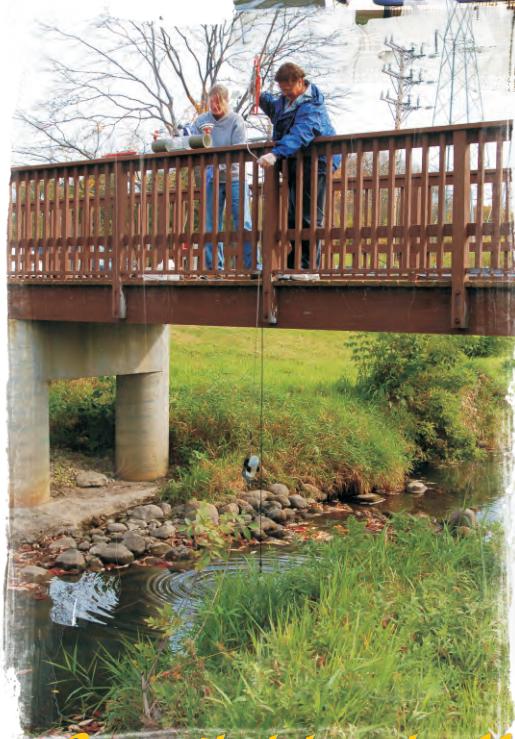
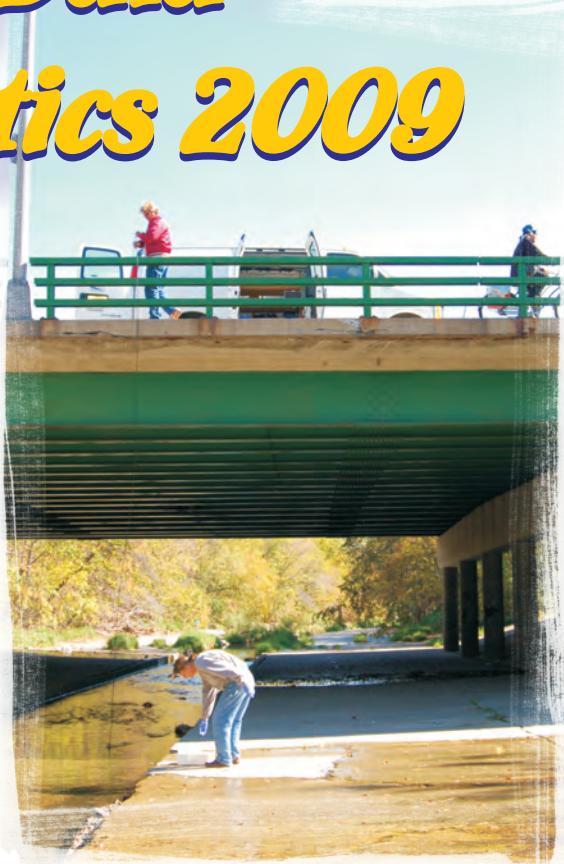
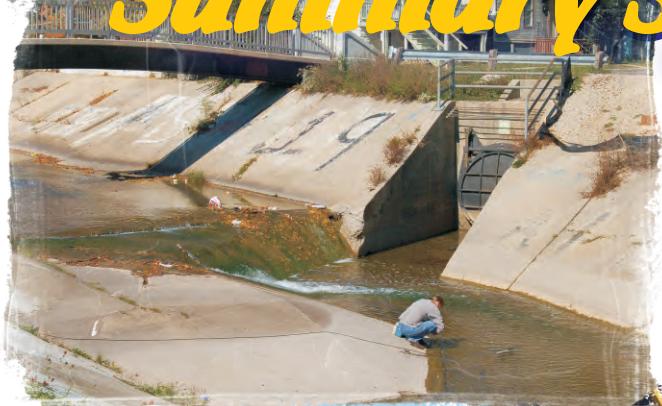




Water Quality Monitoring Data

Summary Statistics 2009



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 2009 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 42 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, 16 years after ISS completion, the past three years (2007-2009) and the current year of analysis (2009). 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 listed in this data summary report. Each sample's tests may vary by survey type and depth due to method specifications, scientific judgement 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 twice a month (March - December) and are completed concurrently with the Menomonee River 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. 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 flood management 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 on a monthly basis (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 – 2009

<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 – 2009

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 2009 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 4-310.2	10.0 mg/L (2/10/09) 6.6 mg/L
Ammonia (mg/L as N)	1-4500NH ₃ G (5-350.1)	0.008 mg/L
Arsenic ($\mu\text{g}/\text{L}$)	3-6010 C 3-6010 C	4.5 $\mu\text{g}/\text{L}$ (2/10/09) 3.5 $\mu\text{g}/\text{L}$
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 ($\mu\text{g}/\text{L}$)	3-6010 C 3-6010 C	2.1 $\mu\text{g}/\text{L}$ (2/10/09) 0.9 $\mu\text{g}/\text{L}$
Calcium (mg/L)	3-6010 C 3-6010 C	0.78 mg/L (2/10/09) 0.22 mg/L
Carbon (mg/L as C) Dissolved Organic Nonpurgeable	1-5310 C 1-5310 C	0.36 mg/L (Prior to 4/8/09) 0.35 mg/L
Total Inorganic Nonpurgeable	1-5310 C 1-5310 C	0.36 mg/L (Prior to 4/8/09) 0.35 mg/L
Total Organic Nonpurgeable	1-5310 C 1-5310 C	0.36 mg/L (Prior to 4/8/09) 0.35 mg/L
Total	1-5310 C 1-5310 C	0.36 mg/L (Prior to 4/8/09) 0.35 mg/L
Chloride (mg/L)	1-4500 Cl E (2-325.2)	4.0 mg/L
Chlorophyll <i>a</i> (mg/m ³)	1-10200 H	0.11 mg/m ³
Chromium ($\mu\text{g}/\text{L}$)	3-6010 C 3-6010 C	7.5 $\mu\text{g}/\text{L}$ (2/10/09) 3.8 $\mu\text{g}/\text{L}$
Copper ($\mu\text{g}/\text{L}$)	3-6010 C 3-6010 C	3.7 $\mu\text{g}/\text{L}$ (2/10/09) 3.9 $\mu\text{g}/\text{L}$
<i>E. coli</i> (MPN/100 mL)	1-9223 B 1-9223 B	1/100 mL 100/100 mL (2/10/09, 4/27/09, 8/26/09, 8/27/09, 9/21/09, 10/22/09, 12/9/09)

Summary of Method Detection Limits (MDLs) for 2009 Water Quality Data

<u>Analyte (units)</u>	<u>Source¹- Reference Method(s)</u>	<u>MDL²</u>
Fecal Coliform (CFU/100 mL)	1-9222 D	2/100 mL (3/25/09, 5/4/09, 6/10/09, 6/23/09, 7/29/09, 8/11/09, 8/24/09, 9/10/09, 10/28/09)
	1-9222 D	3/100 mL
	1-9222 D	10/100 mL (2/10/09, 3/9/09, 4/21/09, 5/14/09, 5/27/09, 6/8/09, 6/19/09, 7/20/09, 8/10/09, 8/17/09, 8/26/09, 8/27/09, 9/21/09, 9/24/09, 9/28/09, 10/21/09, 10/22/09, 10/27/09, 10/29/09, 11/12/09, 11/19/09, 12/9/09)
Hardness (mg/L as CaCO ₃)	3-6010 C	NA (calculated)
Lead (µg/L)	3-6010 C	2.6 µg/L (2/10/09)
	3-6010 C	3.2 µg/L
Magnesium (mg/L)	3-6010 C	0.15 mg/L (2/10/09)
	3-6010 C	0.03 mg/L
Mercury (µg/L) (Total)	3-7470 A	0.1 ug/L ³
Nickel (µg/L)	3-6010 C	1.0 µg/L (2/10/09)
	3-6010 C	3.2 µg/L
Nitrate + Nitrite (mg/L as N)	5-353.2	0.020 mg/L
Nitrate (mg/L as N)	5-353.2	0.020 mg/L
Nitrite (mg/L as N)	5-353.2	0.004 mg/L
Total Kjeldahl Nitrogen (mg/L as N)	2-351.2	0.26 mg/L
Phosphorus (mg/L as P)	2-365.1	0.018 mg/L (Prior to 4/8/09)
	2-365.1	0.017 mg/L
Total	2-365.1	0.018 mg/L (Prior to 4/8/09)
	2-365.1	0.017 mg/L
PAH (µg/L)	3-8270 C	See PAH Lab Report ³
Selenium (µg/L)	3-6010 C	9.6 ug/L (2/10/09)
	3-6010 C	9.9 ug/L
Silica (mg/L as SiO ₂)	2-370.1	0.07 mg/L (Prior to 4/28/09)
	2-370.1	0.52 mg/L
Silver (µg/L)	3-6010 C	2.0 ug/L (2/10/09)
	3-6010 C	2.1 µg/L

Summary of Method Detection Limits (MDLs) for 2009 Water Quality Data

<u>Analyte (units)</u>	<u>Source¹- Reference Method(s)</u>	<u>MDL²</u>
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 ($\mu\text{g}/\text{L}$)	3-6010 C 3-6010 C	14.0 $\mu\text{g}/\text{L}$ (2/10/09) 13.0 $\mu\text{g}/\text{L}$

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 2009 Water Quality Data

METHOD REFERENCES

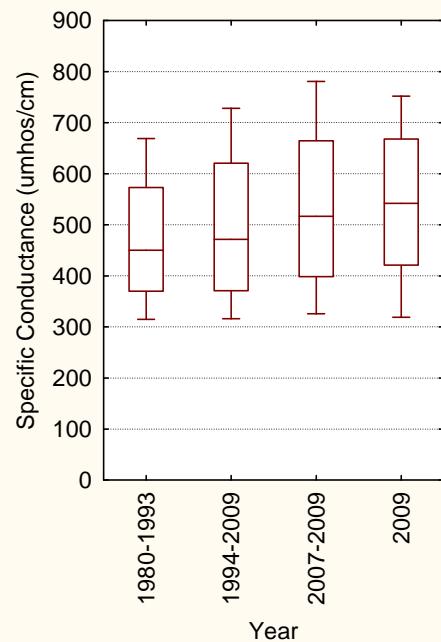
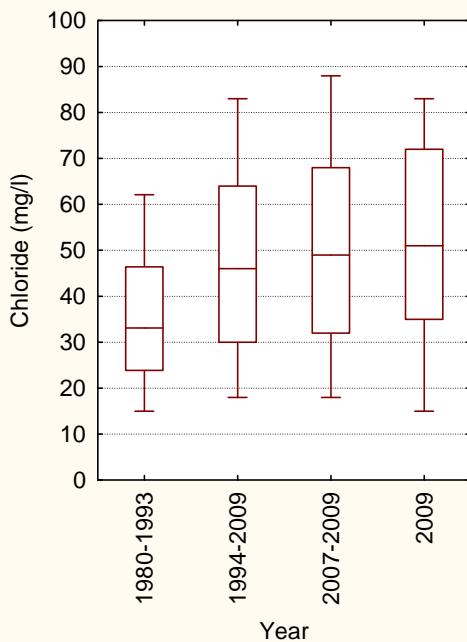
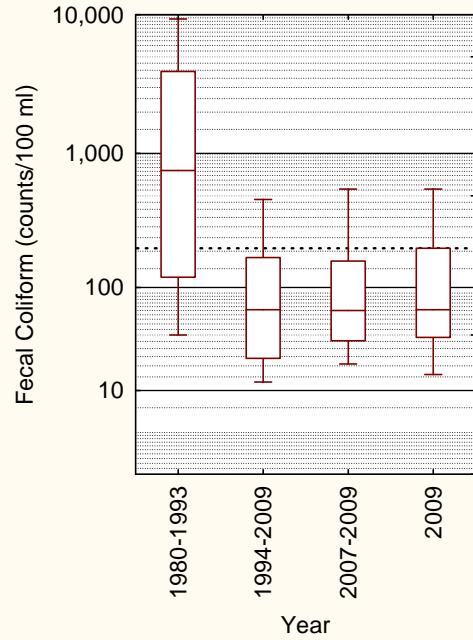
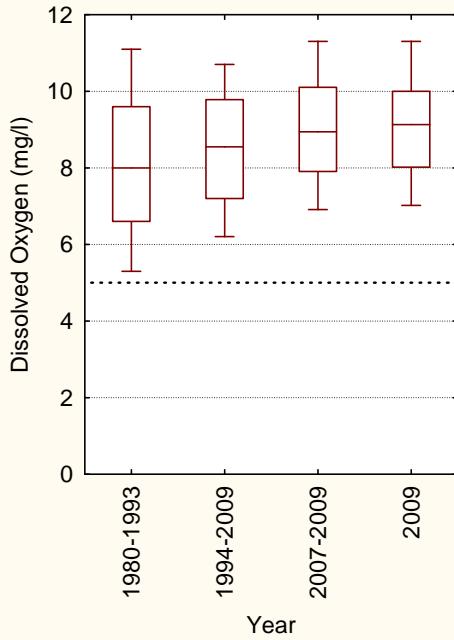
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3. "Test Methods for Evaluating Solid Waste," 3rd Edition. SW846. 1995. USEPA, SWER, Washington, DC 20460.
4. "Methods of Chemical Analysis of Water and Wastes," USEPA, EMSL, Cincinnati, OH 45268, March, 1974 (EPA-600/4-79-020)..
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LEGEND

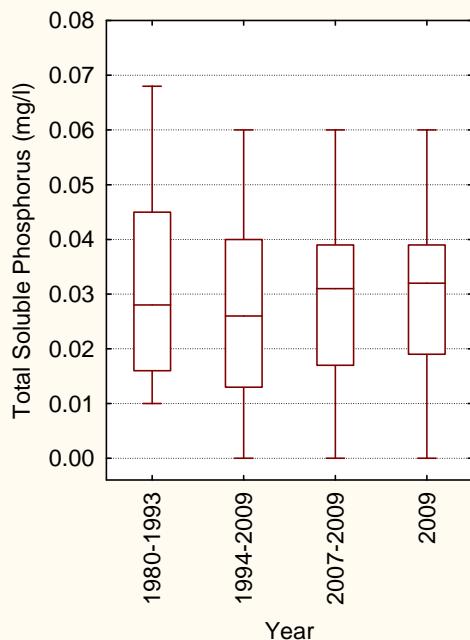
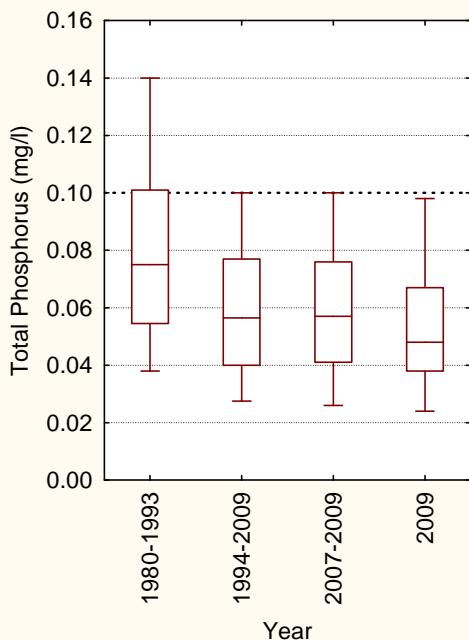
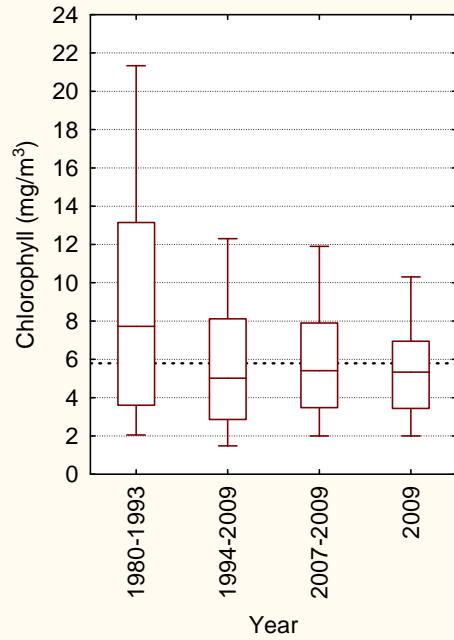
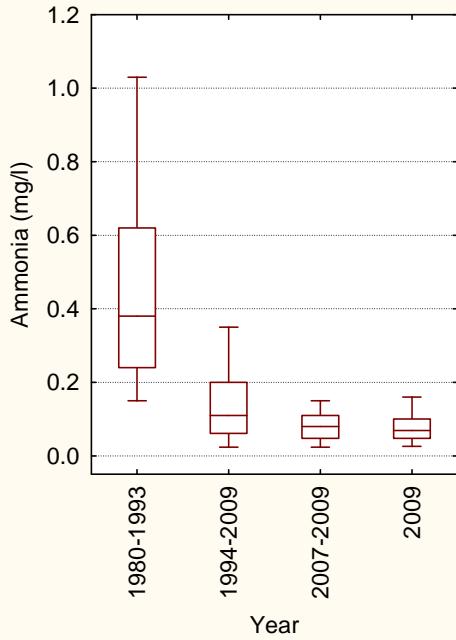
- WATER QUALITY SAMPLING LOCATIONS
- COMBINED SEWER SERVICE AREA

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



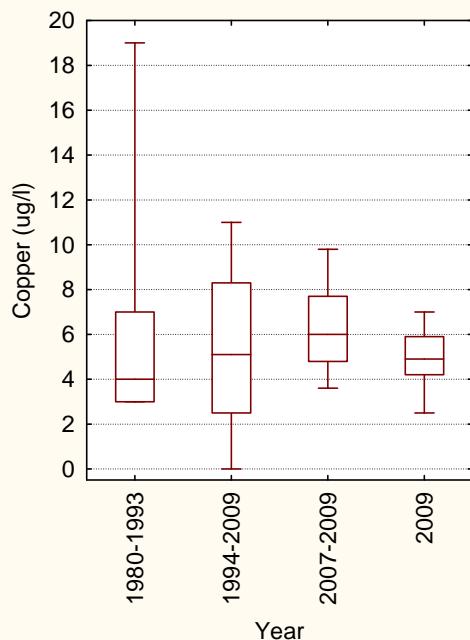
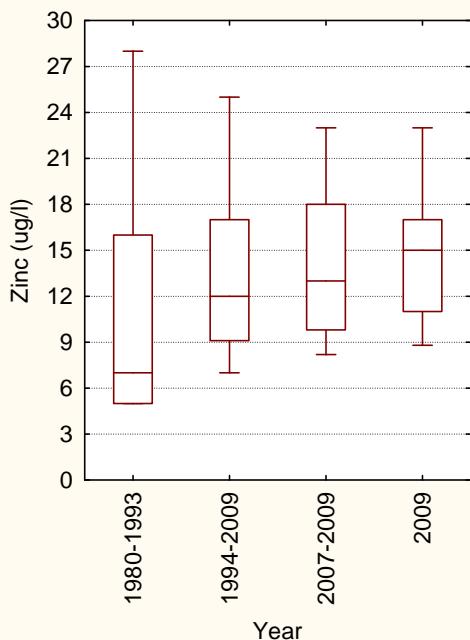
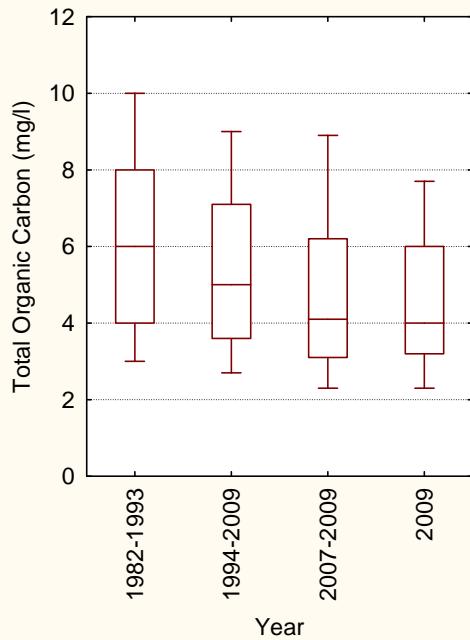
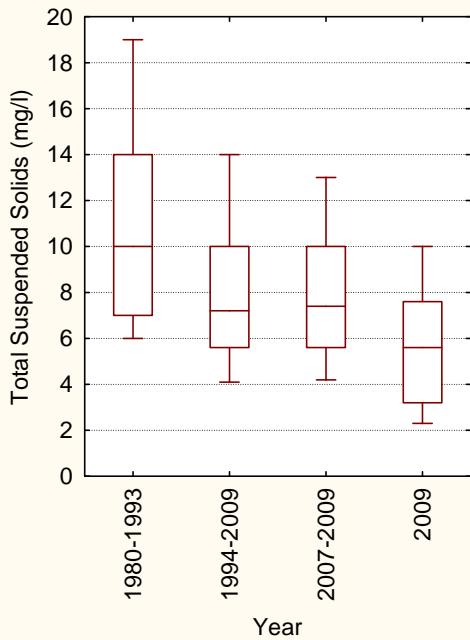
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.7	9.0	5.84	0.75	0.016	0.77	0.086	0.57	0.056	0.031	3.28
Standard Error	0.0	0.5	0.2	0.44	0.04	0.001	0.04	0.007	0.05	0.004	0.002	0.17
Median	8.1	13.0	9.1	5.34	0.73	0.015	0.74	0.069	0.59	0.048	0.032	2.90
Mode	8.2	11.2	11.7	13.70	1.20	0.015	0.86	0.140	0.00	0.038	0.000	2.00
Standard Deviation	0.2	3.9	1.5	3.64	0.33	0.011	0.34	0.061	0.37	0.030	0.020	1.43
Sample Variance	0.0	15.3	2.3	13.22	0.11	0.000	0.12	0.004	0.14	0.001	0.000	2.03
Kurtosis	0.7	-0.5	-0.1	5.16	1.86	5.541	2.20	2.907	2.72	4.539	0.282	-0.66
Skewness	0.5	0.5	-0.2	1.76	1.02	1.930	1.07	1.687	0.64	1.769	0.253	0.70
Range	1.0	14.4	6.3	21.38	1.68	0.057	1.78	0.300	2.10	0.162	0.091	5.20
Minimum	7.7	7.7	5.4	0.82	0.32	0.000	0.32	0.000	0.00	0.018	0.000	1.10
Maximum	8.7	22.1	11.7	22.20	2.00	0.057	2.10	0.300	2.10	0.180	0.091	6.30
Count	69	69	69	69	66	69	66	69	69	69	69	69
Confidence Level(95.0%)	0.1	0.9	0.4	0.87	0.08	0.003	0.08	0.015	0.09	0.007	0.005	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	1.3	3.4	304.8	297.5	1.8	7.3	6.1	549	53.3	168	1.9	191
Standard Error	0.1	0.3	26.0	25.4	0.3	1.9	0.5	19	3.2	45	0.1	90
Median	1.3	3.6	310.0	302.6	1.7	5.6	5.2	542	51.0	66	1.8	34
Mode	1.4	4.5	280.0	ND	0.0	5.2	12.3	ND	24.0	110	2.0	23
Standard Deviation	0.4	1.2	100.5	98.4	1.3	7.3	4.1	159	26.4	215	0.5	349
Sample Variance	0.2	1.5	10108.5	9681.6	1.6	53.8	16.5	25157	694.6	46407	0.3	121669
Kurtosis	2.0	-1.1	2.4	2.5	-0.1	10.5	8.5	-1	0.1	3	-0.5	8
Skewness	1.0	-0.3	-1.3	-1.4	0.3	3.0	2.3	0	0.4	2	0.1	3
Range	1.7	3.9	388.0	384.0	4.4	32.0	25.4	574	112.8	793	2.1	1290
Minimum	0.7	1.1	42.0	38.8	0.0	0.0	1.0	294	7.2	7	0.8	10
Maximum	2.4	5.0	430.0	422.8	4.4	32.0	26.4	868	120.0	800	2.9	1300
Count	23	20	15	15	15	15	69	69	69	23	23	15
Confidence Level(95.0%)	0.2	0.6	55.7	54.5	0.7	4.1	1.0	38	6.3	93	0.2	193

