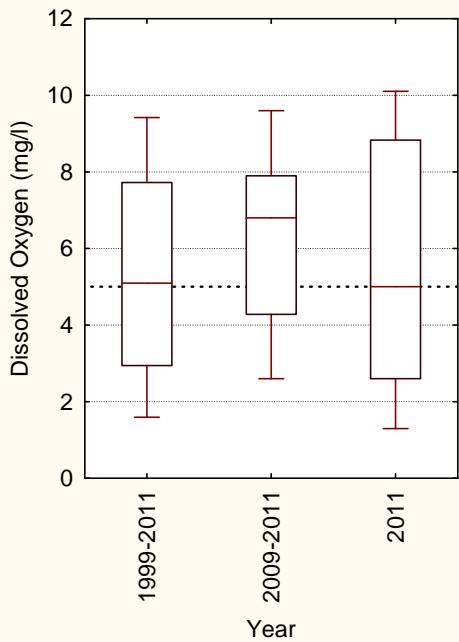
Provisional MMSD Water Quality Data



LEGEND

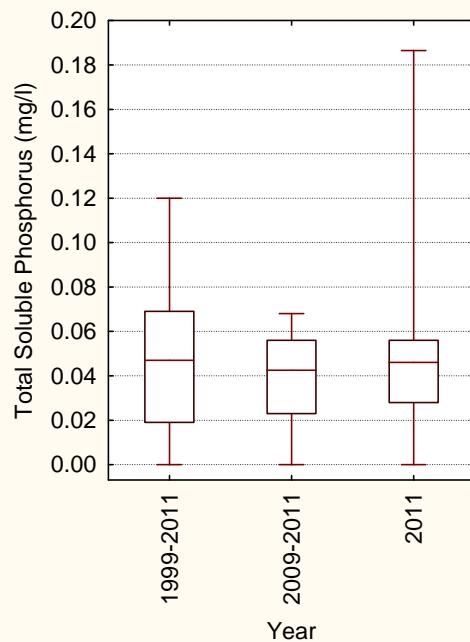
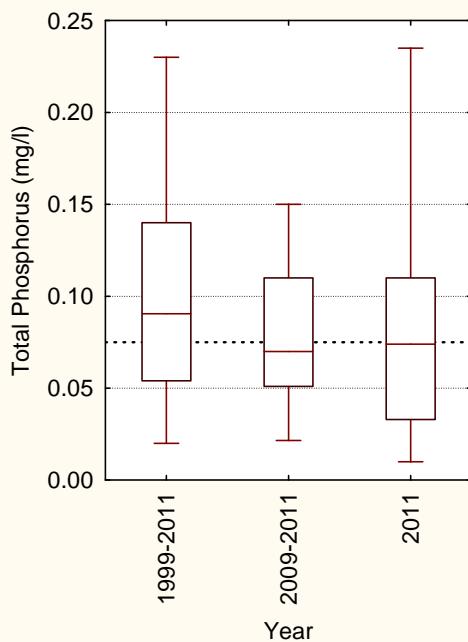
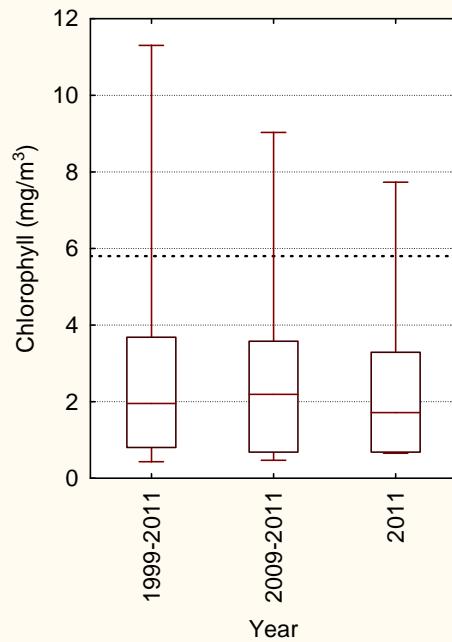
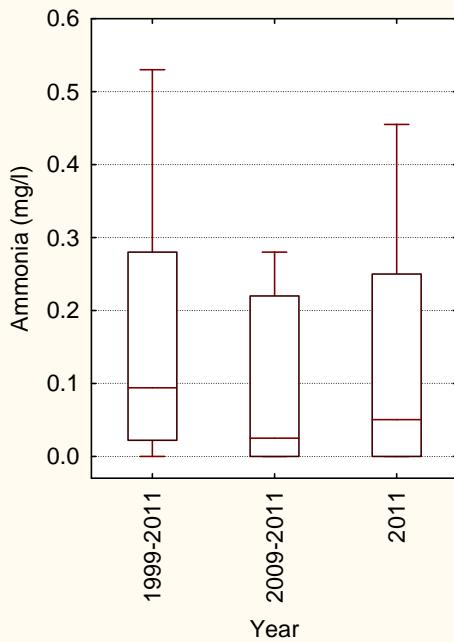
- WATER QUALITY SAMPLING LOCATIONS

MMSD Water Quality Monitoring Program Data
Root River at Cleveland Ave., Site RR-01



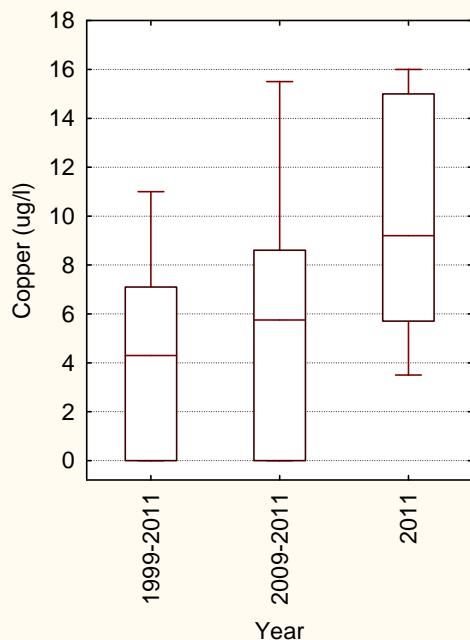
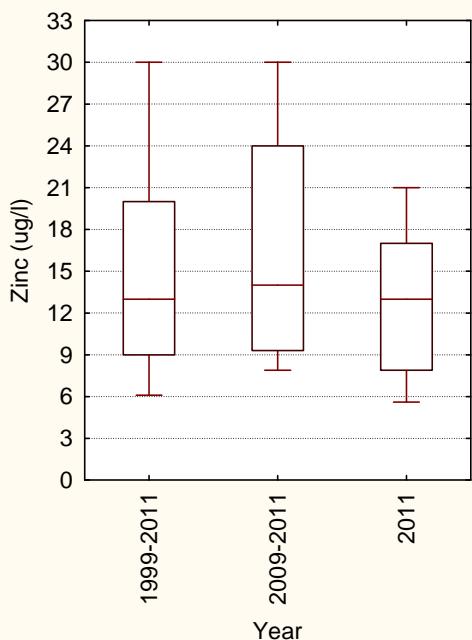
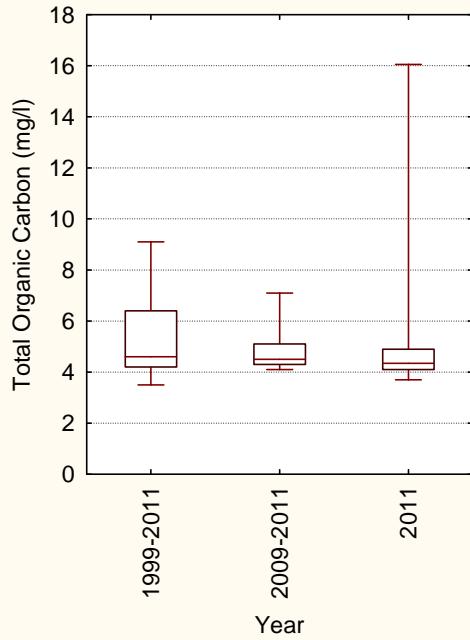
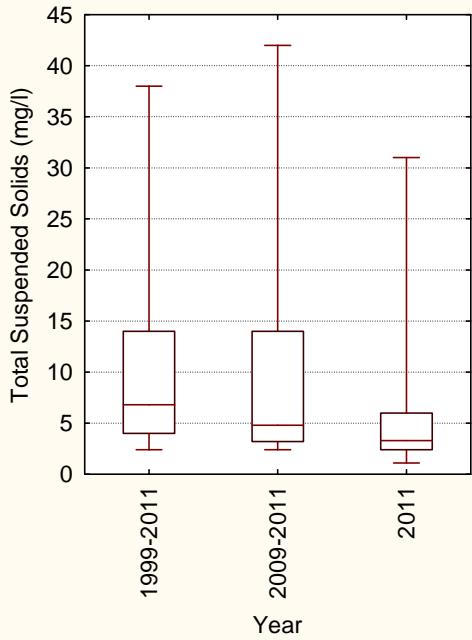
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Root River at Cleveland Ave., Site RR-01



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Root River at Cleveland Ave., Site RR-01



— Median □ 25%-75% □ 10%-90%

CLEVELAND AVENUE, EAST OF 124TH STREET - SITE 1
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.5	14.9	5.5	2.72	0.38	0.016	0.40	0.142	0.47	0.092	0.063	ND
Standard Error	0.1	1.6	1.1	0.90	0.10	0.002	0.11	0.063	0.11	0.031	0.026	ND
Median	7.4	15.4	5.0	1.72	0.36	0.014	0.38	0.051	0.55	0.074	0.046	ND
Mode	7.4	ND	ND	ND	ND	0.014	0.11	0.000	0.00	ND	0.000	ND
Standard Deviation	0.4	5.0	3.6	2.85	0.33	0.008	0.35	0.199	0.36	0.097	0.081	ND
Sample Variance	0.1	24.7	13.0	8.10	0.11	0.000	0.12	0.040	0.13	0.009	0.007	ND
Kurtosis	-1.0	-1.6	-1.9	1.80	-0.48	1.868	0.15	3.296	-1.31	5.412	7.135	ND
Skewness	0.0	-0.2	0.2	1.60	0.66	1.136	0.82	1.803	-0.39	2.117	2.534	ND
Range	1.1	13.6	9.4	8.39	1.00	0.027	1.10	0.620	0.96	0.340	0.280	0.00
Minimum	6.9	7.9	1.2	0.64	0.00	0.006	0.00	0.000	0.00	0.000	0.000	0.00
Maximum	8.0	21.5	10.6	9.03	1.00	0.033	1.10	0.620	0.96	0.340	0.280	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.3	3.6	2.6	2.04	0.24	0.005	0.25	0.142	0.25	0.069	0.058	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	563.0	554.4	2.3	8.6	7.0	993	138.4	8137	3.1	ND
Standard Error	ND	ND	56.7	60.1	1.1	4.3	3.1	111	21.1	4671	0.3	ND
Median	ND	ND	585.0	582.7	1.1	3.3	3.4	1055	145.0	960	3.0	ND
Mode	ND	ND	ND	ND	0.0	ND	ND	ND	78.0	ND	ND	ND
Standard Deviation	ND	ND	179.4	190.0	3.4	13.6	9.7	350	66.7	14771	0.9	ND
Sample Variance	ND	ND	32201.1	36112.1	11.8	185.7	93.8	122350	4449.6	218182624	0.9	ND
Kurtosis	ND	ND	0.1	0.5	5.0	6.9	8.5	0	-0.4	1	-0.6	ND
Skewness	ND	ND	-0.7	-0.9	2.2	2.6	2.9	-1	-0.4	2	0.5	ND
Range	0.0	0.0	580.0	622.5	11.0	45.0	31.6	1076	212.0	37918	2.7	0
Minimum	0.0	0.0	220.0	175.0	0.0	0.0	2.2	294	18.0	82	1.9	0
Maximum	0.0	0.0	800.0	797.5	11.0	45.0	33.8	1370	230.0	38000	4.6	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	128.4	135.9	2.5	9.7	6.9	250	47.7	10567	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

CLEVELAND AVENUE, EAST OF 124TH STREET - SITE 1
 ROOT RIVER
 WATER QUALITY DATA - 2011

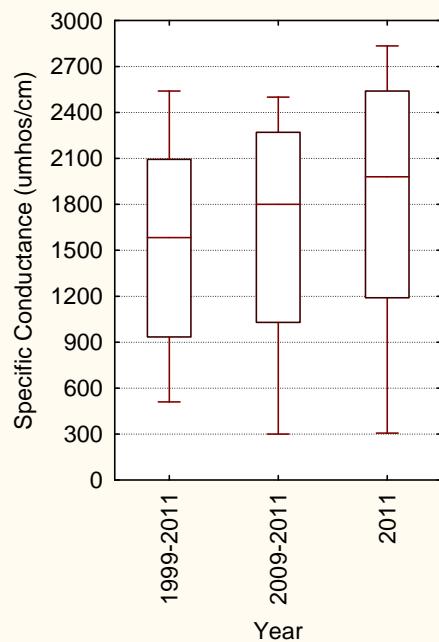
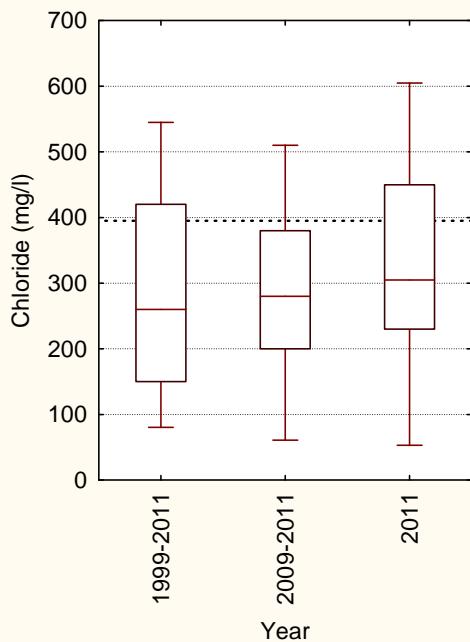
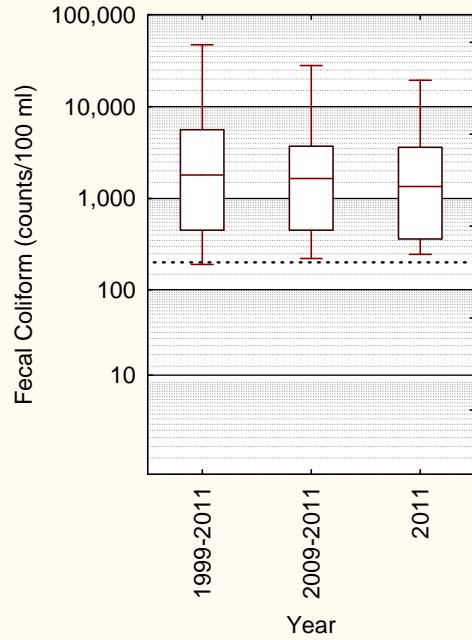
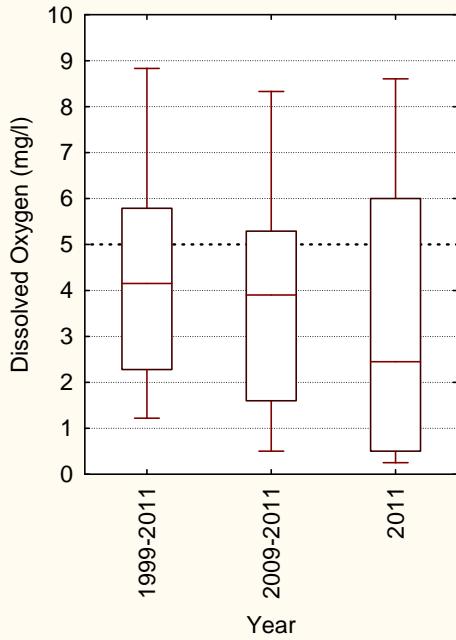
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	69.90	35.30	0.0	0.7	9.8	2.2	3.7	12.9	0.1	1.0	0.0	ND
Standard Error	6.84	3.50	0.0	0.7	1.6	0.2	1.2	1.9	0.1	0.2	0.0	ND
Median	80.00	40.50	0.0	0.0	9.2	2.2	3.8	13.0	0.0	1.2	0.0	ND
Mode	86.00	41.00	0.0	0.0	16.0	2.3	ND	ND	0.0	0.0	0.0	ND
Standard Deviation	21.64	11.08	0.0	2.2	4.8	0.6	2.8	6.0	0.2	0.6	0.0	ND
Sample Variance	468.32	122.68	0.0	4.9	23.3	0.3	8.1	35.9	0.0	0.4	0.0	ND
Kurtosis	0.03	1.42	ND	10.0	-1.6	2.1	-0.8	-0.5	10.0	-0.3	ND	ND
Skewness	-1.22	-1.64	ND	3.2	0.2	1.2	0.2	0.4	3.2	-0.8	ND	ND
Range	60.00	32.00	0.0	7.0	12.5	1.9	7.8	18.9	0.6	1.7	0.0	0.0
Minimum	27.00	12.00	0.0	0.0	3.5	1.6	0.0	5.1	0.0	0.0	0.0	0.0
Maximum	87.00	44.00	0.0	7.0	16.0	3.5	7.8	24.0	0.6	1.7	0.0	0.0
Count	10	10	10	10	9	10	6	10	10	10	10	0
Confidence Level(95.0%)	15.48	7.92	0.0	1.6	3.7	0.4	3.0	4.3	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	321	259	2.4	6.3	71.1	64.3	6.6	6.4
Standard Error	31	27	1.7	1.3	5.1	5.4	2.3	2.2
Median	370	285	0.0	5.9	73.5	68.5	4.4	4.2
Mode	370	ND	0.0	ND	70.0	ND	4.4	4.0
Standard Deviation	98	85	5.3	4.1	16.1	17.2	7.2	6.9
Sample Variance	9654	7278	27.6	17.1	258.8	295.8	51.7	47.8
Kurtosis	1	1	8.7	5.6	7.2	4.2	9.9	9.9
Skewness	-1	-1	2.9	2.2	-2.5	-1.9	3.1	3.1
Range	280	265	17.0	14.2	59.0	61.0	23.4	22.4
Minimum	120	75	0.0	2.8	28.0	22.0	3.6	3.6
Maximum	400	340	17.0	17.0	87.0	83.0	27.0	26.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	70	61	3.8	3.0	11.5	12.3	5.1	4.9

ND = No Data

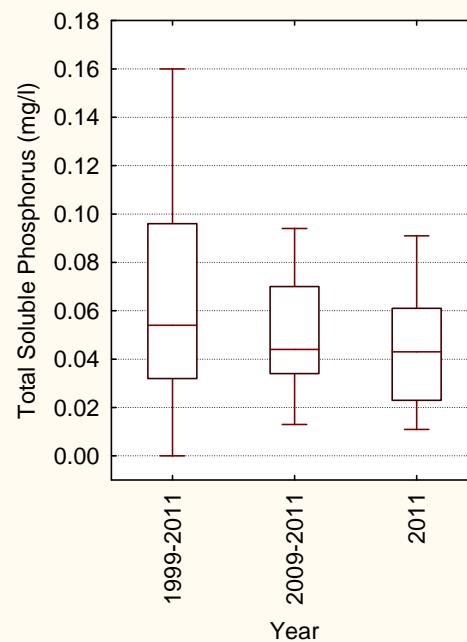
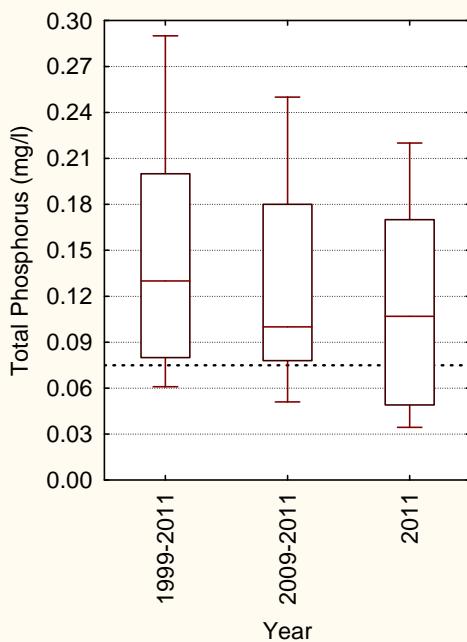
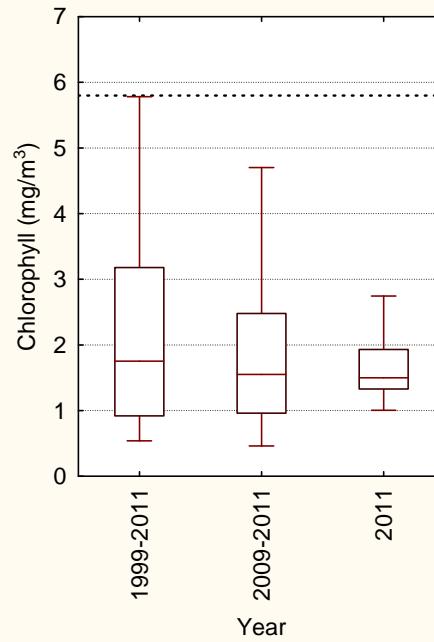
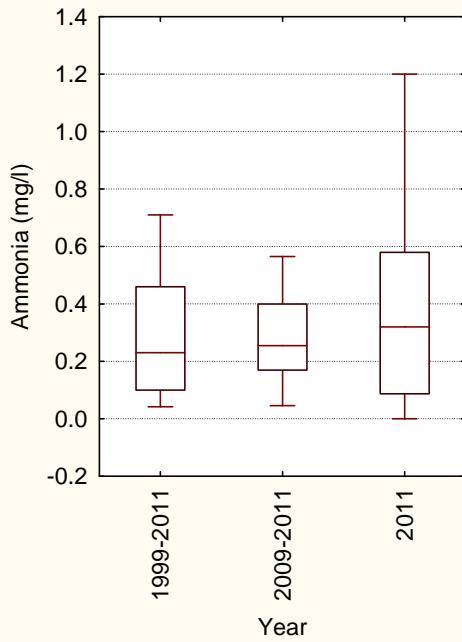
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Root River at National and Oklahoma Ave., Site RR-02



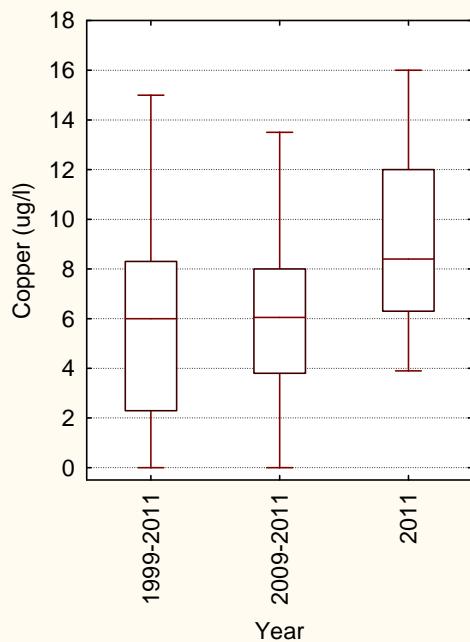
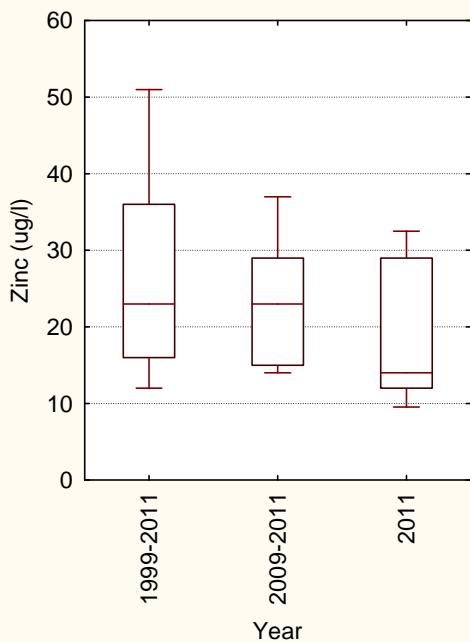
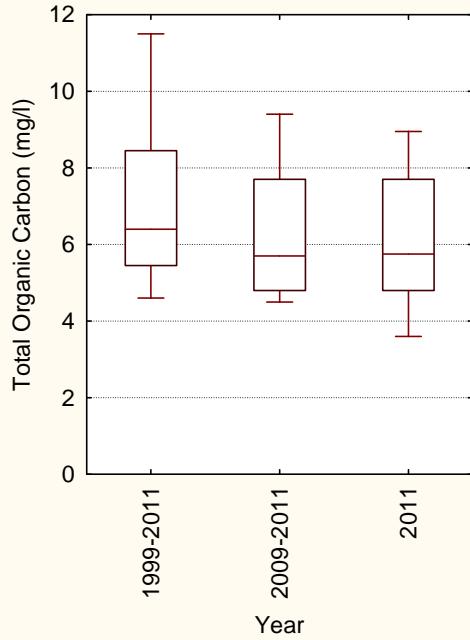
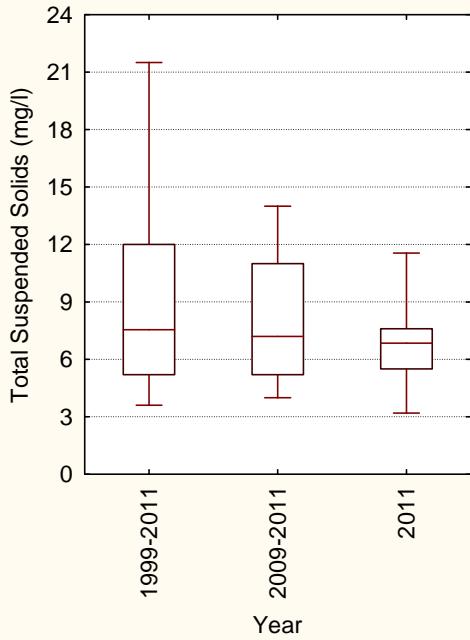
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
 Root River at National and Oklahoma Ave., Site RR-02



— Median □ 25%-75% | 10%-90%
 ---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Root River at National and Oklahoma Ave., Site RR-02



— Median □ 25%-75% □ 10%-90%

NATIONAL and OKLAHOMA, approx. 116TH STREET - SITE 2
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.2	15.5	3.4	1.70	0.36	0.030	0.40	0.435	0.95	0.117	0.045	ND
Standard Error	0.1	1.5	1.1	0.20	0.11	0.006	0.12	0.140	0.19	0.024	0.010	ND
Median	7.3	15.9	2.5	1.50	0.22	0.021	0.27	0.320	1.00	0.107	0.043	ND
Mode	7.3	ND	ND	ND	0.10	0.021	ND	ND	ND	ND	ND	ND
Standard Deviation	0.3	4.8	3.3	0.64	0.36	0.019	0.38	0.419	0.58	0.074	0.030	ND
Sample Variance	0.1	22.9	11.1	0.41	0.13	0.000	0.14	0.175	0.34	0.006	0.001	ND
Kurtosis	1.0	-1.5	-1.0	0.76	-0.47	1.113	-0.24	-0.344	-0.62	-0.232	1.260	ND
Skewness	-1.2	-0.2	0.7	1.06	1.07	1.395	1.10	0.803	-0.13	0.592	1.015	ND
Range	0.9	12.9	8.8	2.08	0.95	0.058	1.04	1.200	1.80	0.239	0.101	0.00
Minimum	6.6	9.4	0.1	0.93	0.05	0.013	0.06	0.000	0.00	0.021	0.009	0.00
Maximum	7.5	22.3	8.9	3.01	1.00	0.071	1.10	1.200	1.80	0.260	0.110	0.00
Count	10	10	10	10	10	10	10	9	9	10	10	0
Confidence Level(95.0%)	0.2	3.4	2.4	0.46	0.26	0.013	0.27	0.322	0.45	0.053	0.022	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	977.5	970.5	2.7	7.0	7.9	1828	324.6	4800	3.1	ND
Standard Error	ND	ND	163.6	163.8	0.6	1.0	1.1	301	61.8	2998	0.2	ND
Median	ND	ND	1050.0	1044.5	2.6	6.9	7.3	1980	305.0	1350	3.1	ND
Mode	ND	ND	1200.0	ND	0.0	ND	ND	1980	ND	ND	ND	ND
Standard Deviation	ND	ND	517.2	517.8	2.1	3.1	3.4	951	195.4	9479	0.7	ND
Sample Variance	ND	ND	267495.8	268157.1	4.2	9.6	11.3	905218	38184.9	89856244	0.5	ND
Kurtosis	ND	ND	-0.4	-0.4	2.0	2.4	1.2	0	-0.5	8	0.0	ND
Skewness	ND	ND	-0.4	-0.4	0.8	1.1	1.1	-1	0.1	3	0.7	ND
Range	0.0	0.0	1615.0	1619.9	7.2	11.0	11.1	2745	620.0	30800	2.2	0
Minimum	0.0	0.0	85.0	71.0	0.0	3.0	4.0	105	10.0	200	2.3	0
Maximum	0.0	0.0	1700.0	1690.9	7.2	14.0	15.1	2850	630.0	31000	4.5	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	370.0	370.4	1.5	2.2	2.4	681	139.8	6781	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

NATIONAL and OKLAHOMA, approx. 116TH STREET - SITE 2
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	82.96	38.49	0.0	1.3	9.5	2.4	5.5	19.3	0.1	0.9	0.0	ND
Standard Error	12.55	6.05	0.0	0.9	1.4	0.2	1.1	3.1	0.1	0.2	0.0	ND
Median	96.50	44.00	0.0	0.0	8.4	2.5	5.0	14.0	0.0	1.1	0.0	ND
Mode	100.00	ND	0.0	0.0	ND	2.4	ND	14.0	0.0	0.0	0.0	ND
Standard Deviation	39.68	19.14	0.0	2.8	4.2	0.7	3.2	9.7	0.2	0.7	0.0	ND
Sample Variance	1574.59	366.18	0.0	7.9	17.9	0.5	10.1	93.8	0.0	0.5	0.0	ND
Kurtosis	-0.15	-0.31	ND	3.0	-1.2	0.4	-0.5	-1.3	3.5	-1.5	ND	ND
Skewness	-0.91	-0.79	ND	2.0	0.4	-0.8	-0.4	0.6	2.1	-0.4	ND	ND
Range	121.40	59.10	0.0	7.9	12.1	2.4	9.2	27.9	0.5	1.8	0.0	0.0
Minimum	8.60	2.90	0.0	0.0	3.9	1.1	0.0	8.1	0.0	0.0	0.0	0.0
Maximum	130.00	62.00	0.0	7.9	16.0	3.5	9.2	36.0	0.5	1.8	0.0	0.0
Count	10	10	10	10	9	10	8	10	10	10	10	0
Confidence Level(95.0%)	28.39	13.69	0.0	2.0	3.3	0.5	2.7	6.9	0.1	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	367	243	2.4	9.6	64.9	58.9	6.1	5.8
Standard Error	57	39	0.9	1.3	8.9	8.8	0.7	0.6
Median	425	275	2.6	9.4	72.5	67.5	5.8	5.4
Mode	450	ND	0.0	11.0	ND	82.0	ND	5.7
Standard Deviation	179	123	2.8	4.1	28.0	27.9	2.1	2.0
Sample Variance	32133	15157	7.6	16.8	785.9	780.4	4.3	3.8
Kurtosis	0	0	3.4	-0.5	-0.1	-0.6	0.6	1.9
Skewness	-1	-1	1.6	0.3	-0.9	-0.8	0.2	0.9
Range	547	370	9.0	13.3	85.0	81.2	7.5	7.3
Minimum	33	0	0.0	3.7	10.0	7.8	2.5	2.7
Maximum	580	370	9.0	17.0	95.0	89.0	10.0	10.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	128	88	2.0	2.9	20.1	20.0	1.5	1.4

ND = No Data

Provisional MMSD Water Quality Data

COLDSPRING ROAD, EAST OF 108TH STREET - SITE 3
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.4	15.3	5.6	2.96	0.33	0.039	0.37	0.129	0.73	0.117	0.057	ND
Standard Error	0.1	1.6	1.0	0.59	0.06	0.008	0.07	0.041	0.13	0.018	0.013	ND
Median	7.4	15.6	4.4	2.59	0.31	0.027	0.37	0.116	0.73	0.135	0.058	ND
Mode	7.6	ND	ND	ND	ND	0.020	ND	0.000	ND	0.160	ND	ND
Standard Deviation	0.3	5.1	3.2	1.86	0.20	0.024	0.21	0.128	0.41	0.057	0.040	ND
Sample Variance	0.1	25.7	10.3	3.45	0.04	0.001	0.04	0.016	0.16	0.003	0.002	ND
Kurtosis	0.7	-1.3	-0.3	-1.42	0.24	-1.772	0.34	0.856	1.04	-0.694	-0.333	ND
Skewness	-1.0	0.0	1.0	0.39	0.60	0.541	0.46	0.976	0.20	-0.750	0.257	ND
Range	0.9	14.3	9.3	5.23	0.66	0.059	0.71	0.400	1.50	0.173	0.130	0.00
Minimum	6.8	8.6	2.3	0.79	0.03	0.014	0.05	0.000	0.00	0.017	0.000	0.00
Maximum	7.7	22.9	11.6	6.02	0.69	0.073	0.76	0.400	1.50	0.190	0.130	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	3.6	2.3	1.33	0.14	0.018	0.15	0.092	0.29	0.041	0.028	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	755.0	743.9	2.3	11.1	11.4	1338	218.7	3037	2.9	ND
Standard Error	ND	ND	93.7	97.9	1.2	6.4	3.6	176	25.9	1712	0.2	ND
Median	ND	ND	815.0	809.7	1.5	5.1	8.3	1460	245.0	805	2.9	ND
Mode	ND	ND	ND	ND	0.0	ND	ND	ND	260.0	880	2.9	ND
Standard Deviation	ND	ND	296.4	309.5	3.9	20.2	11.4	558	82.0	5414	0.8	ND
Sample Variance	ND	ND	87850.0	95762.1	14.9	409.7	131.1	311136	6730.2	29312945	0.6	ND
Kurtosis	ND	ND	-0.2	0.2	8.5	9.3	8.1	0	1.7	3	-0.1	ND
Skewness	ND	ND	-0.5	-0.6	2.8	3.0	2.8	-1	-1.3	2	0.4	ND
Range	0.0	0.0	990.0	1051.4	13.0	68.0	38.9	1726	283.0	15955	2.6	0
Minimum	0.0	0.0	210.0	142.0	0.0	0.0	3.9	274	37.0	45	1.7	0
Maximum	0.0	0.0	1200.0	1193.4	13.0	68.0	42.8	2000	320.0	16000	4.2	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	212.0	221.4	2.8	14.5	8.2	399	58.7	3873	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

COLDSPRING ROAD, EAST OF 108TH STREET - SITE 3
ROOT RIVER
WATER QUALITY DATA - 2011

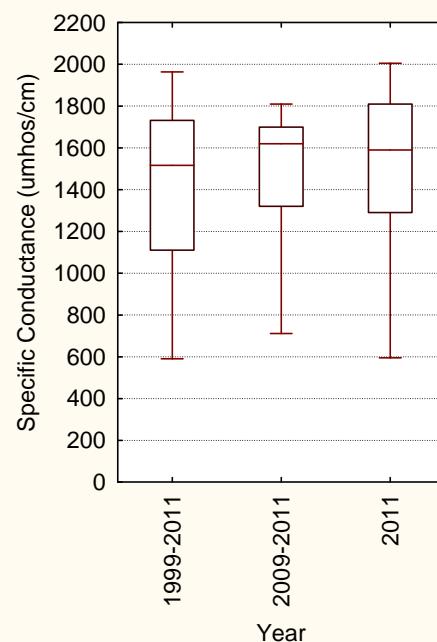
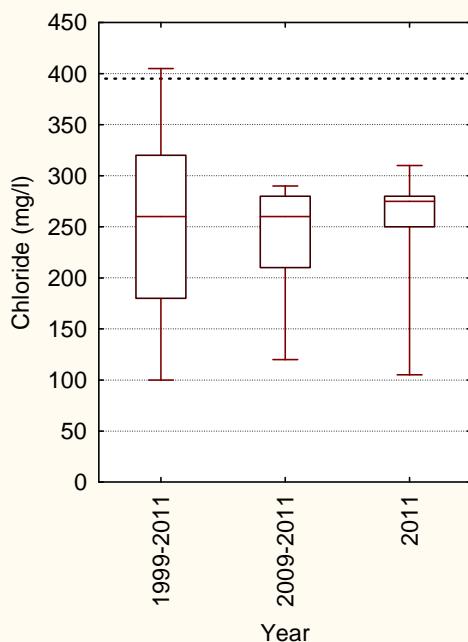
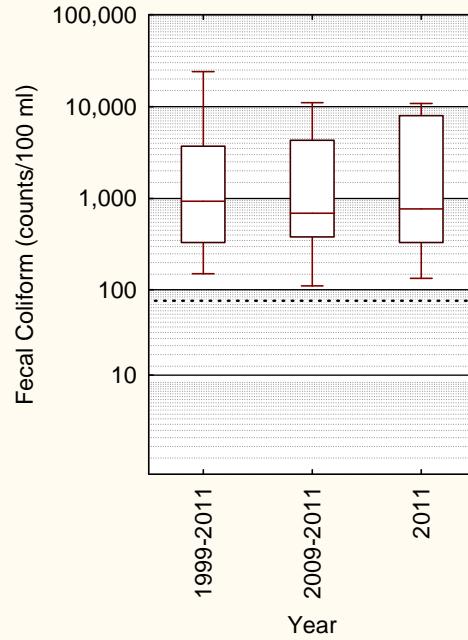
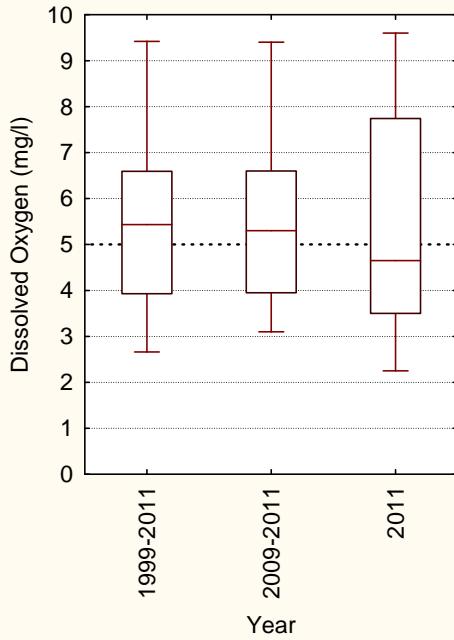
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	75.50	35.92	0.0	1.6	9.3	2.5	4.5	18.0	0.4	1.7	0.0	ND
Standard Error	9.53	4.56	0.0	1.0	1.2	0.2	1.0	4.3	0.2	0.3	0.0	ND
Median	85.00	39.50	0.0	0.0	8.6	2.6	4.5	12.5	0.2	2.0	0.0	ND
Mode	98.00	46.00	0.0	0.0	13.0	ND	ND	ND	0.0	0.0	0.0	ND
Standard Deviation	30.15	14.42	0.0	3.3	3.6	0.6	2.7	13.6	0.6	1.0	0.0	ND
Sample Variance	908.72	207.98	0.0	11.0	13.1	0.4	7.2	186.1	0.3	1.0	0.0	ND
Kurtosis	-0.28	-0.18	ND	1.8	-1.8	0.0	0.4	4.3	2.0	0.1	ND	ND
Skewness	-0.85	-0.69	ND	1.8	0.0	0.3	-0.3	2.0	1.5	-0.9	ND	ND
Range	92.00	46.80	0.0	8.6	9.4	2.1	8.3	44.7	1.7	3.0	0.0	0.0
Minimum	18.00	8.20	0.0	0.0	4.6	1.6	0.0	7.3	0.0	0.0	0.0	0.0
Maximum	110.00	55.00	0.0	8.6	14.0	3.7	8.3	52.0	1.7	3.0	0.0	0.0
Count	10	10	9	10	9	10	7	10	10	10	10	0
Confidence Level(95.0%)	21.56	10.32	0.0	2.4	2.8	0.4	2.5	9.8	0.4	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	337	240	1.4	7.1	64.7	58.1	6.6	6.3
Standard Error	42	31	0.9	1.2	6.9	7.1	0.7	0.6
Median	375	260	0.0	6.2	69.0	63.0	6.2	5.8
Mode	ND	260	0.0	ND	69.0	63.0	ND	5.3
Standard Deviation	134	99	2.7	3.8	21.8	22.3	2.1	1.8
Sample Variance	17912	9839	7.3	14.1	477.3	498.3	4.6	3.3
Kurtosis	0	0	5.0	6.5	0.8	0.2	4.8	6.2
Skewness	-1	-1	2.2	2.4	-0.9	-0.8	1.9	2.3
Range	420	313	8.3	13.3	73.0	72.0	7.8	6.4
Minimum	80	47	0.0	3.7	19.0	14.0	4.2	4.6
Maximum	500	360	8.3	17.0	92.0	86.0	12.0	11.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	96	71	1.9	2.7	15.6	16.0	1.5	1.3

ND = No Data

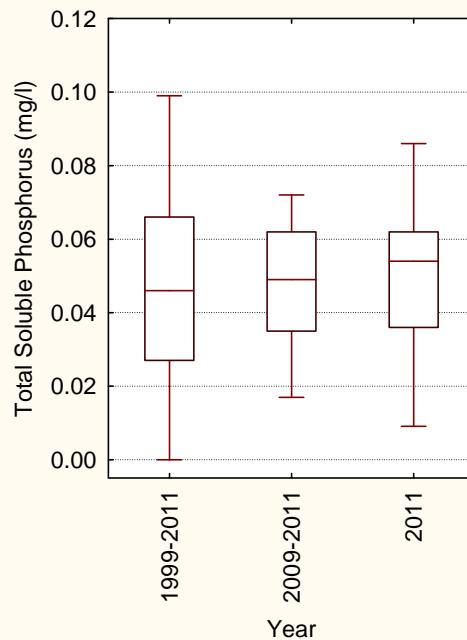
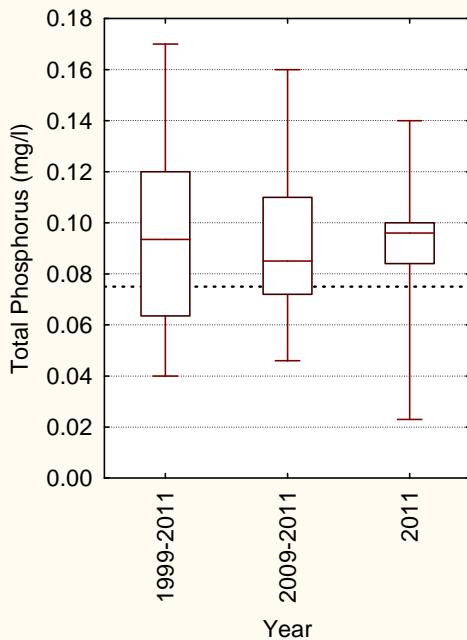
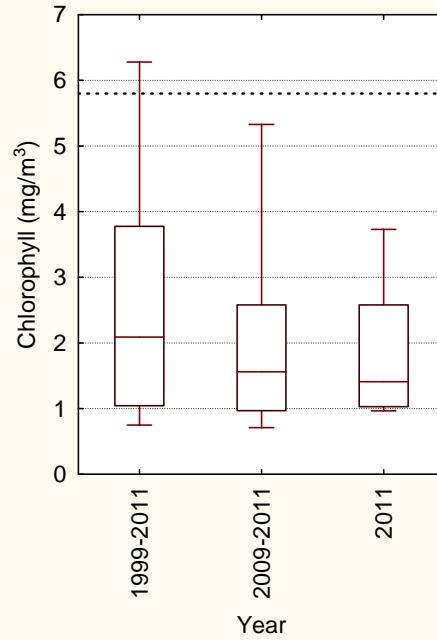
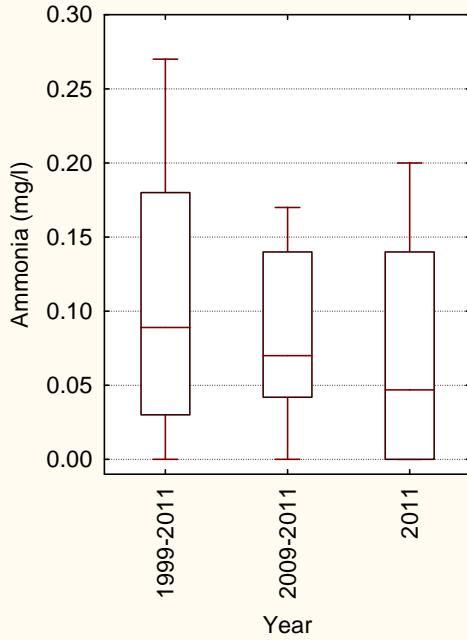
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Root River at Grange Ave., Site RR-04



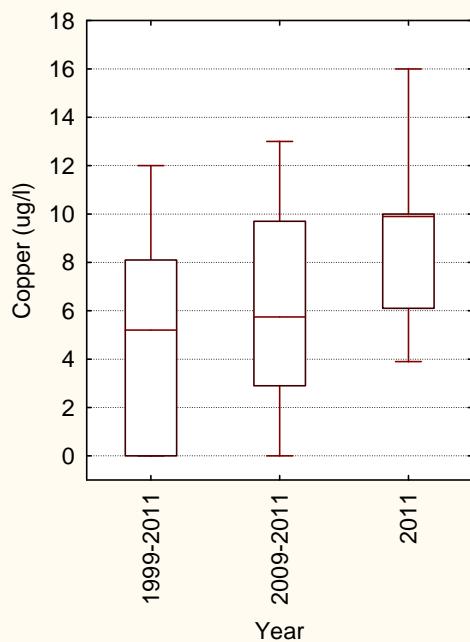
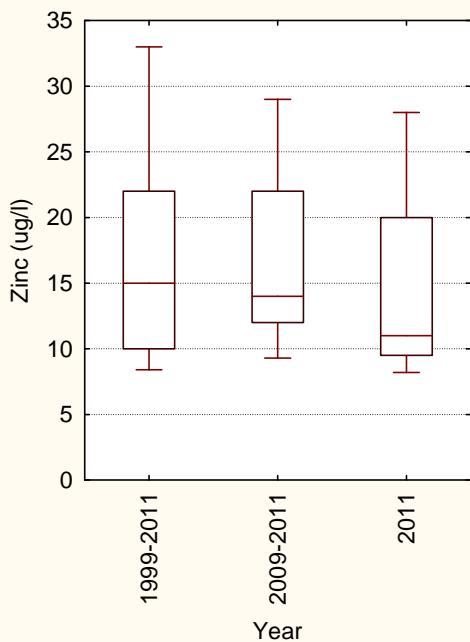
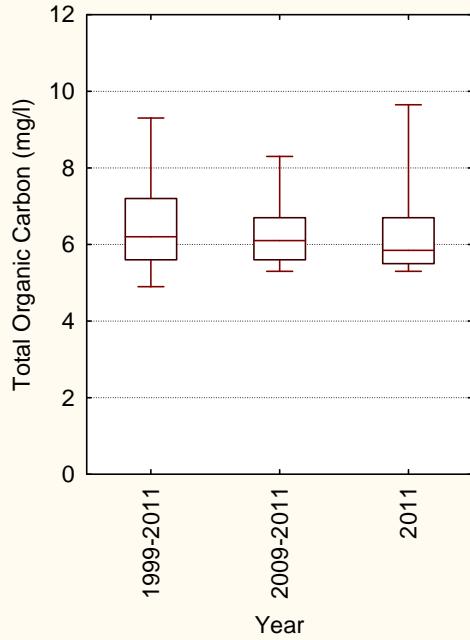
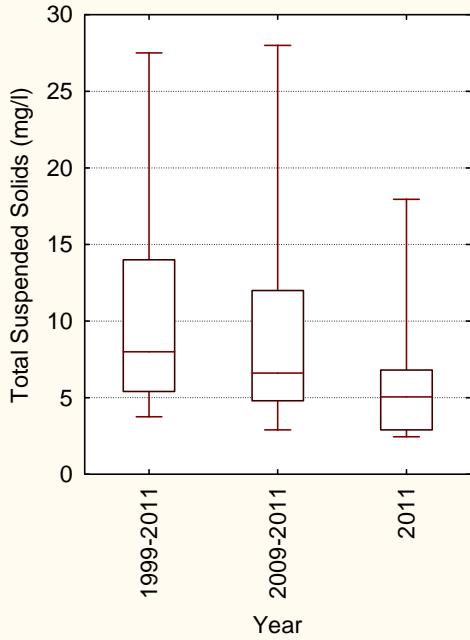
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Root River at Grange Ave., Site RR-04



— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Root River at Grange Ave., Site RR-04



— Median □ 25%-75% ━ 10%-90%

GRANGE AVENUE, WEST OF 76TH STREET - SITE 4
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.4	15.2	5.4	1.94	0.48	0.040	0.52	0.072	0.57	0.089	0.050	ND
Standard Error	0.1	1.7	0.9	0.35	0.07	0.010	0.08	0.026	0.08	0.013	0.009	ND
Median	7.5	15.2	4.7	1.41	0.46	0.026	0.50	0.047	0.59	0.096	0.054	ND
Mode	7.6	ND	9.6	ND	ND	ND	0.38	0.000	0.75	0.100	0.062	ND
Standard Deviation	0.3	5.2	2.8	1.10	0.23	0.032	0.24	0.084	0.26	0.041	0.029	ND
Sample Variance	0.1	27.5	7.8	1.20	0.05	0.001	0.06	0.007	0.07	0.002	0.001	ND
Kurtosis	0.6	-1.4	-1.1	-0.71	0.61	-0.379	0.99	0.110	2.37	0.725	1.321	ND
Skewness	-1.2	-0.1	0.6	0.91	0.64	0.776	0.52	1.020	-0.88	-0.416	0.406	ND
Range	0.8	14.3	7.4	2.87	0.78	0.100	0.86	0.240	0.98	0.142	0.102	0.00
Minimum	6.9	8.5	2.2	0.96	0.12	0.000	0.12	0.000	0.00	0.018	0.008	0.00
Maximum	7.7	22.7	9.6	3.83	0.90	0.100	0.98	0.240	0.98	0.160	0.110	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	3.7	2.0	0.78	0.16	0.023	0.17	0.060	0.18	0.029	0.021	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	820.0	812.9	2.3	7.1	8.1	1470	245.0	3312	3.0	ND
Standard Error	ND	ND	86.4	87.9	0.7	2.4	1.8	166	24.6	1464	0.2	ND
Median	ND	ND	935.0	930.2	1.6	5.1	7.0	1590	275.0	770	2.9	ND
Mode	ND	ND	1000.0	ND	1.6	ND	ND	ND	280.0	ND	ND	ND
Standard Deviation	ND	ND	273.4	278.0	2.2	7.6	5.5	526	77.6	4631	0.8	ND
Sample Variance	ND	ND	74733.3	77301.2	5.0	57.4	30.6	276405	6027.8	21445611	0.6	ND
Kurtosis	ND	ND	0.5	0.6	5.9	8.3	8.1	0	1.5	0	-1.2	ND
Skewness	ND	ND	-1.2	-1.3	2.3	2.8	2.7	-1	-1.5	1	0.4	ND
Range	0.0	0.0	820.0	843.9	8.1	25.9	19.4	1712	250.0	11913	2.1	0
Minimum	0.0	0.0	280.0	252.0	0.0	2.1	3.9	478	80.0	87	1.9	0
Maximum	0.0	0.0	1100.0	1095.9	8.1	28.0	23.3	2190	330.0	12000	4.1	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	195.6	198.9	1.6	5.4	4.0	376	55.5	3313	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

GRANGE AVENUE, WEST OF 76TH STREET - SITE 4
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	76.80	37.90	0.0	0.7	9.0	2.4	4.1	14.7	0.2	1.2	0.0	ND
Standard Error	8.08	4.02	0.0	0.7	1.3	0.2	0.8	2.6	0.1	0.3	0.0	ND
Median	89.50	43.50	0.0	0.0	9.9	2.5	3.9	11.0	0.0	1.4	0.0	ND
Mode	92.00	ND	0.0	0.0	10.0	2.7	ND	10.0	0.0	0.0	0.0	ND
Standard Deviation	25.55	12.71	0.0	2.3	3.8	0.5	2.4	8.3	0.4	1.0	0.0	ND
Sample Variance	652.84	161.43	0.0	5.2	14.8	0.3	5.8	69.1	0.2	1.0	0.0	ND
Kurtosis	0.55	0.97	ND	10.0	-0.3	1.0	0.0	2.4	3.6	-1.1	ND	ND
Skewness	-1.32	-1.30	ND	3.2	0.6	0.1	-0.2	1.6	1.9	0.1	ND	ND
Range	74.00	39.00	0.0	7.2	12.1	1.9	7.5	26.9	1.2	2.8	0.0	0.0
Minimum	26.00	11.00	0.0	0.0	3.9	1.5	0.0	7.1	0.0	0.0	0.0	0.0
Maximum	100.00	50.00	0.0	7.2	16.0	3.4	7.5	34.0	1.2	2.8	0.0	0.0
Count	10	10	10	10	9	10	8	10	10	10	10	0
Confidence Level(95.0%)	18.28	9.09	0.0	1.6	3.0	0.4	2.0	5.9	0.3	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	348	254	1.1	6.3	66.2	59.5	6.6	6.3
Standard Error	36	26	0.6	0.7	5.8	5.9	0.6	0.5
Median	405	270	0.0	5.4	71.0	64.0	5.9	5.9
Mode	420	260	0.0	10.0	71.0	76.0	5.6	5.2
Standard Deviation	115	81	1.8	2.3	18.4	18.7	1.8	1.6
Sample Variance	13240	6521	3.4	5.5	339.5	350.5	3.2	2.4
Kurtosis	1	1	-0.7	-0.8	0.5	0.1	4.0	3.4
Skewness	-1	-1	1.2	0.8	-1.2	-1.0	2.0	1.9
Range	340	259	4.4	6.6	54.0	54.0	5.7	4.9
Minimum	110	81	0.0	3.4	28.0	22.0	5.3	5.1
Maximum	450	340	4.4	10.0	82.0	76.0	11.0	10.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	82	58	1.3	1.7	13.2	13.4	1.3	1.1

ND = No Data

Provisional MMSD Water Quality Data

RYAN ROAD, WEST OF 60TH STREET - SITE 5
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.7	16.7	7.6	7.84	0.35	0.022	0.37	0.033	0.44	0.074	0.041	ND
Standard Error	0.1	1.8	0.6	0.81	0.06	0.007	0.07	0.017	0.11	0.009	0.007	ND
Median	7.8	17.3	7.3	7.64	0.38	0.013	0.39	0.000	0.48	0.085	0.046	ND
Mode	7.8	ND	ND	ND	ND	ND	0.39	0.000	0.00	ND	0.045	ND
Standard Deviation	0.3	5.8	1.9	2.56	0.20	0.022	0.22	0.055	0.34	0.030	0.022	ND
Sample Variance	0.1	33.5	3.6	6.53	0.04	0.001	0.05	0.003	0.12	0.001	0.000	ND
Kurtosis	0.4	-1.3	-0.3	-0.82	1.49	1.554	1.39	4.550	-1.45	-0.743	0.265	ND
Skewness	-1.2	0.0	0.8	0.39	0.80	1.569	0.78	2.061	-0.31	-0.754	-0.734	ND
Range	0.9	16.9	5.4	7.34	0.71	0.070	0.76	0.170	0.89	0.088	0.073	0.00
Minimum	7.2	8.5	5.4	4.66	0.07	0.000	0.07	0.000	0.00	0.022	0.000	0.00
Maximum	8.1	25.4	10.8	12.00	0.78	0.070	0.83	0.170	0.89	0.110	0.073	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	4.1	1.4	1.83	0.14	0.016	0.15	0.039	0.24	0.021	0.016	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	630.0	618.4	2.5	11.6	11.6	1074	155.0	1166	2.5	ND
Standard Error	ND	ND	45.7	47.7	0.6	3.0	2.8	82	13.2	916	0.2	ND
Median	ND	ND	655.0	646.3	2.0	7.7	7.7	1135	170.0	255	2.4	ND
Mode	ND	ND	ND	ND	ND	ND	ND	ND	190.0	270	2.4	ND
Standard Deviation	ND	ND	144.6	150.9	1.9	9.4	9.0	261	41.7	2897	0.6	ND
Sample Variance	ND	ND	20911.1	22779.0	3.6	88.5	81.0	67894	1738.9	8390326	0.4	ND
Kurtosis	ND	ND	1.7	2.1	3.6	3.2	3.7	2	-0.7	10	4.2	ND
Skewness	ND	ND	-1.2	-1.3	1.6	1.8	1.9	-1	-0.8	3	1.6	ND
Range	0.0	0.0	490.0	516.5	7.1	30.1	29.2	969	120.0	9353	2.3	0
Minimum	0.0	0.0	310.0	276.0	0.0	3.9	4.3	501	80.0	47	1.7	0
Maximum	0.0	0.0	800.0	792.5	7.1	34.0	33.5	1470	200.0	9400	4.0	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	103.4	108.0	1.4	6.7	6.4	186	29.8	2072	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

RYAN ROAD, WEST OF 60TH STREET - SITE 5
 ROOT RIVER
 WATER QUALITY DATA - 2011

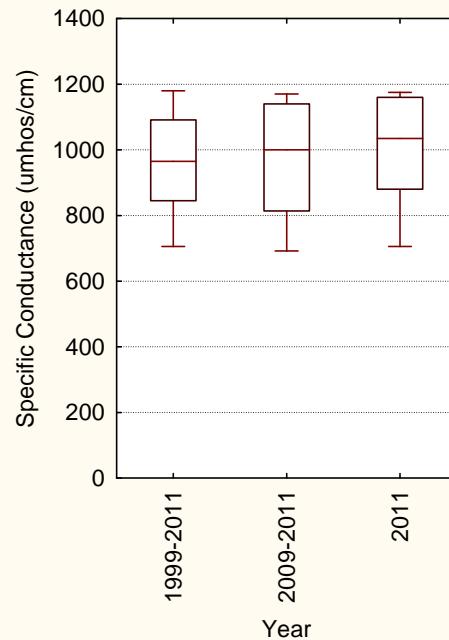
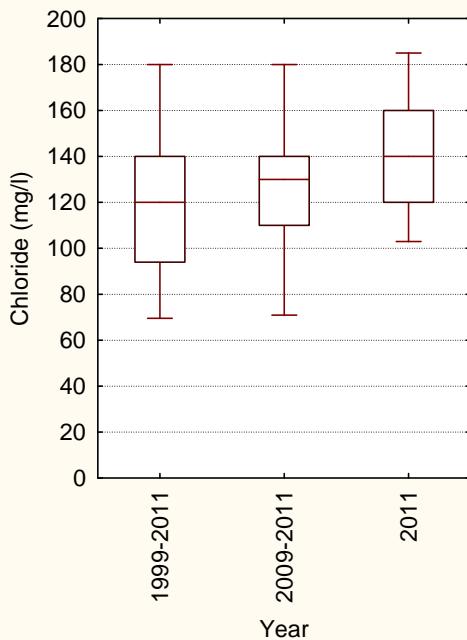
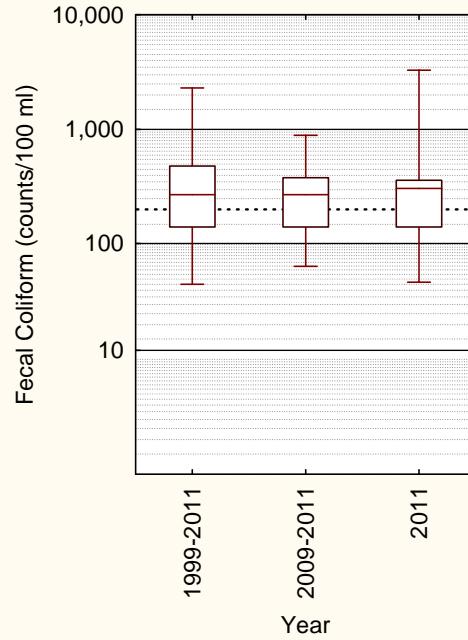
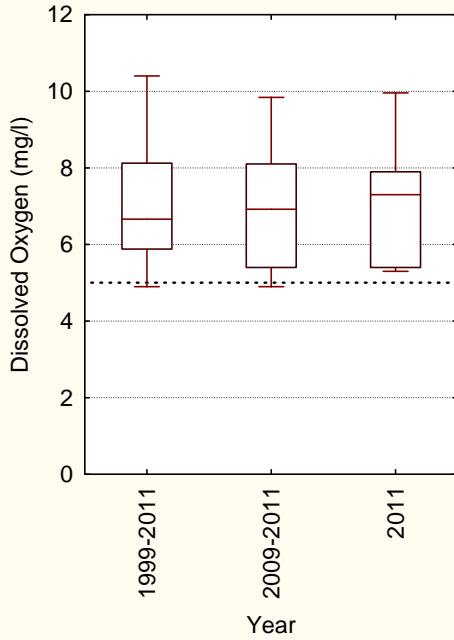
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	68.10	38.30	0.0	0.7	7.1	2.7	4.2	10.3	0.2	1.2	0.0	ND
Standard Error	5.48	3.84	0.0	0.7	0.7	0.3	1.3	1.7	0.1	0.2	0.0	ND
Median	71.00	38.00	0.0	0.0	7.3	2.6	4.1	8.0	0.2	1.3	0.0	ND
Mode	80.00	38.00	0.0	0.0	7.3	2.6	ND	20.0	0.0	0.0	0.0	ND
Standard Deviation	17.34	12.15	0.0	2.3	2.2	0.8	3.2	5.3	0.3	0.7	0.0	ND
Sample Variance	300.54	147.57	0.0	5.3	5.0	0.7	10.5	28.2	0.1	0.5	0.0	ND
Kurtosis	2.46	1.99	ND	10.0	-0.6	1.9	0.7	0.8	-1.0	-0.1	ND	ND
Skewness	-1.47	0.14	ND	3.2	-0.6	1.0	0.6	1.5	0.7	-0.8	ND	ND
Range	57.00	47.00	0.0	7.3	6.8	2.8	9.5	14.2	0.7	2.0	0.0	0.0
Minimum	28.00	15.00	0.0	0.0	3.2	1.7	0.0	5.8	0.0	0.0	0.0	0.0
Maximum	85.00	62.00	0.0	7.3	10.0	4.5	9.5	20.0	0.7	2.0	0.0	0.0
Count	10	10	10	10	9	10	6	10	10	10	10	0
Confidence Level(95.0%)	12.40	8.69	0.0	1.7	1.7	0.6	3.4	3.8	0.2	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	329	224	0.5	5.6	59.8	54.5	5.3	5.1
Standard Error	29	18	0.3	0.4	4.1	4.0	0.4	0.3
Median	330	240	0.0	5.6	64.5	59.5	5.4	5.3
Mode	330	270	0.0	4.6	66.0	60.0	ND	5.3
Standard Deviation	91	57	1.1	1.1	13.1	12.7	1.1	1.1
Sample Variance	8343	3220	1.2	1.3	171.5	161.2	1.3	1.1
Kurtosis	2	3	1.9	0.7	2.3	2.7	0.9	1.0
Skewness	-1	-2	1.9	0.6	-1.7	-1.7	-0.4	-0.8
Range	340	192	2.9	4.0	41.0	41.0	4.1	3.7
Minimum	130	88	0.0	3.9	30.0	25.0	3.1	3.0
Maximum	470	280	2.9	7.9	71.0	66.0	7.2	6.7
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	65	41	0.8	0.8	9.4	9.1	0.8	0.8