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 1
WATER QUALITY DATA - 2009

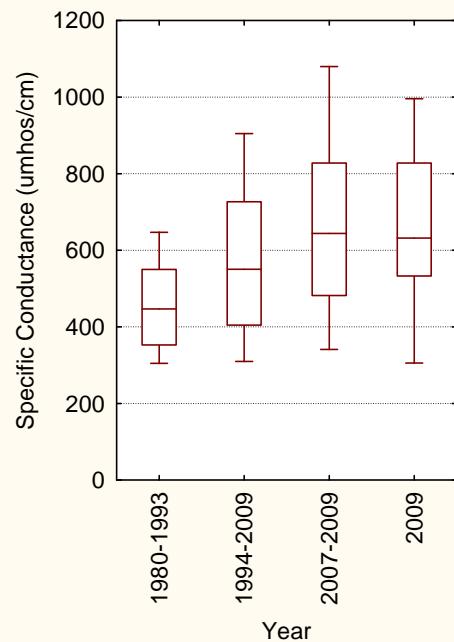
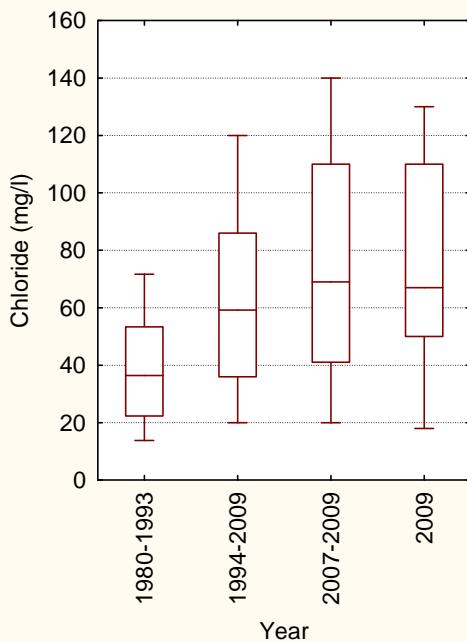
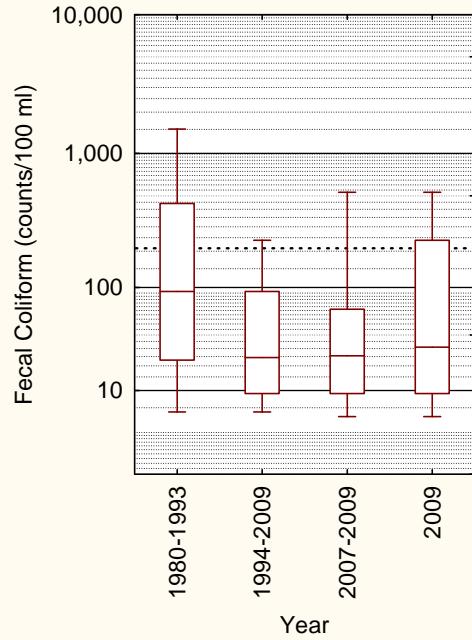
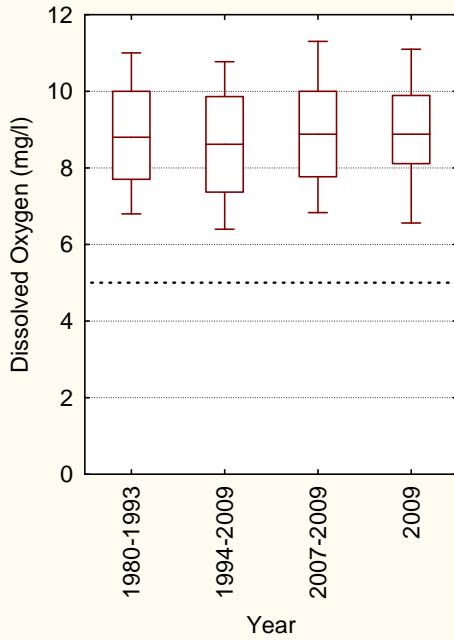
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	47.11	21.00	0.0	4.6	5.5	1.9	0.0	15.6	0.0	0.1	2.8	ND
Standard Error	1.32	0.82	0.0	0.1	0.7	0.2	0.0	0.9	0.0	0.1	0.7	ND
Median	45.00	20.00	0.0	4.4	4.9	2.1	0.0	15.0	0.0	0.0	0.0	ND
Mode	41.00	16.00	0.0	4.2	4.5	0.0	0.0	15.0	0.0	0.0	0.0	ND
Standard Deviation	9.62	5.98	0.0	1.0	5.0	1.1	0.0	6.9	0.0	0.4	4.0	ND
Sample Variance	92.60	35.81	0.0	1.0	24.9	1.3	0.0	47.2	0.0	0.1	16.1	ND
Kurtosis	-0.91	-0.84	ND	12.7	36.1	0.5	ND	3.3	ND	23.9	-1.2	ND
Skewness	0.52	0.29	ND	2.8	5.5	-0.1	ND	1.3	ND	5.0	0.8	ND
Range	32.00	22.00	0.0	6.7	38.0	5.0	0.0	40.0	0.0	2.0	9.9	0.0
Minimum	34.00	12.00	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	66.00	34.00	0.0	9.8	38.0	5.0	0.0	40.0	0.0	2.0	9.9	0.0
Count	53	53	53	53	53	53	53	53	53	53	38	0
Confidence Level(95.0%)	2.65	1.65	0.0	0.3	1.4	0.3	0.0	1.9	0.0	0.1	1.3	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	165	ND	ND	43.2	38.5	4.7	ND
Standard Error	7	6	ND	ND	1.7	1.4	0.3	ND
Median	200	150	ND	ND	41.0	37.0	4.0	ND
Mode	170	140	ND	ND	36.0	33.0	6.0	ND
Standard Deviation	48	41	ND	ND	11.7	9.6	2.1	ND
Sample Variance	2325	1685	ND	ND	135.8	92.6	4.6	ND
Kurtosis	-1	-1	ND	ND	-0.5	-0.6	0.2	ND
Skewness	0	0	ND	ND	0.4	0.4	0.9	ND
Range	170	130	0.0	0.0	46.0	38.0	8.1	0.0
Minimum	130	110	0.0	0.0	21.0	19.0	1.9	0.0
Maximum	300	240	0.0	0.0	67.0	57.0	10.0	0.0
Count	53	45	0	0	45	45	45	0
Confidence Level(95.0%)	13	12	ND	ND	3.5	2.9	0.6	ND

ND = No Data

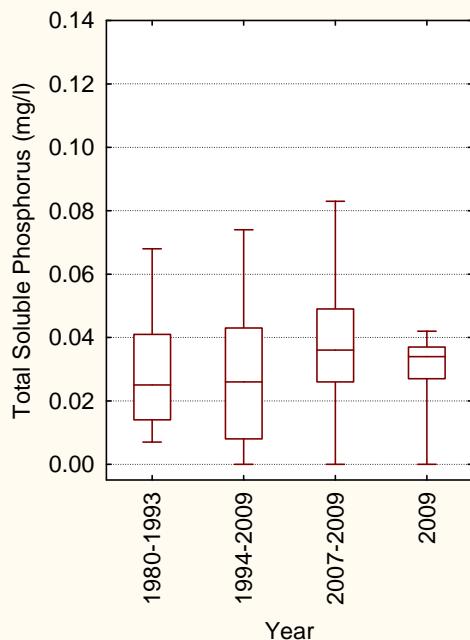
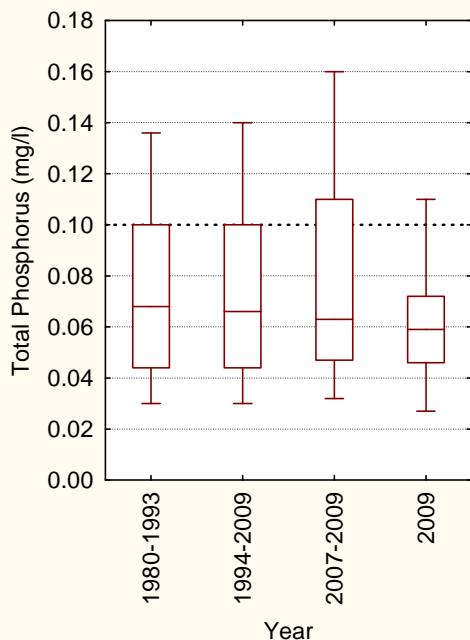
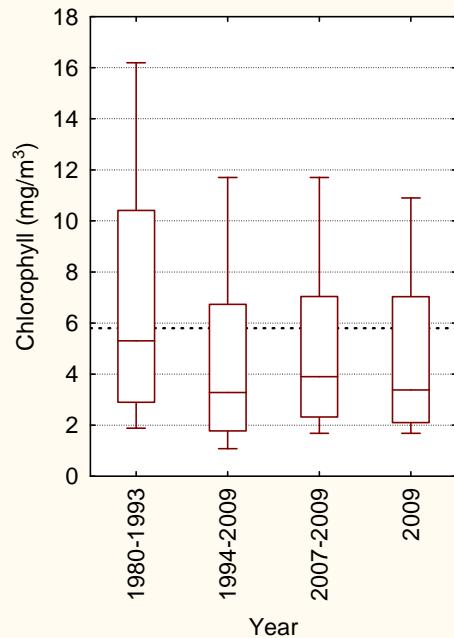
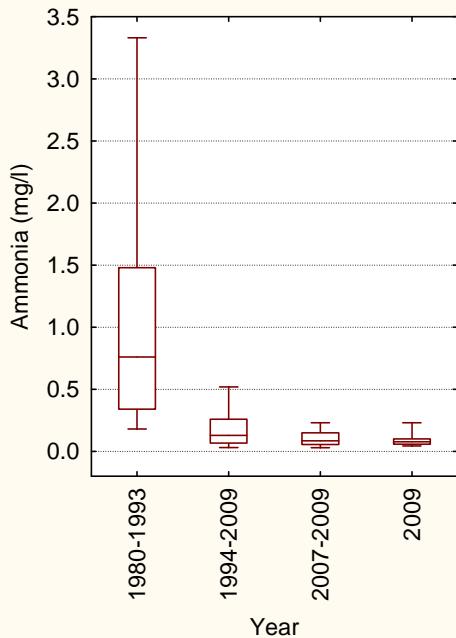
Provisional MMSD Water Quality Data

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



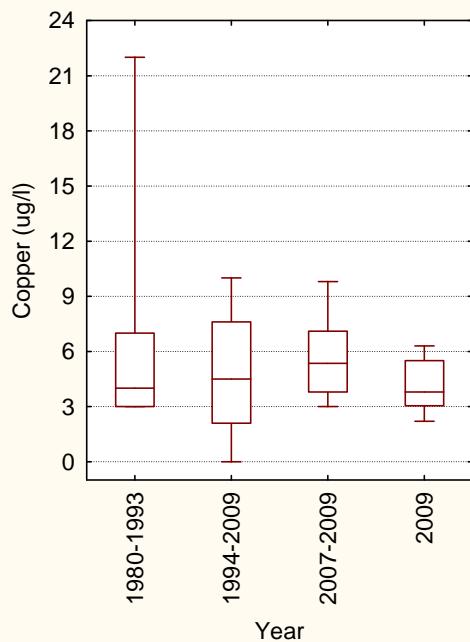
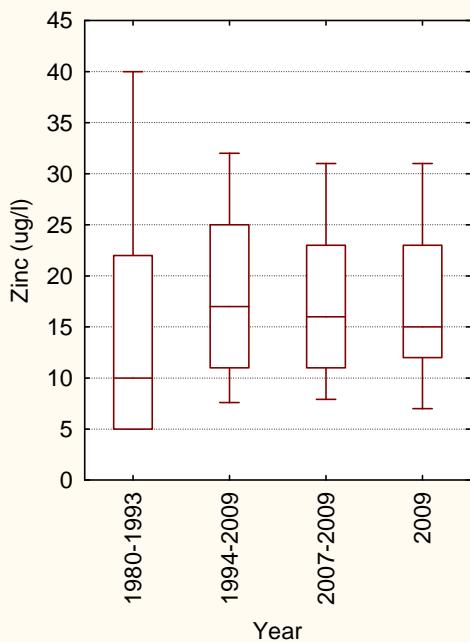
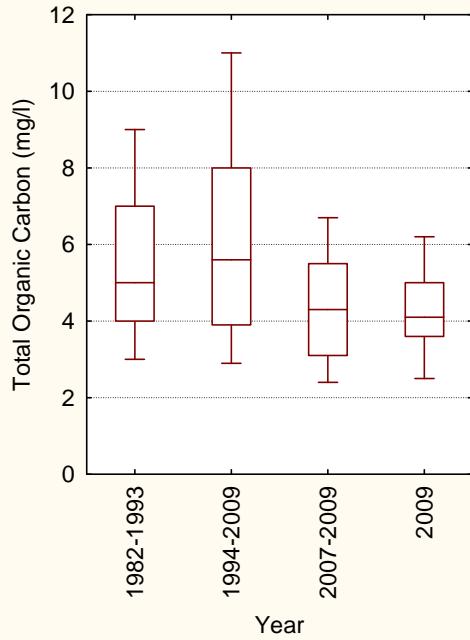
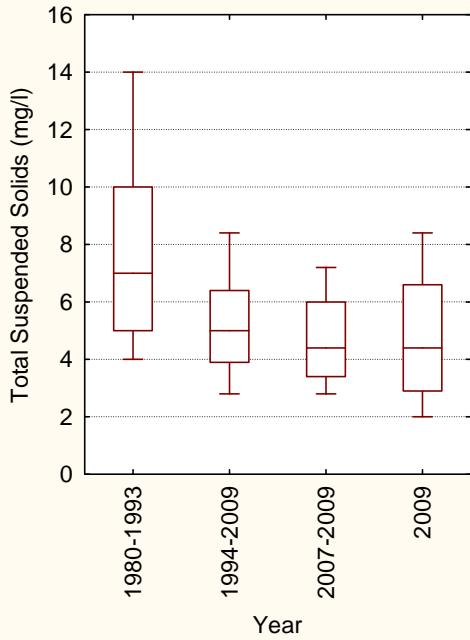
— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	8.9	4.80	2.09	0.048	2.13	0.107	0.78	0.063	0.031	3.26
Standard Error	0.0	0.6	0.2	0.53	0.22	0.010	0.22	0.013	0.06	0.005	0.003	0.17
Median	7.7	12.5	8.9	3.38	1.70	0.024	1.70	0.078	0.77	0.059	0.034	3.50
Mode	8.0	12.5	11.6	4.48	2.60	0.014	0.43	0.150	1.10	0.120	0.000	3.80
Standard Deviation	0.3	3.9	1.5	3.56	1.47	0.067	1.50	0.089	0.40	0.031	0.017	1.13
Sample Variance	0.1	15.2	2.3	12.64	2.15	0.005	2.26	0.008	0.16	0.001	0.000	1.28
Kurtosis	-1.0	-0.2	-0.1	1.65	-0.25	14.957	-0.26	3.459	-0.08	1.194	5.313	-1.04
Skewness	0.1	0.3	-0.2	1.43	0.89	3.490	0.89	1.908	0.11	0.840	0.732	-0.04
Range	1.2	15.9	6.4	14.38	5.09	0.390	5.18	0.401	1.80	0.160	0.099	4.00
Minimum	7.2	5.3	5.4	1.22	0.41	0.000	0.42	0.009	0.00	0.000	0.000	1.20
Maximum	8.4	21.2	11.8	15.60	5.50	0.390	5.60	0.410	1.80	0.160	0.099	5.20
Count	45	45	45	45	45	45	45	45	45	45	45	45
Confidence Level(95.0%)	0.1	1.2	0.5	1.07	0.44	0.020	0.45	0.027	0.12	0.009	0.005	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	1.5	4.6	336.4	331.5	1.7	4.8	3.9	660	77.0	128	1.6	161
Standard Error	0.1	0.4	25.2	25.0	0.4	0.6	0.3	34	6.4	47	0.2	49
Median	1.7	4.8	345.0	339.8	1.6	4.4	3.6	632	67.0	31	1.5	50
Mode	0.9	3.0	490.0	ND	0.0	3.8	3.0	832	120.0	3	0.5	11
Standard Deviation	0.4	1.4	94.3	93.6	1.4	2.3	2.1	229	42.9	183	0.7	190
Sample Variance	0.2	2.0	8901.6	8752.1	1.9	5.1	4.2	52534	1841.3	33366	0.6	36249
Kurtosis	-0.9	-0.7	0.5	0.5	-1.2	-0.6	0.8	0	0.6	1	-1.0	-1
Skewness	-0.5	0.3	-0.2	-0.2	0.1	0.5	1.1	0	0.7	2	0.1	1
Range	1.2	4.2	350.0	349.2	4.0	7.5	7.9	974	198.0	517	2.2	547
Minimum	0.9	2.9	140.0	138.0	0.0	1.7	0.8	286	12.0	3	0.5	3
Maximum	2.1	7.1	490.0	487.2	4.0	9.2	8.7	1260	210.0	520	2.7	550
Count	15	12	14	14	15	15	45	45	45	15	15	15
Confidence Level(95.0%)	0.2	0.9	54.5	54.0	0.8	1.3	0.6	69	12.9	101	0.4	105