ND = No Data

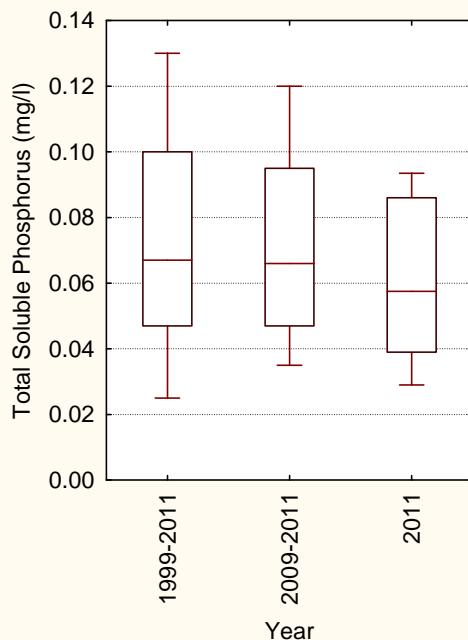
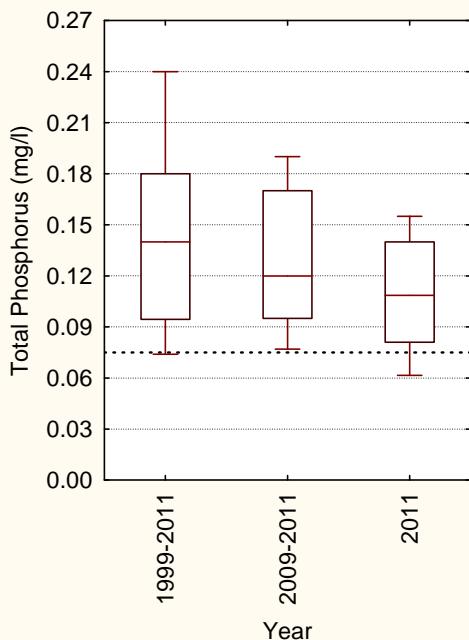
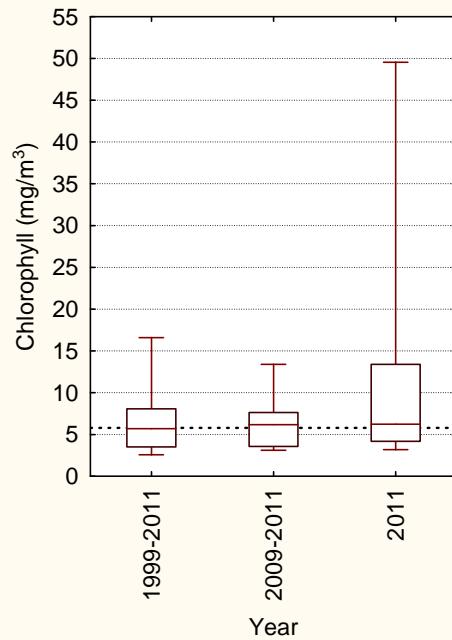
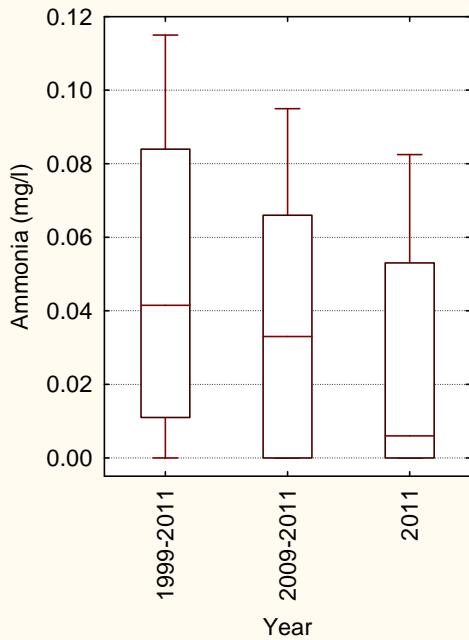
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Root River at County Line Rd., Site RR-06



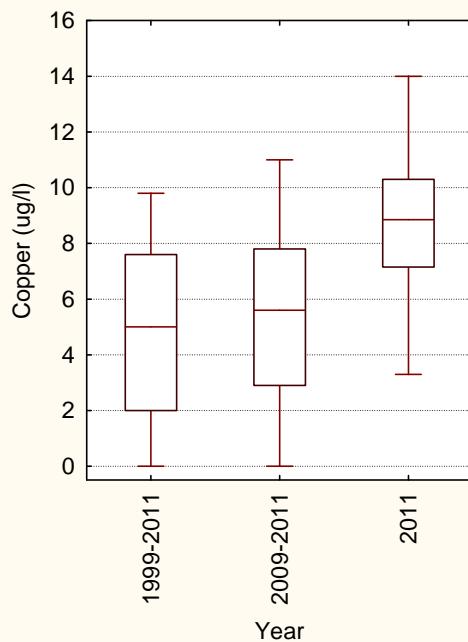
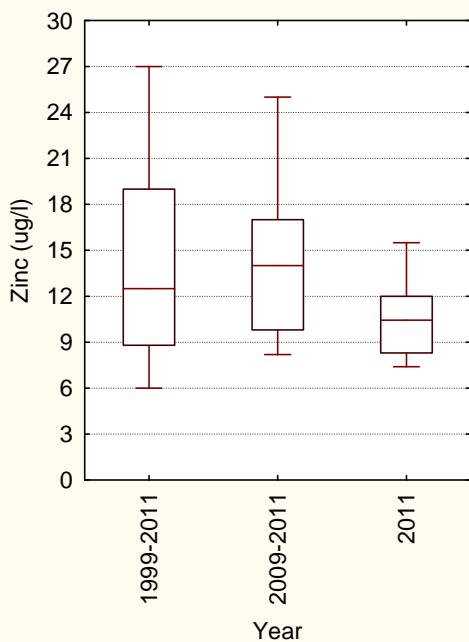
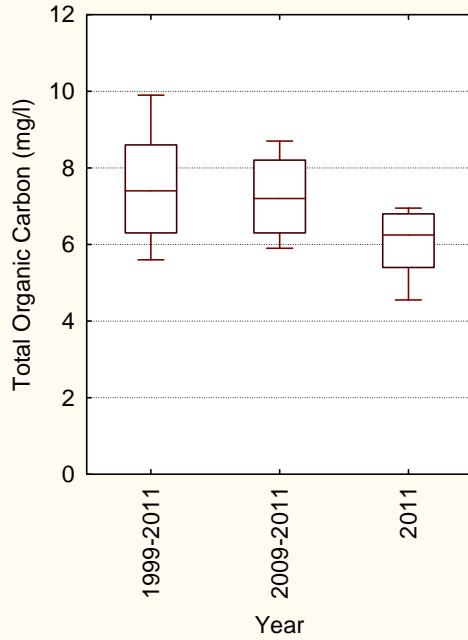
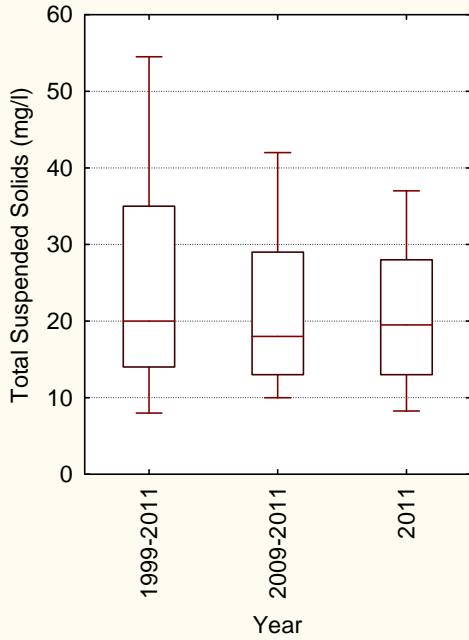
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Root River at County Line Rd., Site RR-06



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Root River at County Line Rd., Site RR-06



— Median □ 25%-75% ┌ 10%-90%

COUNTY LINE ROAD (8 MILE ROAD), approx. 47TH STREET - SITE 6
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	SU	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.8	16.8	7.3	14.96	0.91	0.023	0.94	0.026	0.65	0.110	0.060	ND
Standard Error	0.1	1.9	0.5	7.66	0.27	0.006	0.28	0.011	0.06	0.012	0.008	ND
Median	7.8	17.0	7.3	6.22	0.64	0.018	0.66	0.006	0.70	0.109	0.058	ND
Mode	7.8	ND	5.4	ND	ND	0.013	ND	0.000	0.50	0.140	ND	ND
Standard Deviation	0.3	6.0	1.7	24.22	0.86	0.018	0.88	0.035	0.19	0.037	0.025	ND
Sample Variance	0.1	35.6	3.0	586.62	0.74	0.000	0.78	0.001	0.04	0.001	0.001	ND
Kurtosis	0.1	-1.2	-0.7	9.07	-1.20	1.451	-1.09	-0.694	-1.49	-0.640	-0.956	ND
Skewness	-0.7	0.1	0.4	2.97	0.60	1.463	0.63	0.971	-0.20	-0.020	0.269	ND
Range	1.0	17.6	5.0	79.68	2.34	0.055	2.43	0.088	0.55	0.121	0.077	0.00
Minimum	7.2	8.7	5.2	3.02	0.06	0.007	0.07	0.000	0.37	0.049	0.023	0.00
Maximum	8.2	26.2	10.2	82.70	2.40	0.062	2.50	0.088	0.92	0.170	0.100	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	4.3	1.2	17.33	0.62	0.013	0.63	0.025	0.14	0.026	0.018	ND

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	ND	ND	593.0	572.4	4.2	20.7	20.1	1000	142.6	839	2.4	ND
Standard Error	ND	ND	33.9	36.1	0.8	3.6	3.6	60	9.5	597	0.2	ND
Median	ND	ND	605.0	587.5	3.8	19.5	20.2	1035	140.0	305	2.5	ND
Mode	ND	ND	ND	ND	ND	13.0	ND	ND	160.0	45	1.7	ND
Standard Deviation	ND	ND	107.1	114.3	2.7	11.3	11.3	189	30.1	1888	0.6	ND
Sample Variance	ND	ND	11467.8	13065.1	7.0	127.4	128.3	35673	907.6	3563982	0.4	ND
Kurtosis	ND	ND	-0.2	0.2	2.2	1.1	1.6	1	-0.8	10	2.9	ND
Skewness	ND	ND	-0.5	-0.6	0.9	0.7	1.1	-1	0.1	3	1.0	ND
Range	0.0	0.0	340.0	371.0	10.0	40.5	37.8	583	94.0	6155	2.1	0
Minimum	0.0	0.0	390.0	346.0	0.0	3.5	7.3	597	96.0	45	1.7	0
Maximum	0.0	0.0	730.0	717.0	10.0	44.0	45.1	1180	190.0	6200	3.8	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	76.6	81.8	1.9	8.1	8.1	135	21.6	1350	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

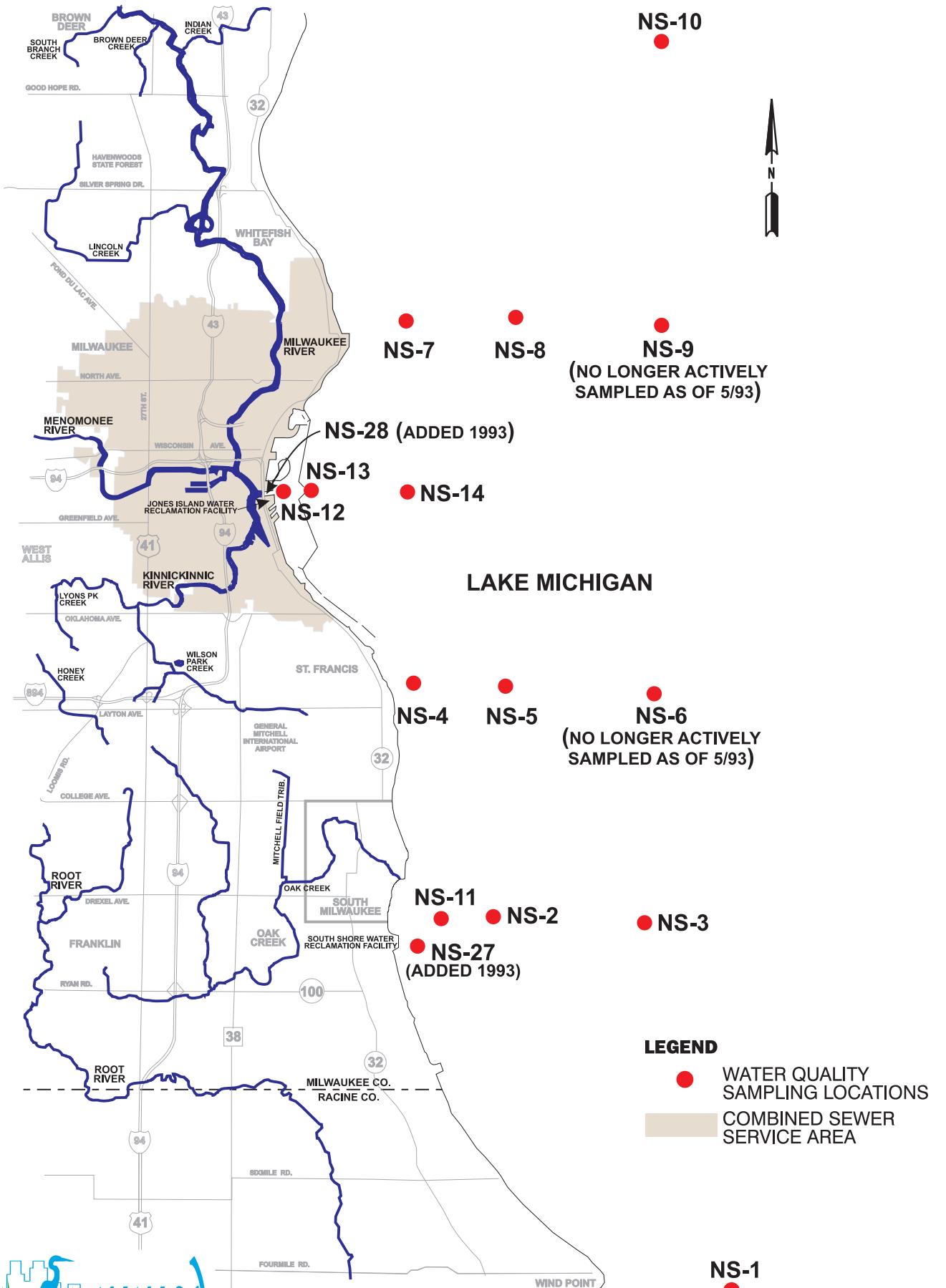
COUNTY LINE ROAD (8 MILE ROAD), approx. 47TH STREET - SITE 6
 ROOT RIVER
 WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	67.60	36.70	0.0	1.3	8.7	3.2	5.7	10.7	0.1	0.9	0.0	ND
Standard Error	4.83	2.89	0.0	0.8	1.1	0.2	1.0	0.9	0.1	0.3	0.0	ND
Median	72.00	36.00	0.0	0.0	8.9	3.3	6.5	10.5	0.0	0.9	0.0	ND
Mode	ND	36.00	0.0	0.0	8.7	2.7	ND	11.0	0.0	0.0	0.0	ND
Standard Deviation	15.26	9.14	0.0	2.7	3.2	0.6	3.0	3.0	0.2	0.9	0.0	ND
Sample Variance	232.93	83.57	0.0	7.2	10.4	0.4	9.2	9.0	0.0	0.9	0.0	ND
Kurtosis	2.00	2.52	ND	2.0	0.7	-0.8	0.1	-0.3	10.0	-1.1	ND	ND
Skewness	-1.45	-1.04	ND	1.9	-0.2	-0.2	-0.7	0.7	3.2	0.5	ND	ND
Range	50.00	33.00	0.0	7.1	10.7	2.0	9.7	9.4	0.7	2.5	0.0	0.0
Minimum	33.00	16.00	0.0	0.0	3.3	2.1	0.0	6.6	0.0	0.0	0.0	0.0
Maximum	83.00	49.00	0.0	7.1	14.0	4.1	9.7	16.0	0.7	2.5	0.0	0.0
Count	10	10	10	10	8	10	9	10	10	10	10	0
Confidence Level(95.0%)	10.92	6.54	0.0	1.9	2.7	0.5	2.3	2.1	0.2	0.7	0.0	ND

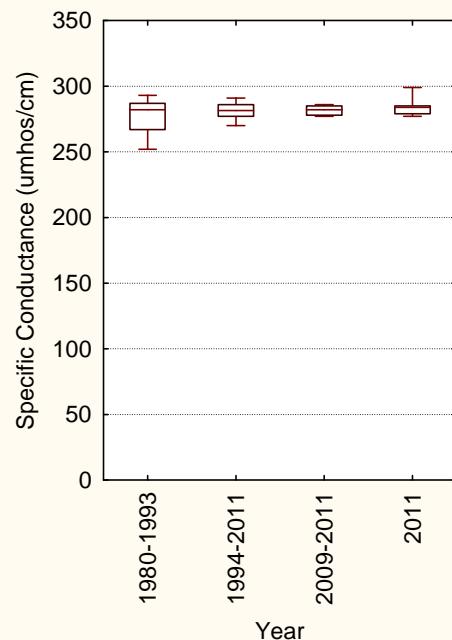
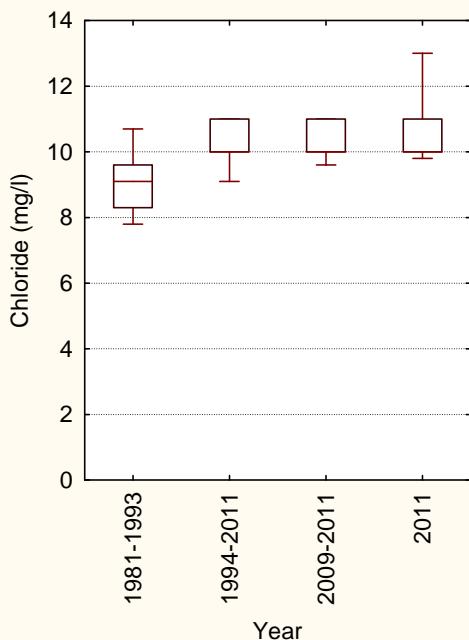
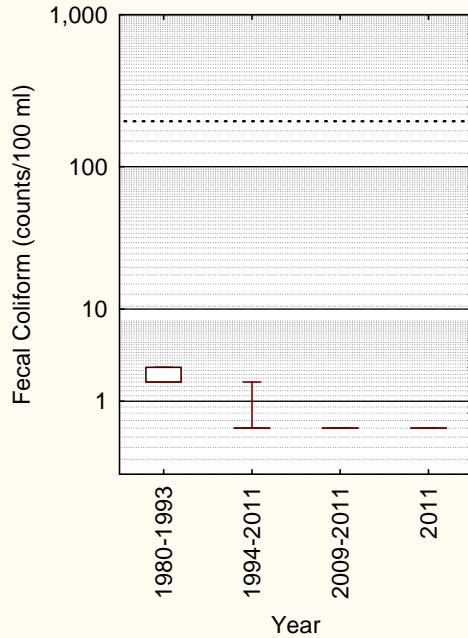
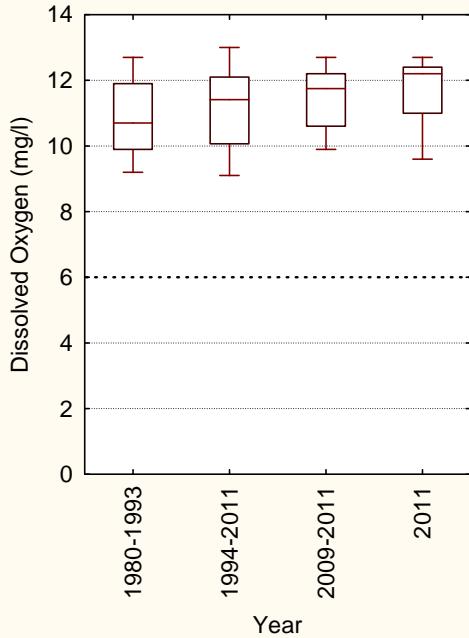
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	321	224	1.4	6.2	59.4	53.5	6.1	5.7
Standard Error	23	18	0.4	0.6	4.2	4.0	0.3	0.2
Median	325	230	2.1	5.8	64.0	57.5	6.3	6.0
Mode	320	230	0.0	ND	64.0	61.0	6.2	4.5
Standard Deviation	73	56	1.3	1.8	13.4	12.6	0.9	0.8
Sample Variance	5299	3087	1.6	3.1	178.7	159.4	0.8	0.6
Kurtosis	3	3	-2.1	0.7	1.1	1.0	-0.6	-1.0
Skewness	-1	-1	-0.3	1.2	-1.2	-1.1	-0.9	-0.6
Range	250	206	3.0	5.6	45.0	43.0	2.5	2.2
Minimum	150	94	0.0	4.1	31.0	27.0	4.5	4.5
Maximum	400	300	3.0	9.7	76.0	70.0	7.0	6.7
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	52	40	0.9	1.3	9.6	9.0	0.7	0.6

ND = No Data

Provisional MMSD Water Quality Data

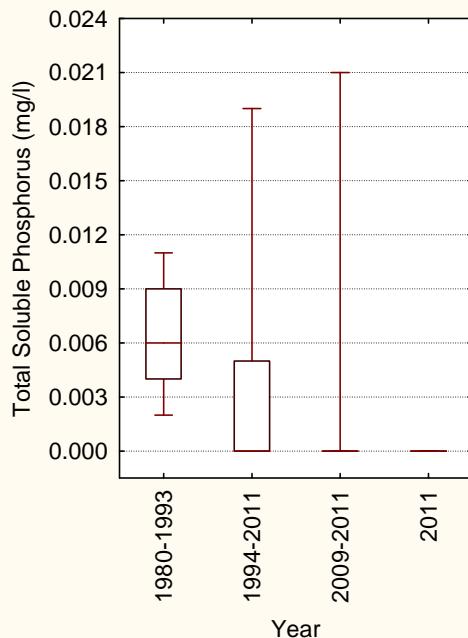
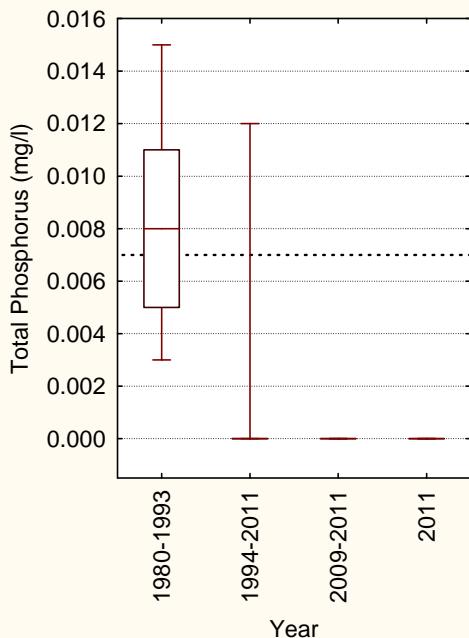
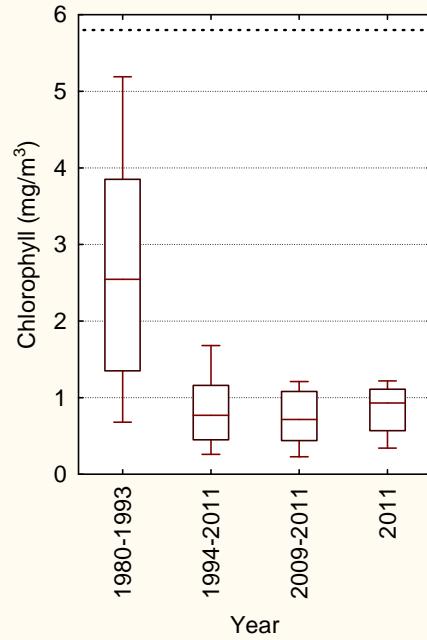
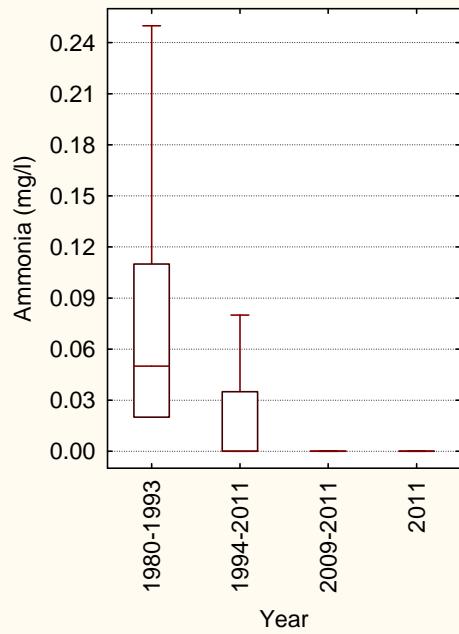


MMSD Water Quality Program Data
Nearshore survey, Site NS-01



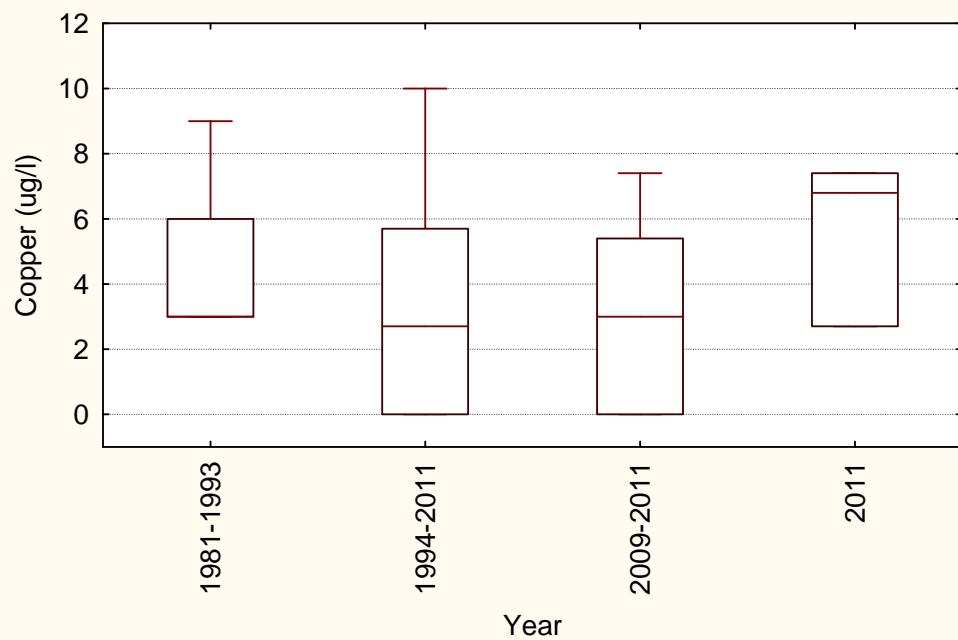
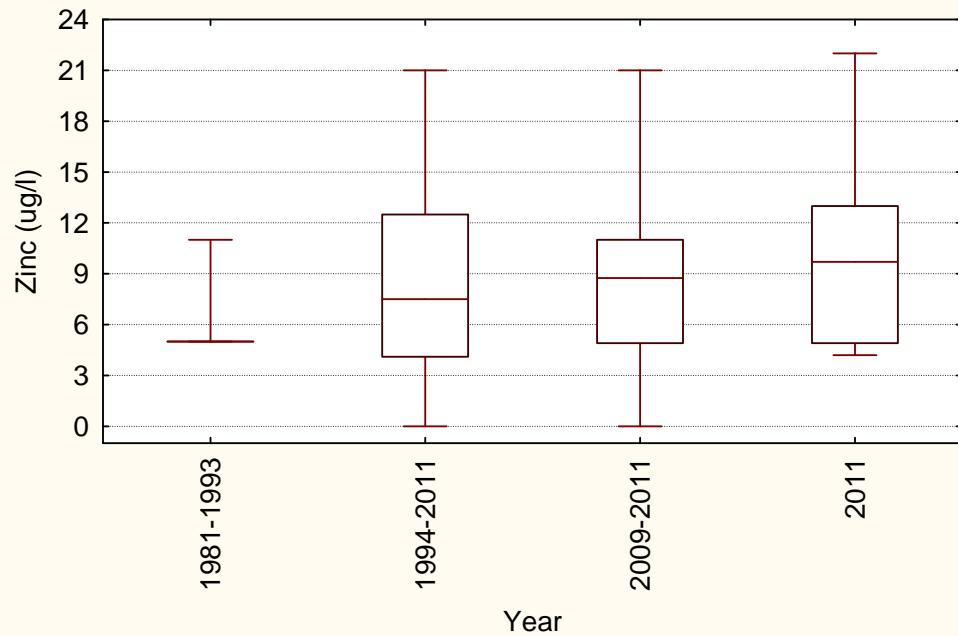
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-01



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-01



— Median □ 25%-75% █ 10%-90%

NEAR SHORE - SITE 1
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	9.4	11.6	0.85	0.30	0.002	0.31	0.000	0.04	0.000	0.001	1.80
Standard Error	0.0	1.2	0.3	0.08	0.01	0.000	0.01	0.000	0.03	0.000	0.001	0.08
Median	8.0	7.8	12.2	0.93	0.28	0.003	0.28	0.000	0.00	0.000	0.000	1.90
Mode	8.0	14.8	12.2	1.11	0.25	0.000	0.26	0.000	0.00	0.000	0.000	1.50
Standard Deviation	0.2	5.4	1.2	0.39	0.06	0.001	0.06	0.000	0.13	0.000	0.002	0.38
Sample Variance	0.0	29.3	1.5	0.15	0.00	0.000	0.00	0.000	0.02	0.000	0.000	0.14
Kurtosis	0.5	0.4	-0.5	-0.61	0.08	-0.068	0.18	ND	8.21	ND	20.000	-1.35
Skewness	0.2	1.0	-1.0	-0.13	1.06	-0.832	1.13	ND	3.04	ND	4.472	-0.14
Range	0.7	19.4	3.8	1.43	0.19	0.005	0.18	0.000	0.46	0.000	0.011	1.20
Minimum	7.7	3.2	9.3	0.17	0.24	0.000	0.25	0.000	0.00	0.000	0.000	1.10
Maximum	8.4	22.6	13.1	1.60	0.43	0.005	0.43	0.000	0.46	0.000	0.011	2.30
Count	21	21	21	21	21	21	21	21	21	20	20	21
Confidence Level(95.0%)	0.1	2.5	0.5	0.18	0.03	0.001	0.03	0.000	0.06	0.000	0.001	0.17

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	7.4	23.7	ND	ND	ND	ND	0.6	284	10.7	0	0.0	ND
Standard Error	0.8	1.7	ND	ND	ND	ND	0.1	2	0.3	0	0.0	ND
Median	7.4	23.4	ND	ND	ND	ND	0.5	284	10.0	0	0.0	ND
Mode	ND	27.5	ND	ND	ND	ND	0.4	284	10.0	0	0.0	ND
Standard Deviation	2.0	4.5	ND	ND	ND	ND	0.4	7	1.3	0	0.0	ND
Sample Variance	4.1	20.4	ND	ND	ND	ND	0.1	56	1.8	0	0.0	ND
Kurtosis	1.0	1.8	ND	ND	ND	ND	0.1	2	2.4	ND	ND	ND
Skewness	0.6	-1.3	ND	ND	ND	ND	1.1	1	1.9	ND	ND	ND
Range	6.0	12.5	0.0	0.0	0.0	0.0	1.2	26	4.3	0	0.0	0
Minimum	5.0	15.0	0.0	0.0	0.0	0.0	0.2	277	9.7	0	0.0	0
Maximum	11.0	27.5	0.0	0.0	0.0	0.0	1.4	303	14.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	1.9	4.2	ND	ND	ND	ND	0.2	3	0.6	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 1
WATER QUALITY DATA - 2011

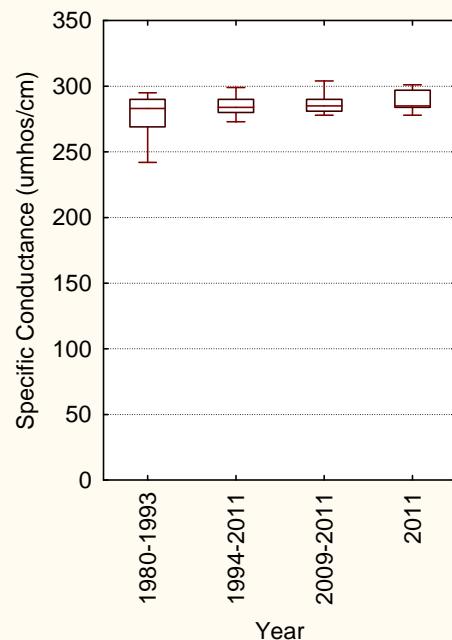
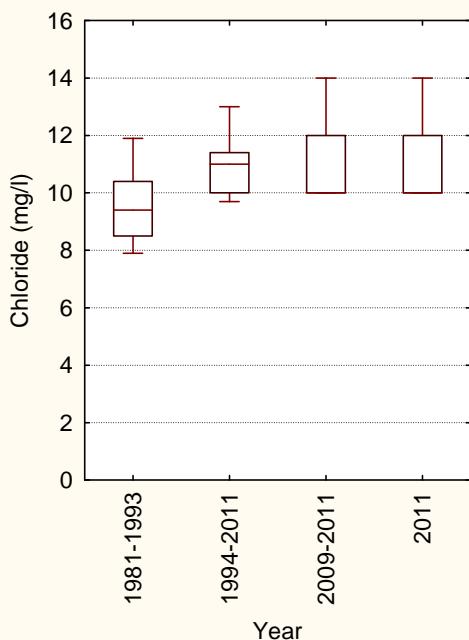
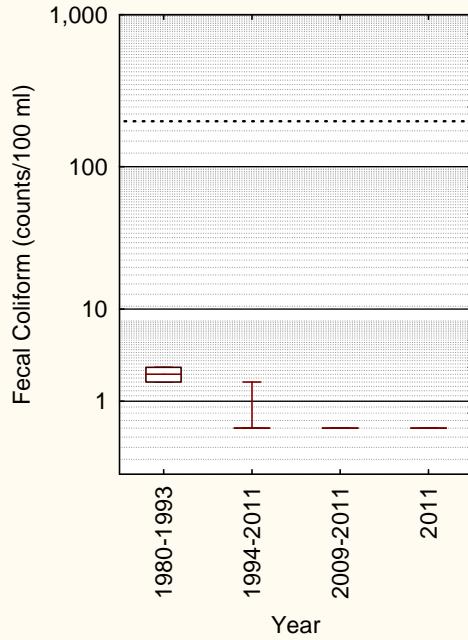
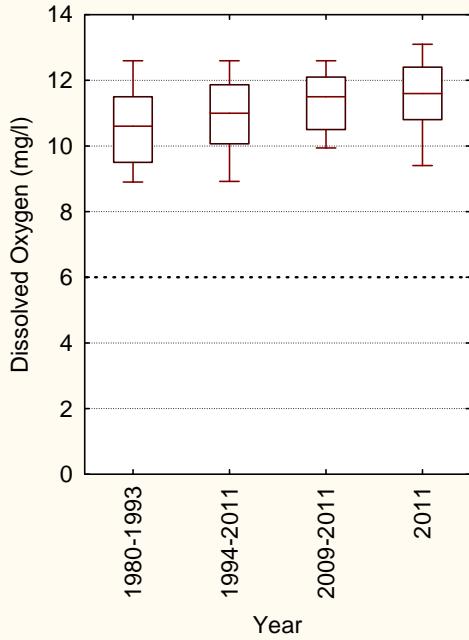
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.14	12.29	0.4	0.8	5.6	0.9	1.7	10.0	0.1	1.3	0.0	ND
Standard Error	0.59	0.18	0.4	0.8	1.5	0.2	1.0	2.4	0.1	0.3	0.0	ND
Median	34.00	12.00	0.0	0.0	6.8	0.8	1.5	9.7	0.0	1.4	0.0	ND
Mode	36.00	12.00	0.0	0.0	ND	0.8	ND	ND	0.0	1.4	0.0	ND
Standard Deviation	1.57	0.49	0.9	2.2	2.6	0.5	1.8	6.3	0.3	0.8	0.0	ND
Sample Variance	2.48	0.24	0.9	5.0	6.5	0.2	3.3	39.8	0.1	0.6	0.0	ND
Kurtosis	-1.68	-0.84	7.0	7.0	ND	1.9	ND	1.5	7.0	2.2	ND	ND
Skewness	0.04	1.23	2.6	2.6	-1.6	-0.4	0.5	1.2	2.6	0.1	ND	ND
Range	4.00	1.00	2.5	5.9	4.7	1.6	3.6	17.8	0.8	2.6	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	2.7	0.0	0.0	4.2	0.0	0.0	0.0	0.0
Maximum	36.00	13.00	2.5	5.9	7.4	1.6	3.6	22.0	0.8	2.6	0.0	0.0
Count	7	7	7	7	3	7	3	7	7	7	7	0
Confidence Level(95.0%)	1.46	0.45	0.9	2.1	6.4	0.4	4.5	5.8	0.3	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	136	101	ND	ND	ND	ND	ND	ND
Standard Error	2	1	ND	ND	ND	ND	ND	ND
Median	140	100	ND	ND	ND	ND	ND	ND
Mode	140	100	ND	ND	ND	ND	ND	ND
Standard Deviation	5	4	ND	ND	ND	ND	ND	ND
Sample Variance	29	13	ND	ND	ND	ND	ND	ND
Kurtosis	-3	4	ND	ND	ND	ND	ND	ND
Skewness	0	2	ND	ND	ND	ND	ND	ND
Range	10	12	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	98	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	5	2	ND	ND	ND	ND	ND	ND

ND = No Data

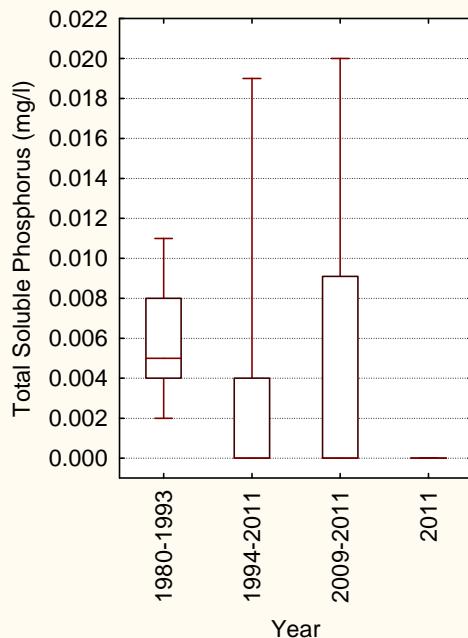
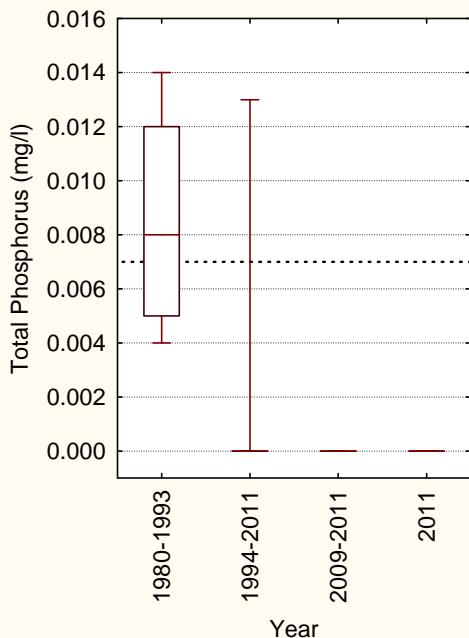
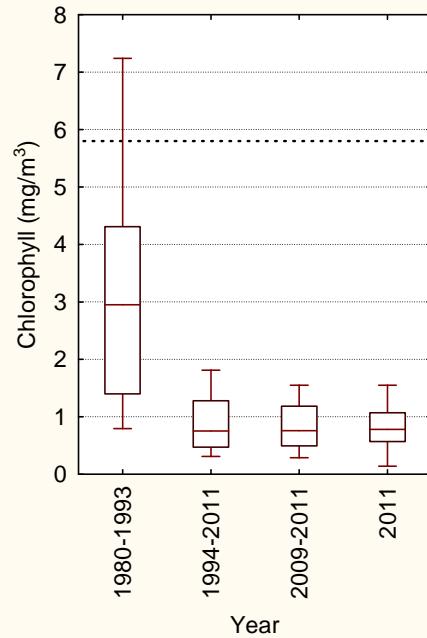
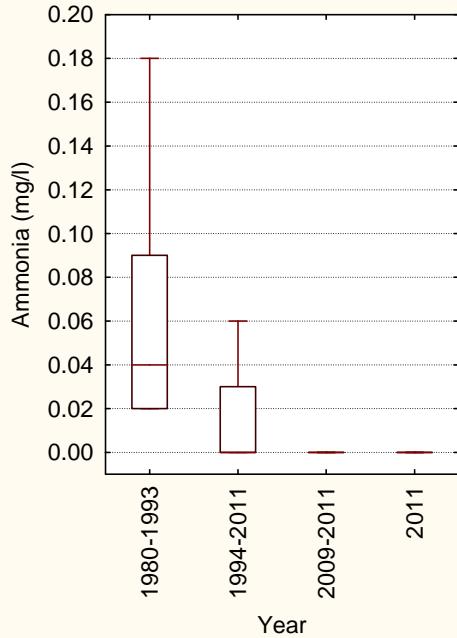
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-02



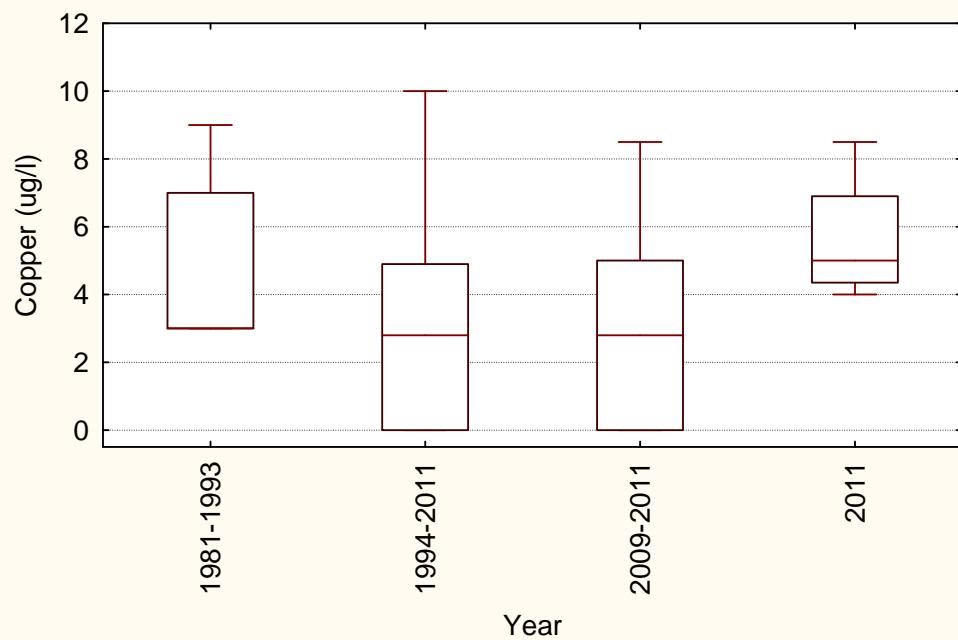
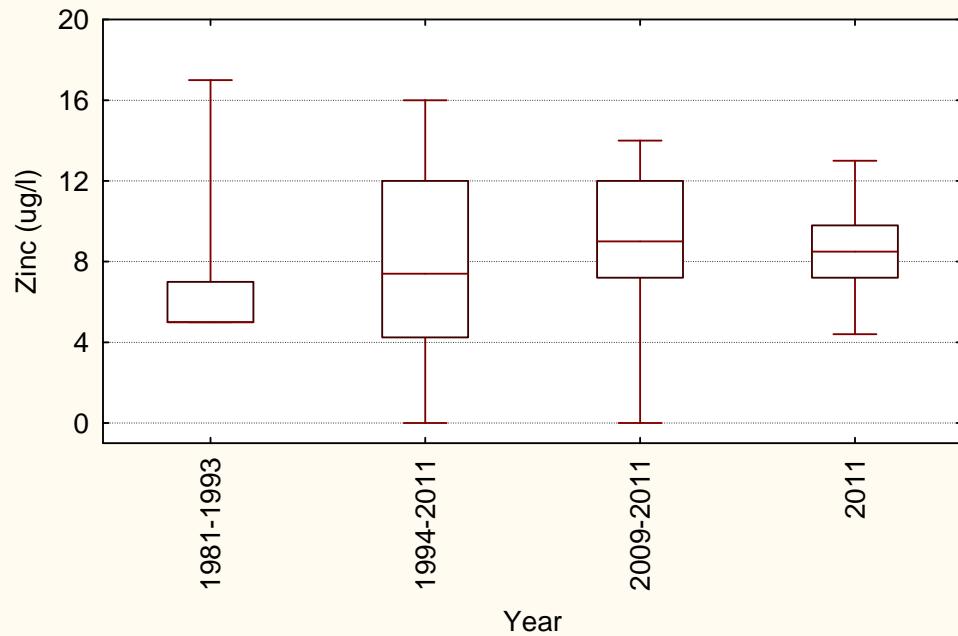
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-02



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-02



— Median □ 25%-75% ━ 10%-90%

NEAR SHORE - SITE 2
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	11.2	11.5	0.82	0.31	0.002	0.32	0.000	0.09	0.000	0.001	1.65
Standard Error	0.0	1.1	0.3	0.10	0.02	0.000	0.01	0.000	0.06	0.000	0.001	0.09
Median	8.1	11.2	11.6	0.78	0.26	0.003	0.27	0.000	0.00	0.000	0.000	1.60
Mode	8.1	2.9	13.1	0.78	0.26	0.000	0.26	0.000	0.00	0.000	0.000	2.00
Standard Deviation	0.1	5.2	1.3	0.45	0.07	0.001	0.07	0.000	0.26	0.000	0.003	0.41
Sample Variance	0.0	27.4	1.7	0.20	0.00	0.000	0.00	0.000	0.07	0.000	0.000	0.17
Kurtosis	0.1	-0.9	-0.8	-0.26	-1.55	-0.147	-1.46	ND	12.45	ND	8.058	-1.09
Skewness	0.3	-0.1	-0.5	0.11	0.52	-0.941	0.54	ND	3.42	ND	3.028	0.17
Range	0.5	17.5	4.0	1.59	0.19	0.004	0.19	0.000	1.10	0.000	0.011	1.31
Minimum	7.9	2.9	9.2	0.00	0.24	0.000	0.24	0.000	0.00	0.000	0.000	0.99
Maximum	8.4	20.4	13.2	1.59	0.43	0.004	0.43	0.000	1.10	0.000	0.011	2.30
Count	21	21	21	21	21	21	21	21	21	21	21	21
Confidence Level(95.0%)	0.1	2.4	0.6	0.20	0.03	0.001	0.03	0.000	0.12	0.000	0.001	0.19

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	7.8	14.4	ND	ND	ND	ND	0.7	288	11.1	0	0.0	ND
Standard Error	0.6	0.6	ND	ND	ND	ND	0.1	2	0.3	0	0.0	ND
Median	8.4	15.0	ND	ND	ND	ND	0.6	285	10.0	0	0.0	ND
Mode	ND	15.0	ND	ND	ND	ND	0.5	285	10.0	0	0.0	ND
Standard Deviation	1.7	1.6	ND	ND	ND	ND	0.4	8	1.6	0	0.0	ND
Sample Variance	2.9	2.5	ND	ND	ND	ND	0.2	66	2.4	0	0.0	ND
Kurtosis	1.0	6.9	ND	ND	ND	ND	0.2	-1	1.1	ND	ND	ND
Skewness	-1.1	-2.6	ND	ND	ND	ND	1.2	1	1.4	ND	ND	ND
Range	5.1	4.4	0.0	0.0	0.0	0.0	1.2	25	5.2	0	0.0	0
Minimum	4.7	10.9	0.0	0.0	0.0	0.0	0.3	277	9.8	0	0.0	0
Maximum	9.8	15.3	0.0	0.0	0.0	0.0	1.5	302	15.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	1.6	1.4	ND	ND	ND	ND	0.2	4	0.7	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 2
WATER QUALITY DATA - 2011

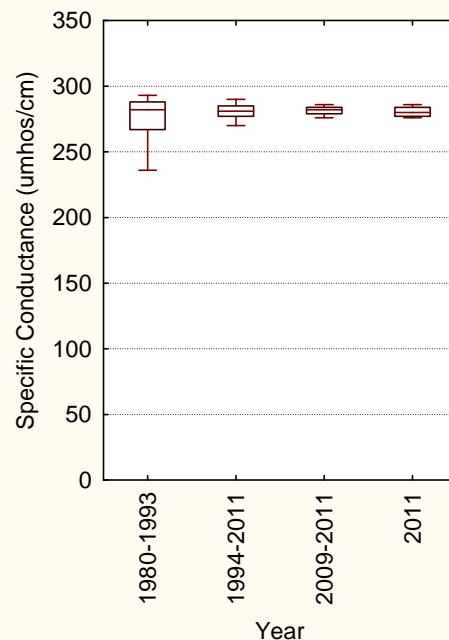
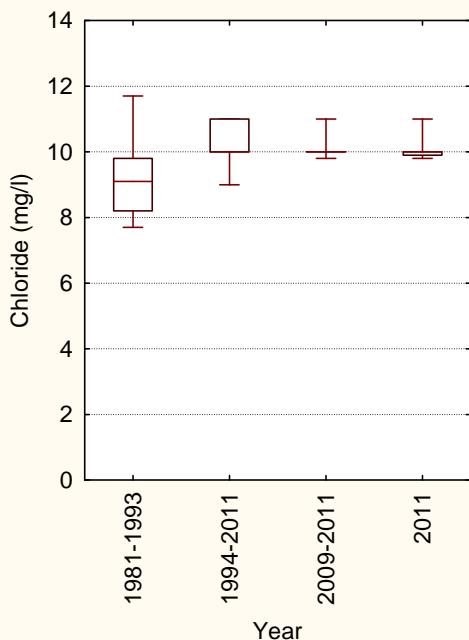
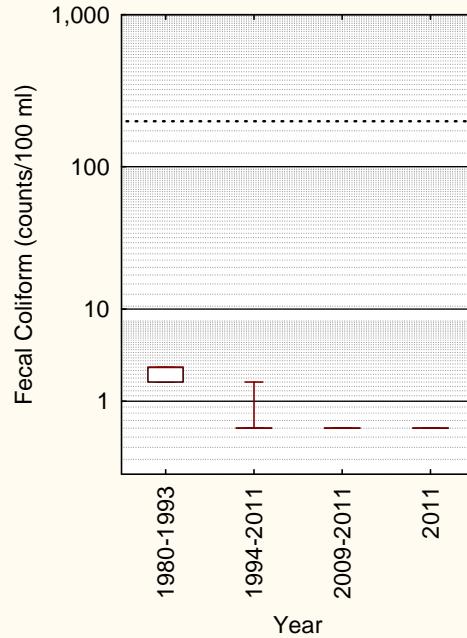
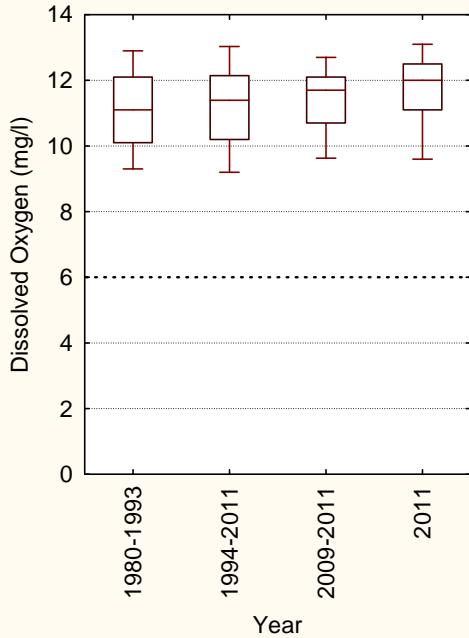
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.43	12.57	0.3	0.7	5.6	1.0	2.9	8.6	0.1	1.4	0.0	ND
Standard Error	0.65	0.30	0.3	0.7	1.0	0.2	1.7	1.0	0.1	0.3	0.0	ND
Median	34.00	12.00	0.0	0.0	5.0	1.1	2.4	8.5	0.0	1.6	0.0	ND
Mode	34.00	12.00	0.0	0.0	ND	ND	0.0	ND	0.0	1.6	0.0	ND
Standard Deviation	1.72	0.79	0.8	1.8	2.0	0.6	3.4	2.6	0.2	0.7	0.0	ND
Sample Variance	2.95	0.62	0.6	3.3	4.0	0.4	11.6	6.8	0.0	0.5	0.0	ND
Kurtosis	-0.64	0.27	7.0	7.0	2.7	1.1	-4.5	1.5	-0.8	3.7	ND	ND
Skewness	0.17	1.11	2.6	2.6	1.6	-0.5	0.3	0.1	1.2	-1.7	ND	ND
Range	5.00	2.00	2.0	4.8	4.5	1.9	6.7	8.6	0.4	2.2	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	4.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0
Maximum	37.00	14.00	2.0	4.8	8.5	1.9	6.7	13.0	0.4	2.2	0.0	0.0
Count	7	7	7	7	4	7	4	7	7	7	7	0
Confidence Level(95.0%)	1.59	0.73	0.7	1.7	3.2	0.5	5.4	2.4	0.2	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	137	104	ND	ND	ND	ND	ND	ND
Standard Error	3	1	ND	ND	ND	ND	ND	ND
Median	140	100	ND	ND	ND	ND	ND	ND
Mode	140	100	ND	ND	ND	ND	ND	ND
Standard Deviation	8	5	ND	ND	ND	ND	ND	ND
Sample Variance	57	28	ND	ND	ND	ND	ND	ND
Kurtosis	0	-2	ND	ND	ND	ND	ND	ND
Skewness	1	0	ND	ND	ND	ND	ND	ND
Range	20	12	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	98	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	150	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	7	3	ND	ND	ND	ND	ND	ND

ND = No Data

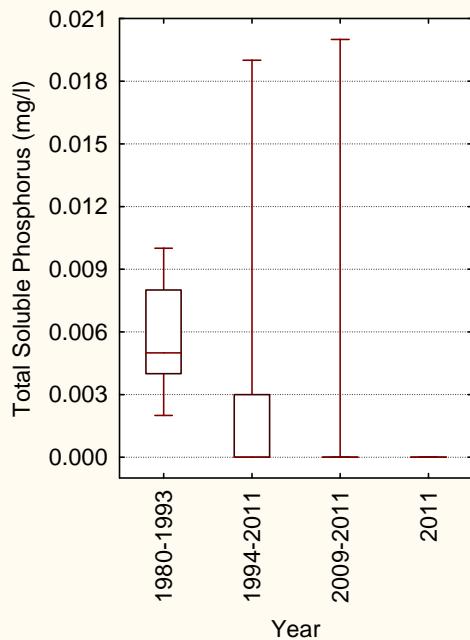
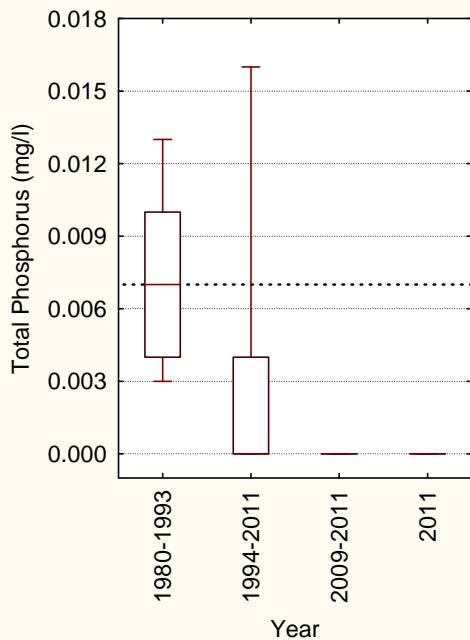
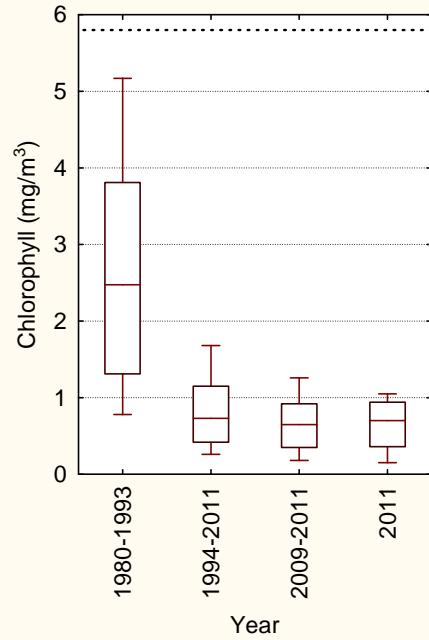
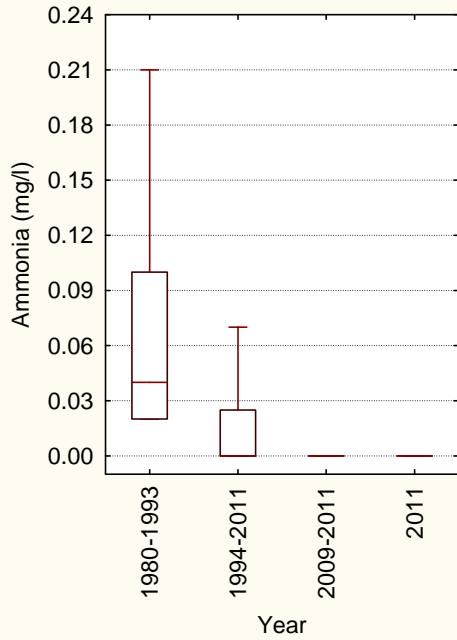
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-03



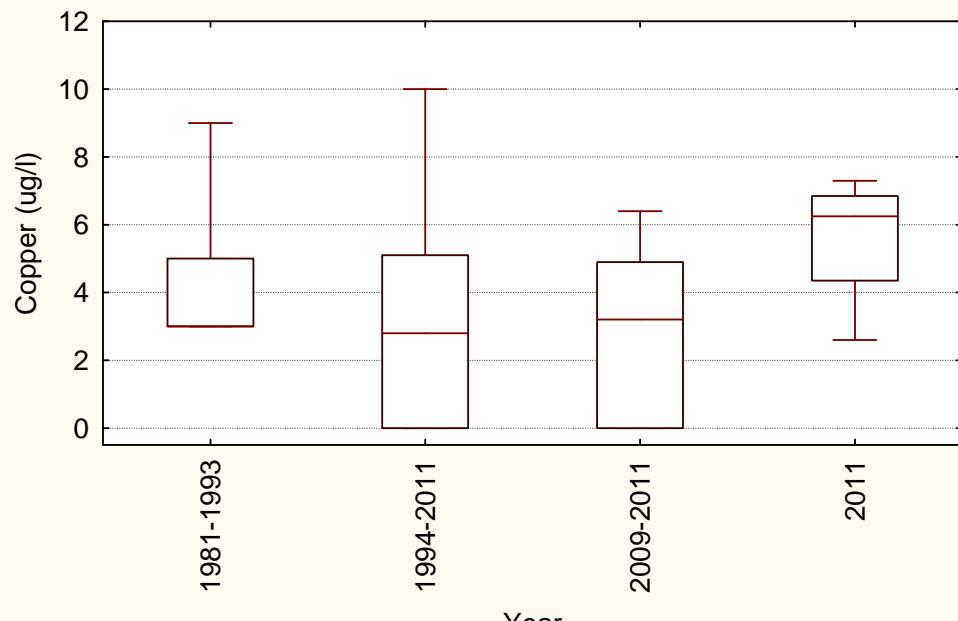
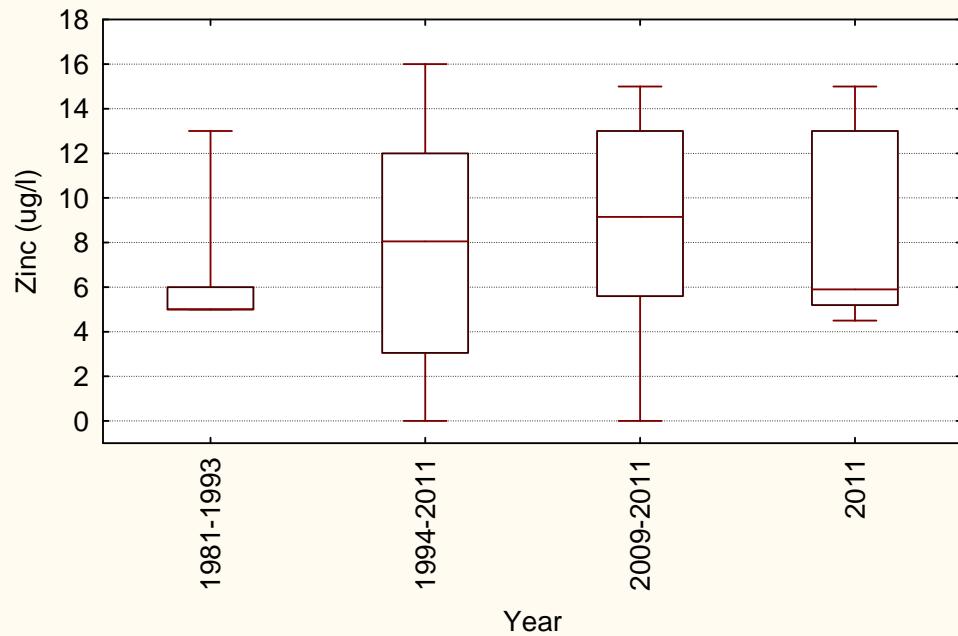
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-03