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 2
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	46.16	18.22	0.0	4.6	4.0	2.2	0.2	17.2	0.0	0.0	2.9	ND
Standard Error	1.09	0.53	0.0	0.1	0.3	0.1	0.2	1.4	0.0	0.0	0.7	ND
Median	47.00	19.00	0.0	4.4	3.8	2.3	0.0	15.0	0.0	0.0	0.0	ND
Mode	52.00	20.00	0.0	4.2	3.2	2.8	0.0	15.0	0.0	0.0	0.0	ND
Standard Deviation	7.32	3.55	0.1	0.9	1.9	0.9	1.1	9.4	0.0	0.0	4.2	ND
Sample Variance	53.59	12.63	0.0	0.7	3.5	0.9	1.3	89.0	0.0	0.0	17.4	ND
Kurtosis	0.41	-0.20	45.0	1.3	0.0	1.5	45.0	0.5	ND	ND	-1.4	ND
Skewness	0.18	-0.19	6.7	0.9	-0.5	-1.0	6.7	0.4	ND	ND	0.8	ND
Range	35.00	16.00	0.9	4.0	7.3	4.2	7.6	43.0	0.0	0.0	9.7	0.0
Minimum	33.00	11.00	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	68.00	27.00	0.9	7.1	7.3	4.2	7.6	43.0	0.0	0.0	9.7	0.0
Count	45	45	45	45	44	45	45	45	45	45	32	0
Confidence Level(95.0%)	2.20	1.07	0.0	0.3	0.6	0.3	0.3	2.8	0.0	0.0	1.5	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	190	144	ND	ND	38.9	34.4	4.3	ND
Standard Error	5	4	ND	ND	1.0	0.9	0.2	ND
Median	200	150	ND	ND	39.0	34.0	4.1	ND
Mode	220	150	ND	ND	40.0	36.0	3.7	ND
Standard Deviation	32	27	ND	ND	7.0	5.8	1.4	ND
Sample Variance	1032	715	ND	ND	48.3	33.3	1.9	ND
Kurtosis	0	2	ND	ND	0.7	0.3	0.4	ND
Skewness	0	-1	ND	ND	0.6	0.5	0.7	ND
Range	150	148	0.0	0.0	32.0	26.0	5.8	0.0
Minimum	130	52	0.0	0.0	26.0	24.0	2.0	0.0
Maximum	280	200	0.0	0.0	58.0	50.0	7.8	0.0
Count	45	45	0	0	45	45	45	0
Confidence Level(95.0%)	10	8	ND	ND	2.1	1.7	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 3
WATER QUALITY DATA - 2009

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	12.9	10.1	6.53	0.66	0.014	0.70	0.055	0.44	0.042	0.023	2.48
Standard Error	0.0	0.4	0.1	0.50	0.03	0.001	0.03	0.006	0.04	0.004	0.001	0.12
Median	8.1	12.1	10.3	5.57	0.63	0.012	0.65	0.040	0.43	0.040	0.025	2.20
Mode	8.0	12.1	11.2	13.50	1.10	0.015	1.10	0.000	0.00	0.000	0.000	1.90
Standard Deviation	0.2	3.8	1.3	4.54	0.24	0.009	0.30	0.056	0.32	0.032	0.013	1.04
Sample Variance	0.1	14.6	1.7	20.65	0.06	0.000	0.09	0.003	0.10	0.001	0.000	1.09
Kurtosis	-0.5	-0.3	0.0	3.28	-0.66	2.655	9.14	2.304	-0.36	3.652	1.365	-0.19
Skewness	0.3	0.2	-0.5	1.32	-0.01	1.444	2.00	1.470	0.26	1.532	-0.070	0.56
Range	1.0	16.4	6.2	25.69	1.10	0.043	2.03	0.270	1.20	0.170	0.072	4.85
Minimum	7.7	4.3	6.1	1.01	0.00	0.000	0.27	0.000	0.00	0.000	0.000	0.75
Maximum	8.7	20.6	12.3	26.70	1.10	0.043	2.30	0.270	1.20	0.170	0.072	5.60
Count	81	81	81	81	77	80	77	81	81	81	81	81
Confidence Level(95.0%)	0.1	0.8	0.3	1.00	0.06	0.002	0.07	0.012	0.07	0.007	0.003	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	1.7	5.2	243.2	234.5	1.7	8.7	7.7	435	35.9	523	1.4	1758
Standard Error	0.2	0.7	19.7	19.2	0.3	2.3	1.7	12	2.3	423	0.2	1296
Median	1.7	4.7	230.0	226.4	1.5	4.6	3.5	423	31.5	28	1.4	760
Mode	1.4	2.4	180.0	ND	0.0	ND	11.5	485	12.0	3	0.5	ND
Standard Deviation	0.8	3.3	86.0	83.8	1.4	10.0	15.6	104	20.7	2157	0.9	2591
Sample Variance	0.6	11.1	7399.2	7027.8	2.0	100.3	244.0	10773	428.7	4650656	0.9	6715092
Kurtosis	0.5	1.1	0.7	0.9	-0.2	5.6	32.9	0	7.1	25	1.2	2
Skewness	0.3	1.1	-0.5	-0.5	0.6	2.3	5.3	1	2.0	5	0.9	2
Range	3.3	13.1	339.0	331.8	4.8	39.8	117.7	411	128.0	11000	4.0	5490
Minimum	0.2	0.4	31.0	23.8	0.0	1.2	0.3	286	12.0	0	0.0	10
Maximum	3.5	13.5	370.0	355.6	4.8	41.0	118.0	697	140.0	11000	4.0	5500
Count	27	24	19	19	19	19	81	81	80	26	26	4
Confidence Level(95.0%)	0.3	1.4	41.5	40.4	0.7	4.8	3.5	23	4.6	871	0.4	4123

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 3
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	40.11	15.63	0.0	4.2	4.9	1.8	0.3	13.8	0.0	0.2	2.9	0.0
Standard Error	1.11	0.62	0.0	0.2	0.8	0.2	0.2	1.3	0.0	0.1	0.9	0.0
Median	40.00	16.00	0.0	4.1	4.4	1.9	0.0	12.0	0.0	0.0	0.0	0.0
Mode	40.00	16.00	0.0	4.1	6.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Standard Deviation	5.76	3.21	0.0	0.9	3.9	1.1	0.9	6.6	0.0	0.6	3.9	0.0
Sample Variance	33.18	10.32	0.0	0.9	15.4	1.3	0.9	43.1	0.0	0.3	15.5	0.0
Kurtosis	0.60	1.56	ND	3.1	14.5	1.0	9.3	3.6	ND	10.7	-1.5	ND
Skewness	1.10	1.17	ND	1.5	3.2	0.2	3.1	1.3	ND	3.5	0.7	ND
Range	22.00	14.00	0.0	4.3	22.0	4.5	3.9	35.0	0.0	2.2	9.4	0.0
Minimum	33.00	11.00	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	55.00	25.00	0.0	7.2	22.0	4.5	3.9	35.0	0.0	2.2	9.4	0.0
Count	27	27	27	27	27	27	27	27	27	27	19	4
Confidence Level(95.0%)	2.28	1.27	0.0	0.4	1.6	0.4	0.4	2.6	0.0	0.2	1.9	0.0

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	166	129	0.5	4.6	34.4	30.7	3.6	ND
Standard Error	5	3	0.3	0.3	0.9	0.8	0.2	ND
Median	160	130	0.0	4.1	32.0	29.0	3.2	ND
Mode	170	130	0.0	3.7	31.0	28.0	2.8	ND
Standard Deviation	28	24	1.2	1.4	7.0	5.7	1.6	ND
Sample Variance	764	600	1.4	2.0	48.5	32.1	2.5	ND
Kurtosis	1	3	3.1	2.3	4.5	4.6	3.0	ND
Skewness	1	1	2.1	1.5	2.0	1.9	1.9	ND
Range	110	141	3.6	5.4	33.0	30.0	6.8	0.0
Minimum	130	69	0.0	3.1	26.0	21.0	2.0	0.0
Maximum	240	210	3.6	8.5	59.0	51.0	8.8	0.0
Count	27	56	18	18	57	57	57	0
Confidence Level(95.0%)	11	7	0.6	0.7	1.8	1.5	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 4
WATER QUALITY DATA - 2009

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	12.6	10.6	6.88	0.60	0.012	0.61	0.047	0.37	0.030	0.020	2.21
Standard Error	0.0	0.6	0.2	0.78	0.04	0.001	0.04	0.008	0.05	0.004	0.002	0.14
Median	8.2	12.6	10.6	6.21	0.55	0.011	0.56	0.039	0.41	0.032	0.023	2.00
Mode	8.0	10.4	12.2	15.50	0.84	0.013	0.60	0.000	0.00	0.000	0.000	2.00
Standard Deviation	0.2	3.9	1.3	4.80	0.23	0.007	0.23	0.048	0.28	0.022	0.014	0.85
Sample Variance	0.0	14.8	1.8	23.05	0.06	0.000	0.06	0.002	0.08	0.001	0.000	0.72
Kurtosis	-0.8	-0.1	0.0	0.83	1.34	3.284	1.13	0.521	-1.06	-0.164	-1.212	-0.67
Skewness	0.3	0.0	-0.6	1.12	1.09	1.389	1.01	1.041	-0.02	0.311	-0.507	0.39
Range	0.9	16.4	5.3	18.62	1.02	0.034	1.01	0.180	0.85	0.082	0.037	3.25
Minimum	7.8	4.2	7.2	1.58	0.28	0.000	0.29	0.000	0.00	0.000	0.000	0.75
Maximum	8.7	20.5	12.5	20.20	1.30	0.034	1.30	0.180	0.85	0.082	0.037	4.00
Count	38	38	38	38	38	38	38	37	37	37	37	38
Confidence Level(95.0%)	0.1	1.3	0.4	1.58	0.08	0.002	0.08	0.016	0.09	0.007	0.005	0.28

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	6.4	253.7	248.8	0.9	4.9	5.0	411	31.3	269	1.1	809
Standard Error	0.2	0.9	11.0	10.9	0.2	1.1	1.0	14	2.6	153	0.3	615
Median	1.9	7.2	240.0	236.9	1.1	3.1	2.3	400	26.5	5	0.7	317
Mode	1.9	9.5	240.0	ND	0.0	1.2	3.3	474	14.0	0	0.0	ND
Standard Deviation	1.1	3.7	47.9	47.5	1.0	4.9	6.3	88	16.0	667	1.1	1230
Sample Variance	1.1	13.8	2291.2	2257.2	1.1	24.0	39.2	7822	256.8	445098	1.2	1512999
Kurtosis	1.2	-1.9	0.4	0.6	-0.9	2.3	4.0	1	1.4	7	0.0	3
Skewness	0.8	-0.2	0.7	0.8	0.6	1.8	2.1	1	1.3	3	1.1	2
Range	4.3	9.7	180.0	178.2	3.0	16.8	25.0	349	60.0	2400	3.4	2598
Minimum	0.2	1.2	190.0	187.6	0.0	1.2	0.9	295	13.0	0	0.0	2
Maximum	4.5	10.9	370.0	365.8	3.0	18.0	25.9	644	73.0	2400	3.4	2600
Count	19	16	19	19	19	19	38	38	38	19	19	4
Confidence Level(95.0%)	0.5	2.0	23.1	22.9	0.5	2.4	2.1	29	5.3	322	0.5	1957

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 4
WATER QUALITY DATA - 2009

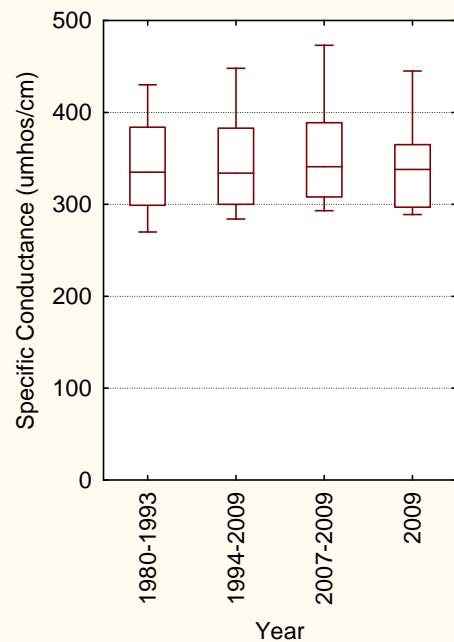
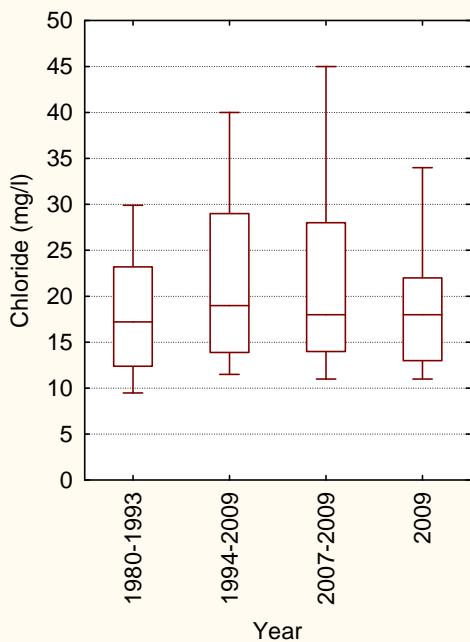
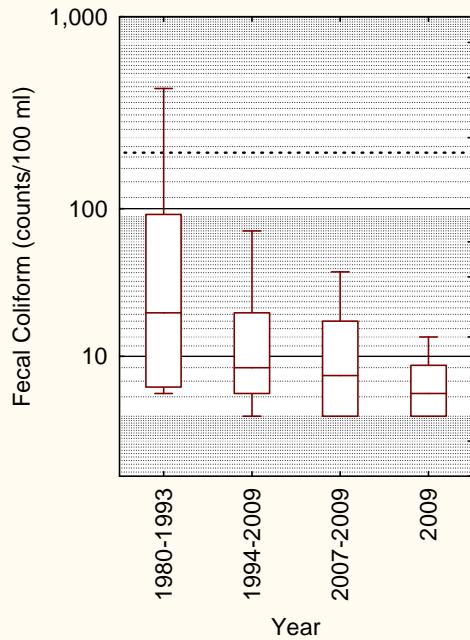
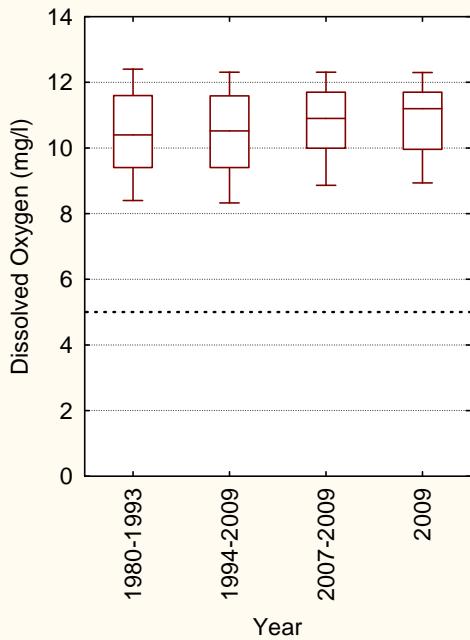
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	39.47	15.37	0.0	4.1	4.4	1.7	0.0	13.3	0.0	0.2	2.9	0.0
Standard Error	1.04	0.59	0.0	0.2	0.6	0.2	0.0	2.2	0.0	0.2	0.9	0.0
Median	39.00	15.00	0.0	3.8	4.3	1.8	0.0	13.0	0.0	0.0	0.0	0.0
Mode	37.00	14.00	0.0	3.8	4.8	1.8	0.0	13.0	0.0	0.0	0.0	0.0
Standard Deviation	4.51	2.59	0.0	0.8	2.8	1.1	0.0	9.5	0.0	0.7	3.5	0.0
Sample Variance	20.37	6.69	0.0	0.7	7.7	1.2	0.0	89.8	0.0	0.4	12.6	0.0
Kurtosis	1.97	3.24	ND	1.9	4.9	-0.3	ND	0.7	ND	7.5	-1.8	ND
Skewness	1.25	1.48	ND	1.4	1.4	-0.3	ND	0.7	ND	2.9	0.5	ND
Range	18.00	11.00	0.0	3.2	13.0	3.6	0.0	36.0	0.0	2.4	8.1	0.0
Minimum	34.00	12.00	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	52.00	23.00	0.0	6.3	13.0	3.6	0.0	36.0	0.0	2.4	8.1	0.0
Count	19	19	19	19	19	19	19	18	19	19	16	4
Confidence Level(95.0%)	2.18	1.25	0.0	0.4	1.3	0.5	0.0	4.7	0.0	0.3	1.9	0.0

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	127	0.6	ND	33.3	29.9	3.4	ND
Standard Error	5	3	0.6	ND	1.0	0.8	0.2	ND
Median	160	120	0.0	ND	32.0	29.5	3.0	ND
Mode	160	120	0.0	ND	29.0	31.0	2.4	ND
Standard Deviation	22	20	1.1	ND	6.0	4.7	1.4	ND
Sample Variance	501	400	1.2	ND	35.8	22.4	1.9	ND
Kurtosis	4	3	4.0	ND	6.1	5.7	4.7	ND
Skewness	2	2	2.0	ND	2.2	2.1	2.1	ND
Range	90	90	2.2	0.0	28.0	22.0	5.9	0.0
Minimum	140	100	0.0	0.0	26.0	24.0	2.2	0.0
Maximum	230	190	2.2	0.0	54.0	46.0	8.1	0.0
Count	19	38	4	0	38	38	38	0
Confidence Level(95.0%)	11	7	1.8	ND	2.0	1.6	0.5	ND

ND = No Data

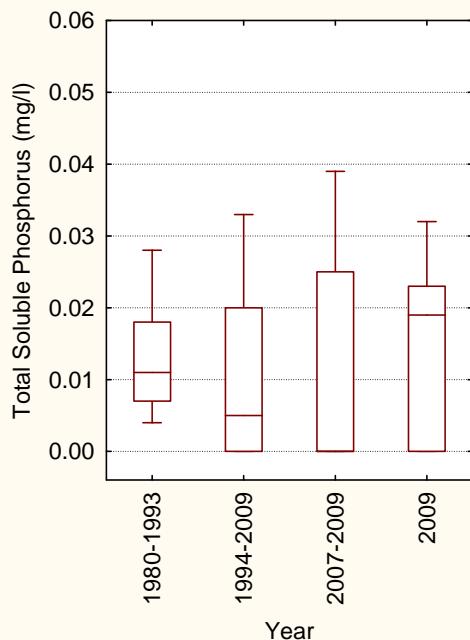
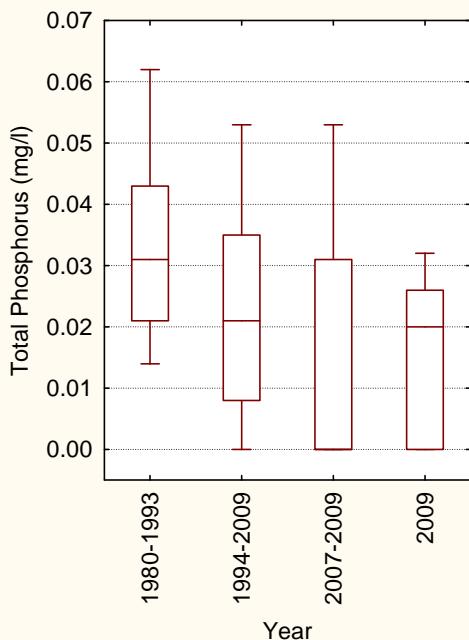
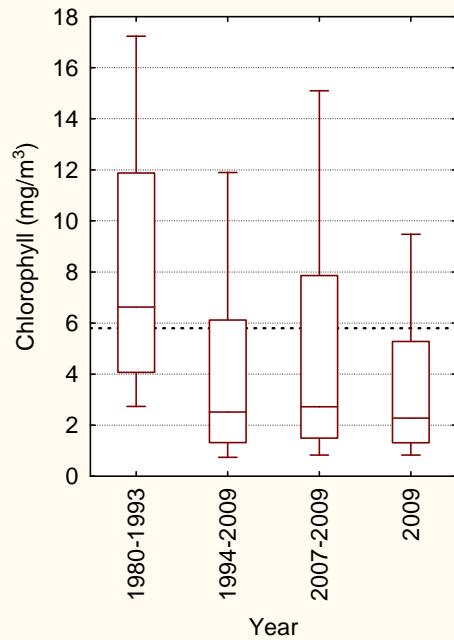
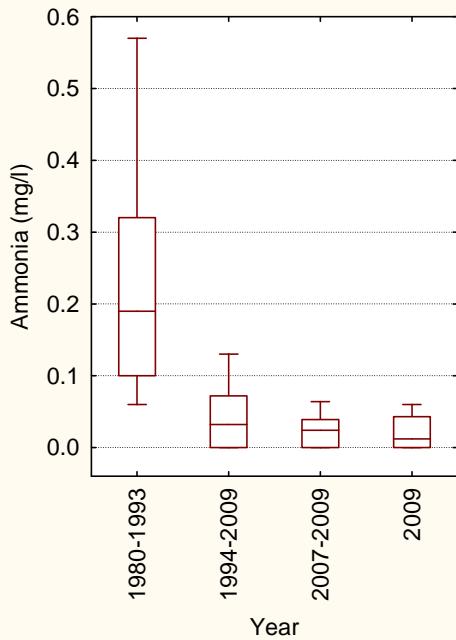
Provisional MMSD Water Quality Data