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-03



— Median □ 25%-75% ┌ 10%-90%

NEAR SHORE - SITE 3
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	9.6	11.6	0.66	0.29	0.002	0.29	0.000	0.06	0.000	0.000	1.76
Standard Error	0.0	1.2	0.3	0.08	0.01	0.000	0.01	0.000	0.05	0.000	0.000	0.08
Median	8.0	8.5	12.0	0.70	0.29	0.003	0.30	0.000	0.00	0.000	0.000	1.90
Mode	8.0	14.8	12.1	0.00	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.90
Standard Deviation	0.2	5.6	1.3	0.39	0.03	0.001	0.03	0.000	0.22	0.000	0.000	0.35
Sample Variance	0.0	31.4	1.7	0.15	0.00	0.000	0.00	0.000	0.05	0.000	0.000	0.12
Kurtosis	0.0	-0.6	-0.8	-0.74	-1.71	-1.525	-1.73	ND	13.74	ND	ND	-0.51
Skewness	0.2	0.6	-0.6	-0.14	0.02	-0.475	-0.04	ND	3.66	ND	ND	-0.13
Range	0.7	18.4	4.3	1.40	0.10	0.004	0.10	0.000	0.94	0.000	0.000	1.30
Minimum	7.7	2.4	9.2	0.00	0.24	0.000	0.24	0.000	0.00	0.000	0.000	1.00
Maximum	8.4	20.8	13.5	1.40	0.34	0.004	0.34	0.000	0.94	0.000	0.000	2.30
Count	21	21	21	21	21	21	21	21	21	20	20	21
Confidence Level(95.0%)	0.1	2.5	0.6	0.18	0.02	0.001	0.02	0.000	0.10	0.000	0.000	0.16

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	9.2	23.0	ND	ND	ND	ND	0.4	281	10.1	0	0.0	ND
Standard Error	1.3	1.1	ND	ND	ND	ND	0.0	1	0.1	0	0.0	ND
Median	8.0	25.0	ND	ND	ND	ND	0.4	280	10.0	0	0.0	ND
Mode	ND	25.5	ND	ND	ND	ND	0.5	277	10.0	0	0.0	ND
Standard Deviation	3.5	3.0	ND	ND	ND	ND	0.2	5	0.4	0	0.0	ND
Sample Variance	12.2	9.1	ND	ND	ND	ND	0.0	21	0.2	0	0.0	ND
Kurtosis	-0.3	-0.9	ND	ND	ND	ND	3.1	-1	0.8	ND	ND	ND
Skewness	0.9	-0.8	ND	ND	ND	ND	1.7	1	1.6	ND	ND	ND
Range	9.8	7.5	0.0	0.0	0.0	0.0	0.7	15	1.2	0	0.0	0
Minimum	5.2	18.0	0.0	0.0	0.0	0.0	0.2	275	9.8	0	0.0	0
Maximum	15.0	25.5	0.0	0.0	0.0	0.0	0.9	290	11.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	3.2	2.8	ND	ND	ND	ND	0.1	2	0.2	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 3
WATER QUALITY DATA - 2011

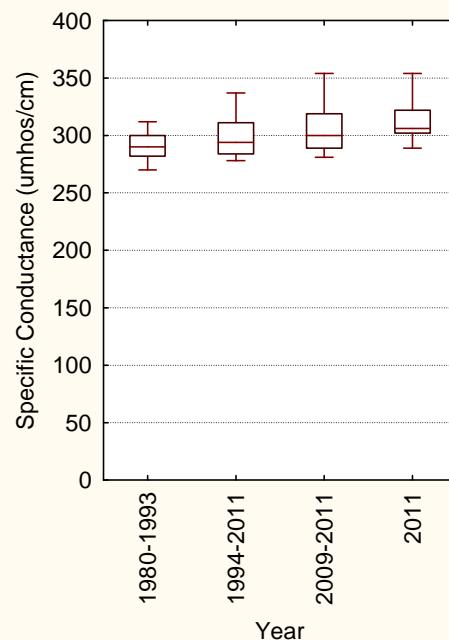
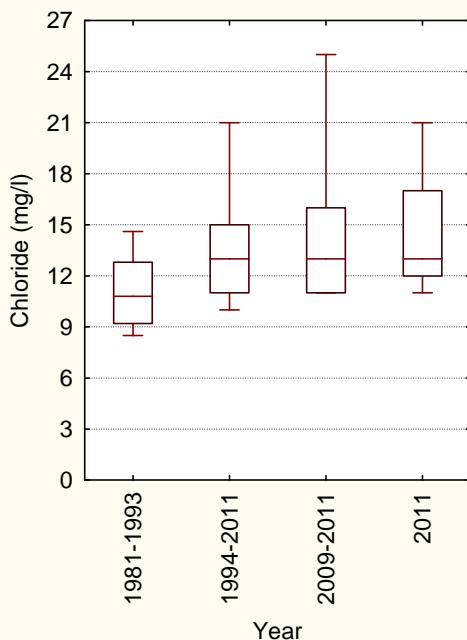
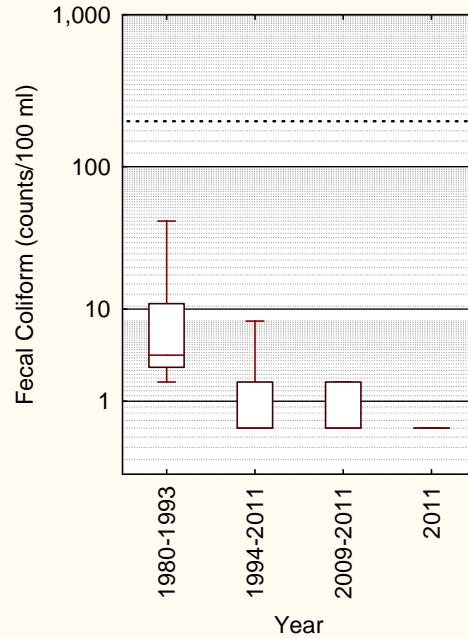
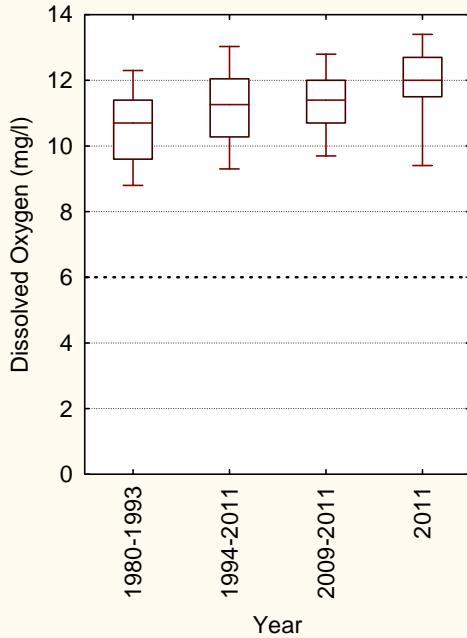
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.14	12.43	0.0	0.6	5.6	0.9	1.6	8.4	0.1	1.8	0.0	ND
Standard Error	0.51	0.20	0.0	0.6	1.0	0.2	1.0	1.6	0.1	0.5	0.0	ND
Median	34.00	12.00	0.0	0.0	6.3	1.0	1.2	5.9	0.0	1.4	0.0	ND
Mode	35.00	12.00	0.0	0.0	ND	ND	0.0	ND	0.0	1.1	0.0	ND
Standard Deviation	1.35	0.53	0.0	1.7	2.1	0.4	1.9	4.2	0.2	1.2	0.0	ND
Sample Variance	1.81	0.29	0.0	2.8	4.3	0.2	3.7	17.5	0.0	1.5	0.0	ND
Kurtosis	-0.30	-2.80	ND	7.0	3.0	3.9	-3.2	-1.1	1.2	5.5	ND	ND
Skewness	-0.35	0.37	ND	2.6	-1.6	-1.8	0.5	0.8	1.6	2.3	ND	ND
Range	4.00	1.00	0.0	4.4	4.7	1.3	3.9	10.5	0.5	3.4	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	2.6	0.0	0.0	4.5	0.0	1.1	0.0	0.0
Maximum	36.00	13.00	0.0	4.4	7.3	1.3	3.9	15.0	0.5	4.5	0.0	0.0
Count	7	7	7	7	4	7	4	7	7	7	7	0
Confidence Level(95.0%)	1.24	0.49	0.0	1.5	3.3	0.4	3.1	3.9	0.2	1.1	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	136	105	ND	ND	ND	ND	ND	ND
Standard Error	2	1	ND	ND	ND	ND	ND	ND
Median	140	100	ND	ND	ND	ND	ND	ND
Mode	140	100	ND	ND	ND	ND	ND	ND
Standard Deviation	5	5	ND	ND	ND	ND	ND	ND
Sample Variance	29	27	ND	ND	ND	ND	ND	ND
Kurtosis	-3	-2	ND	ND	ND	ND	ND	ND
Skewness	0	0	ND	ND	ND	ND	ND	ND
Range	10	10	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	100	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	5	3	ND	ND	ND	ND	ND	ND

ND = No Data

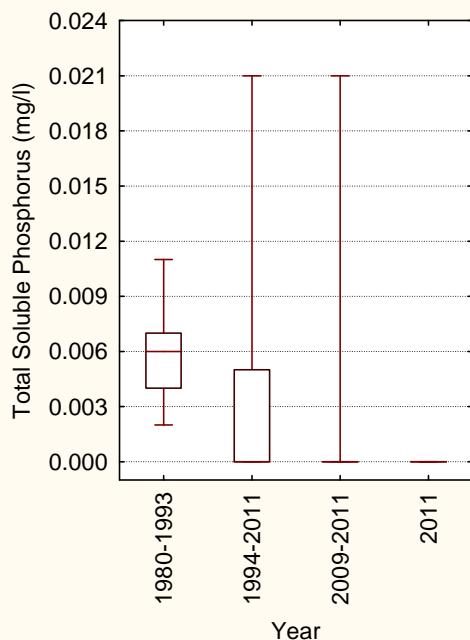
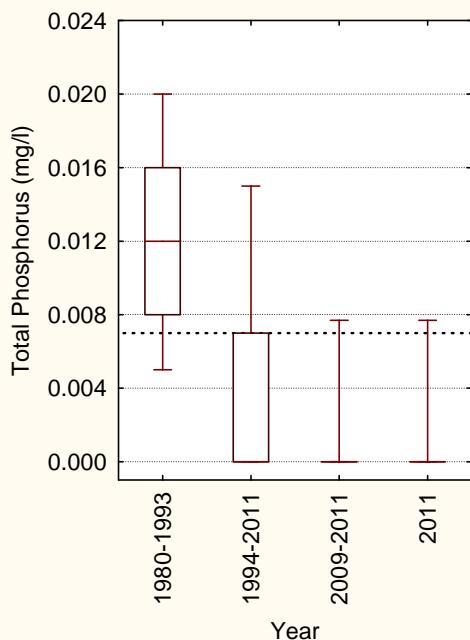
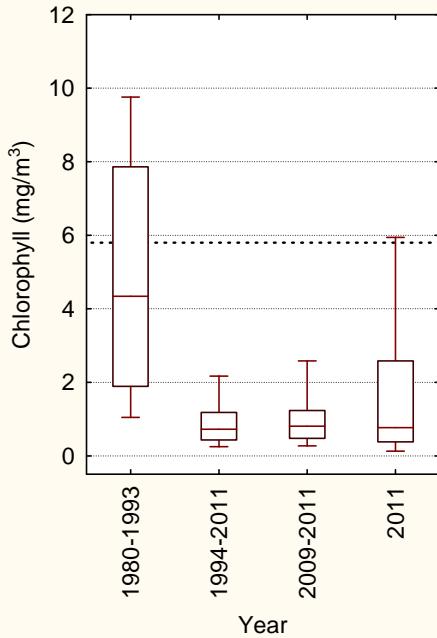
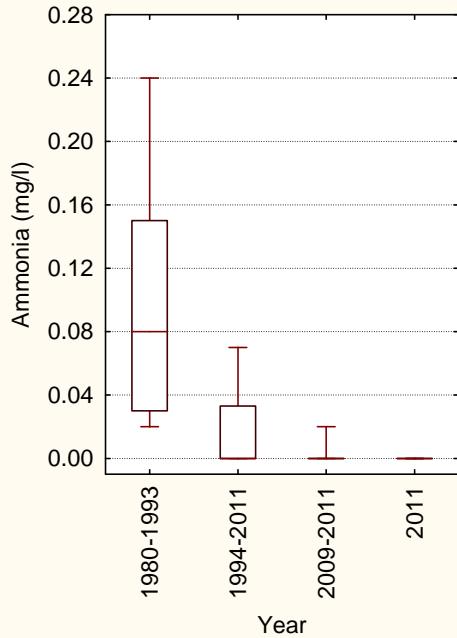
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-04



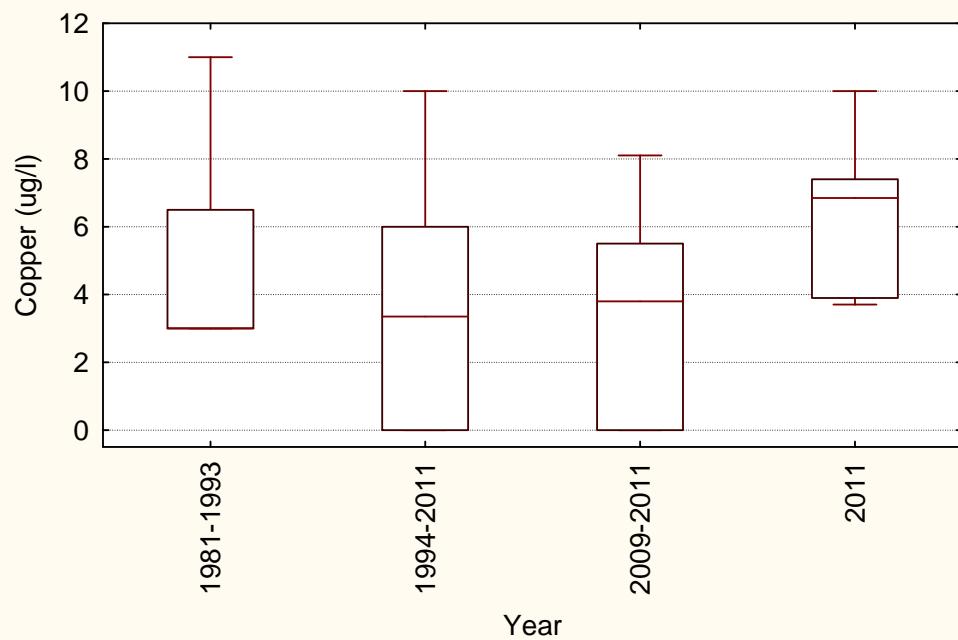
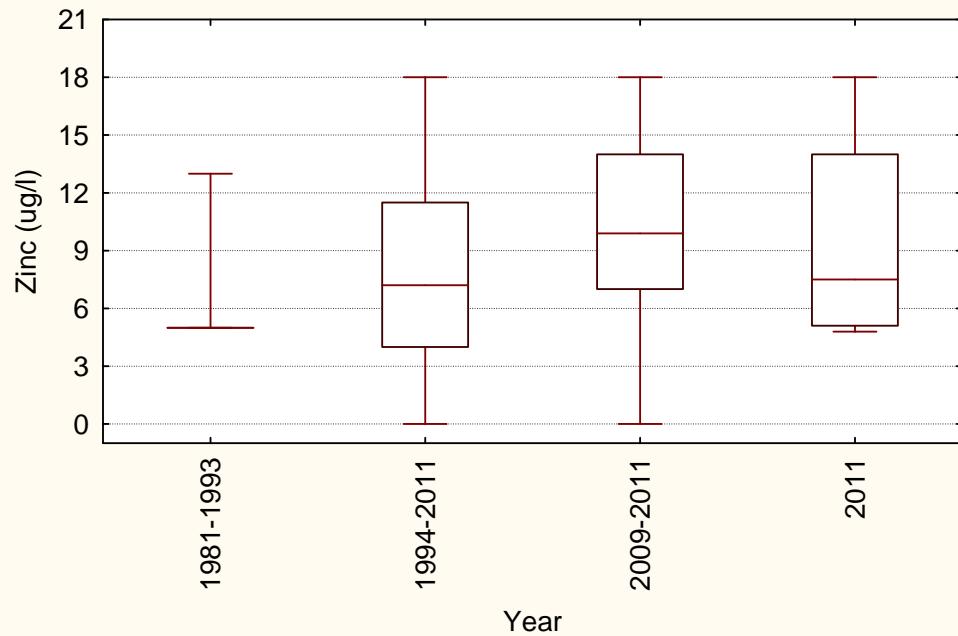
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-04



— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-04



— Median □ 25%-75% ━ 10%-90%

NEAR SHORE - SITE 4
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.2	11.7	12.0	1.97	0.36	0.004	0.36	0.000	0.02	0.002	0.001	1.59
Standard Error	0.0	1.0	0.3	0.58	0.03	0.000	0.03	0.000	0.02	0.001	0.001	0.14
Median	8.2	13.0	12.0	0.77	0.32	0.004	0.32	0.000	0.00	0.000	0.000	1.60
Mode	8.2	3.8	12.8	0.00	0.61	0.003	0.32	0.000	0.00	0.000	0.000	2.40
Standard Deviation	0.2	4.6	1.4	2.64	0.13	0.001	0.13	0.000	0.08	0.004	0.003	0.63
Sample Variance	0.0	21.4	2.0	7.00	0.02	0.000	0.02	0.000	0.01	0.000	0.000	0.40
Kurtosis	-0.3	-1.0	0.8	1.74	0.12	3.899	0.09	ND	21.00	4.351	7.690	0.52
Skewness	-0.2	-0.4	-0.3	1.68	0.98	1.741	0.97	ND	4.58	2.217	2.988	-0.76
Range	0.7	14.7	5.8	8.78	0.42	0.006	0.42	0.000	0.38	0.015	0.011	2.40
Minimum	7.9	3.8	9.2	0.00	0.19	0.003	0.20	0.000	0.00	0.000	0.000	0.00
Maximum	8.6	18.5	15.0	8.78	0.61	0.009	0.62	0.000	0.38	0.015	0.011	2.40
Count	21	21	21	21	21	21	21	21	21	21	21	21
Confidence Level(95.0%)	0.1	2.1	0.6	1.20	0.06	0.001	0.06	0.000	0.04	0.002	0.001	0.29

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.1	9.2	ND	ND	ND	ND	1.0	312	14.5	0	0.0	ND
Standard Error	1.2	0.2	ND	ND	ND	ND	0.1	5	0.7	0	0.0	ND
Median	4.5	9.0	ND	ND	ND	ND	1.0	306	13.0	0	0.0	ND
Mode	9.0	9.0	ND	ND	ND	ND	0.9	354	13.0	0	0.0	ND
Standard Deviation	3.1	0.5	ND	ND	ND	ND	0.3	22	3.3	0	0.0	ND
Sample Variance	9.4	0.2	ND	ND	ND	ND	0.1	494	11.2	0	0.0	ND
Kurtosis	-2.2	-1.5	ND	ND	ND	ND	-0.8	0	-0.2	ND	ND	ND
Skewness	0.1	0.1	ND	ND	ND	ND	0.1	1	0.9	ND	ND	ND
Range	7.6	1.2	0.0	0.0	0.0	0.0	1.0	76	10.0	0	0.0	0
Minimum	2.2	8.6	0.0	0.0	0.0	0.0	0.5	278	11.0	0	0.0	0
Maximum	9.8	9.8	0.0	0.0	0.0	0.0	1.5	354	21.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	2.8	0.4	ND	ND	ND	ND	0.1	10	1.5	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 4
WATER QUALITY DATA - 2011

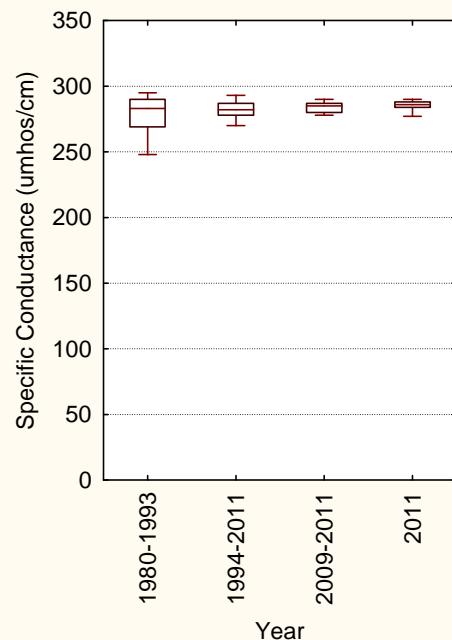
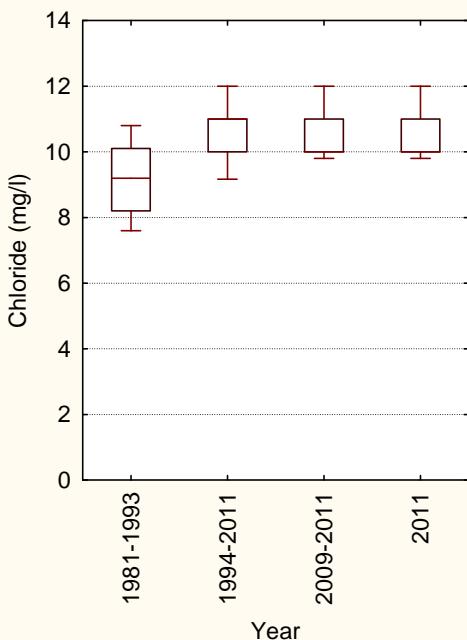
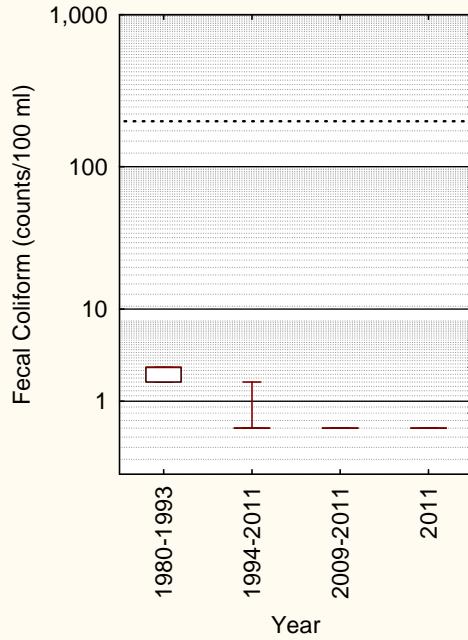
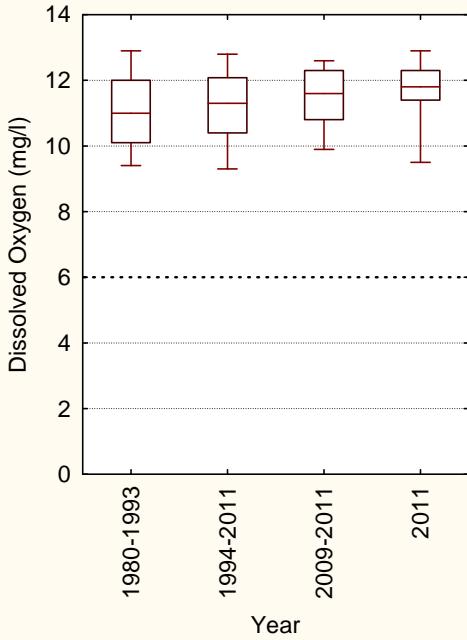
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.29	13.29	0.5	0.8	6.5	1.6	3.0	9.5	0.1	1.3	0.0	ND
Standard Error	0.81	0.36	0.5	0.8	1.0	0.2	1.5	1.8	0.1	0.3	0.0	ND
Median	35.00	14.00	0.0	0.0	6.9	1.4	2.2	7.5	0.0	1.5	0.0	ND
Mode	38.00	14.00	0.0	0.0	ND	ND	0.0	ND	0.0	ND	0.0	ND
Standard Deviation	2.14	0.95	1.2	2.1	2.4	0.6	3.3	4.9	0.1	0.7	0.0	ND
Sample Variance	4.57	0.90	1.5	4.5	5.6	0.4	11.0	23.9	0.0	0.5	0.0	ND
Kurtosis	-1.69	-1.69	7.0	7.0	-0.5	0.7	-2.7	-0.1	-0.8	0.8	ND	ND
Skewness	0.34	-0.76	2.6	2.6	0.2	0.9	0.4	1.0	1.2	-1.2	ND	ND
Range	5.00	2.00	3.2	5.6	6.3	1.9	7.1	13.2	0.3	1.9	0.0	0.0
Minimum	33.00	12.00	0.0	0.0	3.7	0.8	0.0	4.8	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	3.2	5.6	10.0	2.7	7.1	18.0	0.3	1.9	0.0	0.0
Count	7	7	7	7	6	7	5	7	7	7	7	0
Confidence Level(95.0%)	1.98	0.88	1.1	2.0	2.5	0.6	4.1	4.5	0.1	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	141	107	ND	ND	ND	ND	ND	ND
Standard Error	3	1	ND	ND	ND	ND	ND	ND
Median	140	110	ND	ND	ND	ND	ND	ND
Mode	140	110	ND	ND	ND	ND	ND	ND
Standard Deviation	7	5	ND	ND	ND	ND	ND	ND
Sample Variance	48	21	ND	ND	ND	ND	ND	ND
Kurtosis	0	-1	ND	ND	ND	ND	ND	ND
Skewness	0	-1	ND	ND	ND	ND	ND	ND
Range	20	10	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	100	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	150	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	6	3	ND	ND	ND	ND	ND	ND

ND = No Data

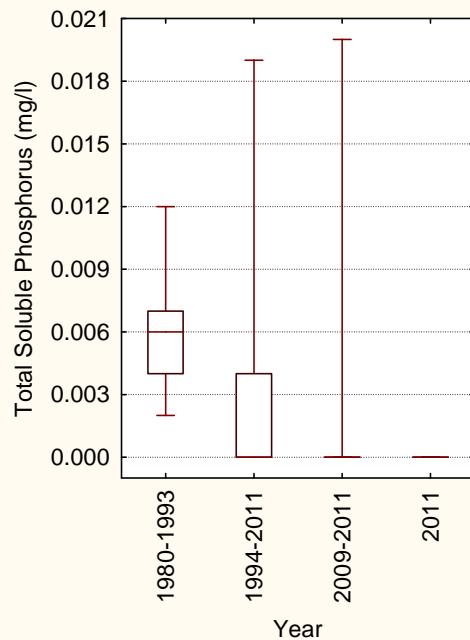
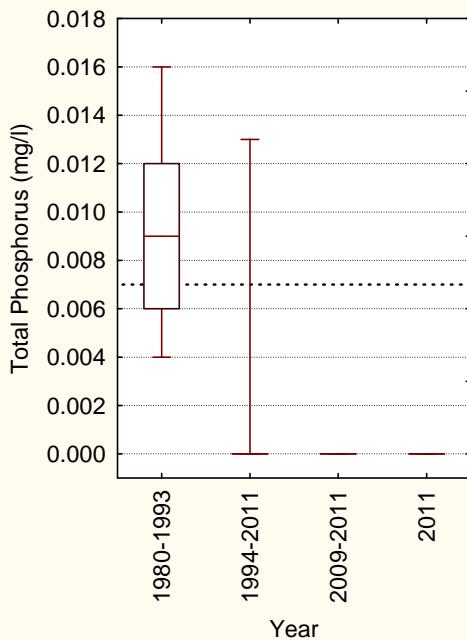
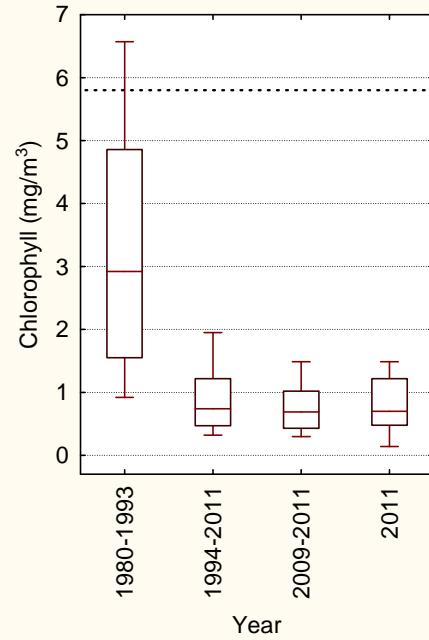
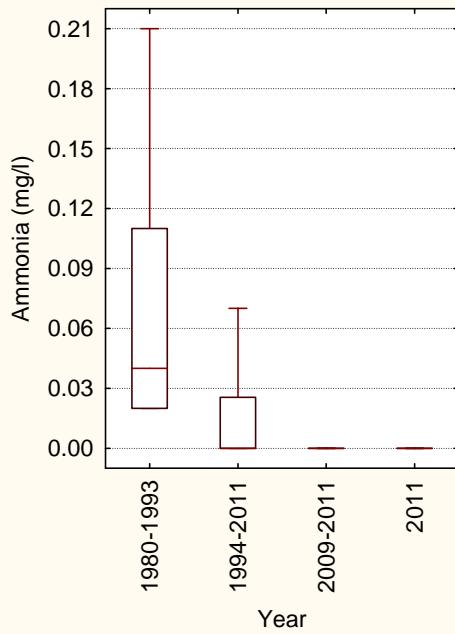
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-05



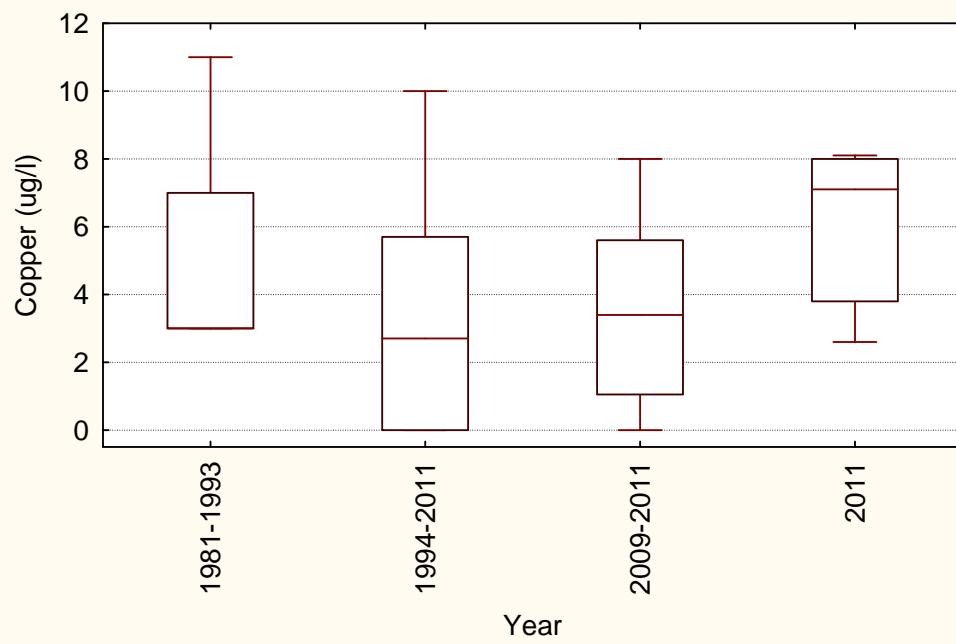
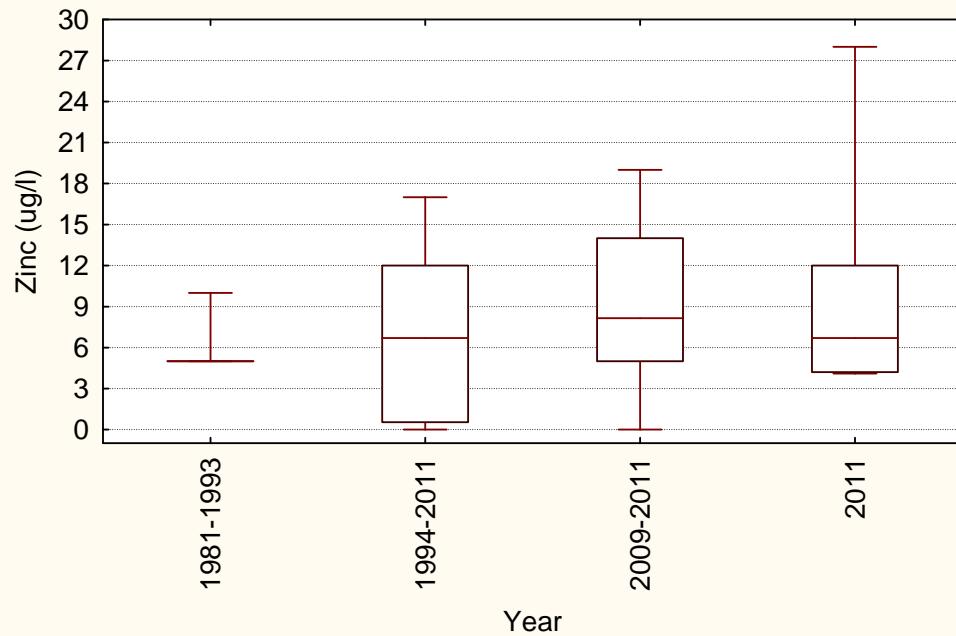
— Median □ 25%-75% ━ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-05



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-05



— Median □ 25%-75% ┤ 10%-90%

NEAR SHORE - SITE 5
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	9.8	11.6	0.84	0.31	0.003	0.32	0.000	0.04	0.000	0.000	1.80
Standard Error	0.1	1.2	0.3	0.13	0.02	0.000	0.02	0.000	0.02	0.000	0.000	0.08
Median	8.0	8.3	11.8	0.70	0.27	0.003	0.28	0.000	0.00	0.000	0.000	1.70
Mode	8.2	14.7	12.3	0.00	0.26	0.000	0.26	0.000	0.00	0.000	0.000	2.20
Standard Deviation	0.2	5.3	1.3	0.62	0.08	0.002	0.08	0.000	0.11	0.000	0.000	0.37
Sample Variance	0.1	28.1	1.7	0.38	0.01	0.000	0.01	0.000	0.01	0.000	0.000	0.14
Kurtosis	-1.1	-0.4	-0.5	0.28	1.71	0.779	1.90	ND	7.65	ND	ND	-1.23
Skewness	0.0	0.6	-0.8	0.84	1.47	0.776	1.52	ND	2.98	ND	ND	-0.30
Range	0.8	18.1	4.3	2.22	0.29	0.008	0.28	0.000	0.39	0.000	0.000	1.10
Minimum	7.6	2.5	9.0	0.00	0.24	0.000	0.25	0.000	0.00	0.000	0.000	1.20
Maximum	8.4	20.6	13.3	2.22	0.53	0.008	0.53	0.000	0.39	0.000	0.000	2.30
Count	21	21	21	21	21	21	21	21	21	21	21	21
Confidence Level(95.0%)	0.1	2.4	0.6	0.28	0.04	0.001	0.03	0.000	0.05	0.000	0.000	0.17

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.5	17.0	ND	ND	ND	ND	0.9	286	10.8	0	0.0	ND
Standard Error	1.0	2.4	ND	ND	ND	ND	0.2	2	0.3	0	0.0	ND
Median	6.5	16.0	ND	ND	ND	ND	0.5	286	10.0	0	0.0	ND
Mode	6.5	ND	ND	ND	ND	ND	ND	288	10.0	0	0.0	ND
Standard Deviation	2.6	6.3	ND	ND	ND	ND	0.9	9	1.3	0	0.0	ND
Sample Variance	6.9	40.1	ND	ND	ND	ND	0.8	77	1.8	0	0.0	ND
Kurtosis	0.8	-0.4	ND	ND	ND	ND	3.5	7	3.6	ND	ND	ND
Skewness	-0.7	-0.6	ND	ND	ND	ND	2.1	2	1.8	ND	ND	ND
Range	7.8	17.0	0.0	0.0	0.0	0.0	3.1	41	5.3	0	0.0	0
Minimum	1.8	6.3	0.0	0.0	0.0	0.0	0.3	276	9.7	0	0.0	0
Maximum	9.6	23.3	0.0	0.0	0.0	0.0	3.4	317	15.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	2.4	5.9	ND	ND	ND	ND	0.4	4	0.6	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 5
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.29	12.29	0.3	0.7	5.9	0.9	1.0	9.6	0.2	1.4	0.0	ND
Standard Error	0.57	0.18	0.3	0.7	1.1	0.2	0.7	3.2	0.1	0.4	0.0	ND
Median	34.00	12.00	0.0	0.0	7.1	1.0	0.6	6.7	0.0	1.6	0.0	ND
Mode	36.00	12.00	0.0	0.0	ND	1.0	0.0	ND	0.0	1.7	0.0	ND
Standard Deviation	1.50	0.49	0.8	1.9	2.5	0.4	1.4	8.6	0.3	0.9	0.0	ND
Sample Variance	2.24	0.24	0.6	3.7	6.5	0.2	1.9	73.2	0.1	0.9	0.0	ND
Kurtosis	-0.97	-0.84	7.0	7.0	-2.5	2.1	0.8	4.8	0.1	1.1	ND	ND
Skewness	-0.26	1.23	2.6	2.6	-0.6	-1.4	1.3	2.2	1.4	0.3	ND	ND
Range	4.00	1.00	2.1	5.1	5.5	1.3	2.9	23.9	0.7	3.0	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	2.6	0.0	0.0	4.1	0.0	0.0	0.0	0.0
Maximum	36.00	13.00	2.1	5.1	8.1	1.3	2.9	28.0	0.7	3.0	0.0	0.0
Count	7	7	7	7	5	7	4	7	7	7	7	0
Confidence Level(95.0%)	1.38	0.45	0.7	1.8	3.2	0.4	2.2	7.9	0.3	0.9	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	137	105	ND	ND	ND	ND	ND	ND
Standard Error	2	1	ND	ND	ND	ND	ND	ND
Median	140	100	ND	ND	ND	ND	ND	ND
Mode	140	100	ND	ND	ND	ND	ND	ND
Standard Deviation	5	5	ND	ND	ND	ND	ND	ND
Sample Variance	24	27	ND	ND	ND	ND	ND	ND
Kurtosis	-1	-2	ND	ND	ND	ND	ND	ND
Skewness	-1	0	ND	ND	ND	ND	ND	ND
Range	10	10	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	100	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	5	3	ND	ND	ND	ND	ND	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 7
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	9.8	11.8	0.92	0.32	0.002	0.32	0.132	0.00	0.001	0.002	1.72
Standard Error	0.0	1.1	0.3	0.16	0.02	0.000	0.02	0.014	0.00	0.001	0.001	0.11
Median	8.2	7.8	11.9	0.83	0.27	0.003	0.28	0.130	0.00	0.000	0.000	1.70
Mode	8.2	8.6	11.7	ND	0.24	0.000	0.25	0.130	0.00	0.000	0.000	2.10
Standard Deviation	0.2	5.1	1.2	0.74	0.08	0.002	0.09	0.060	0.00	0.002	0.004	0.50
Sample Variance	0.0	26.4	1.4	0.55	0.01	0.000	0.01	0.004	0.00	0.000	0.000	0.25
Kurtosis	-0.2	-0.9	-0.3	5.06	-1.19	-1.209	-1.12	-0.804	ND	7.781	4.465	-0.83
Skewness	-0.6	0.4	-0.7	1.78	0.75	-0.408	0.79	-0.141	ND	2.998	2.380	0.03
Range	0.6	16.8	4.2	3.36	0.23	0.005	0.24	0.197	0.00	0.009	0.014	1.75
Minimum	7.8	2.5	9.2	0.00	0.24	0.000	0.24	0.023	0.00	0.000	0.000	0.85
Maximum	8.4	19.3	13.4	3.36	0.47	0.005	0.48	0.220	0.00	0.009	0.014	2.60
Count	21	21	21	21	21	21	21	19	19	21	21	21
Confidence Level(95.0%)	0.1	2.3	0.5	0.34	0.04	0.001	0.04	0.029	0.00	0.001	0.002	0.23

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	7.4	19.9	ND	ND	ND	ND	0.7	290	11.4	0	0.0	ND
Standard Error	0.8	0.6	ND	ND	ND	ND	0.1	3	0.5	0	0.0	ND
Median	7.5	20.7	ND	ND	ND	ND	0.7	284	11.0	0	0.0	ND
Mode	ND	21.0	ND	ND	ND	ND	0.7	284	12.0	0	0.0	ND
Standard Deviation	2.1	1.7	ND	ND	ND	ND	0.3	15	2.1	0	0.0	ND
Sample Variance	4.4	2.9	ND	ND	ND	ND	0.1	219	4.5	0	0.0	ND
Kurtosis	1.9	2.6	ND	ND	ND	ND	2.0	1	1.9	ND	ND	ND
Skewness	-1.2	-1.6	ND	ND	ND	ND	1.2	1	1.6	ND	ND	ND
Range	6.2	4.9	0.0	0.0	0.0	0.0	1.4	49	7.3	0	0.0	0
Minimum	3.4	16.5	0.0	0.0	0.0	0.0	0.3	276	9.7	0	0.0	0
Maximum	9.6	21.4	0.0	0.0	0.0	0.0	1.6	325	17.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	1.9	1.6	ND	ND	ND	ND	0.1	7	1.0	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 7
WATER QUALITY DATA - 2011

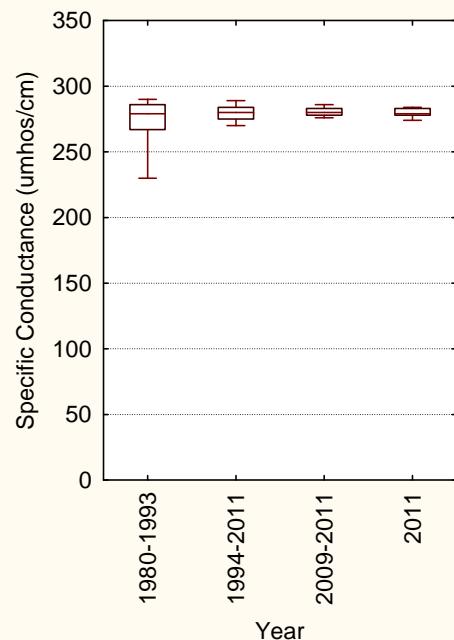
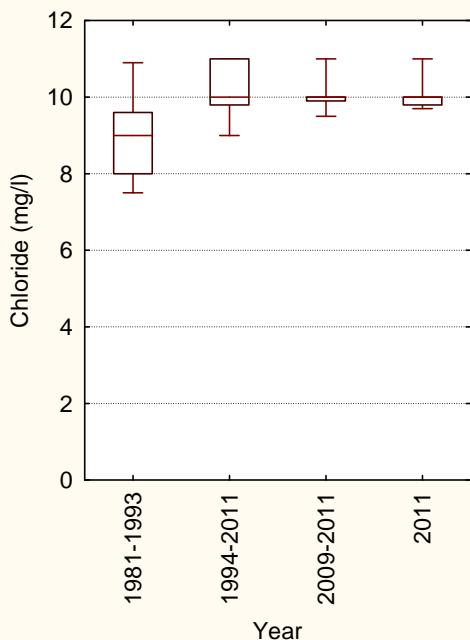
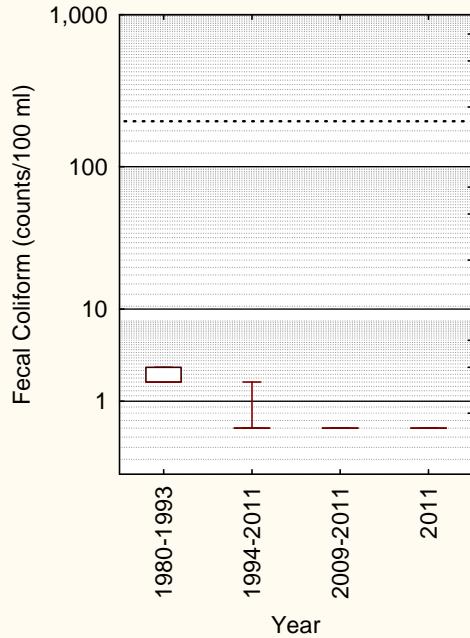
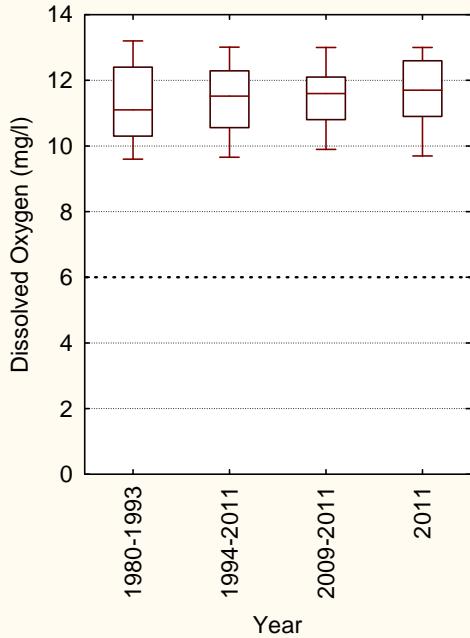
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.71	12.43	0.3	0.7	5.9	0.9	1.6	8.4	0.0	0.8	0.0	ND
Standard Error	0.84	0.30	0.3	0.7	1.1	0.3	1.2	1.7	0.0	0.3	0.0	ND
Median	33.00	12.00	0.0	0.0	6.6	0.9	0.7	5.5	0.0	0.9	0.0	ND
Mode	32.00	12.00	0.0	0.0	ND	0.9	0.0	5.5	0.0	0.0	0.0	ND
Standard Deviation	2.21	0.79	0.9	1.7	2.5	0.7	2.4	4.5	0.1	0.9	0.0	ND
Sample Variance	4.90	0.62	0.8	3.0	6.4	0.5	5.8	20.4	0.0	0.7	0.0	ND
Kurtosis	1.71	2.36	7.0	7.0	-0.5	2.9	2.3	-1.4	7.0	-0.9	ND	ND
Skewness	1.40	1.76	2.6	2.6	0.0	1.2	1.6	0.8	2.6	0.5	ND	ND
Range	6.00	2.00	2.4	4.6	6.6	2.2	5.1	10.8	0.3	2.2	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	2.6	0.0	0.0	4.2	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	2.4	4.6	9.2	2.2	5.1	15.0	0.3	2.2	0.0	0.0
Count	7	7	7	7	5	7	4	7	7	7	7	0
Confidence Level(95.0%)	2.05	0.73	0.8	1.6	3.1	0.6	3.8	4.2	0.1	0.8	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	134	107	ND	ND	ND	ND	ND	ND
Standard Error	3	1	ND	ND	ND	ND	ND	ND
Median	130	110	ND	ND	ND	ND	ND	ND
Mode	130	110	ND	ND	ND	ND	ND	ND
Standard Deviation	8	5	ND	ND	ND	ND	ND	ND
Sample Variance	62	24	ND	ND	ND	ND	ND	ND
Kurtosis	2	-2	ND	ND	ND	ND	ND	ND
Skewness	2	-1	ND	ND	ND	ND	ND	ND
Range	20	10	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	100	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	150	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	7	3	ND	ND	ND	ND	ND	ND

ND = No Data

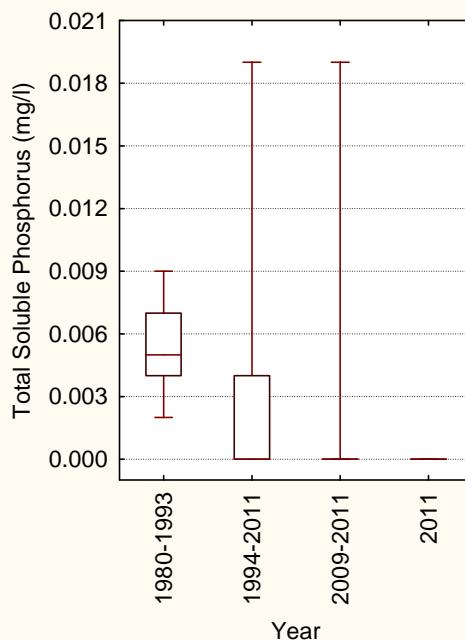
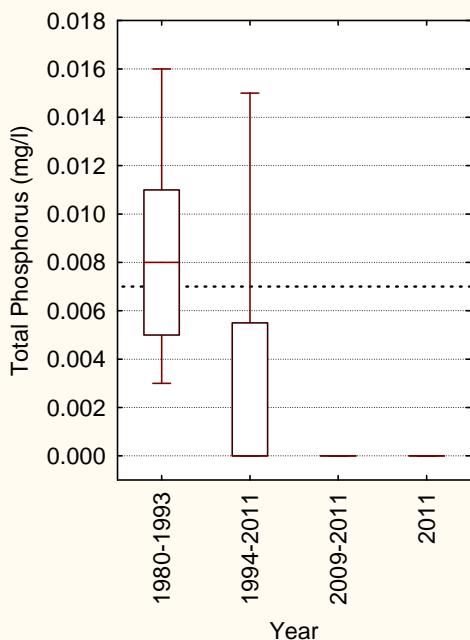
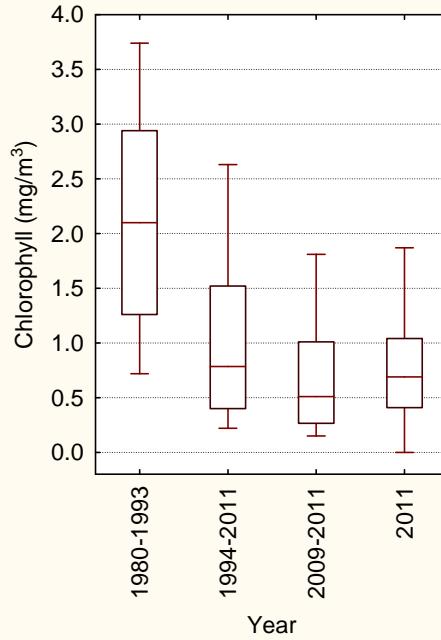
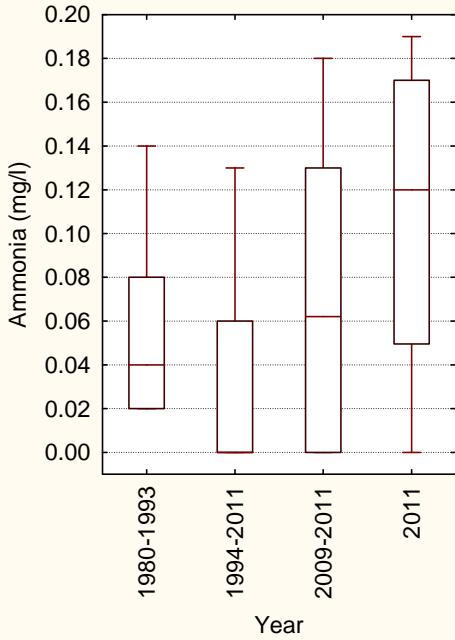
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-08



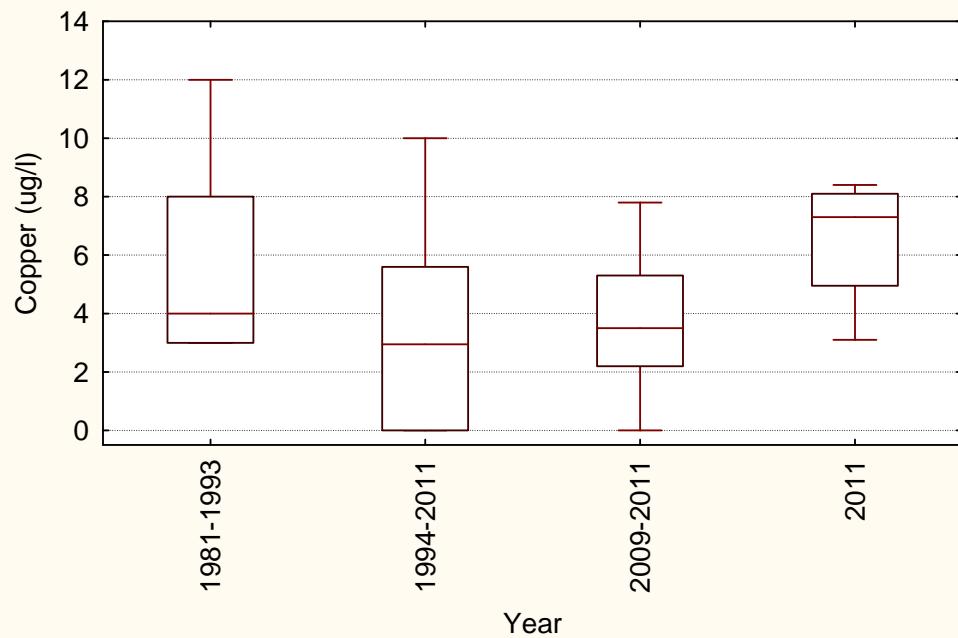
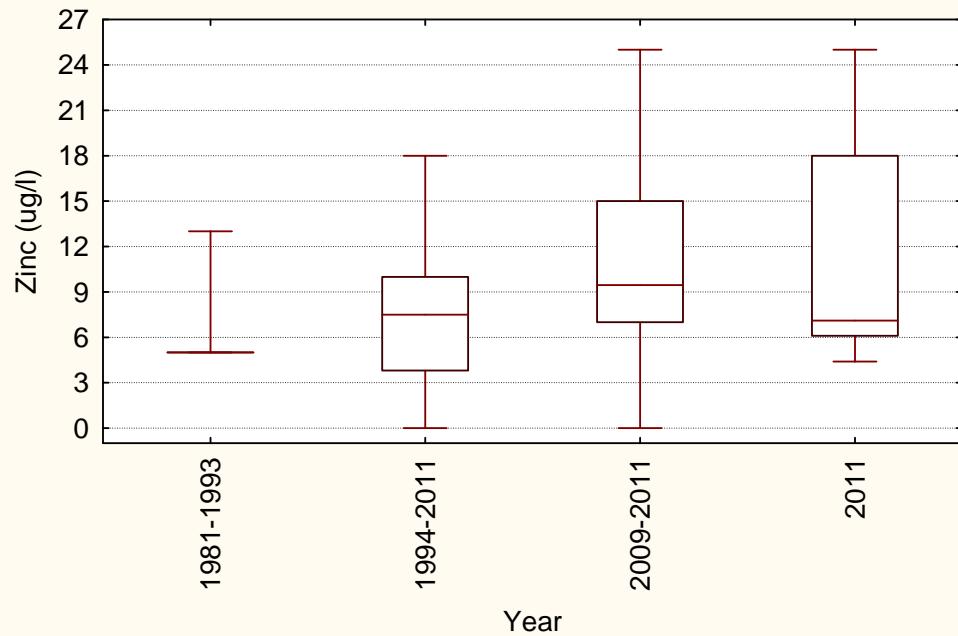
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-08



— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-08



NEAR SHORE - SITE 8
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	8.7	11.6	0.89	0.29	0.001	0.29	0.109	0.00	0.000	0.000	1.87
Standard Error	0.1	1.3	0.3	0.17	0.01	0.000	0.01	0.017	0.00	0.000	0.000	0.08
Median	8.1	6.8	11.7	0.69	0.30	0.000	0.30	0.120	0.00	0.000	0.000	1.90
Mode	8.2	5.3	13.0	0.00	0.32	0.000	0.32	0.000	0.00	0.000	0.000	1.90
Standard Deviation	0.3	6.2	1.3	0.77	0.03	0.002	0.03	0.074	0.00	0.000	0.000	0.38
Sample Variance	0.1	37.9	1.6	0.60	0.00	0.000	0.00	0.006	0.00	0.000	0.000	0.14
Kurtosis	0.1	-0.3	-0.6	3.03	-1.14	-1.763	-1.08	-1.036	ND	ND	ND	-1.01
Skewness	-1.1	0.9	-0.4	1.54	-0.47	0.330	-0.46	-0.043	ND	ND	ND	-0.37
Range	0.8	19.6	4.4	3.22	0.09	0.004	0.09	0.250	0.00	0.000	0.000	1.20
Minimum	7.5	1.9	9.1	0.00	0.24	0.000	0.24	0.000	0.00	0.000	0.000	1.20
Maximum	8.3	21.5	13.5	3.22	0.33	0.004	0.33	0.250	0.00	0.000	0.000	2.40
Count	21	21	21	21	21	21	21	20	20	20	20	21
Confidence Level(95.0%)	0.1	2.8	0.6	0.35	0.01	0.001	0.01	0.035	0.00	0.000	0.000	0.17

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	10.7	31.1	ND	ND	ND	ND	0.3	280	10.1	0	0.0	ND
Standard Error	1.8	2.3	ND	ND	ND	ND	0.0	1	0.1	0	0.0	ND
Median	8.7	30.5	ND	ND	ND	ND	0.3	279	10.0	0	0.0	ND
Mode	ND	ND	ND	ND	ND	ND	0.3	278	10.0	0	0.0	ND
Standard Deviation	4.9	6.2	ND	ND	ND	ND	0.1	5	0.5	0	0.0	ND
Sample Variance	23.8	37.9	ND	ND	ND	ND	0.0	21	0.3	0	0.0	ND
Kurtosis	-1.1	1.0	ND	ND	ND	ND	1.5	1	-0.4	ND	ND	ND
Skewness	0.5	-0.4	ND	ND	ND	ND	1.1	1	1.2	ND	ND	ND
Range	13.3	19.6	0.0	0.0	0.0	0.0	0.5	18	1.3	0	0.0	0
Minimum	4.7	20.5	0.0	0.0	0.0	0.0	0.2	274	9.7	0	0.0	0
Maximum	18.0	40.1	0.0	0.0	0.0	0.0	0.7	292	11.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	4.5	5.7	ND	ND	ND	ND	0.1	2	0.2	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 8
WATER QUALITY DATA - 2011