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



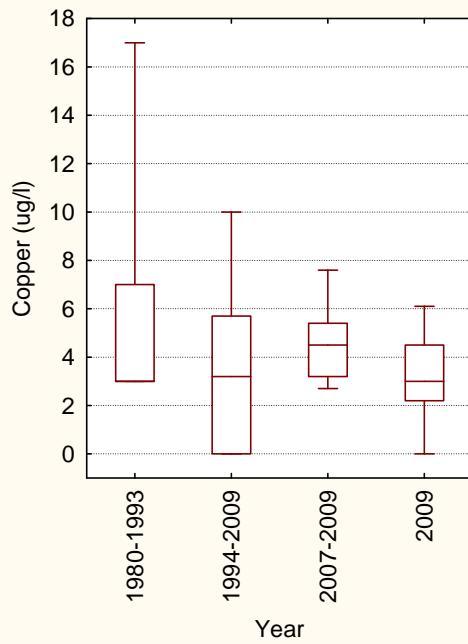
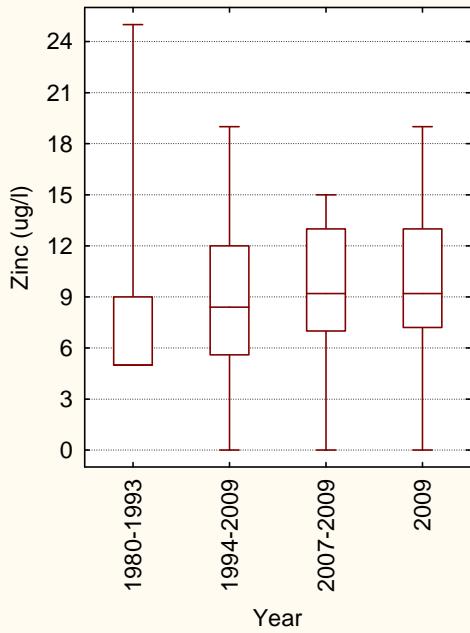
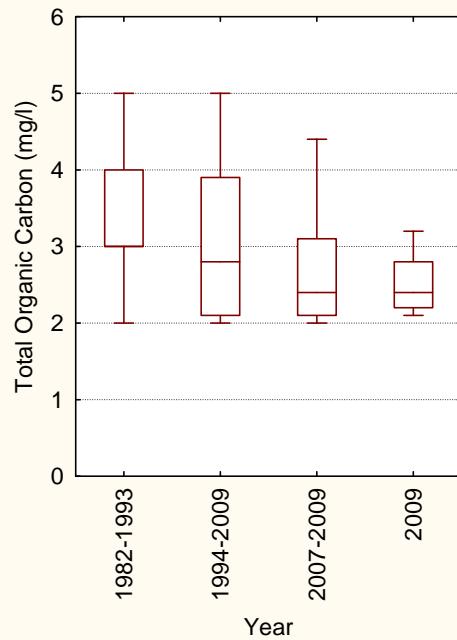
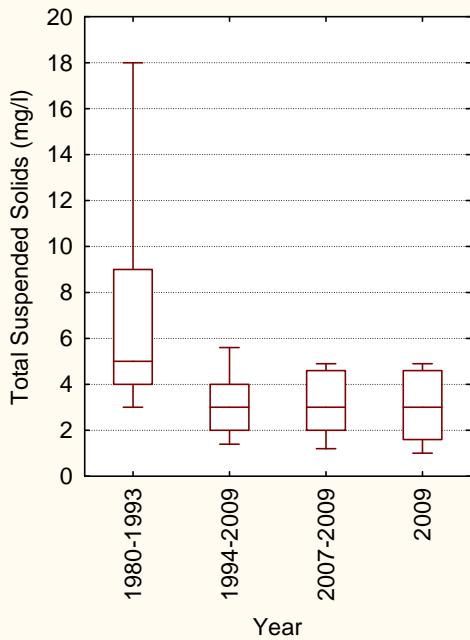
— Median □ 25%-75% □ 10%-90%
----- WQ Standard/Criterion

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 - 2009

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	11.3	10.7	3.74	0.45	0.007	0.46	0.024	0.24	0.016	0.016	1.95
Standard Error	0.0	0.6	0.2	0.58	0.03	0.001	0.03	0.004	0.04	0.002	0.002	0.11
Median	8.2	11.1	11.2	2.28	0.38	0.008	0.39	0.012	0.29	0.020	0.019	1.70
Mode	8.0	10.0	11.5	0.42	0.37	0.000	0.38	0.000	0.00	0.000	0.000	1.70
Standard Deviation	0.2	4.0	1.4	3.86	0.21	0.005	0.22	0.028	0.25	0.015	0.013	0.71
Sample Variance	0.0	16.2	1.9	14.91	0.05	0.000	0.05	0.001	0.06	0.000	0.000	0.51
Kurtosis	-1.2	0.2	0.0	4.66	2.88	0.369	2.74	1.115	-0.52	-0.245	-1.049	-0.79
Skewness	0.3	0.3	-0.7	2.00	1.76	0.356	1.72	1.208	0.58	0.524	-0.002	0.50
Range	0.6	16.7	5.2	18.77	0.87	0.018	0.87	0.110	0.88	0.055	0.043	2.64
Minimum	7.9	3.5	7.4	0.23	0.23	0.000	0.23	0.000	0.00	0.000	0.000	0.76
Maximum	8.5	20.2	12.6	19.00	1.10	0.018	1.10	0.110	0.88	0.055	0.043	3.40
Count	45	45	45	45	45	45	45	45	45	45	45	45
Confidence Level(95.0%)	0.1	1.2	0.4	1.16	0.06	0.001	0.06	0.009	0.07	0.005	0.004	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	2.7	8.0	210.0	206.4	0.8	3.6	3.3	351	20.3	5	0.5	ND
Standard Error	0.4	1.5	14.2	14.2	0.2	0.9	0.6	11	1.8	2	0.1	ND
Median	2.1	7.0	190.0	185.7	0.0	3.0	2.3	338	18.0	3	0.5	ND
Mode	2.0	ND	180.0	ND	0.0	1.6	16.5	284	11.0	0	0.0	ND
Standard Deviation	1.6	5.0	55.0	54.9	0.9	3.5	3.8	77	12.3	6	0.5	ND
Sample Variance	2.6	25.3	3028.6	3009.4	0.7	12.3	14.3	5945	151.6	41	0.2	ND
Kurtosis	0.9	-1.4	1.9	1.9	-1.9	8.7	7.2	7	7.5	2	-1.3	ND
Skewness	1.1	0.2	1.0	1.1	0.3	2.6	2.7	3	2.6	2	0.4	ND
Range	5.9	14.0	230.0	227.6	2.0	15.0	16.1	362	57.0	21	1.3	0
Minimum	0.4	1.0	120.0	118.4	0.0	0.0	0.4	284	10.0	0	0.0	0
Maximum	6.3	15.0	350.0	346.0	2.0	15.0	16.5	646	67.0	21	1.3	0
Count	15	12	15	15	15	15	45	45	45	14	14	0
Confidence Level(95.0%)	0.9	3.2	30.5	30.4	0.5	1.9	1.1	23	3.7	4	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 5
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	36.80	13.47	0.0	3.6	3.3	0.9	0.0	10.7	0.0	0.1	3.5	ND
Standard Error	1.31	0.79	0.0	0.2	0.5	0.3	0.0	2.5	0.0	0.1	1.1	ND
Median	35.00	13.00	0.0	3.4	3.0	0.0	0.0	9.2	0.0	0.0	2.8	ND
Mode	35.00	12.00	0.0	4.1	2.2	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	5.06	3.07	0.0	0.7	1.9	1.1	0.0	9.7	0.0	0.5	3.8	ND
Sample Variance	25.60	9.41	0.0	0.5	3.7	1.3	0.0	94.8	0.0	0.2	14.3	ND
Kurtosis	5.69	6.84	ND	4.2	0.1	-1.9	ND	5.8	ND	15.0	-1.9	ND
Skewness	2.18	2.44	ND	1.7	0.0	0.5	ND	2.0	ND	3.9	0.2	ND
Range	21.00	12.00	0.0	3.0	6.9	2.5	0.0	40.0	0.0	1.8	9.5	0.0
Minimum	31.00	11.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	52.00	23.00	0.0	5.7	6.9	2.5	0.0	40.0	0.0	1.8	9.5	0.0
Count	15	15	15	15	15	15	15	15	15	15	12	0
Confidence Level(95.0%)	2.80	1.70	0.0	0.4	1.1	0.6	0.0	5.4	0.0	0.3	2.4	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	116	ND	ND	30.1	27.4	2.8	ND
Standard Error	6	3	ND	ND	0.9	0.7	0.2	ND
Median	140	110	ND	ND	29.0	26.0	2.4	ND
Mode	140	110	ND	ND	29.0	25.0	2.3	ND
Standard Deviation	24	19	ND	ND	5.8	4.6	1.2	ND
Sample Variance	574	365	ND	ND	33.4	21.1	1.5	ND
Kurtosis	6	9	ND	ND	12.1	11.0	13.7	ND
Skewness	2	3	ND	ND	3.4	3.1	3.6	ND
Range	100	90	0.0	0.0	28.0	23.0	5.9	0.0
Minimum	120	100	0.0	0.0	26.0	23.0	2.0	0.0
Maximum	220	190	0.0	0.0	54.0	46.0	7.9	0.0
Count	15	45	0	0	45	45	45	0
Confidence Level(95.0%)	13	6	ND	ND	1.7	1.4	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 6
WATER QUALITY DATA - 2009

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	10.8	11.1	ND	0.33	0.004	0.34	0.011	0.18	0.005	0.011	1.66
Standard Error	0.0	0.7	0.2	ND	0.01	0.001	0.01	0.003	0.03	0.002	0.002	0.08
Median	8.3	10.4	11.7	ND	0.32	0.005	0.33	0.000	0.27	0.000	0.000	1.60
Mode	8.2	11.8	12.3	ND	0.33	0.000	0.34	0.000	0.00	0.000	0.000	1.40
Standard Deviation	0.2	4.3	1.3	ND	0.07	0.005	0.08	0.016	0.17	0.010	0.013	0.52
Sample Variance	0.0	18.6	1.8	ND	0.01	0.000	0.01	0.000	0.03	0.000	0.000	0.27
Kurtosis	-1.0	-0.1	0.2	ND	2.30	0.516	2.07	1.633	-1.89	3.654	-0.856	1.09
Skewness	0.0	0.3	-0.9	ND	1.49	0.946	1.40	1.580	0.05	2.022	0.672	0.92
Range	0.7	17.0	5.1	0.00	0.31	0.016	0.32	0.055	0.44	0.043	0.039	2.33
Minimum	7.9	3.0	7.8	0.00	0.24	0.000	0.24	0.000	0.00	0.000	0.000	0.77
Maximum	8.6	20.0	12.9	0.00	0.55	0.016	0.56	0.055	0.44	0.043	0.039	3.10
Count	42	42	42	0	42	42	42	42	42	42	42	42
Confidence Level(95.0%)	0.1	1.3	0.4	ND	0.02	0.001	0.02	0.005	0.05	0.003	0.004	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	4.4	11.3	182.1	180.6	0.3	1.6	1.8	306	13.3	5	0.5	ND
Standard Error	0.6	1.2	12.8	13.1	0.1	0.7	0.3	4	0.6	1	0.1	ND
Median	4.5	12.3	175.0	174.5	0.0	1.2	0.8	296	12.0	3	0.5	ND
Mode	3.5	15.0	200.0	ND	0.0	0.0	0.7	284	11.0	0	0.0	ND
Standard Deviation	2.2	4.3	48.1	49.1	0.5	2.6	2.3	26	3.6	5	0.5	ND
Sample Variance	4.7	18.6	2310.4	2407.1	0.3	6.8	5.1	694	12.7	21	0.2	ND
Kurtosis	-1.3	-0.9	5.0	4.8	1.1	5.2	4.1	3	2.8	-2	-1.9	ND
Skewness	-0.4	-0.6	1.8	1.7	1.7	2.3	2.3	2	1.7	0	-0.1	ND
Range	6.1	12.8	200.0	209.0	1.4	9.0	8.3	116	15.3	12	1.1	0
Minimum	0.6	3.2	120.0	111.0	0.0	0.0	0.3	283	9.7	0	0.0	0
Maximum	6.7	16.0	320.0	320.0	1.4	9.0	8.7	399	25.0	12	1.1	0
Count	14	12	14	14	14	14	42	42	42	13	13	0
Confidence Level(95.0%)	1.3	2.7	27.8	28.3	0.3	1.5	0.7	8	1.1	3	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 6
WATER QUALITY DATA - 2009

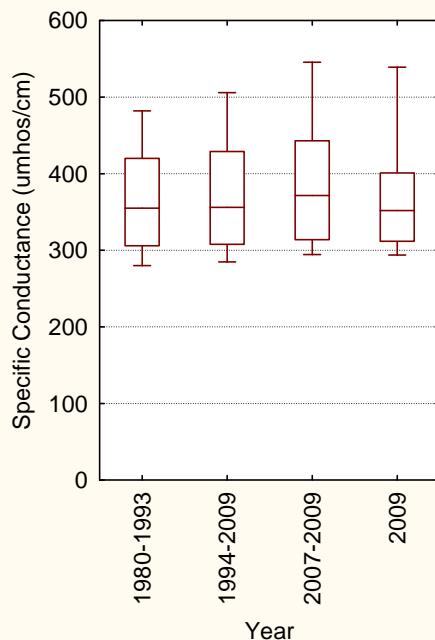
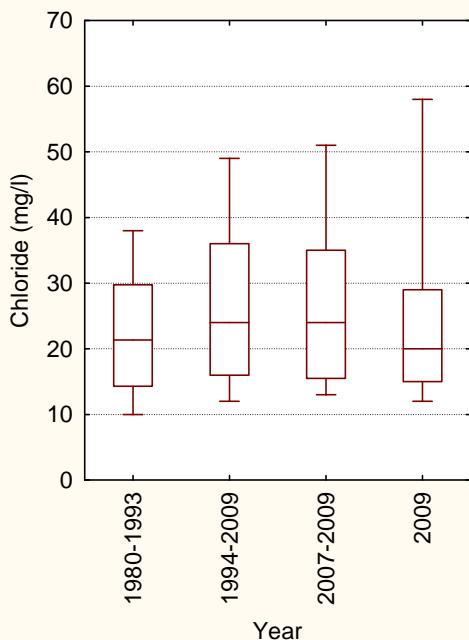
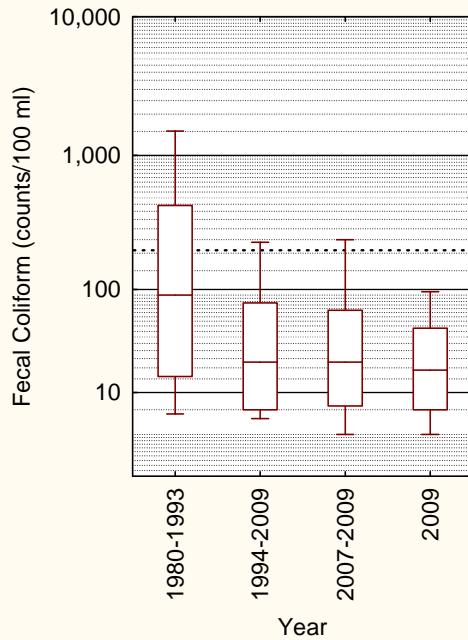
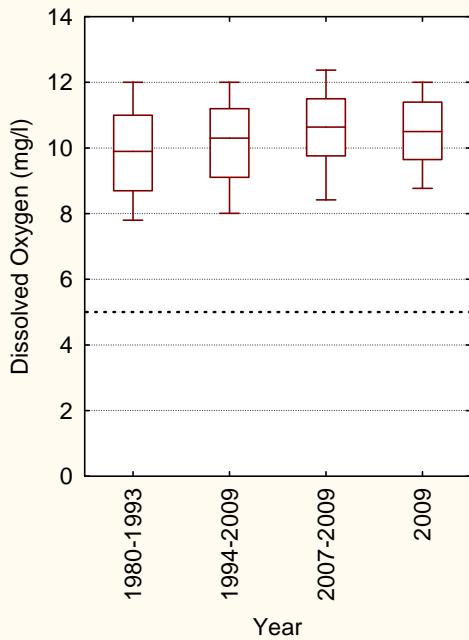
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.93	11.79	0.0	3.5	2.9	0.5	0.0	14.1	0.0	0.0	4.1	ND
Standard Error	0.43	0.19	0.0	0.2	0.6	0.2	0.0	2.6	0.0	0.0	1.1	ND
Median	34.00	12.00	0.0	3.3	3.7	0.0	0.0	12.8	0.0	0.0	5.3	ND
Mode	34.00	12.00	0.0	3.3	0.0	0.0	0.0	7.7	0.0	0.0	0.0	ND
Standard Deviation	1.59	0.70	0.0	0.7	2.1	0.9	0.0	9.9	0.0	0.0	4.1	ND
Sample Variance	2.53	0.49	0.0	0.5	4.3	0.8	0.0	97.7	0.0	0.0	17.2	ND
Kurtosis	1.77	2.88	ND	1.5	-1.3	0.8	ND	-0.7	ND	ND	-2.0	ND
Skewness	-1.07	-1.25	ND	1.3	-0.5	1.6	ND	0.3	ND	ND	0.1	ND
Range	6.00	3.00	0.0	2.5	5.8	2.3	0.0	33.0	0.0	0.0	9.5	0.0
Minimum	30.00	10.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	36.00	13.00	0.0	5.2	5.8	2.3	0.0	33.0	0.0	0.0	9.5	0.0
Count	14	14	14	14	14	14	14	14	14	14	13	0
Confidence Level(95.0%)	0.92	0.40	0.0	0.4	1.2	0.5	0.0	5.7	0.0	0.0	2.5	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	108	ND	ND	27.7	25.4	2.2	ND
Standard Error	2	1	ND	ND	0.2	0.2	0.1	ND
Median	130	110	ND	ND	27.5	25.0	2.2	ND
Mode	140	110	ND	ND	27.0	25.0	2.3	ND
Standard Deviation	7	7	ND	ND	1.5	1.3	0.4	ND
Sample Variance	53	43	ND	ND	2.2	1.6	0.1	ND
Kurtosis	-1	2	ND	ND	13.8	8.6	6.2	ND
Skewness	-1	1	ND	ND	2.8	2.1	1.8	ND
Range	20	30	0.0	0.0	10.0	8.0	2.1	0.0
Minimum	120	100	0.0	0.0	25.0	23.0	1.6	0.0
Maximum	140	130	0.0	0.0	35.0	31.0	3.7	0.0
Count	14	42	0	0	42	42	42	0
Confidence Level(95.0%)	4	2	ND	ND	0.5	0.4	0.1	ND

ND = No Data

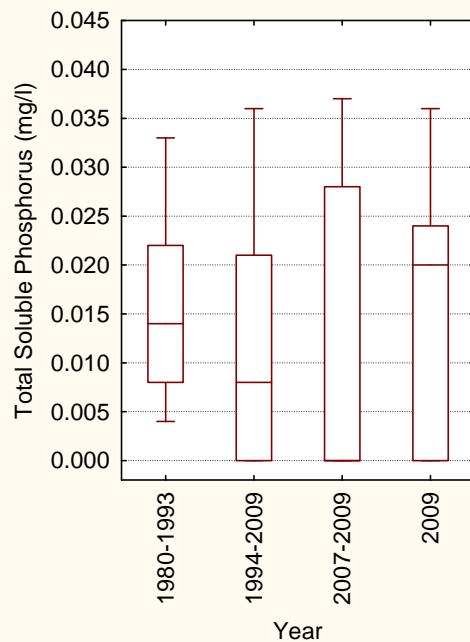
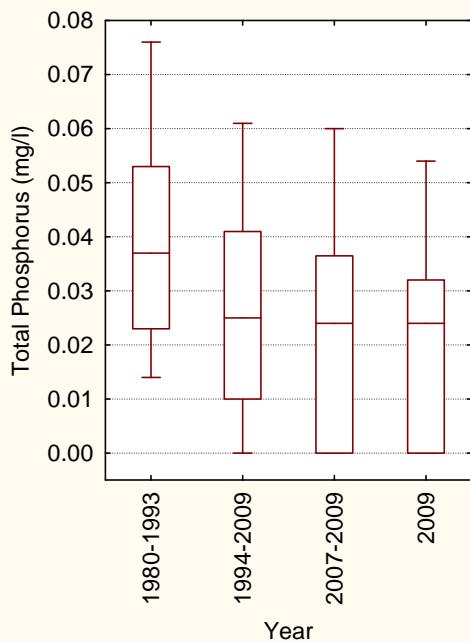
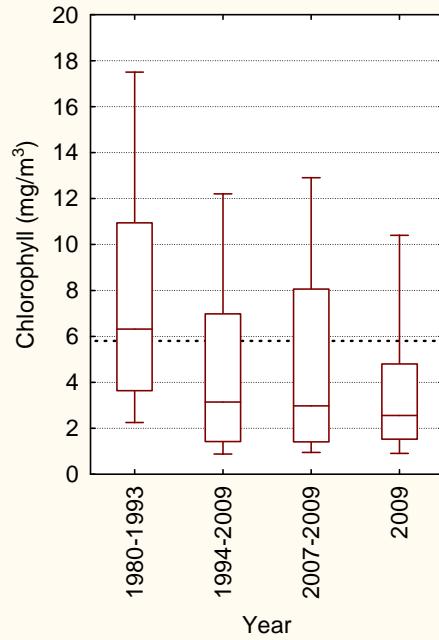
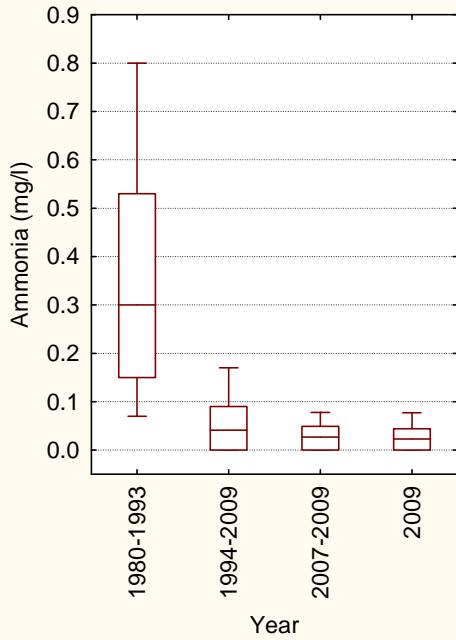
Provisional MMSD Water Quality Data