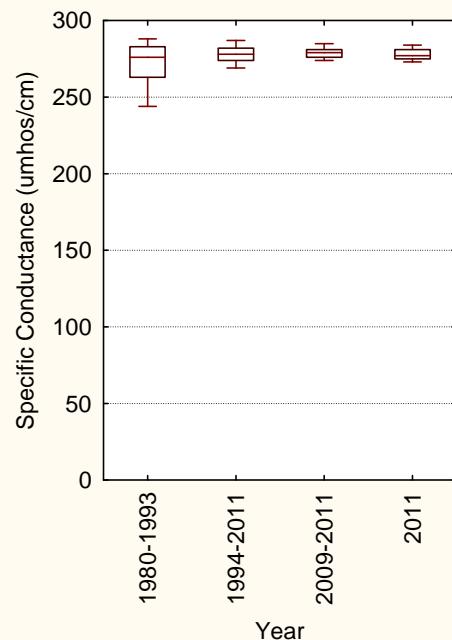
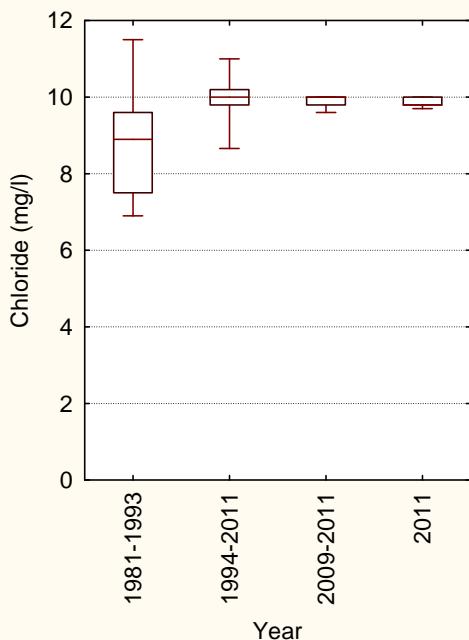
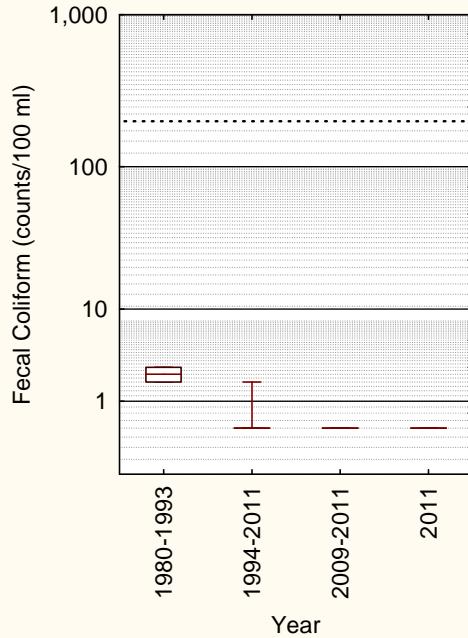
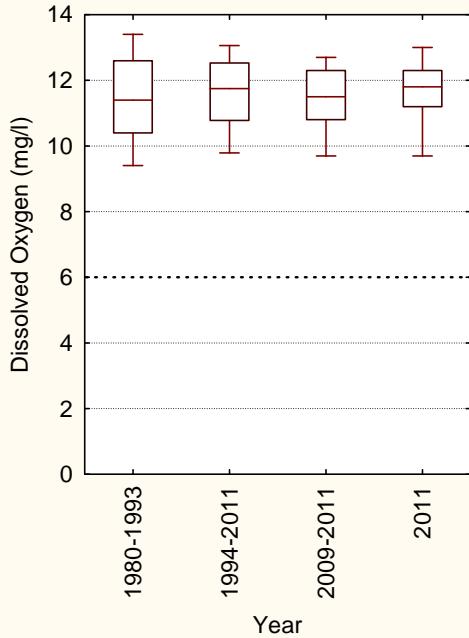
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.29	12.14	0.3	0.7	6.5	1.3	2.7	10.8	0.0	1.1	0.0	ND
Standard Error	0.57	0.26	0.3	0.7	1.2	0.2	0.9	2.9	0.0	0.2	0.0	ND
Median	33.00	12.00	0.0	0.0	7.3	1.3	2.6	7.1	0.0	1.3	0.0	ND
Mode	32.00	12.00	0.0	0.0	ND	1.3	ND	ND	0.0	ND	0.0	ND
Standard Deviation	1.50	0.69	0.9	1.9	2.4	0.5	2.0	7.7	0.1	0.5	0.0	ND
Sample Variance	2.24	0.48	0.8	3.4	5.6	0.2	4.1	58.8	0.0	0.3	0.0	ND
Kurtosis	0.47	0.34	7.0	7.0	2.4	0.7	1.4	0.8	7.0	3.5	ND	ND
Skewness	1.00	-0.17	2.6	2.6	-1.6	0.6	0.2	1.4	2.6	-1.8	ND	ND
Range	4.00	2.00	2.4	4.9	5.3	1.4	5.6	20.6	0.3	1.6	0.0	0.0
Minimum	32.00	11.00	0.0	0.0	3.1	0.7	0.0	4.4	0.0	0.0	0.0	0.0
Maximum	36.00	13.00	2.4	4.9	8.4	2.1	5.6	25.0	0.3	1.6	0.0	0.0
Count	7	7	7	7	4	7	5	7	7	7	7	0
Confidence Level(95.0%)	1.38	0.64	0.8	1.7	3.8	0.4	2.5	7.1	0.1	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	131	107	ND	ND	ND	ND	ND	ND
Standard Error	1	1	ND	ND	ND	ND	ND	ND
Median	130	110	ND	ND	ND	ND	ND	ND
Mode	130	110	ND	ND	ND	ND	ND	ND
Standard Deviation	4	5	ND	ND	ND	ND	ND	ND
Sample Variance	14	21	ND	ND	ND	ND	ND	ND
Kurtosis	7	-1	ND	ND	ND	ND	ND	ND
Skewness	3	-1	ND	ND	ND	ND	ND	ND
Range	10	10	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	100	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	3	3	ND	ND	ND	ND	ND	ND

ND = No Data

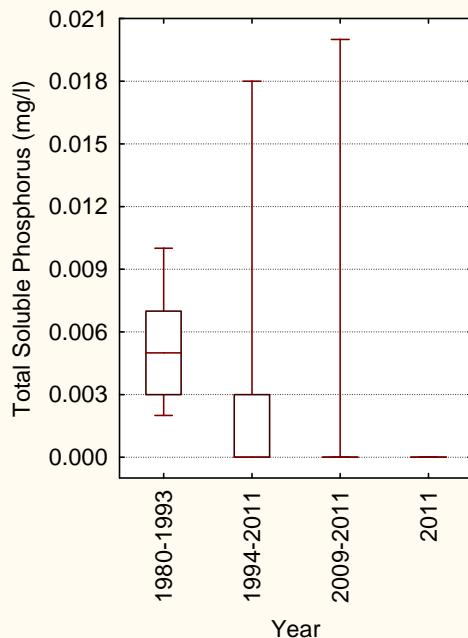
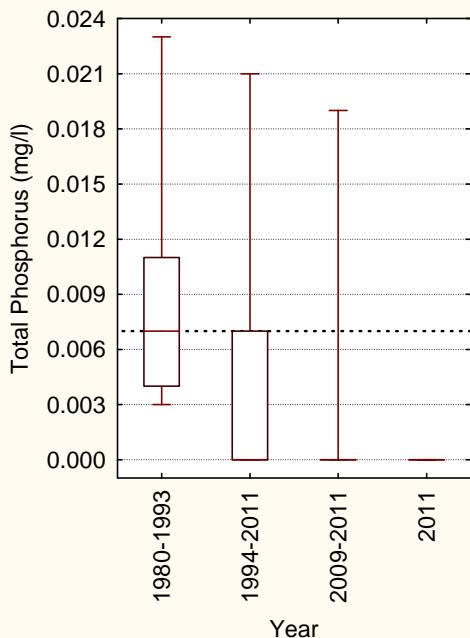
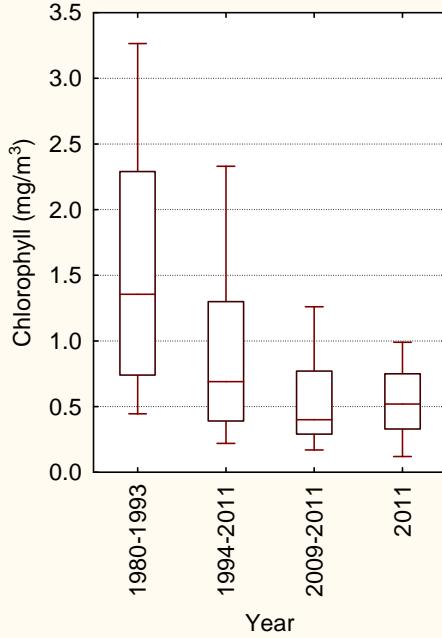
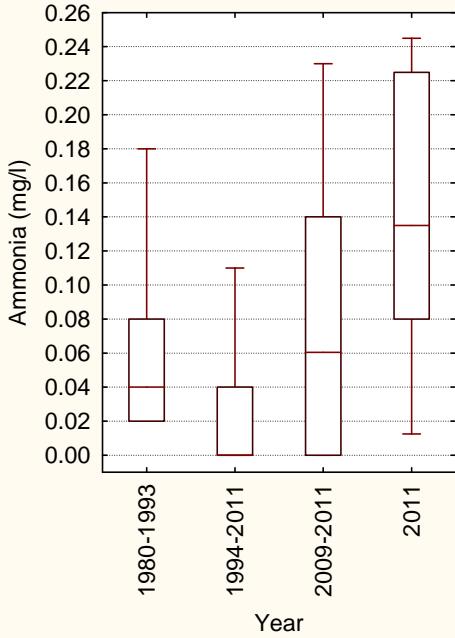
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-10



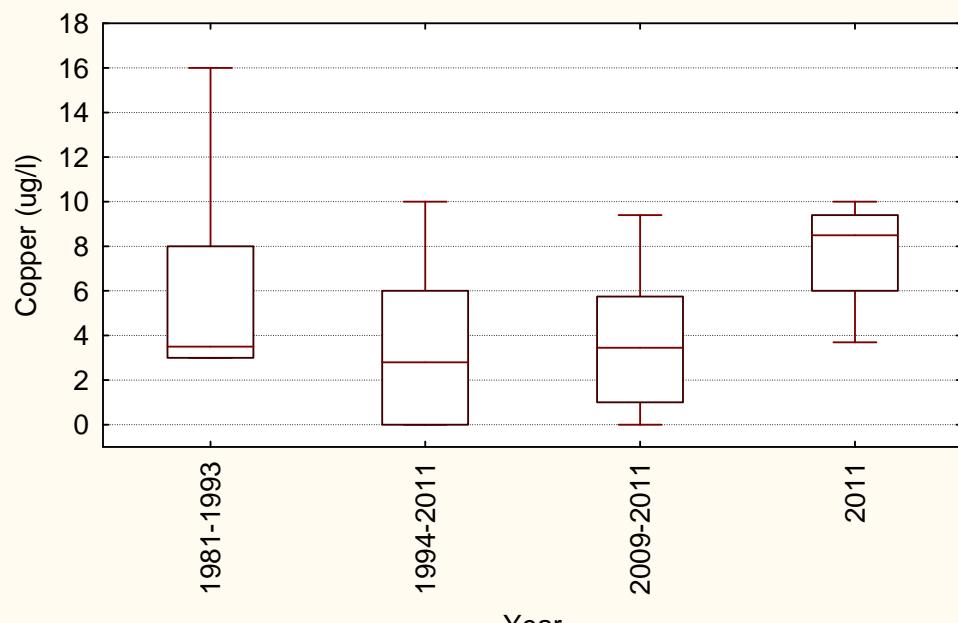
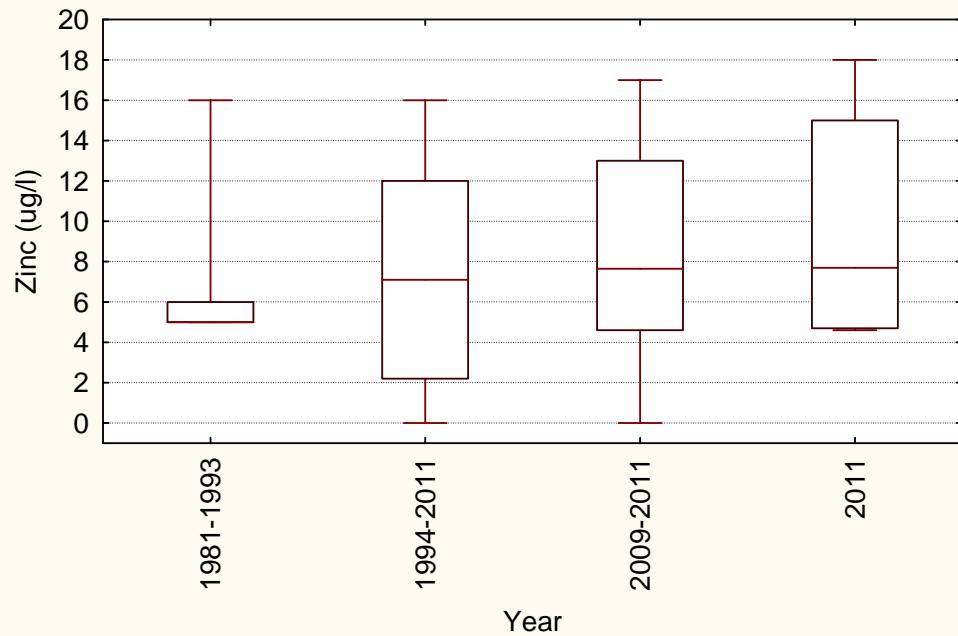
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-10



— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-10



— Median □ 25%-75% ┤ 10%-90%

NEAR SHORE - SITE 10
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	7.0	11.6	0.57	0.30	0.001	0.30	0.142	0.03	0.000	0.001	1.96
Standard Error	0.1	1.4	0.3	0.08	0.01	0.000	0.01	0.020	0.03	0.000	0.001	0.08
Median	8.0	4.1	11.8	0.52	0.31	0.000	0.31	0.135	0.00	0.000	0.000	2.00
Mode	8.2	4.1	12.3	0.49	0.31	0.000	0.31	0.000	0.00	0.000	0.000	2.00
Standard Deviation	0.3	6.3	1.2	0.37	0.03	0.002	0.03	0.088	0.11	0.000	0.003	0.36
Sample Variance	0.1	39.2	1.6	0.14	0.00	0.000	0.00	0.008	0.01	0.000	0.000	0.13
Kurtosis	-1.4	1.1	-0.8	2.55	-0.29	0.114	-0.13	-0.971	20.00	ND	20.000	0.30
Skewness	-0.3	1.5	-0.5	1.16	-1.13	0.952	-1.21	-0.033	4.47	ND	4.472	-0.86
Range	0.8	20.0	4.1	1.65	0.08	0.006	0.08	0.300	0.50	0.000	0.015	1.30
Minimum	7.5	1.9	9.4	0.00	0.24	0.000	0.24	0.000	0.00	0.000	0.000	1.10
Maximum	8.3	21.9	13.5	1.65	0.32	0.006	0.32	0.300	0.50	0.000	0.015	2.40
Count	21	21	21	21	21	21	21	20	20	20	20	21
Confidence Level(95.0%)	0.1	2.9	0.6	0.17	0.01	0.001	0.01	0.041	0.05	0.000	0.002	0.16

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	13.1	36.5	ND	ND	ND	ND	0.4	278	9.9	0	0.0	ND
Standard Error	1.1	2.7	ND	ND	ND	ND	0.0	1	0.0	0	0.0	ND
Median	13.0	34.0	ND	ND	ND	ND	0.3	277	9.8	0	0.0	ND
Mode	15.0	ND	ND	ND	ND	ND	0.3	275	10.0	0	0.0	ND
Standard Deviation	2.9	7.1	ND	ND	ND	ND	0.2	4	0.1	0	0.0	ND
Sample Variance	8.4	50.7	ND	ND	ND	ND	0.0	18	0.0	0	0.0	ND
Kurtosis	-0.3	-1.0	ND	ND	ND	ND	4.8	-1	-0.7	ND	ND	ND
Skewness	-0.3	0.8	ND	ND	ND	ND	2.1	0	-0.5	ND	ND	ND
Range	8.6	17.6	0.0	0.0	0.0	0.0	0.7	15	0.4	0	0.0	0
Minimum	8.4	30.0	0.0	0.0	0.0	0.0	0.2	272	9.6	0	0.0	0
Maximum	17.0	47.6	0.0	0.0	0.0	0.0	0.9	287	10.0	0	0.0	0
Count	7	7	0	0	0	0	21	21	21	7	7	0
Confidence Level(95.0%)	2.7	6.6	ND	ND	ND	ND	0.1	2	0.1	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality data

NEAR SHORE - SITE 10
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.14	11.86	0.5	0.7	7.5	1.7	3.3	9.8	0.0	1.1	0.0	ND
Standard Error	0.40	0.14	0.5	0.7	1.2	0.3	1.2	2.1	0.0	0.2	0.0	ND
Median	33.00	12.00	0.0	0.0	8.5	1.4	3.1	7.7	0.0	1.2	0.0	ND
Mode	33.00	12.00	0.0	0.0	ND	1.4	ND	ND	0.0	ND	0.0	ND
Standard Deviation	1.07	0.38	1.2	1.8	2.6	0.7	2.6	5.5	0.1	0.6	0.0	ND
Sample Variance	1.14	0.14	1.6	3.3	6.9	0.5	6.8	30.4	0.0	0.4	0.0	ND
Kurtosis	0.26	7.00	7.0	7.0	-0.9	-0.9	-0.2	-1.7	7.0	0.7	ND	ND
Skewness	0.77	-2.65	2.6	2.6	-0.8	1.0	0.2	0.5	2.6	-0.9	ND	ND
Range	3.00	1.00	3.3	4.8	6.3	1.7	6.9	13.4	0.3	1.9	0.0	0.0
Minimum	32.00	11.00	0.0	0.0	3.7	1.0	0.0	4.6	0.0	0.0	0.0	0.0
Maximum	35.00	12.00	3.3	4.8	10.0	2.7	6.9	18.0	0.3	1.9	0.0	0.0
Count	7	7	7	7	5	7	5	7	7	7	7	0
Confidence Level(95.0%)	0.99	0.35	1.2	1.7	3.3	0.6	3.2	5.1	0.1	0.6	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	133	107	ND	ND	ND	ND	ND	ND
Standard Error	2	1	ND	ND	ND	ND	ND	ND
Median	130	110	ND	ND	ND	ND	ND	ND
Mode	130	110	ND	ND	ND	ND	ND	ND
Standard Deviation	5	5	ND	ND	ND	ND	ND	ND
Sample Variance	24	24	ND	ND	ND	ND	ND	ND
Kurtosis	-1	-2	ND	ND	ND	ND	ND	ND
Skewness	1	-1	ND	ND	ND	ND	ND	ND
Range	10	10	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	130	100	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140	110	0.0	0.0	0.0	0.0	0.0	0.0
Count	7	15	0	0	0	0	0	0
Confidence Level(95.0%)	5	3	ND	ND	ND	ND	ND	ND

ND = No Data

Provisional MMSD Water Quality data

NEAR SHORE - SITE 11
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	12.4	11.2	0.79	0.35	0.003	0.36	0.001	0.03	0.002	0.001	1.70
Standard Error	0.0	0.7	0.2	0.08	0.01	0.000	0.01	0.001	0.01	0.001	0.000	0.06
Median	8.1	13.7	11.5	0.79	0.33	0.003	0.33	0.000	0.00	0.000	0.000	1.60
Mode	8.0	14.8	11.6	1.27	0.26	0.000	0.33	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.1	5.6	1.6	0.46	0.11	0.002	0.11	0.006	0.10	0.004	0.004	0.47
Sample Variance	0.0	31.1	2.6	0.21	0.01	0.000	0.01	0.000	0.01	0.000	0.000	0.22
Kurtosis	-0.7	-0.9	-1.0	-1.17	1.02	1.186	1.16	25.887	10.35	2.436	15.657	-1.23
Skewness	0.3	-0.1	-0.2	-0.05	1.20	0.339	1.23	5.193	3.46	1.957	4.120	0.32
Range	0.5	19.2	5.6	1.56	0.42	0.009	0.43	0.031	0.40	0.016	0.017	1.62
Minimum	7.9	2.3	8.4	0.00	0.24	0.000	0.24	0.000	0.00	0.000	0.000	0.98
Maximum	8.4	21.4	14.0	1.56	0.66	0.009	0.67	0.031	0.40	0.016	0.017	2.60
Count	57	57	57	32	57	57	57	57	57	56	56	57
Confidence Level(95.0%)	0.0	1.5	0.4	0.17	0.03	0.000	0.03	0.002	0.03	0.001	0.001	0.12

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	7.1	11.5	179.2	178.2	0.1	0.9	1.4	297	12.0	0	0.0	ND
Standard Error	0.8	0.5	3.6	3.4	0.1	0.4	0.2	2	0.4	0	0.0	ND
Median	7.2	12.0	180.0	180.0	0.0	0.0	0.7	291	12.0	0	0.0	ND
Mode	7.5	12.0	180.0	180.0	0.0	0.0	0.6	286	10.0	0	0.0	ND
Standard Deviation	3.6	2.1	12.4	11.9	0.3	1.4	1.6	17	2.9	0	0.1	ND
Sample Variance	13.0	4.5	153.8	140.8	0.1	2.0	2.6	306	8.4	0	0.0	ND
Kurtosis	-0.6	7.1	-0.6	-0.6	12.0	1.4	9.0	5	8.1	19	19.0	ND
Skewness	0.1	-2.7	-0.2	-0.1	3.5	1.5	3.0	2	2.7	4	4.4	ND
Range	11.8	8.4	40.0	38.4	1.0	4.2	7.3	82	13.0	2	0.3	0
Minimum	1.2	4.6	160.0	160.0	0.0	0.0	0.4	275	10.0	0	0.0	0
Maximum	13.0	13.0	200.0	198.4	1.0	4.2	7.7	357	23.0	2	0.3	0
Count	19	19	12	12	12	12	57	57	57	19	19	0
Confidence Level(95.0%)	1.7	1.0	7.9	7.5	0.2	0.9	0.4	5	0.8	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 11
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.79	12.74	0.1	1.1	6.4	1.2	1.7	8.7	0.1	1.4	0.0	ND
Standard Error	0.44	0.20	0.1	0.5	0.5	0.3	0.7	1.2	0.0	0.3	0.0	ND
Median	34.00	13.00	0.0	0.0	6.2	0.9	0.0	7.1	0.0	1.2	0.0	ND
Mode	34.00	12.00	0.0	0.0	ND	0.0	0.0	3.8	0.0	0.0	0.0	ND
Standard Deviation	1.90	0.87	0.5	2.1	1.6	1.3	2.2	5.1	0.2	1.4	0.0	ND
Sample Variance	3.62	0.76	0.3	4.6	2.7	1.8	5.0	26.4	0.0	2.1	0.0	ND
Kurtosis	2.03	0.99	19.0	1.4	-0.9	9.8	0.2	0.2	8.7	8.2	ND	ND
Skewness	1.26	1.14	4.4	1.7	0.2	2.8	1.1	0.6	2.9	2.4	ND	ND
Range	8.00	3.00	2.3	6.5	5.2	6.0	6.4	21.0	0.7	6.3	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	40.00	15.00	2.3	6.5	8.9	6.0	6.4	21.0	0.7	6.3	0.0	0.0
Count	19	19	19	19	13	19	11	19	19	18	19	0
Confidence Level(95.0%)	0.92	0.42	0.3	1.0	1.0	0.6	1.5	2.5	0.1	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	141	108	0.0	2.1	28.2	26.5	1.7	ND
Standard Error	2	1	0.0	0.4	0.3	0.3	0.1	ND
Median	140	110	0.0	2.6	28.5	27.0	1.9	ND
Mode	140	110	0.0	0.0	30.0	28.0	1.9	ND
Standard Deviation	7	6	0.0	1.3	1.9	2.0	0.6	ND
Sample Variance	43	41	0.0	1.8	3.7	4.0	0.4	ND
Kurtosis	4	0	ND	-0.6	-1.2	-0.8	2.8	ND
Skewness	1	0	ND	-1.0	0.1	-0.4	-1.9	ND
Range	30	20	0.0	3.7	7.0	8.0	2.2	0.0
Minimum	130	100	0.0	0.0	25.0	22.0	0.0	0.0
Maximum	160	120	0.0	3.7	32.0	30.0	2.2	0.0
Count	19	24	12	12	36	36	36	0
Confidence Level(95.0%)	3	3	0.0	0.9	0.7	0.7	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 12
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	12.9	10.4	6.20	0.87	0.012	0.89	0.028	0.36	0.035	0.015	3.04
Standard Error	0.0	0.6	0.2	0.62	0.05	0.001	0.05	0.004	0.03	0.003	0.002	0.15
Median	8.0	13.6	10.1	4.20	0.81	0.012	0.82	0.016	0.44	0.033	0.014	2.75
Mode	8.1	14.8	13.3	1.92	1.40	0.014	1.40	0.000	0.00	0.016	0.000	4.20
Standard Deviation	0.2	5.5	1.6	5.25	0.45	0.005	0.45	0.034	0.26	0.023	0.016	1.29
Sample Variance	0.1	30.3	2.6	27.60	0.21	0.000	0.21	0.001	0.07	0.001	0.000	1.67
Kurtosis	0.2	-0.3	-1.0	2.13	1.01	1.848	0.94	1.185	-1.15	2.494	0.810	-0.30
Skewness	0.0	-0.4	0.2	1.28	1.08	1.095	1.06	1.255	-0.32	1.250	1.053	0.66
Range	1.1	21.9	5.8	25.80	2.10	0.027	2.09	0.130	0.86	0.110	0.062	5.00
Minimum	7.5	1.2	7.5	0.60	0.30	0.003	0.31	0.000	0.00	0.000	0.000	1.20
Maximum	8.6	23.1	13.3	26.40	2.40	0.029	2.40	0.130	0.86	0.110	0.062	6.20
Count	72	72	72	72	72	72	72	72	72	72	72	72
Confidence Level(95.0%)	0.1	1.3	0.4	1.23	0.11	0.001	0.11	0.008	0.06	0.005	0.004	0.30

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.6	5.2	265.9	260.3	1.6	5.6	6.5	444	39.1	269	1.3	911
Standard Error	0.1	0.6	11.9	11.9	0.3	1.0	0.8	12	2.3	224	0.2	894
Median	1.6	4.6	260.0	252.8	1.6	3.4	4.2	433	36.0	20	1.3	30
Mode	1.4	5.0	260.0	ND	0.0	3.1	2.8	408	17.0	0	0.0	ND
Standard Deviation	0.7	2.9	49.3	49.0	1.1	4.3	6.7	104	19.4	1096	0.9	1549
Sample Variance	0.5	8.3	2425.7	2397.1	1.2	18.3	44.7	10751	376.4	1200860	0.8	2399665
Kurtosis	0.2	1.6	1.8	2.0	2.0	5.6	5.1	-1	1.3	24	1.3	ND
Skewness	0.2	1.3	0.9	1.1	0.6	2.2	2.3	0	0.9	5	0.6	2
Range	2.9	11.1	200.0	198.7	4.4	17.0	29.7	432	98.0	5400	3.7	2696
Minimum	0.4	1.4	190.0	188.0	0.0	2.0	1.1	282	12.0	0	0.0	4
Maximum	3.3	12.5	390.0	386.7	4.4	19.0	30.8	714	110.0	5400	3.7	2700
Count	24	23	17	17	17	17	72	72	72	24	24	3
Confidence Level(95.0%)	0.3	1.2	25.3	25.2	0.6	2.2	1.6	24	4.6	463	0.4	3848

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 12
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	41.08	17.83	0.1	1.2	7.8	1.5	4.0	11.3	0.2	1.0	0.0	ND
Standard Error	1.26	0.80	0.1	0.6	0.6	0.1	0.6	1.1	0.1	0.2	0.0	ND
Median	39.00	17.00	0.0	0.0	7.7	1.6	5.2	10.0	0.0	1.1	0.0	ND
Mode	39.00	15.00	0.0	0.0	7.3	1.6	0.0	14.0	0.0	0.0	0.0	ND
Standard Deviation	6.17	3.92	0.5	2.9	2.7	0.7	2.7	5.2	0.3	0.7	0.0	ND
Sample Variance	38.08	15.36	0.2	8.3	7.1	0.5	7.1	27.3	0.1	0.5	0.0	ND
Kurtosis	1.64	1.40	24.0	3.1	1.3	0.8	-1.3	3.2	-0.1	-0.7	ND	ND
Skewness	1.46	1.39	4.9	2.1	0.9	-0.5	-0.6	1.0	1.1	0.1	ND	ND
Range	24.00	14.00	2.3	9.7	11.1	2.8	7.1	27.0	0.8	2.3	0.0	0.0
Minimum	34.00	14.00	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	58.00	28.00	2.3	9.7	15.0	2.8	7.1	27.0	0.8	2.3	0.0	0.0
Count	24	24	24	24	22	24	17	23	24	22	24	0
Confidence Level(95.0%)	2.61	1.66	0.2	1.2	1.2	0.3	1.4	2.3	0.1	0.3	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	175	135	0.1	4.6	36.4	32.8	3.5	ND
Standard Error	6	3	0.1	0.2	1.0	0.8	0.2	ND
Median	170	130	0.0	4.4	35.0	32.0	3.3	ND
Mode	150	120	0.0	4.0	29.0	28.0	2.6	ND
Standard Deviation	31	20	0.5	0.9	6.8	5.5	1.6	ND
Sample Variance	948	403	0.3	0.8	46.6	30.6	2.6	ND
Kurtosis	2	0	17.0	-0.4	-0.3	-0.5	0.6	ND
Skewness	2	1	4.1	-0.1	0.7	0.6	0.7	ND
Range	110	70	2.2	3.3	24.0	20.0	6.9	0.0
Minimum	150	110	0.0	2.7	28.0	24.0	0.7	0.0
Maximum	260	180	2.2	6.0	52.0	44.0	7.6	0.0
Count	24	36	17	17	51	51	51	0
Confidence Level(95.0%)	13	7	0.3	0.5	1.9	1.6	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 13
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.0	11.5	11.0	4.64	0.63	0.008	0.64	0.016	0.20	0.022	0.012	2.78
Standard Error	0.0	0.7	0.2	0.79	0.04	0.001	0.04	0.004	0.04	0.003	0.002	0.18
Median	8.0	11.5	11.0	1.99	0.52	0.006	0.53	0.000	0.00	0.016	0.008	2.40
Mode	8.0	14.4	11.6	1.95	0.28	0.010	0.29	0.000	0.00	0.000	0.000	1.60
Standard Deviation	0.2	5.3	1.5	6.26	0.33	0.006	0.34	0.031	0.31	0.024	0.015	1.47
Sample Variance	0.0	27.6	2.3	39.20	0.11	0.000	0.11	0.001	0.09	0.001	0.000	2.15
Kurtosis	1.4	-0.4	-0.9	8.36	0.01	4.643	0.05	8.213	1.94	6.931	2.607	1.66
Skewness	0.4	0.0	-0.2	2.72	0.89	1.821	0.91	2.773	1.50	2.334	1.612	1.26
Range	1.1	21.7	5.7	33.45	1.24	0.033	1.24	0.150	1.30	0.120	0.063	6.80
Minimum	7.5	1.1	7.9	0.35	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.10
Maximum	8.6	22.8	13.6	33.80	1.50	0.033	1.50	0.150	1.30	0.120	0.063	7.90
Count	63	63	63	63	63	63	63	60	60	63	63	63
Confidence Level(95.0%)	0.1	1.3	0.4	1.58	0.08	0.002	0.08	0.008	0.08	0.006	0.004	0.37

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	2.6	7.2	239.3	236.4	0.6	2.9	4.5	410	33.4	48	1.1	34
Standard Error	0.4	0.9	17.6	17.5	0.2	0.6	0.9	20	4.8	20	0.2	19
Median	2.4	5.7	230.0	227.4	0.0	2.5	2.3	387	22.0	13	1.1	6
Mode	1.6	14.0	230.0	ND	0.0	1.1	3.1	331	17.0	0	0.0	2
Standard Deviation	1.8	4.0	65.8	65.4	0.8	2.2	6.9	157	37.8	91	0.8	70
Sample Variance	3.2	15.8	4330.2	4274.8	0.6	5.0	47.0	24687	1425.3	8368	0.6	4848
Kurtosis	2.4	-0.4	5.2	5.4	-1.8	-0.3	12.7	17	25.3	7	-0.6	12
Skewness	1.6	0.8	2.0	2.0	0.5	0.9	3.5	3	4.5	3	0.1	3
Range	6.6	13.2	260.0	258.3	1.9	7.0	35.8	1043	260.2	350	2.5	260
Minimum	0.5	1.4	170.0	169.0	0.0	0.0	0.5	277	9.8	0	0.0	0
Maximum	7.1	14.6	430.0	427.3	1.9	7.0	36.3	1320	270.0	350	2.5	260
Count	20	20	14	14	14	14	63	63	63	21	21	13
Confidence Level(95.0%)	0.8	1.9	38.0	37.8	0.4	1.3	1.7	40	9.5	42	0.3	42

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 13
WATER QUALITY DATA - 2011

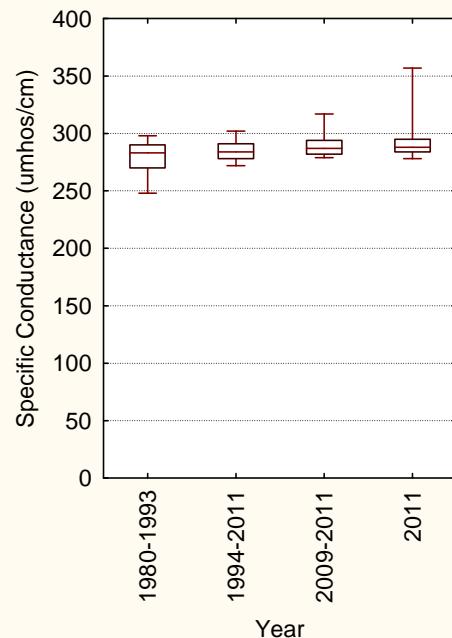
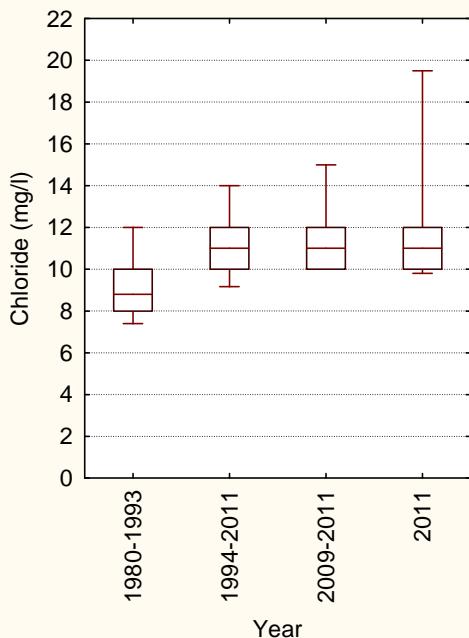
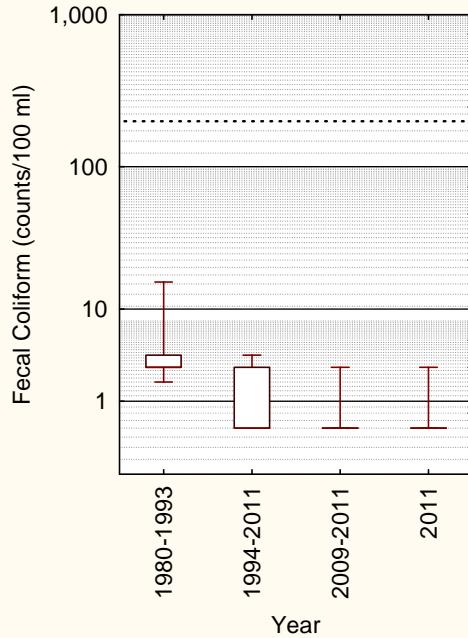
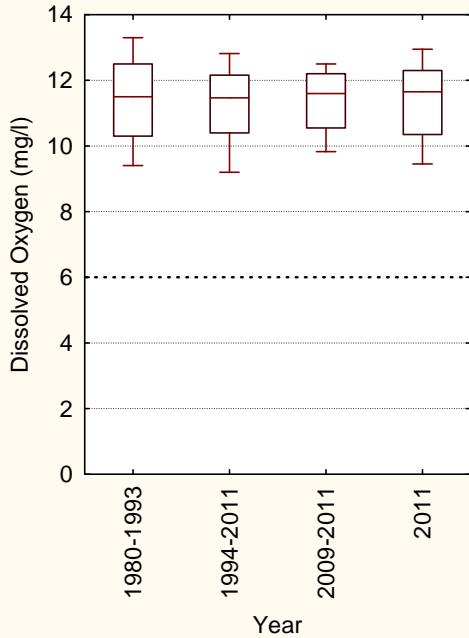
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	39.05	16.00	0.1	1.1	7.7	1.2	3.0	9.0	0.3	1.1	0.0	ND
Standard Error	1.31	0.70	0.1	0.5	0.6	0.1	0.6	1.1	0.1	0.3	0.0	ND
Median	38.00	15.00	0.0	0.0	7.6	1.2	3.6	7.1	0.0	1.0	0.0	ND
Mode	40.00	13.00	0.0	0.0	5.0	1.1	0.0	13.0	0.0	0.0	0.0	ND
Standard Deviation	5.99	3.21	0.5	2.4	2.7	0.6	2.5	4.8	0.3	1.5	0.0	ND
Sample Variance	35.85	10.30	0.2	6.0	7.3	0.4	6.4	23.3	0.1	2.3	0.0	ND
Kurtosis	1.17	-0.38	21.0	1.4	-0.7	0.2	-1.4	-0.8	-0.3	10.1	ND	ND
Skewness	1.33	0.88	4.6	1.8	0.3	-0.5	0.1	0.3	0.9	2.8	ND	ND
Range	21.00	10.00	2.1	6.8	9.4	2.2	7.3	18.0	1.0	6.7	0.0	0.0
Minimum	33.00	13.00	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	54.00	23.00	2.1	6.8	13.0	2.2	7.3	18.0	1.0	6.7	0.0	0.0
Count	21	21	21	21	19	21	17	20	21	20	21	0
Confidence Level(95.0%)	2.73	1.46	0.2	1.1	1.3	0.3	1.3	2.3	0.2	0.7	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	163	133	0.0	3.7	33.7	30.7	3.1	ND
Standard Error	6	5	0.0	0.2	0.9	0.7	0.2	ND
Median	160	130	0.0	3.6	31.5	30.0	3.1	ND
Mode	140	110	0.0	3.6	29.0	27.0	3.4	ND
Standard Deviation	28	26	0.0	0.7	6.0	4.7	1.5	ND
Sample Variance	761	669	0.0	0.5	35.7	22.3	2.3	ND
Kurtosis	0	4	ND	0.2	1.6	1.0	2.9	ND
Skewness	1	2	ND	0.5	1.3	1.1	1.2	ND
Range	90	110	0.0	2.6	25.0	21.0	8.1	0.0
Minimum	130	110	0.0	2.5	26.0	23.0	0.0	0.0
Maximum	220	220	0.0	5.1	51.0	44.0	8.1	0.0
Count	21	27	14	14	42	42	42	0
Confidence Level(95.0%)	13	10	0.0	0.4	1.9	1.5	0.5	ND

ND = No Data

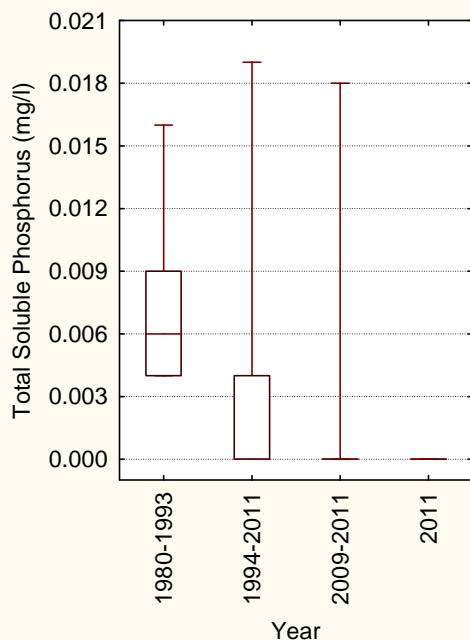
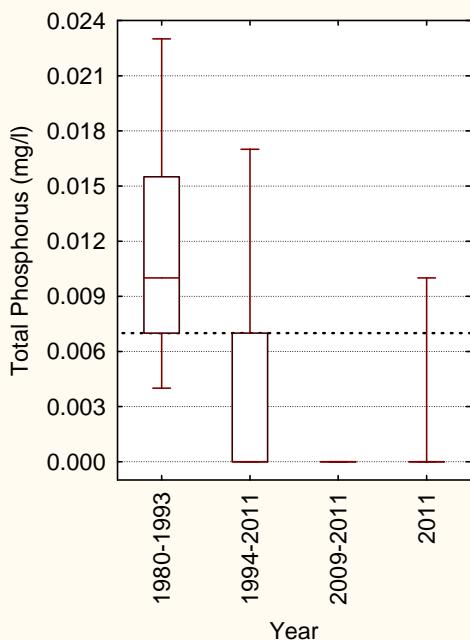
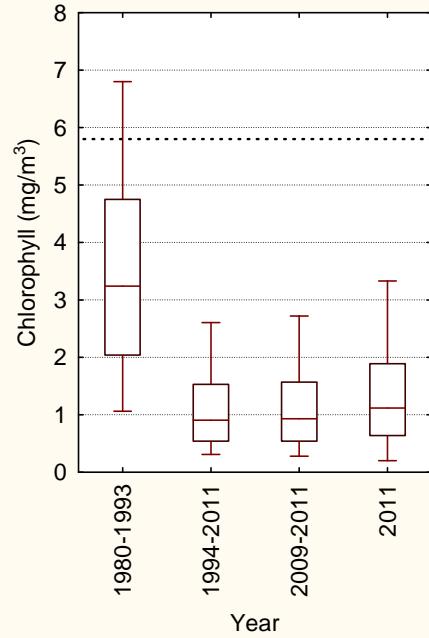
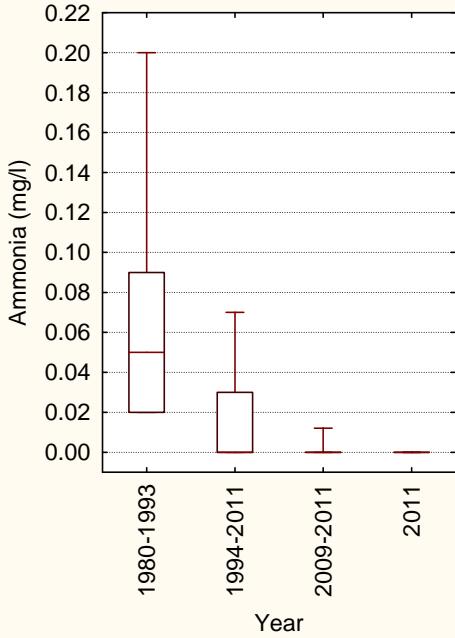
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-14



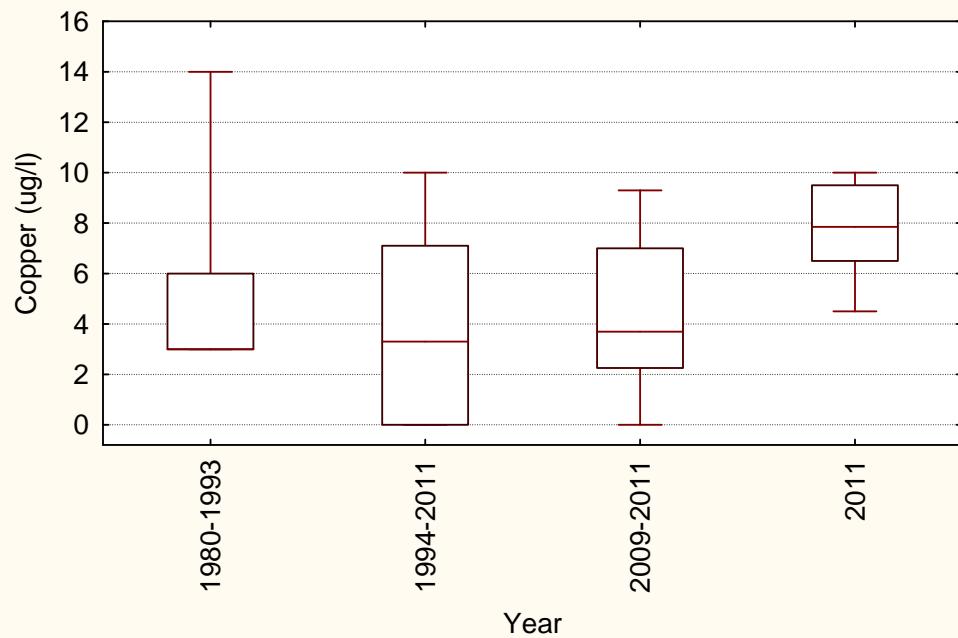
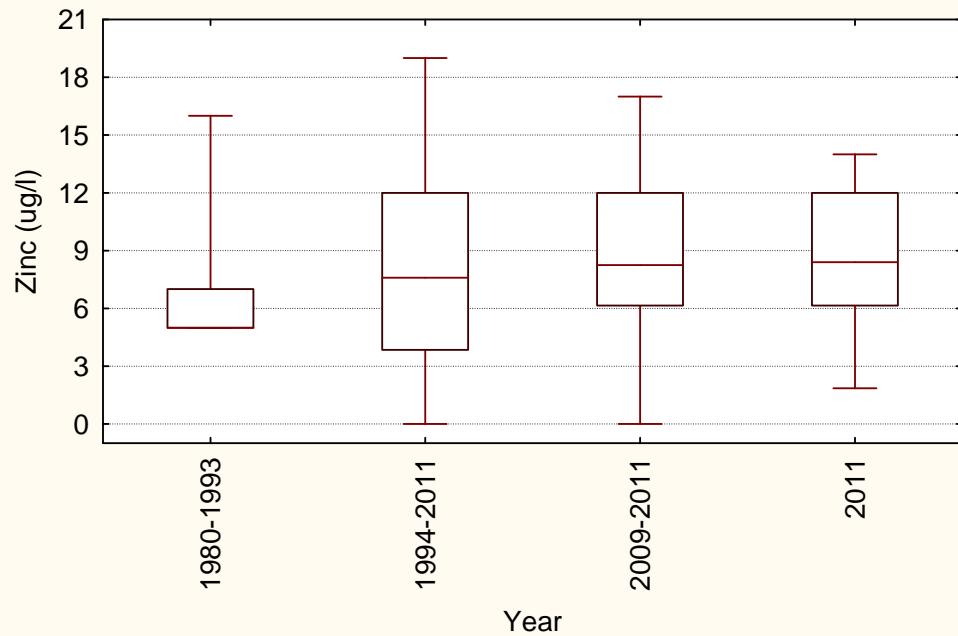
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-14



— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-14



— Median □ 25%-75% ━ 10%-90%

NEAR SHORE - SITE 14
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	10.8	11.4	1.39	0.34	0.003	0.34	0.001	0.03	0.001	0.001	1.81
Standard Error	0.0	0.7	0.2	0.15	0.01	0.000	0.01	0.001	0.02	0.001	0.001	0.07
Median	8.0	10.1	11.7	1.12	0.28	0.003	0.28	0.000	0.00	0.000	0.000	1.80
Mode	8.2	14.3	11.7	0.94	0.26	0.000	0.28	0.000	0.00	0.000	0.000	1.40
Standard Deviation	0.3	5.1	1.3	1.13	0.11	0.002	0.11	0.005	0.12	0.004	0.004	0.51
Sample Variance	0.1	25.9	1.8	1.27	0.01	0.000	0.01	0.000	0.01	0.000	0.000	0.26
Kurtosis	0.0	-0.3	-0.7	2.19	0.35	-0.531	0.37	35.951	11.98	5.643	17.820	-0.74
Skewness	-0.7	0.3	-0.4	1.45	1.27	-0.154	1.28	5.911	3.65	2.640	4.079	0.38
Range	1.3	20.9	5.3	5.24	0.39	0.008	0.40	0.036	0.54	0.017	0.024	1.88
Minimum	7.2	1.5	8.4	0.11	0.21	0.000	0.21	0.000	0.00	0.000	0.000	0.92
Maximum	8.5	22.4	13.7	5.35	0.60	0.008	0.61	0.036	0.54	0.017	0.024	2.80
Count	60	60	60	59	60	60	60	59	59	58	59	60
Confidence Level(95.0%)	0.1	1.3	0.3	0.29	0.03	0.001	0.03	0.001	0.03	0.001	0.001	0.13

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	5.4	14.4	178.5	177.6	0.2	0.9	1.3	306	12.5	0	0.1	ND
Standard Error	0.4	1.1	8.0	8.1	0.2	0.3	0.2	6	0.5	0	0.0	ND
Median	5.5	18.0	170.0	170.0	0.0	0.0	0.8	288	11.0	0	0.0	ND
Mode	5.5	18.5	160.0	180.0	0.0	0.0	0.4	288	11.0	0	0.0	ND
Standard Deviation	1.9	4.9	28.8	29.1	0.6	1.1	1.5	44	4.2	1	0.2	ND
Sample Variance	3.8	23.8	830.8	844.1	0.4	1.2	2.3	1976	17.7	1	0.0	ND
Kurtosis	-0.7	-0.8	5.3	5.4	3.9	-0.5	31.0	6	3.9	3	2.8	ND
Skewness	-0.3	-0.8	2.2	2.2	2.3	0.9	5.0	2	2.1	2	2.1	ND
Range	6.6	13.6	110.0	110.0	1.8	3.1	10.9	218	19.7	3	0.5	0
Minimum	1.5	5.0	150.0	150.0	0.0	0.0	0.3	275	9.3	0	0.0	0
Maximum	8.1	18.6	260.0	260.0	1.8	3.1	11.2	493	29.0	3	0.5	0
Count	20	19	13	13	13	13	59	60	60	20	20	0
Confidence Level(95.0%)	0.9	2.4	17.4	17.6	0.4	0.7	0.4	11	1.1	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 14
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.60	13.00	0.2	0.9	7.8	1.0	4.4	8.6	0.1	1.2	0.0	ND
Standard Error	0.52	0.30	0.1	0.5	0.5	0.1	0.7	1.0	0.1	0.4	0.0	ND
Median	34.00	13.00	0.0	0.0	7.9	1.0	4.9	8.4	0.0	0.9	0.0	ND
Mode	34.00	12.00	0.0	0.0	10.0	0.0	0.0	12.0	0.0	0.0	0.0	ND
Standard Deviation	2.33	1.34	0.5	2.2	2.2	0.7	2.9	4.4	0.3	1.6	0.0	ND
Sample Variance	5.41	1.79	0.3	4.7	4.8	0.4	8.6	19.8	0.1	2.6	0.0	ND
Kurtosis	3.00	0.75	17.3	5.2	-0.4	4.4	-1.2	-0.3	2.0	5.4	ND	ND
Skewness	1.82	1.03	4.1	2.5	-0.6	1.4	-0.5	-0.4	1.8	2.2	ND	ND
Range	9.00	5.00	2.4	7.7	7.7	3.1	7.8	16.0	0.8	6.4	0.0	0.0
Minimum	32.00	11.00	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	41.00	16.00	2.4	7.7	11.0	3.1	7.8	16.0	0.8	6.4	0.0	0.0
Count	20	20	20	20	16	20	17	20	20	20	20	0
Confidence Level(95.0%)	1.09	0.63	0.3	1.0	1.2	0.3	1.5	2.1	0.1	0.8	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	140	112	0.0	3.1	28.5	26.5	2.0	ND
Standard Error	3	2	0.0	0.5	0.5	0.5	0.1	ND
Median	140	110	0.0	3.0	28.0	26.0	2.1	ND
Mode	140	110	0.0	3.0	28.0	25.0	1.9	ND
Standard Deviation	12	11	0.0	1.8	3.2	3.1	0.7	ND
Sample Variance	142	124	0.0	3.2	10.3	9.7	0.6	ND
Kurtosis	3	2	ND	6.6	2.0	1.7	2.4	ND
Skewness	2	1	ND	1.8	1.5	1.2	-1.3	ND
Range	40	42	0.0	8.2	14.0	14.0	3.4	0.0
Minimum	130	98	0.0	0.0	23.0	21.0	0.0	0.0
Maximum	170	140	0.0	8.2	37.0	35.0	3.4	0.0
Count	20	24	13	13	39	39	38	0
Confidence Level(95.0%)	6	5	0.0	1.1	1.0	1.0	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 27
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	8.1	12.6	11.2	0.80	0.50	0.008	0.51	0.017	0.05	0.009	0.005	1.75
Standard Error	0.0	0.7	0.3	0.09	0.04	0.002	0.04	0.009	0.02	0.002	0.001	0.08
Median	8.0	12.2	11.1	0.70	0.35	0.004	0.36	0.000	0.00	0.008	0.000	1.70
Mode	8.0	10.6	11.0	1.48	0.33	0.000	0.28	0.000	0.00	0.000	0.000	2.60
Standard Deviation	0.3	5.4	2.0	0.54	0.27	0.014	0.28	0.067	0.15	0.013	0.007	0.64
Sample Variance	0.1	28.7	3.9	0.29	0.08	0.000	0.08	0.004	0.02	0.000	0.000	0.41
Kurtosis	-0.2	-0.8	-0.1	-0.50	-0.17	14.366	-0.33	16.276	6.40	6.381	1.238	-1.52
Skewness	0.0	-0.1	0.2	0.46	0.97	3.860	0.91	4.165	2.80	2.134	1.419	0.14
Range	1.1	19.2	8.2	2.13	1.00	0.072	1.00	0.340	0.60	0.068	0.028	2.05
Minimum	7.5	2.3	7.4	0.00	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.75
Maximum	8.6	21.5	15.6	2.13	1.20	0.072	1.20	0.340	0.60	0.068	0.028	2.80
Count	57	57	57	33	57	57	57	57	57	57	57	57
Confidence Level(95.0%)	0.1	1.4	0.5	0.19	0.07	0.004	0.07	0.018	0.04	0.003	0.002	0.17

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	6.2	10.1	187.5	186.3	0.1	1.2	1.5	324	16.5	1	0.2	ND
Standard Error	0.8	0.3	4.8	4.7	0.1	0.4	0.2	6	0.9	0	0.1	ND
Median	5.6	10.4	180.0	180.0	0.0	1.2	0.9	305	13.0	0	0.0	ND
Mode	10.0	10.0	180.0	170.0	0.0	0.0	0.5	371	11.0	0	0.0	ND
Standard Deviation	3.4	1.2	16.6	16.3	0.3	1.5	1.4	47	6.7	2	0.3	ND
Sample Variance	11.3	1.6	275.0	264.9	0.1	2.2	1.9	2243	45.2	4	0.1	ND
Kurtosis	-1.3	16.7	-0.5	-0.5	12.0	2.8	6.1	2	-0.7	5	1.2	ND
Skewness	0.2	-4.0	0.8	0.8	3.5	1.6	2.4	1	0.8	2	1.3	ND
Range	9.7	5.9	50.0	48.0	1.0	5.0	6.2	208	23.2	8	0.9	0
Minimum	1.3	5.1	170.0	170.0	0.0	0.0	0.3	274	9.8	0	0.0	0
Maximum	11.0	11.0	220.0	218.0	1.0	5.0	6.6	482	33.0	8	0.9	0
Count	19	19	12	12	12	12	57	57	57	19	19	0
Confidence Level(95.0%)	1.6	0.6	10.5	10.3	0.2	1.0	0.4	13	1.8	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 27
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.32	13.26	0.0	1.1	6.6	0.9	3.0	10.1	0.1	1.2	0.0	ND
Standard Error	0.60	0.25	0.0	0.5	0.5	0.2	0.7	1.5	0.0	0.3	0.0	ND
Median	34.00	13.00	0.0	0.0	6.8	1.1	2.8	8.0	0.0	1.1	0.0	ND
Mode	37.00	13.00	0.0	0.0	6.8	0.0	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	2.63	1.10	0.0	2.1	1.8	0.7	2.6	6.3	0.1	1.1	0.0	ND
Sample Variance	6.89	1.20	0.0	4.5	3.1	0.4	6.7	40.3	0.0	1.3	0.0	ND
Kurtosis	-0.34	-0.91	ND	0.7	-0.8	-1.5	-1.8	2.7	1.0	4.0	ND	ND
Skewness	0.66	0.54	ND	1.6	-0.2	-0.4	-0.1	1.7	1.6	1.5	ND	ND
Range	9.00	3.00	0.0	5.5	5.8	1.8	6.7	24.1	0.4	4.7	0.0	0.0
Minimum	32.00	12.00	0.0	0.0	3.3	0.0	0.0	3.9	0.0	0.0	0.0	0.0
Maximum	41.00	15.00	0.0	5.5	9.1	1.8	6.7	28.0	0.4	4.7	0.0	0.0
Count	19	19	19	19	14	19	15	19	19	19	19	0
Confidence Level(95.0%)	1.27	0.53	0.0	1.0	1.0	0.3	1.4	3.1	0.1	0.5	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	144	112	ND	ND	29.1	27.2	1.8	ND
Standard Error	2	2	ND	ND	0.4	0.4	0.1	ND
Median	140	110	ND	ND	29.0	27.0	2.0	ND
Mode	150	120	ND	ND	29.0	27.0	2.1	ND
Standard Deviation	10	9	ND	ND	2.4	2.4	0.6	ND
Sample Variance	91	76	ND	ND	6.0	5.8	0.4	ND
Kurtosis	-1	-2	ND	ND	-0.9	-0.4	3.0	ND
Skewness	0	0	ND	ND	-0.3	-0.6	-2.0	ND
Range	30	21	0.0	0.0	9.0	9.0	2.4	0.0
Minimum	130	99	0.0	0.0	24.0	22.0	0.0	0.0
Maximum	160	120	0.0	0.0	33.0	31.0	2.4	0.0
Count	19	24	0	0	36	36	36	0
Confidence Level(95.0%)	5	4	ND	ND	0.8	0.8	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 28
WATER QUALITY DATA - 2011

VARIABLE	PH	TEMP	DO	CHLA	NITRATE	NITRITE	NO5	AMMONIA	TKN	PHOS	SOLPHOS	SOLSIL
units	su	C	mg/L	mg/m3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS												
Mean	7.9	13.3	9.4	5.58	0.90	0.015	0.91	0.059	0.54	0.056	0.030	4.46
Standard Error	0.0	0.7	0.2	0.44	0.05	0.001	0.05	0.006	0.04	0.004	0.003	0.27
Median	7.9	13.7	8.9	5.08	0.85	0.014	0.87	0.057	0.58	0.052	0.032	3.80
Mode	8.0	12.0	8.2	9.35	1.40	0.013	1.40	0.000	0.00	0.048	0.000	3.60
Standard Deviation	0.2	5.8	1.8	3.45	0.43	0.006	0.43	0.051	0.31	0.031	0.021	2.13
Sample Variance	0.0	33.7	3.2	11.93	0.19	0.000	0.19	0.003	0.09	0.001	0.000	4.54
Kurtosis	-0.6	-0.4	-0.6	0.85	-0.38	3.679	-0.48	-1.290	0.51	5.586	-0.466	-0.55
Skewness	0.0	-0.3	0.6	0.95	0.67	1.449	0.62	0.315	-0.24	1.925	0.243	0.65
Range	0.8	23.8	6.9	15.72	1.60	0.033	1.60	0.150	1.30	0.166	0.079	7.90
Minimum	7.5	1.2	6.5	0.68	0.30	0.003	0.30	0.000	0.00	0.014	0.000	1.40
Maximum	8.3	25.0	13.4	16.40	1.90	0.036	1.90	0.150	1.30	0.180	0.079	9.30
Count	63	63	63	63	63	63	63	63	63	63	63	63
Confidence Level(95.0%)	0.0	1.5	0.4	0.87	0.11	0.002	0.11	0.013	0.08	0.008	0.005	0.54

VARIABLE	SCHII	IXLITE	TS	DS	VSS	SS	TURB	SPEC	CHLOR	FECAL	LFC	ECOLIQT
units	meters	meters	mg/L	mg/L	mg/L	mg/L	NTU	umhos/cm	mg/L	CFU/100 mL	CFU/100 mL	MPN/100 mL
STATISTICS												
Mean	1.2	3.5	353.6	346.0	2.4	7.6	8.2	575	60.1	396	1.8	540
Standard Error	0.1	0.2	21.5	21.1	0.4	1.1	1.1	24	4.9	306	0.2	439
Median	1.3	3.7	350.0	339.7	2.2	6.1	5.5	564	62.0	57	1.8	66
Mode	1.4	2.3	330.0	ND	2.0	ND	4.5	423	71.0	ND	ND	19
Standard Deviation	0.3	1.1	80.4	78.9	1.4	4.3	9.0	191	39.0	1370	0.8	1584
Sample Variance	0.1	1.2	6470.9	6227.2	1.9	18.1	80.2	36630	1520.2	1876949	0.6	2509873
Kurtosis	2.0	0.6	-0.9	-1.0	2.9	3.3	14.5	7	23.1	20	2.7	13
Skewness	-1.3	-0.2	0.0	0.0	1.1	1.7	3.7	2	3.9	4	0.3	4
Range	1.4	4.8	260.0	251.6	5.9	16.2	49.2	1178	288.0	6200	3.8	5796
Minimum	0.3	1.0	220.0	214.3	0.0	2.8	2.8	282	12.0	0	0.0	4
Maximum	1.7	5.8	480.0	465.9	5.9	19.0	52.0	1460	300.0	6200	3.8	5800
Count	20	20	14	14	14	14	63	63	63	20	20	13
Confidence Level(95.0%)	0.2	0.5	46.4	45.6	0.8	2.5	2.3	48	9.8	641	0.4	957

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 28
WATER QUALITY DATA - 2011

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	49.10	23.67	0.0	2.1	10.1	1.7	3.7	13.8	0.1	1.1	0.0	ND
Standard Error	1.47	0.96	0.0	0.6	0.4	0.1	0.5	1.0	0.0	0.2	0.0	ND
Median	45.00	24.00	0.0	0.0	9.5	1.6	3.9	12.0	0.0	1.0	0.0	ND
Mode	44.00	24.00	0.0	0.0	12.0	1.8	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	10.30	6.73	0.2	4.2	2.6	0.9	2.8	7.2	0.2	1.3	0.0	ND
Sample Variance	106.01	45.35	0.0	17.8	6.8	0.7	7.6	52.2	0.1	1.6	0.0	ND
Kurtosis	-0.52	-0.92	49.0	2.8	0.8	1.0	-1.3	1.3	1.4	10.0	ND	ND
Skewness	0.68	0.27	7.0	1.9	0.7	0.2	-0.2	1.0	1.6	2.6	ND	ND
Range	39.00	25.00	1.2	16.0	13.2	4.0	7.7	34.0	0.8	7.1	0.0	0.0
Minimum	36.00	13.00	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	75.00	38.00	1.2	16.0	18.0	4.0	7.7	34.0	0.8	7.1	0.0	0.0
Count	49	49	49	49	44	49	35	48	49	48	49	0
Confidence Level(95.0%)	2.96	1.93	0.0	1.2	0.8	0.2	0.9	2.1	0.1	0.4	0.0	ND

VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	220	177	ND	ND	ND	41.3	5.3	ND
Standard Error	7	9	ND	ND	2.0	1.7	0.4	ND
Median	210	170	ND	ND	45.5	40.0	4.7	ND
Mode	220	220	ND	ND	61.0	29.0	3.5	ND
Standard Deviation	52	45	ND	ND	13.1	10.8	2.7	ND
Sample Variance	2715	2023	ND	ND	172.6	117.5	7.2	ND
Kurtosis	-1	-2	ND	ND	-1.0	-0.9	-0.3	ND
Skewness	0	0	ND	ND	0.3	0.3	0.5	ND
Range	180	140	0.0	0.0	44.0	39.0	12.0	0.0
Minimum	140	110	0.0	0.0	27.0	24.0	0.0	0.0
Maximum	320	250	0.0	0.0	71.0	63.0	12.0	0.0
Count	49	27	0	0	42	42	42	0
Confidence Level(95.0%)	15	18	ND	ND	4.1	3.4	0.8	ND

ND = No Data

Provisional MMSD Water Quality Data