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



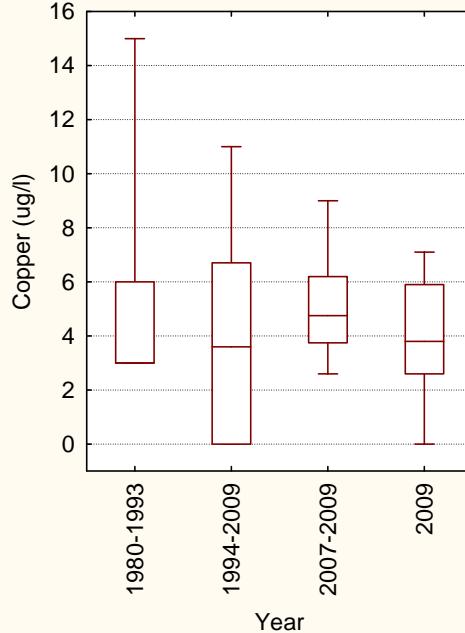
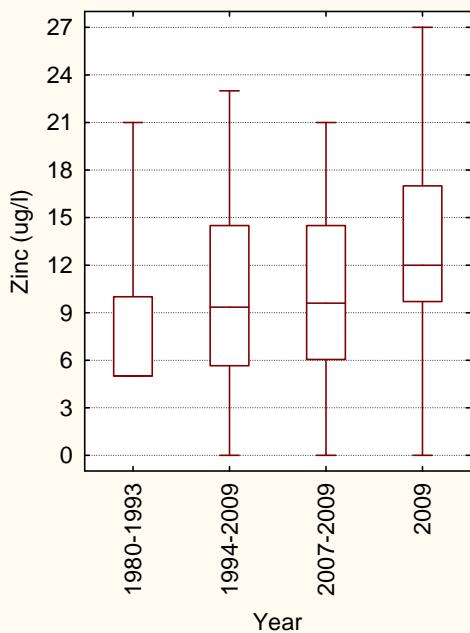
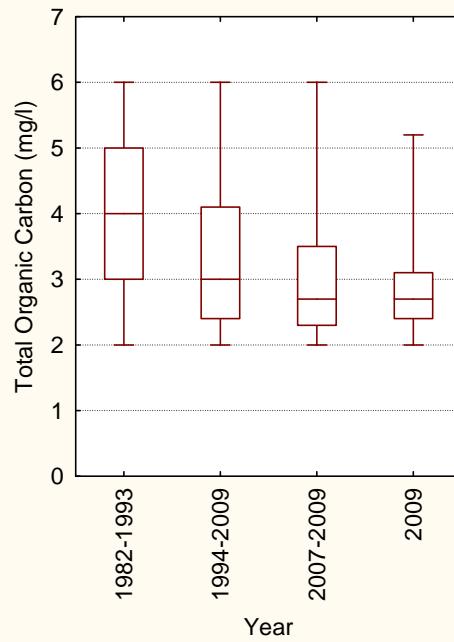
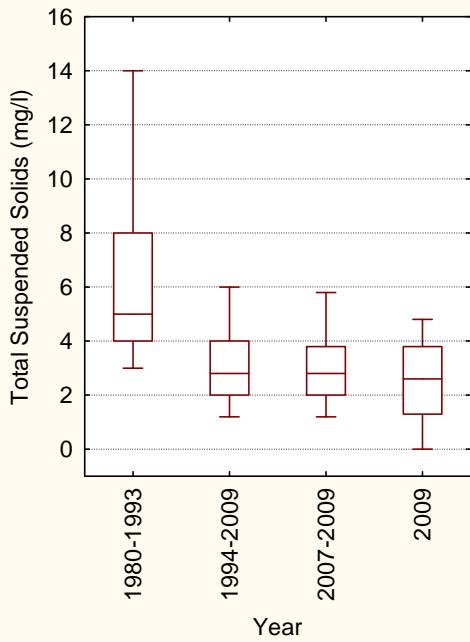
— Median □ 25%-75% I 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	11.9	10.4	4.00	0.54	0.009	0.54	0.032	0.32	0.022	0.018	2.14
Standard Error	0.0	0.5	0.2	0.43	0.03	0.001	0.03	0.004	0.04	0.003	0.002	0.11
Median	8.1	11.1	10.5	2.56	0.49	0.008	0.50	0.023	0.31	0.024	0.020	2.00
Mode	8.1	11.0	10.1	2.56	0.35	0.000	0.35	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	4.0	1.3	3.61	0.21	0.007	0.22	0.033	0.32	0.021	0.013	0.94
Sample Variance	0.0	16.1	1.7	13.03	0.05	0.000	0.05	0.001	0.10	0.000	0.000	0.88
Kurtosis	-0.6	0.1	-0.1	0.89	0.22	6.391	0.06	1.854	0.42	-0.368	-1.066	0.17
Skewness	0.2	0.4	-0.5	1.37	0.87	1.931	0.82	1.337	0.90	0.608	-0.199	0.62
Range	0.9	17.6	5.6	13.78	0.99	0.037	0.99	0.140	1.30	0.076	0.039	4.03
Minimum	7.7	2.9	7.2	0.22	0.21	0.000	0.21	0.000	0.00	0.000	0.000	0.57
Maximum	8.6	20.5	12.8	14.00	1.20	0.037	1.20	0.140	1.30	0.076	0.039	4.60
Count	69	69	69	69	66	69	66	69	68	68	68	69
Confidence Level(95.0%)	0.1	1.0	0.3	0.87	0.05	0.002	0.05	0.008	0.08	0.005	0.003	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	2.5	7.8	226.7	224.0	0.8	2.7	2.7	385	25.8	73	1.2	49
Standard Error	0.3	1.1	19.8	19.7	0.2	0.6	0.3	12	2.0	39	0.2	32
Median	2.4	6.5	210.0	202.0	1.0	2.6	2.1	352	20.0	19	1.3	10
Mode	2.4	9.0	210.0	ND	0.0	0.0	1.2	312	12.0	0	0.0	3
Standard Deviation	1.3	4.9	76.5	76.2	0.9	2.1	2.1	103	16.3	188	0.7	124
Sample Variance	1.8	24.4	5852.4	5808.2	0.8	4.5	4.5	10616	265.5	35237	0.6	15299
Kurtosis	-0.6	-1.1	0.8	0.8	-0.4	1.5	3.3	2	1.3	19	0.2	14
Skewness	0.7	0.6	0.9	0.9	0.7	0.9	1.7	2	1.5	4	0.1	4
Range	4.4	14.0	300.0	298.6	2.8	8.0	10.5	428	60.0	900	3.0	490
Minimum	0.8	2.0	100.0	98.0	0.0	0.0	0.4	281	11.0	0	0.0	0
Maximum	5.2	16.0	400.0	396.6	2.8	8.0	10.9	709	71.0	900	3.0	490
Count	23	20	15	15	15	15	69	69	69	23	23	15
Confidence Level(95.0%)	0.6	2.3	42.4	42.2	0.5	1.2	0.5	25	3.9	81	0.3	68

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 7
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	38.00	14.39	0.0	3.6	4.4	1.4	0.0	12.9	0.0	0.2	3.0	ND
Standard Error	1.28	0.72	0.0	0.1	0.7	0.2	0.0	1.9	0.0	0.1	1.0	ND
Median	36.00	13.00	0.0	3.4	3.8	1.8	0.0	12.0	0.0	0.0	0.0	ND
Mode	36.00	12.00	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	6.12	3.45	0.0	0.6	3.1	1.1	0.0	9.0	0.0	0.6	4.4	ND
Sample Variance	37.45	11.89	0.0	0.4	9.9	1.2	0.0	81.2	0.0	0.4	19.0	ND
Kurtosis	3.01	3.89	ND	0.5	3.0	-0.7	ND	-0.4	ND	9.1	-1.5	ND
Skewness	1.94	2.04	ND	0.9	1.2	0.0	ND	0.2	ND	3.2	0.8	ND
Range	22.00	14.00	0.0	2.4	14.0	3.8	0.0	31.0	0.0	2.3	9.8	0.0
Minimum	33.00	11.00	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	55.00	25.00	0.0	5.2	14.0	3.8	0.0	31.0	0.0	2.3	9.8	0.0
Count	23	23	23	23	23	23	23	23	23	23	18	0
Confidence Level(95.0%)	2.65	1.49	0.0	0.3	1.4	0.5	0.0	3.9	0.0	0.3	2.2	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	154	125	0.0	3.7	32.4	29.2	3.1	ND
Standard Error	6	4	0.0	0.2	1.2	0.9	0.2	ND
Median	150	120	0.0	3.6	30.0	27.0	2.7	ND
Mode	150	110	0.0	3.4	30.0	26.0	2.4	ND
Standard Deviation	30	26	0.0	0.7	7.8	6.1	1.6	ND
Sample Variance	879	689	0.0	0.6	61.1	37.7	2.5	ND
Kurtosis	3	5	ND	-0.6	5.4	4.8	6.7	ND
Skewness	2	2	ND	0.4	2.4	2.3	2.6	ND
Range	110	120	0.0	2.4	34.0	26.0	7.3	0.0
Minimum	130	100	0.0	2.6	26.0	24.0	1.8	0.0
Maximum	240	220	0.0	5.0	60.0	50.0	9.1	0.0
Count	23	45	14	14	45	45	45	0
Confidence Level(95.0%)	13	8	0.0	0.4	2.3	1.8	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 8
WATER QUALITY DATA - 2009

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	10.8	11.1	ND	0.32	0.004	0.33	0.007	0.12	0.003	0.013	1.64
Standard Error	0.0	0.7	0.2	ND	0.01	0.001	0.01	0.002	0.03	0.001	0.002	0.09
Median	8.3	10.0	11.5	ND	0.32	0.005	0.32	0.000	0.00	0.000	0.018	1.50
Mode	8.3	11.7	12.2	ND	0.32	0.000	0.32	0.000	0.00	0.000	0.000	1.40
Standard Deviation	0.2	4.3	1.3	ND	0.09	0.004	0.08	0.010	0.19	0.008	0.013	0.57
Sample Variance	0.0	18.4	1.7	ND	0.01	0.000	0.01	0.000	0.04	0.000	0.000	0.33
Kurtosis	-0.4	-0.1	-0.2	ND	4.05	-0.778	1.84	1.168	-0.48	3.874	-1.129	-0.01
Skewness	0.0	0.3	-0.6	ND	-0.29	0.070	1.30	1.420	1.07	2.294	0.434	0.44
Range	0.6	17.1	5.1	0.00	0.55	0.013	0.32	0.035	0.63	0.030	0.038	2.44
Minimum	8.0	2.8	8.0	0.00	0.00	0.000	0.24	0.000	0.00	0.000	0.000	0.56
Maximum	8.6	19.9	13.0	0.00	0.55	0.013	0.56	0.035	0.63	0.030	0.038	3.00
Count	42	42	42	0	42	42	42	42	42	42	42	42
Confidence Level(95.0%)	0.0	1.3	0.4	ND	0.03	0.001	0.02	0.003	0.06	0.002	0.004	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	5.1	11.9	167.9	166.4	0.4	1.5	1.7	305	13.2	213	0.6	ND
Standard Error	0.7	1.4	6.9	6.8	0.2	0.6	0.3	4	0.5	207	0.3	ND
Median	5.9	14.6	175.0	170.5	0.0	1.1	0.6	297	12.0	2	0.2	ND
Mode	1.8	7.0	180.0	170.0	0.0	0.0	ND	294	12.0	0	0.0	ND
Standard Deviation	2.7	4.8	25.8	25.6	0.8	2.4	2.1	23	3.3	773	1.0	ND
Sample Variance	7.2	23.2	664.3	656.5	0.6	5.6	4.5	527	11.1	598188	1.0	ND
Kurtosis	-0.7	-1.0	-0.8	-0.7	0.9	9.0	4.6	3	3.6	14	4.9	ND
Skewness	-0.1	-0.9	-0.5	-0.5	1.5	2.8	2.2	2	1.9	4	2.1	ND
Range	9.3	12.9	80.0	81.2	2.0	9.0	8.5	96	15.0	2900	3.5	0
Minimum	0.8	3.1	120.0	118.8	0.0	0.0	0.3	283	10.0	0	0.0	0
Maximum	10.1	16.0	200.0	200.0	2.0	9.0	8.9	379	25.0	2900	3.5	0
Count	14	12	14	14	14	14	42	42	42	14	14	0
Confidence Level(95.0%)	1.5	3.1	14.9	14.8	0.4	1.4	0.7	7	1.0	447	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 8
WATER QUALITY DATA - 2009

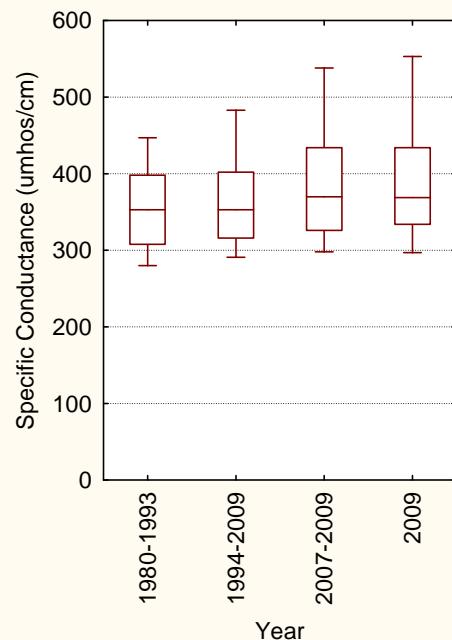
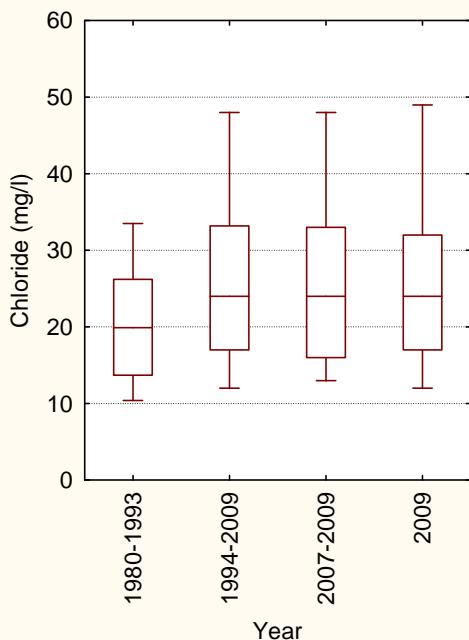
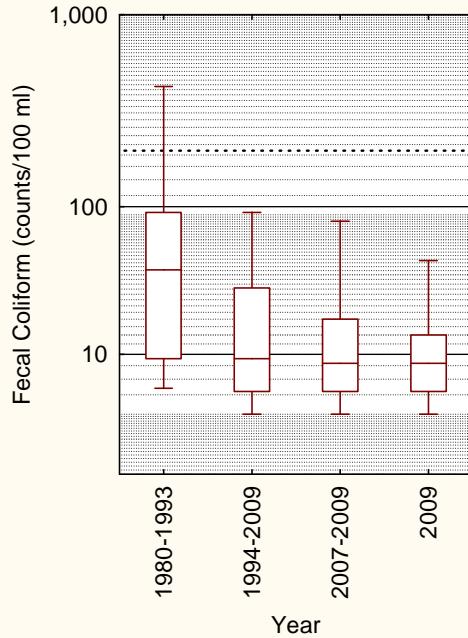
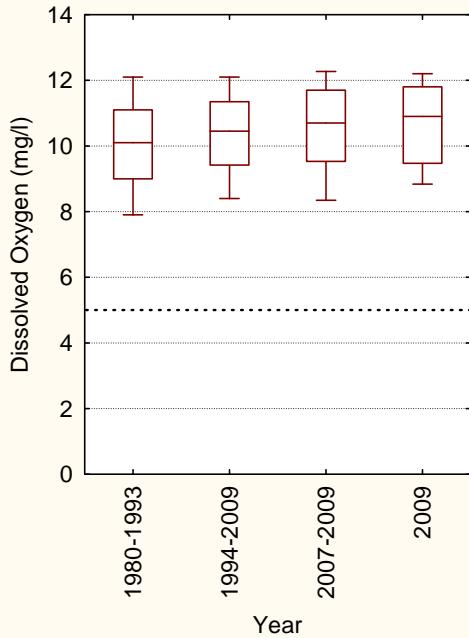
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.50	11.93	0.0	3.6	3.6	0.9	0.0	16.8	0.0	0.0	3.7	ND
Standard Error	0.58	0.27	0.0	0.3	0.8	0.4	0.0	5.3	0.0	0.0	1.3	ND
Median	34.00	12.00	0.0	3.3	3.2	0.0	0.0	10.5	0.0	0.0	0.0	ND
Mode	34.00	12.00	0.0	3.1	0.0	0.0	0.0	10.0	0.0	0.0	0.0	ND
Standard Deviation	2.18	1.00	0.0	1.2	2.8	1.3	0.0	19.8	0.0	0.0	4.6	ND
Sample Variance	4.73	0.99	0.0	1.3	8.1	1.7	0.0	391.4	0.0	0.0	20.8	ND
Kurtosis	2.34	1.18	ND	11.5	0.6	0.1	ND	6.9	ND	ND	-2.1	ND
Skewness	1.60	1.25	ND	3.3	0.7	1.2	ND	2.5	ND	ND	0.5	ND
Range	8.00	3.00	0.0	4.7	10.0	3.7	0.0	77.0	0.0	0.0	9.8	0.0
Minimum	32.00	11.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	40.00	14.00	0.0	7.4	10.0	3.7	0.0	77.0	0.0	0.0	9.8	0.0
Count	14	14	14	14	14	14	14	14	14	14	12	0
Confidence Level(95.0%)	1.26	0.58	0.0	0.7	1.6	0.8	0.0	11.4	0.0	0.0	2.9	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	108	ND	ND	27.2	25.0	2.2	ND
Standard Error	3	1	ND	ND	0.3	0.3	0.1	ND
Median	130	110	ND	ND	27.0	25.0	2.2	ND
Mode	130	110	ND	ND	27.0	25.0	2.2	ND
Standard Deviation	10	7	ND	ND	1.8	1.6	0.3	ND
Sample Variance	103	43	ND	ND	3.2	2.7	0.1	ND
Kurtosis	2	-1	ND	ND	0.6	0.1	-0.1	ND
Skewness	2	0	ND	ND	0.6	0.2	0.3	ND
Range	40	20	0.0	0.0	8.0	7.0	1.4	0.0
Minimum	120	100	0.0	0.0	24.0	22.0	1.7	0.0
Maximum	160	120	0.0	0.0	32.0	29.0	3.1	0.0
Count	14	42	0	0	42	42	42	0
Confidence Level(95.0%)	6	2	ND	ND	0.6	0.5	0.1	ND

ND = No Data

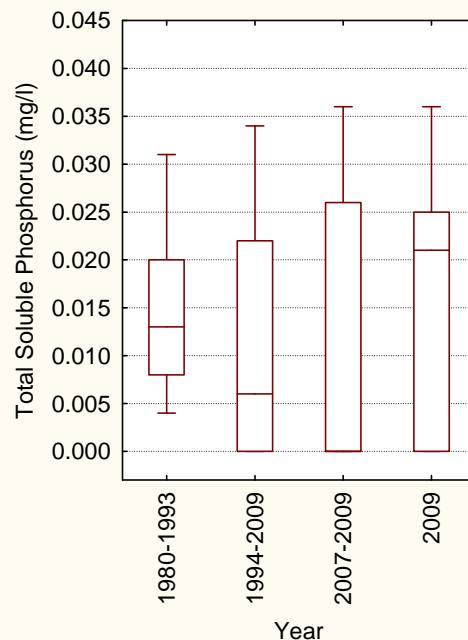
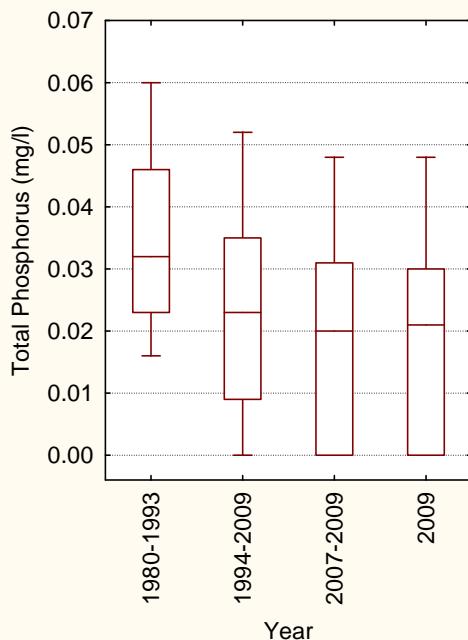
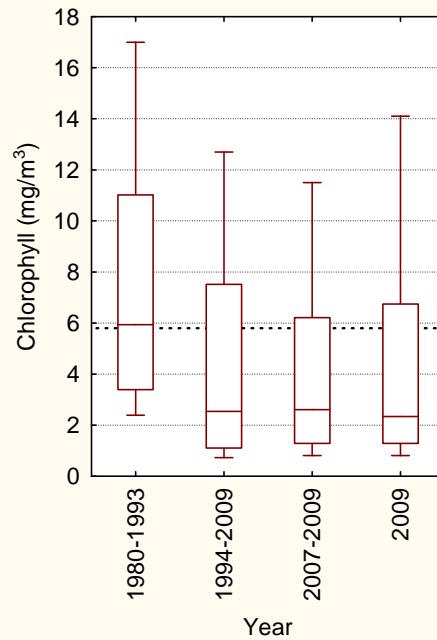
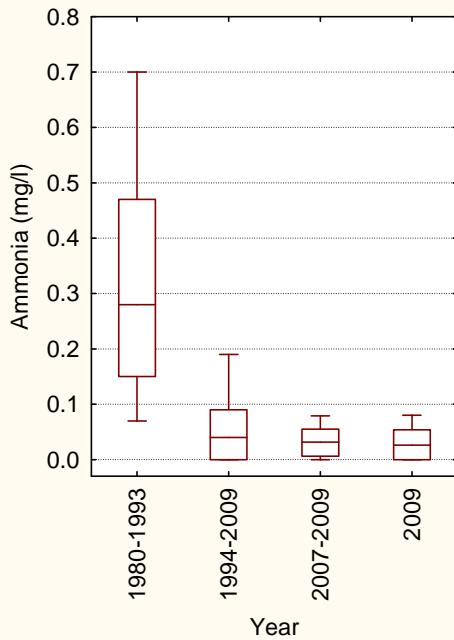
Provisional MMSD Water Quality Data

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



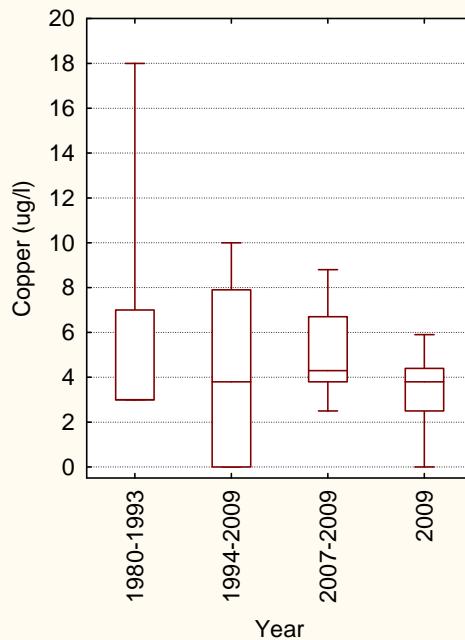
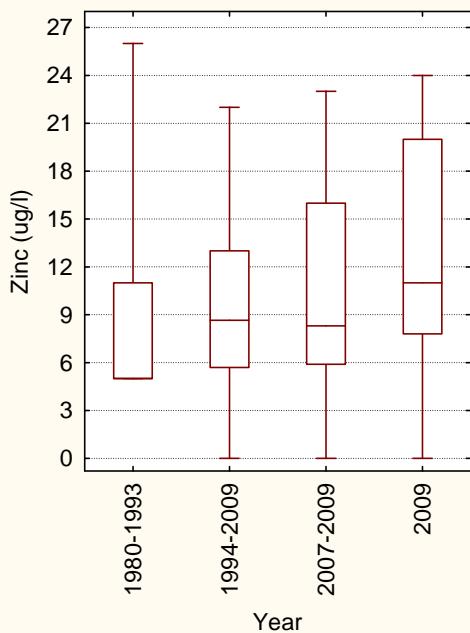
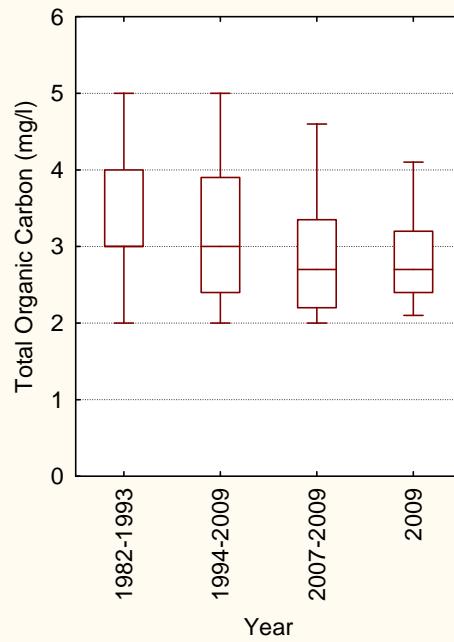
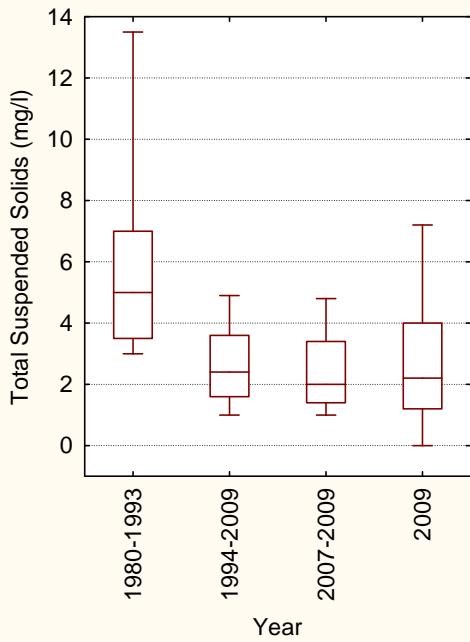
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	11.5	10.5	4.78	0.55	0.010	0.56	0.030	0.27	0.022	0.017	2.15
Standard Error	0.0	0.6	0.2	0.77	0.03	0.001	0.03	0.005	0.04	0.003	0.002	0.14
Median	8.2	10.8	10.9	2.34	0.52	0.008	0.53	0.026	0.34	0.021	0.021	2.10
Mode	8.2	10.7	11.6	0.81	0.50	0.000	0.39	0.000	0.00	0.000	0.000	2.10
Standard Deviation	0.3	4.2	1.5	5.20	0.18	0.006	0.19	0.031	0.26	0.020	0.014	0.96
Sample Variance	0.1	17.3	2.1	27.02	0.03	0.000	0.03	0.001	0.07	0.000	0.000	0.92
Kurtosis	0.4	0.0	-0.9	1.78	-0.72	0.416	-0.74	-0.525	-0.30	1.815	-1.460	0.51
Skewness	-0.6	0.2	-0.4	1.60	0.32	0.345	0.29	0.722	0.51	0.933	-0.101	0.12
Range	1.3	17.4	5.5	20.52	0.67	0.029	0.68	0.110	0.91	0.091	0.038	4.80
Minimum	7.4	2.9	7.5	0.68	0.26	0.000	0.26	0.000	0.00	0.000	0.000	0.00
Maximum	8.7	20.2	13.0	21.20	0.93	0.029	0.94	0.110	0.91	0.091	0.038	4.80
Count	45	45	45	45	45	45	45	45	45	45	45	45
Confidence Level(95.0%)	0.1	1.2	0.4	1.56	0.05	0.002	0.06	0.009	0.08	0.006	0.004	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	2.6	8.3	229.3	226.6	0.9	2.7	2.6	392	26.8	61	0.9	43
Standard Error	0.4	1.4	14.4	14.3	0.3	0.6	0.4	13	2.1	51	0.2	32
Median	2.0	7.1	220.0	217.6	0.0	2.2	1.9	369	24.0	8	0.9	3
Mode	1.3	3.5	220.0	ND	0.0	4.0	6.5	297	18.0	0	0.0	0
Standard Deviation	1.4	5.0	55.7	55.4	1.1	2.2	2.6	89	14.1	199	0.7	125
Sample Variance	2.0	24.5	3106.7	3072.5	1.2	5.0	7.0	7946	198.3	39672	0.6	15734
Kurtosis	-0.4	-0.7	2.0	2.0	-0.8	1.2	5.4	0	0.6	15	2.8	14
Skewness	0.9	0.9	1.3	1.3	0.7	1.2	2.3	1	1.2	4	1.3	4
Range	4.6	13.0	210.0	208.0	3.2	7.7	12.6	328	52.0	780	2.9	490
Minimum	1.0	3.5	160.0	158.0	0.0	0.0	0.4	284	11.0	0	0.0	0
Maximum	5.6	16.5	370.0	366.0	3.2	7.7	13.0	612	63.0	780	2.9	490
Count	15	12	15	15	15	15	45	45	45	15	15	15
Confidence Level(95.0%)	0.8	3.1	30.9	30.7	0.6	1.2	0.8	27	4.2	110	0.4	69

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 9
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	37.87	14.47	0.0	3.7	3.3	0.8	0.0	13.3	0.0	0.1	2.3	ND
Standard Error	1.32	0.77	0.0	0.2	0.5	0.3	0.0	2.4	0.0	0.1	1.0	ND
Median	37.00	14.00	0.0	3.7	3.8	0.0	0.0	11.0	0.0	0.0	0.0	ND
Mode	38.00	13.00	0.0	3.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	ND
Standard Deviation	5.13	2.97	0.0	0.7	2.0	1.1	0.0	9.3	0.0	0.5	3.5	ND
Sample Variance	26.27	8.84	0.0	0.5	4.0	1.2	0.0	87.2	0.0	0.2	12.2	ND
Kurtosis	3.89	4.47	ND	0.4	-0.3	-1.6	ND	0.2	ND	15.0	-0.7	ND
Skewness	2.01	2.07	ND	0.9	-0.6	0.6	ND	0.6	ND	3.9	1.1	ND
Range	19.00	11.00	0.0	2.4	6.3	2.8	0.0	34.0	0.0	1.8	9.0	0.0
Minimum	33.00	12.00	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	52.00	23.00	0.0	5.3	6.3	2.8	0.0	34.0	0.0	1.8	9.0	0.0
Count	15	15	15	15	15	15	15	15	15	15	12	0
Confidence Level(95.0%)	2.84	1.65	0.0	0.4	1.1	0.6	0.0	5.2	0.0	0.3	2.2	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	153	122	ND	ND	31.9	28.8	3.1	ND
Standard Error	6	3	ND	ND	0.9	0.7	0.2	ND
Median	150	120	ND	ND	30.0	27.0	2.7	ND
Mode	140	110	ND	ND	29.0	27.0	2.7	ND
Standard Deviation	25	19	ND	ND	5.7	4.7	1.1	ND
Sample Variance	624	371	ND	ND	32.8	21.8	1.2	ND
Kurtosis	3	2	ND	ND	3.9	3.6	3.9	ND
Skewness	2	2	ND	ND	2.1	2.0	2.0	ND
Range	90	80	0.0	0.0	24.0	20.0	4.7	0.0
Minimum	130	100	0.0	0.0	26.0	24.0	1.9	0.0
Maximum	220	180	0.0	0.0	50.0	44.0	6.6	0.0
Count	15	45	0	0	45	45	45	0
Confidence Level(95.0%)	14	6	ND	ND	1.7	1.4	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 10
WATER QUALITY DATA - 2009

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	10.0	5.23	0.56	0.012	0.57	0.044	0.35	0.026	0.021	2.34
Standard Error	0.0	0.6	0.2	0.64	0.03	0.001	0.03	0.007	0.04	0.003	0.002	0.15
Median	8.1	11.7	10.1	3.95	0.55	0.011	0.56	0.038	0.36	0.029	0.023	2.30
Mode	7.9	11.8	10.8	1.26	0.45	0.017	0.71	0.000	0.00	0.000	0.000	2.30
Standard Deviation	0.2	4.0	1.6	4.32	0.19	0.005	0.19	0.044	0.28	0.018	0.014	0.98
Sample Variance	0.0	16.1	2.4	18.68	0.04	0.000	0.04	0.002	0.08	0.000	0.000	0.96
Kurtosis	-0.6	-0.3	0.0	-0.26	-0.74	-0.473	-0.81	0.804	-1.08	-1.315	-1.333	0.42
Skewness	0.3	0.0	-0.7	0.97	0.03	0.029	0.03	1.133	0.08	-0.358	-0.479	-0.21
Range	0.9	15.7	5.9	14.10	0.77	0.023	0.76	0.160	0.90	0.052	0.039	4.30
Minimum	7.7	4.2	6.3	0.70	0.23	0.000	0.24	0.000	0.00	0.000	0.000	0.00
Maximum	8.6	19.9	12.2	14.80	1.00	0.023	1.00	0.160	0.90	0.052	0.039	4.30
Count	45	45	45	45	45	45	45	45	45	45	45	45
Confidence Level(95.0%)	0.1	1.2	0.5	1.30	0.06	0.002	0.06	0.013	0.08	0.006	0.004	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	1.8	6.6	223.1	218.8	1.2	4.2	3.7	422	31.8	60	1.1	52
Standard Error	0.2	1.0	17.7	17.6	0.3	0.6	0.3	14	2.4	46	0.2	38
Median	1.6	4.9	220.0	213.2	1.4	4.0	3.2	417	30.0	10	1.0	6
Mode	1.6	9.6	250.0	ND	0.0	4.0	3.9	493	37.0	5	0.7	4
Standard Deviation	0.6	3.3	68.4	68.0	1.1	2.1	2.0	96	16.1	177	0.7	147
Sample Variance	0.4	10.8	4675.4	4622.2	1.2	4.6	4.0	9246	258.1	31503	0.4	21605
Kurtosis	2.6	-2.0	2.2	2.0	-1.7	-0.2	0.4	-1	-1.3	15	2.7	15
Skewness	1.5	0.4	-0.4	-0.3	0.0	0.1	0.9	0	0.4	4	1.1	4
Range	2.4	8.1	304.0	300.6	2.8	7.8	8.7	308	50.0	700	2.8	579
Minimum	1.1	3.0	56.0	56.0	0.0	0.0	1.1	295	11.0	0	0.0	1
Maximum	3.5	11.1	360.0	356.6	2.8	7.8	9.8	603	61.0	700	2.8	580
Count	15	12	15	15	15	15	45	45	45	15	15	15
Confidence Level(95.0%)	0.4	2.1	37.9	37.7	0.6	1.2	0.6	29	4.8	98	0.4	81

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 10
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	38.60	14.53	0.0	4.0	3.6	1.4	0.0	15.5	0.0	0.0	3.4	ND
Standard Error	1.10	0.61	0.0	0.2	0.5	0.3	0.0	2.3	0.0	0.0	1.1	ND
Median	38.00	15.00	0.0	3.8	3.8	1.9	0.0	15.0	0.0	0.0	0.0	ND
Mode	36.00	15.00	0.0	3.8	3.8	0.0	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	4.27	2.36	0.0	0.7	2.1	1.3	0.0	8.8	0.0	0.0	3.9	ND
Sample Variance	18.26	5.55	0.0	0.5	4.3	1.6	0.0	77.7	0.0	0.0	15.4	ND
Kurtosis	-0.62	-0.92	ND	2.9	0.2	-1.8	ND	1.3	ND	ND	-2.0	ND
Skewness	0.67	0.54	ND	1.3	-0.1	-0.2	ND	0.9	ND	ND	0.3	ND
Range	14.00	7.00	0.0	2.8	7.7	3.3	0.0	34.0	0.0	0.0	8.9	0.0
Minimum	33.00	12.00	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	47.00	19.00	0.0	5.8	7.7	3.3	0.0	34.0	0.0	0.0	8.9	0.0
Count	15	15	15	15	15	15	15	15	15	15	13	0
Confidence Level(95.0%)	2.37	1.30	0.0	0.4	1.2	0.7	0.0	4.9	0.0	0.0	2.4	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	157	124	ND	ND	32.6	29.4	3.2	ND
Standard Error	6	3	ND	ND	0.9	0.7	0.2	ND
Median	160	120	ND	ND	31.0	28.0	2.9	ND
Mode	140	110	ND	ND	28.0	26.0	5.6	ND
Standard Deviation	22	17	ND	ND	5.8	4.8	1.1	ND
Sample Variance	495	284	ND	ND	33.5	23.0	1.2	ND
Kurtosis	-1	-1	ND	ND	0.0	-0.3	0.7	ND
Skewness	1	1	ND	ND	0.9	0.8	1.2	ND
Range	70	60	0.0	0.0	21.0	17.0	3.8	0.0
Minimum	130	100	0.0	0.0	25.0	23.0	2.0	0.0
Maximum	200	160	0.0	0.0	46.0	40.0	5.8	0.0
Count	15	45	0	0	45	45	45	0
Confidence Level(95.0%)	12	5	ND	ND	1.7	1.4	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 11
WATER QUALITY DATA - 2009

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	12.4	10.3	6.48	0.64	0.014	0.65	0.045	0.40	0.031	0.020	2.32
Standard Error	0.0	0.5	0.2	0.64	0.02	0.001	0.02	0.008	0.04	0.003	0.002	0.14
Median	8.1	12.0	10.3	5.59	0.69	0.013	0.70	0.040	0.42	0.032	0.023	2.20
Mode	8.0	12.0	11.1	10.40	0.74	0.014	0.71	0.000	0.00	0.000	0.000	2.20
Standard Deviation	0.2	3.8	1.2	4.84	0.17	0.008	0.17	0.057	0.27	0.022	0.013	1.09
Sample Variance	0.0	14.6	1.5	23.40	0.03	0.000	0.03	0.003	0.07	0.000	0.000	1.18
Kurtosis	-0.5	-0.1	0.1	-0.56	-0.03	2.115	0.10	12.118	-0.45	6.847	-1.059	5.99
Skewness	0.4	0.1	-0.6	0.67	-0.64	1.269	-0.69	2.786	0.01	1.633	-0.589	1.62
Range	1.0	16.2	5.5	17.94	0.68	0.038	0.69	0.340	1.10	0.130	0.038	7.10
Minimum	7.7	4.2	7.0	0.36	0.23	0.000	0.23	0.000	0.00	0.000	0.000	0.00
Maximum	8.7	20.4	12.5	18.30	0.91	0.038	0.92	0.340	1.10	0.130	0.038	7.10
Count	57	57	57	57	57	57	57	56	56	57	57	57
Confidence Level(95.0%)	0.1	1.0	0.3	1.28	0.04	0.002	0.05	0.015	0.07	0.006	0.003	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	1.9	4.7	255.6	250.0	1.5	5.3	4.9	432	33.6	362	1.1	1560
Standard Error	0.2	0.5	13.9	14.1	0.5	1.6	1.2	12	2.1	268	0.2	1207
Median	2.0	4.4	240.0	230.6	1.0	3.6	2.2	410	31.0	7	0.8	567
Mode	1.9	6.5	220.0	ND	0.0	3.6	2.2	385	23.0	3	0.5	ND
Standard Deviation	0.8	2.1	59.1	59.8	2.0	7.1	8.7	91	15.9	1168	1.0	2415
Sample Variance	0.7	4.5	3496.7	3572.8	4.1	50.9	76.2	8256	254.0	1364203	1.0	5829967
Kurtosis	0.3	-1.0	1.6	1.5	5.2	14.0	26.5	0	1.1	16	1.4	3
Skewness	-0.3	-0.2	1.3	1.3	2.0	3.6	4.8	1	1.0	4	1.4	2
Range	3.2	7.3	230.0	229.2	8.0	33.0	57.9	363	69.0	5000	3.7	5095
Minimum	0.2	0.7	180.0	176.4	0.0	0.0	0.3	292	10.0	0	0.0	5
Maximum	3.4	8.0	410.0	405.6	8.0	33.0	58.2	655	79.0	5000	3.7	5100
Count	19	16	18	18	19	19	57	57	57	19	19	4
Confidence Level(95.0%)	0.4	1.1	29.4	29.7	1.0	3.4	2.3	24	4.2	563	0.5	3842

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 11
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	39.95	15.68	0.0	4.0	5.0	1.6	0.0	17.1	0.0	0.4	2.5	0.0
Standard Error	1.18	0.66	0.0	0.2	0.8	0.5	0.0	2.6	0.0	0.2	1.1	0.0
Median	40.00	15.00	0.0	3.9	4.9	1.8	0.0	16.0	0.0	0.0	0.0	0.0
Mode	36.00	13.00	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	5.16	2.89	0.0	0.8	3.4	2.2	0.0	11.2	0.0	1.0	4.1	0.0
Sample Variance	26.61	8.34	0.0	0.6	11.3	4.8	0.0	125.5	0.0	1.1	16.7	0.0
Kurtosis	-0.56	0.01	ND	0.3	0.6	6.6	ND	-1.1	ND	2.5	-1.0	ND
Skewness	0.65	0.86	ND	0.5	0.5	2.2	ND	-0.1	ND	2.1	1.1	ND
Range	17.00	10.00	0.0	3.1	12.0	9.0	0.0	34.0	0.0	2.9	9.1	0.0
Minimum	34.00	12.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	51.00	22.00	0.0	5.8	12.0	9.0	0.0	34.0	0.0	2.9	9.1	0.0
Count	19	19	19	19	19	19	19	19	19	19	14	4
Confidence Level(95.0%)	2.49	1.39	0.0	0.4	1.6	1.1	0.0	5.4	0.0	0.5	2.4	0.0

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	165	128	0.6	ND	33.4	30.0	3.5	ND
Standard Error	6	3	0.6	ND	0.7	0.6	0.1	ND
Median	160	130	0.0	ND	32.0	29.0	3.2	ND
Mode	140	140	0.0	ND	32.0	28.0	3.3	ND
Standard Deviation	25	19	1.2	ND	5.1	4.2	1.1	ND
Sample Variance	637	377	1.3	ND	25.9	17.2	1.1	ND
Kurtosis	0	0	4.0	ND	1.3	0.8	1.2	ND
Skewness	1	1	2.0	ND	1.2	1.1	1.2	ND
Range	90	80	2.3	0.0	22.0	17.0	4.7	0.0
Minimum	130	100	0.0	0.0	26.0	24.0	2.0	0.0
Maximum	220	180	2.3	0.0	48.0	41.0	6.7	0.0
Count	19	57	4	0	57	57	57	0
Confidence Level(95.0%)	12	5	1.8	ND	1.4	1.1	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 12
WATER QUALITY DATA - 2009

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	10.5	11.3	1.47	0.30	0.003	0.30	0.004	0.14	0.002	0.008	1.65
Standard Error	0.0	0.7	0.2	0.22	0.01	0.001	0.01	0.001	0.02	0.001	0.002	0.07
Median	8.4	9.8	11.6	0.81	0.29	0.004	0.29	0.000	0.00	0.000	0.000	1.60
Mode	8.4	11.8	12.5	0.25	0.22	0.000	0.27	0.000	0.00	0.000	0.000	1.40
Standard Deviation	0.2	4.4	1.3	1.45	0.06	0.003	0.06	0.008	0.16	0.007	0.011	0.48
Sample Variance	0.0	19.0	1.6	2.10	0.00	0.000	0.00	0.000	0.03	0.000	0.000	0.23
Kurtosis	-0.3	0.0	0.4	2.33	1.20	-0.621	1.27	4.663	-1.82	14.020	-1.024	0.55
Skewness	-0.5	0.4	-0.8	1.74	1.04	0.456	1.08	2.080	0.38	3.804	0.800	0.00
Range	0.7	17.5	5.6	5.33	0.27	0.012	0.28	0.032	0.42	0.032	0.034	2.15
Minimum	7.9	2.4	7.6	0.24	0.22	0.000	0.22	0.000	0.00	0.000	0.000	0.55
Maximum	8.6	19.9	13.2	5.57	0.49	0.012	0.50	0.032	0.42	0.032	0.034	2.70
Count	42	42	42	42	42	42	42	42	42	42	42	42
Confidence Level(95.0%)	0.1	1.4	0.4	0.45	0.02	0.001	0.02	0.002	0.05	0.002	0.003	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	4.8	12.3	187.3	186.4	0.2	0.9	1.2	294	11.8	2	0.3	ND
Standard Error	0.8	1.4	19.0	18.9	0.1	0.3	0.1	3	0.4	1	0.1	ND
Median	4.3	14.0	180.0	179.3	0.0	0.0	0.8	288	11.0	0	0.0	ND
Mode	ND	16.0	170.0	200.0	0.0	0.0	ND	285	11.0	0	0.0	ND
Standard Deviation	2.9	4.7	71.3	70.8	0.4	1.2	1.0	18	2.4	4	0.4	ND
Sample Variance	8.4	22.3	5078.5	5007.0	0.2	1.4	0.9	340	6.0	13	0.1	ND
Kurtosis	0.6	-1.9	3.4	3.4	3.8	0.2	0.9	18	14.5	4	-0.1	ND
Skewness	1.0	-0.4	0.1	0.1	2.3	1.1	1.4	4	3.2	2	1.1	ND
Range	10.1	11.3	328.0	325.6	1.2	3.5	3.3	107	14.3	12	1.1	0
Minimum	1.5	5.7	22.0	22.0	0.0	0.0	0.3	283	9.7	0	0.0	0
Maximum	11.6	17.0	350.0	347.6	1.2	3.5	3.6	390	24.0	12	1.1	0
Count	14	12	14	14	14	14	42	42	42	13	13	0
Confidence Level(95.0%)	1.7	3.0	41.1	40.9	0.3	0.7	0.3	6	0.8	2	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 12
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.86	11.43	0.0	3.3	3.6	0.8	0.0	12.6	0.0	0.0	2.8	ND
Standard Error	0.40	0.20	0.0	0.1	0.6	0.3	0.0	2.4	0.0	0.0	1.2	ND
Median	34.00	11.00	0.0	3.2	3.9	0.0	0.0	12.3	0.0	0.0	0.0	ND
Mode	35.00	11.00	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.51	0.76	0.0	0.4	2.4	1.1	0.0	9.2	0.0	0.0	3.8	ND
Sample Variance	2.29	0.57	0.0	0.2	5.8	1.2	0.0	84.0	0.0	0.0	14.1	ND
Kurtosis	0.49	0.29	ND	0.3	-0.2	-1.1	ND	-1.1	ND	ND	-1.7	ND
Skewness	0.12	0.28	ND	0.4	-0.1	0.9	ND	0.0	ND	ND	0.7	ND
Range	6.00	3.00	0.0	1.7	8.1	2.8	0.0	28.0	0.0	0.0	8.8	0.0
Minimum	31.00	10.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	37.00	13.00	0.0	4.2	8.1	2.8	0.0	28.0	0.0	0.0	8.8	0.0
Count	14	14	14	14	14	14	14	14	14	14	10	0
Confidence Level(95.0%)	0.87	0.44	0.0	0.3	1.4	0.6	0.0	5.3	0.0	0.0	2.7	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	106	ND	ND	26.9	24.7	2.2	ND
Standard Error	2	1	ND	ND	0.3	0.3	0.1	ND
Median	130	110	ND	ND	27.0	25.0	2.2	ND
Mode	130	110	ND	ND	27.0	25.0	1.9	ND
Standard Deviation	7	5	ND	ND	2.0	1.9	0.4	ND
Sample Variance	53	29	ND	ND	4.0	3.4	0.2	ND
Kurtosis	2	-1	ND	ND	6.2	3.7	1.4	ND
Skewness	1	0	ND	ND	1.0	0.0	0.9	ND
Range	30	20	0.0	0.0	12.0	11.0	2.0	0.0
Minimum	120	100	0.0	0.0	23.0	20.0	1.6	0.0
Maximum	150	120	0.0	0.0	35.0	31.0	3.6	0.0
Count	14	42	0	0	42	42	42	0
Confidence Level(95.0%)	4	2	ND	ND	0.6	0.6	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 13
WATER QUALITY DATA - 2009

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	10.5	11.3	2.69	0.32	0.004	0.32	0.008	0.14	0.002	0.010	1.63
Standard Error	0.0	0.7	0.2	0.84	0.01	0.001	0.01	0.002	0.03	0.001	0.002	0.09
Median	8.4	9.9	11.7	0.86	0.31	0.005	0.31	0.000	0.00	0.000	0.000	1.60
Mode	8.4	14.9	10.3	0.75	0.33	0.000	0.33	0.000	0.00	0.000	0.000	1.60
Standard Deviation	0.2	4.3	1.2	5.45	0.07	0.004	0.08	0.015	0.19	0.007	0.013	0.56
Sample Variance	0.0	18.4	1.5	29.66	0.01	0.000	0.01	0.000	0.04	0.000	0.000	0.32
Kurtosis	-0.8	-0.1	0.3	22.80	0.16	-0.078	0.00	15.692	-1.18	8.755	-0.915	2.17
Skewness	-0.2	0.4	-0.8	4.48	0.85	0.602	0.81	3.448	0.79	3.096	0.738	-0.70
Range	0.7	17.3	5.3	32.39	0.30	0.014	0.30	0.086	0.55	0.030	0.036	2.70
Minimum	8.0	2.5	7.8	0.11	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.00
Maximum	8.7	19.8	13.1	32.50	0.50	0.014	0.50	0.086	0.55	0.030	0.036	2.70
Count	42	42	42	42	42	42	42	42	42	41	41	42
Confidence Level(95.0%)	0.1	1.3	0.4	1.70	0.02	0.001	0.02	0.005	0.06	0.002	0.004	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	5.8	15.0	166.4	165.5	0.4	1.0	1.2	298	12.7	6	0.2	2
Standard Error	0.7	1.6	6.0	5.9	0.2	0.4	0.2	3	0.5	5	0.1	1
Median	5.8	18.1	165.0	163.2	0.0	0.0	0.7	293	11.0	0	0.0	0
Mode	ND	18.5	170.0	200.0	0.0	0.0	ND	284	11.0	0	0.0	0
Standard Deviation	2.8	5.5	22.4	22.0	0.7	1.4	1.2	23	3.4	20	0.5	5
Sample Variance	7.8	30.1	501.6	486.1	0.5	1.9	1.3	513	11.3	420	0.3	26
Kurtosis	-0.9	-1.2	0.4	0.4	0.3	0.7	2.6	10	2.6	14	10.3	4
Skewness	0.3	-0.9	0.0	0.0	1.3	1.3	1.7	3	1.8	4	3.1	2
Range	9.2	14.5	80.0	80.0	2.0	4.0	4.9	107	13.2	77	1.9	15
Minimum	1.6	5.5	120.0	120.0	0.0	0.0	0.2	283	9.8	0	0.0	0
Maximum	10.8	20.0	200.0	200.0	2.0	4.0	5.1	390	23.0	77	1.9	15
Count	14	12	14	14	14	14	42	42	42	14	14	14
Confidence Level(95.0%)	1.6	3.5	12.9	12.7	0.4	0.8	0.4	7	1.0	12	0.3	3

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 13
WATER QUALITY DATA - 2009

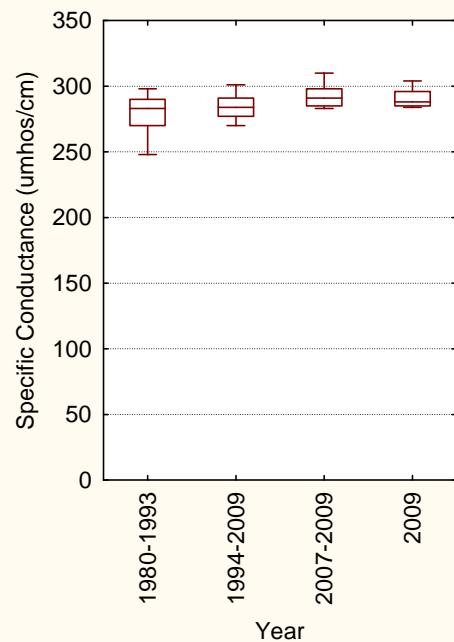
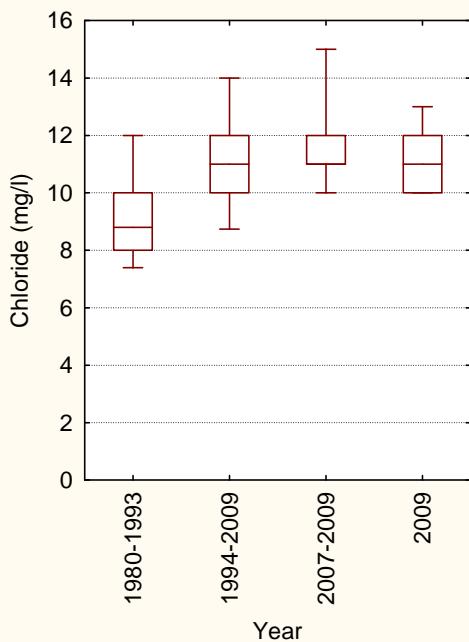
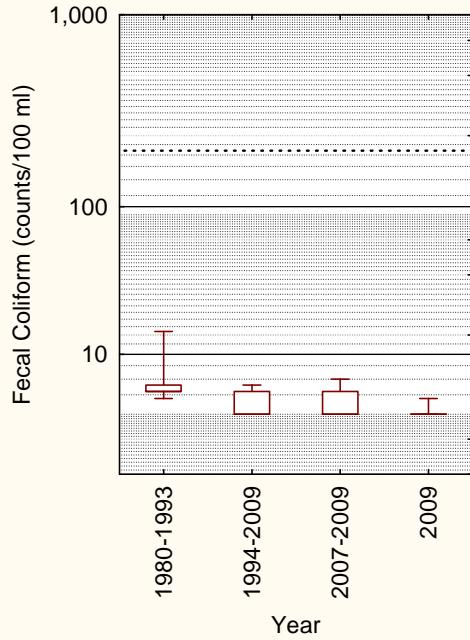
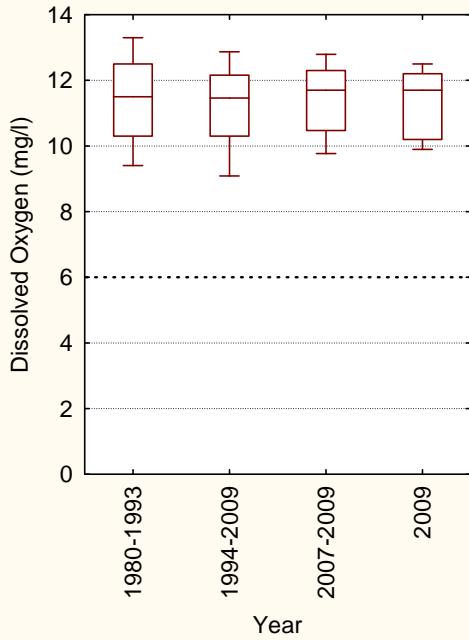
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.93	11.50	0.0	3.5	3.2	0.9	0.0	10.3	0.0	0.1	2.0	ND
Standard Error	0.52	0.20	0.0	0.2	0.6	0.4	0.0	2.2	0.0	0.1	1.3	ND
Median	34.00	11.00	0.0	3.5	3.3	0.0	0.0	11.0	0.0	0.0	0.0	ND
Mode	34.00	11.00	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.94	0.76	0.2	0.6	2.2	1.4	0.0	8.2	0.0	0.5	4.0	ND
Sample Variance	3.76	0.58	0.0	0.3	4.8	1.9	0.0	67.6	0.0	0.2	15.8	ND
Kurtosis	1.69	0.16	14.0	-1.0	-0.1	-0.2	ND	-1.0	ND	14.0	0.8	ND
Skewness	1.22	1.23	3.7	0.1	0.1	1.1	ND	0.1	ND	3.7	1.6	ND
Range	7.00	2.00	0.6	1.9	7.5	4.0	0.0	25.0	0.0	1.8	9.2	0.0
Minimum	31.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	13.00	0.6	4.5	7.5	4.0	0.0	25.0	0.0	1.8	9.2	0.0
Count	14	14	14	14	14	14	14	14	14	14	9	0
Confidence Level(95.0%)	1.12	0.44	0.1	0.3	1.3	0.8	0.0	4.7	0.0	0.3	3.1	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	132	106	ND	ND	27.1	24.8	2.2	ND
Standard Error	2	1	ND	ND	0.3	0.3	0.1	ND
Median	130	110	ND	ND	27.0	25.0	2.2	ND
Mode	130	110	ND	ND	27.0	25.0	1.8	ND
Standard Deviation	8	7	ND	ND	1.9	1.9	0.4	ND
Sample Variance	64	44	ND	ND	3.5	3.6	0.1	ND
Kurtosis	3	3	ND	ND	4.2	2.8	0.6	ND
Skewness	2	1	ND	ND	0.6	0.1	0.5	ND
Range	30	30	0.0	0.0	11.0	11.0	1.7	0.0
Minimum	120	100	0.0	0.0	23.0	20.0	1.6	0.0
Maximum	150	130	0.0	0.0	34.0	31.0	3.3	0.0
Count	14	42	0	0	42	42	42	0
Confidence Level(95.0%)	5	2	ND	ND	0.6	0.6	0.1	ND

ND = No Data

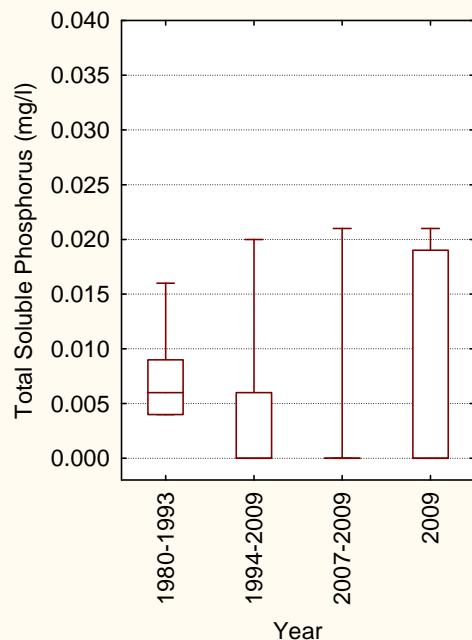
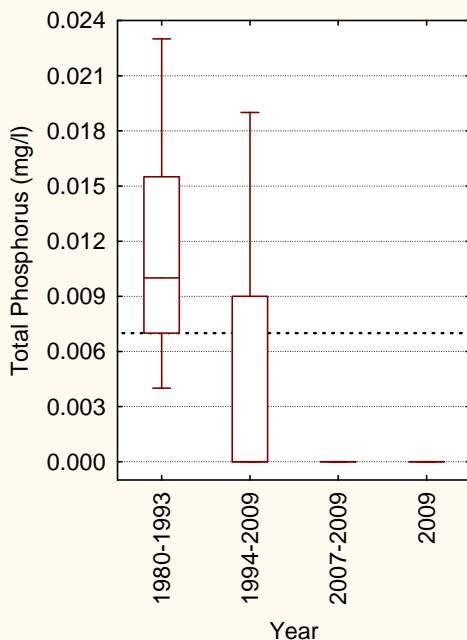
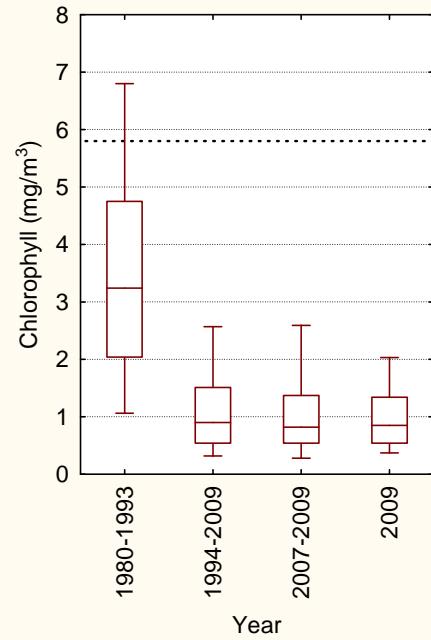
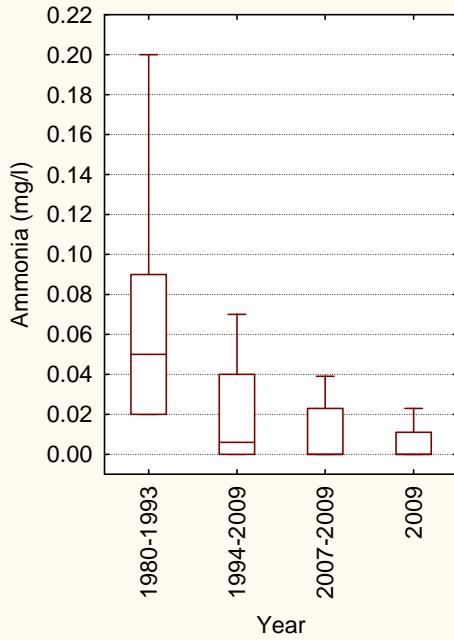
Provisional MMSD Water Quality Data

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



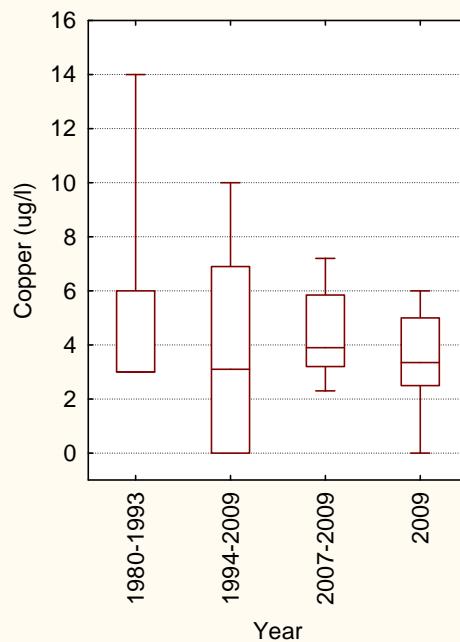
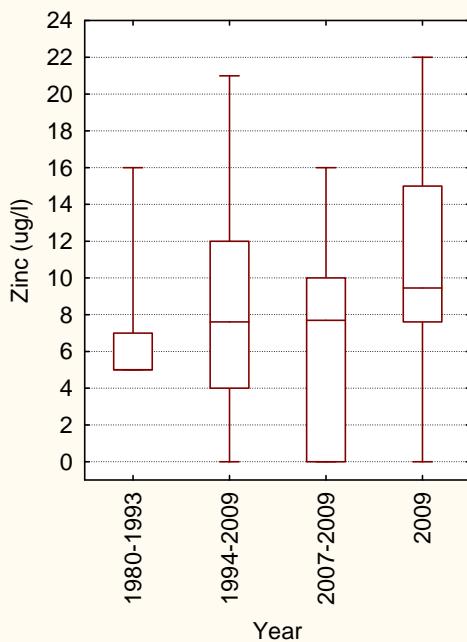
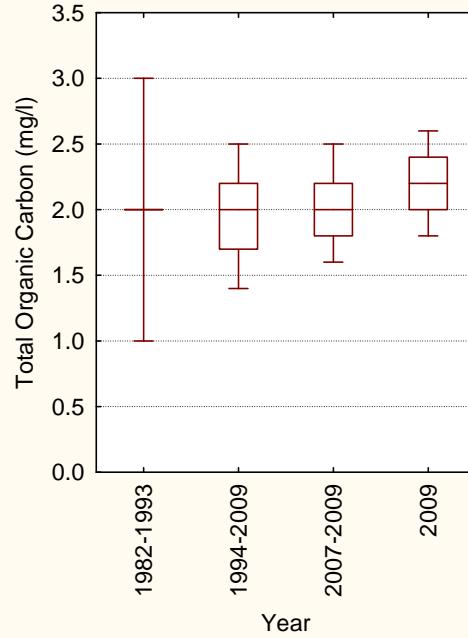
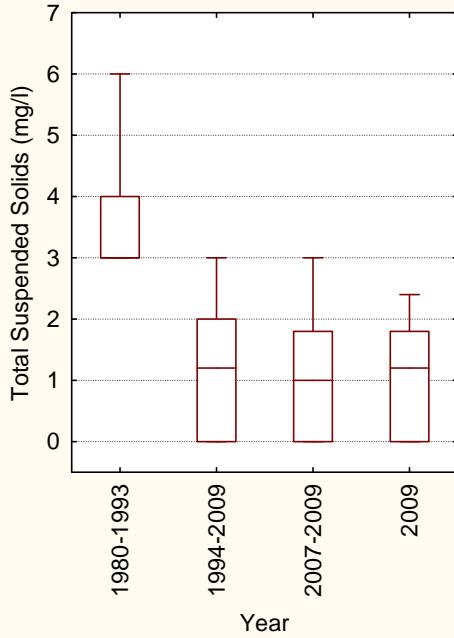
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	10.7	11.3	1.21	0.29	0.002	0.29	0.008	0.15	0.001	0.007	1.67
Standard Error	0.0	0.5	0.1	0.15	0.01	0.000	0.01	0.002	0.03	0.001	0.001	0.06
Median	8.3	10.4	11.7	0.85	0.30	0.000	0.30	0.000	0.00	0.000	0.000	1.70
Mode	8.1	10.8	11.9	0.54	0.30	0.000	0.30	0.000	0.00	0.000	0.000	1.60
Standard Deviation	0.2	4.4	1.1	1.19	0.06	0.004	0.05	0.017	0.23	0.005	0.011	0.48
Sample Variance	0.1	19.3	1.3	1.42	0.00	0.000	0.00	0.000	0.06	0.000	0.000	0.23
Kurtosis	-1.0	-0.2	0.1	10.47	6.54	3.869	-0.25	27.187	1.48	17.102	-0.260	1.42
Skewness	0.2	0.5	-0.8	2.98	-1.47	1.667	0.26	4.581	1.42	4.162	1.100	-0.79
Range	0.8	17.6	5.4	6.95	0.41	0.018	0.22	0.120	1.00	0.030	0.036	2.60
Minimum	7.9	2.4	7.8	0.00	0.00	0.000	0.20	0.000	0.00	0.000	0.000	0.00
Maximum	8.7	20.0	13.2	6.95	0.41	0.018	0.42	0.120	1.00	0.030	0.036	2.60
Count	66	66	66	66	63	66	63	66	66	66	66	66
Confidence Level(95.0%)	0.1	1.1	0.3	0.29	0.02	0.001	0.01	0.004	0.06	0.001	0.003	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	6.2	14.0	156.1	154.3	0.5	1.8	0.9	292	11.4	1	0.1	ND
Standard Error	0.6	1.2	8.9	8.7	0.2	0.9	0.1	1	0.2	0	0.0	ND
Median	6.6	15.0	155.0	153.5	0.0	1.2	0.6	288	11.0	0	0.0	ND
Mode	7.5	19.0	140.0	200.0	0.0	0.0	ND	286	11.0	0	0.0	ND
Standard Deviation	2.6	5.5	33.3	32.7	0.8	3.4	0.7	9	1.4	1	0.2	ND
Sample Variance	6.8	30.2	1108.4	1067.1	0.7	11.2	0.5	86	2.1	2	0.0	ND
Kurtosis	-1.0	-0.9	-0.1	0.0	0.9	11.6	3.7	2	1.4	6	4.8	ND
Skewness	0.0	-0.6	-0.4	-0.4	1.5	3.3	1.9	2	1.2	2	2.3	ND
Range	8.8	17.0	115.0	115.0	2.4	13.0	3.6	43	6.3	5	0.7	0
Minimum	2.0	3.0	85.0	85.0	0.0	0.0	0.3	282	9.7	0	0.0	0
Maximum	10.8	20.0	200.0	200.0	2.4	13.0	3.8	325	16.0	5	0.7	0
Count	22	20	14	14	14	14	66	66	66	21	21	0
Confidence Level(95.0%)	1.2	2.6	19.2	18.9	0.5	1.9	0.2	2	0.4	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 14
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.55	11.45	0.0	3.4	3.5	0.8	0.0	10.6	0.0	0.1	3.6	ND
Standard Error	0.30	0.13	0.0	0.1	0.5	0.2	0.0	1.4	0.0	0.1	1.2	ND
Median	33.50	11.00	0.0	3.3	3.4	0.0	0.0	9.5	0.0	0.0	0.0	ND
Mode	34.00	11.00	0.0	3.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.41	0.60	0.0	0.7	2.1	1.0	0.0	6.8	0.0	0.5	4.4	ND
Sample Variance	1.97	0.35	0.0	0.4	4.6	1.0	0.0	45.6	0.0	0.3	19.1	ND
Kurtosis	4.05	0.02	ND	0.2	-0.5	-1.1	ND	0.0	ND	22.0	-2.0	ND
Skewness	1.26	0.93	ND	1.1	-0.3	0.7	ND	0.5	ND	4.7	0.5	ND
Range	7.00	2.00	0.0	2.2	7.1	2.9	0.0	24.0	0.0	2.5	9.4	0.0
Minimum	31.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	13.00	0.0	4.8	7.1	2.9	0.0	24.0	0.0	2.5	9.4	0.0
Count	22	22	22	22	22	22	22	22	22	22	14	0
Confidence Level(95.0%)	0.62	0.26	0.0	0.3	0.9	0.4	0.0	3.0	0.0	0.2	2.5	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	106	0.0	2.1	26.7	24.4	2.2	ND
Standard Error	1	1	0.0	0.3	0.2	0.3	0.0	ND
Median	130	110	0.0	2.4	27.0	25.0	2.2	ND
Mode	130	110	0.0	2.3	27.0	25.0	2.2	ND
Standard Deviation	6	5	0.0	1.0	1.6	1.7	0.3	ND
Sample Variance	41	27	0.0	1.0	2.5	2.9	0.1	ND
Kurtosis	3	-2	ND	2.2	0.2	0.6	-0.8	ND
Skewness	1	0	ND	-1.8	-0.4	-0.8	0.1	ND
Range	30	14	0.0	3.0	7.0	7.0	1.0	0.0
Minimum	120	96	0.0	0.0	23.0	20.0	1.7	0.0
Maximum	150	110	0.0	3.0	30.0	27.0	2.7	0.0
Count	22	42	13	13	42	42	42	0
Confidence Level(95.0%)	3	2	0.0	0.6	0.5	0.5	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 15
WATER QUALITY DATA - 2009

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	13.7	10.2	4.83	0.48	0.011	0.49	0.049	0.36	0.028	0.020	2.70
Standard Error	0.1	1.1	0.4	0.92	0.04	0.001	0.04	0.012	0.09	0.006	0.003	0.23
Median	8.3	13.4	10.4	2.85	0.43	0.010	0.44	0.044	0.40	0.027	0.023	2.80
Mode	8.4	ND	10.4	ND	0.64	0.012	0.65	0.000	0.00	0.000	0.000	3.10
Standard Deviation	0.2	4.4	1.4	3.56	0.15	0.005	0.15	0.045	0.34	0.022	0.013	0.90
Sample Variance	0.0	19.2	2.0	12.66	0.02	0.000	0.02	0.002	0.12	0.000	0.000	0.80
Kurtosis	-1.4	-0.5	1.4	-0.61	-1.60	2.952	-1.65	-0.087	-1.28	-1.022	-1.035	0.05
Skewness	-0.3	-0.4	-0.9	0.95	-0.03	1.650	-0.02	0.929	0.26	0.023	-0.717	0.27
Range	0.6	15.4	5.7	10.14	0.45	0.019	0.45	0.140	0.94	0.065	0.036	3.30
Minimum	7.9	4.8	6.9	1.36	0.25	0.005	0.26	0.000	0.00	0.000	0.000	1.10
Maximum	8.5	20.2	12.6	11.50	0.70	0.024	0.71	0.140	0.94	0.065	0.036	4.40
Count	15	15	15	15	15	15	15	15	15	15	15	15
Confidence Level(95.0%)	0.1	2.4	0.8	1.97	0.08	0.003	0.08	0.025	0.19	0.012	0.007	0.50

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	235.3	231.3	1.1	4.1	2.7	402	26.9	17	0.9	ND
Standard Error	ND	ND	19.5	19.2	0.2	0.8	0.5	18	2.6	5	0.1	ND
Median	ND	ND	220.0	217.2	1.2	2.8	2.2	386	24.0	8	0.9	ND
Mode	ND	ND	270.0	ND	0.0	2.2	1.5	ND	22.0	3	0.5	ND
Standard Deviation	ND	ND	75.7	74.3	1.0	3.1	2.1	70	10.0	20	0.6	ND
Sample Variance	ND	ND	5726.7	5518.2	0.9	9.7	4.5	4846	100.3	403	0.3	ND
Kurtosis	ND	ND	1.1	1.0	-0.2	0.2	5.5	2	0.2	1	-0.9	ND
Skewness	ND	ND	1.1	1.0	0.3	1.0	2.0	1	1.1	1	0.0	ND
Range	0.0	0.0	270.0	271.4	3.2	11.0	8.3	246	32.0	64	1.8	0
Minimum	0.0	0.0	140.0	131.2	0.0	0.0	0.7	326	16.0	0	0.0	0
Maximum	0.0	0.0	410.0	402.6	3.2	11.0	9.1	572	48.0	64	1.8	0
Count	0	0	15	15	15	15	15	15	15	15	15	0
Confidence Level(95.0%)	ND	ND	41.9	41.1	0.5	1.7	1.2	39	5.5	11	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

OUTER HARBOR - SITE 15
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	39.67	16.07	0.1	4.0	4.6	1.3	0.0	12.7	0.0	0.0	2.7	ND
Standard Error	1.58	0.96	0.1	0.2	0.5	0.3	0.0	2.1	0.0	0.0	1.2	ND
Median	38.00	15.00	0.0	3.8	4.8	1.9	0.0	13.0	0.0	0.0	0.0	ND
Mode	38.00	13.00	0.0	3.4	ND	0.0	0.0	15.0	0.0	0.0	0.0	ND
Standard Deviation	6.13	3.71	0.2	1.0	2.0	1.2	0.0	8.3	0.0	0.0	4.3	ND
Sample Variance	37.52	13.78	0.0	0.9	4.1	1.4	0.0	68.4	0.0	0.0	18.5	ND
Kurtosis	1.84	2.85	6.0	5.1	-0.1	-1.5	ND	0.7	ND	ND	-1.2	ND
Skewness	1.46	1.74	2.6	1.8	-0.7	0.0	ND	0.6	ND	ND	1.0	ND
Range	22.00	13.00	0.7	4.1	7.0	3.4	0.0	31.0	0.0	0.0	9.6	0.0
Minimum	33.00	13.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	55.00	26.00	0.7	6.8	7.0	3.4	0.0	31.0	0.0	0.0	9.6	0.0
Count	15	15	15	15	15	15	15	15	15	15	13	0
Confidence Level(95.0%)	3.39	2.06	0.1	0.5	1.1	0.7	0.0	4.6	0.0	0.0	2.6	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	165	135	0.2	3.9	34.6	31.0	3.7	ND
Standard Error	8	7	0.2	0.2	2.2	1.9	0.4	ND
Median	160	130	0.0	3.6	32.0	29.0	3.1	ND
Mode	160	120	0.0	3.4	28.0	32.0	2.5	ND
Standard Deviation	30	26	0.6	0.9	8.7	7.2	1.7	ND
Sample Variance	912	655	0.3	0.9	74.8	51.4	2.7	ND
Kurtosis	2	1	14.0	3.7	1.7	1.3	2.9	ND
Skewness	2	1	3.7	1.9	1.6	1.3	1.9	ND
Range	100	80	2.2	3.6	28.0	24.0	5.5	0.0
Minimum	140	110	0.0	2.8	27.0	24.0	2.2	0.0
Maximum	240	190	2.2	6.4	55.0	48.0	7.7	0.0
Count	15	15	14	14	15	15	15	0
Confidence Level(95.0%)	17	14	0.3	0.5	4.8	4.0	0.9	ND

ND = No Data

Provisional MMSD Water Quality Data

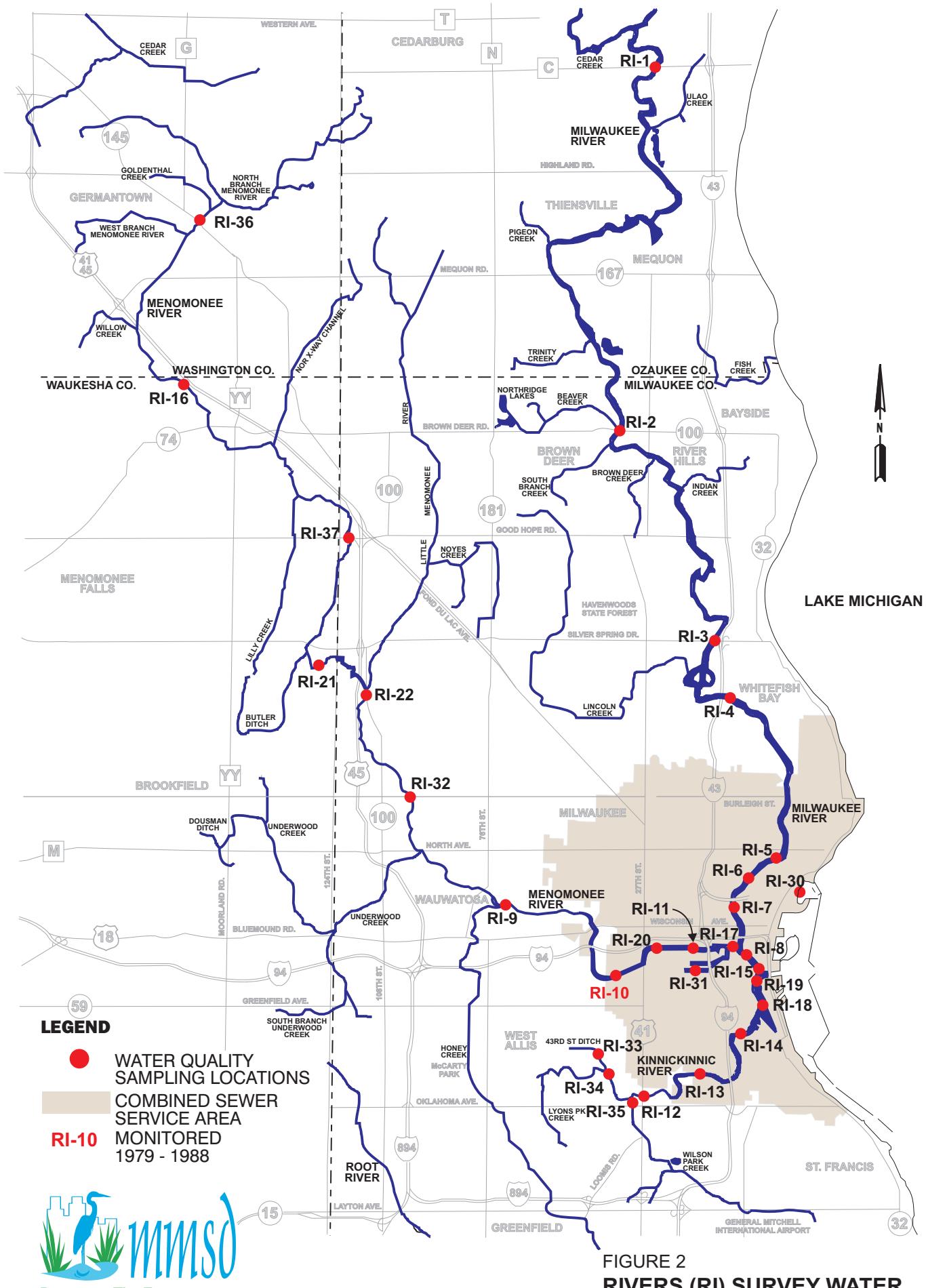
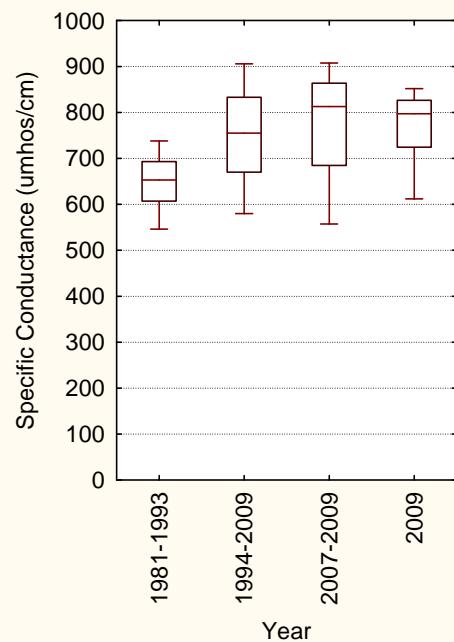
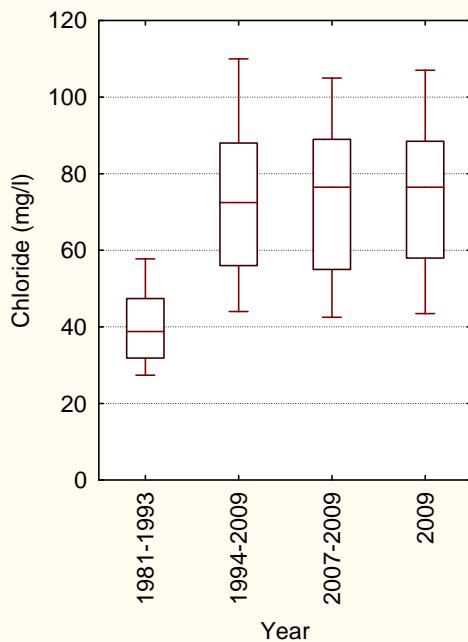
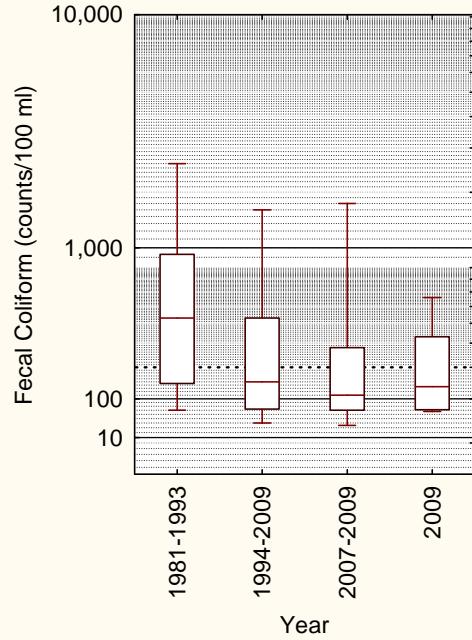
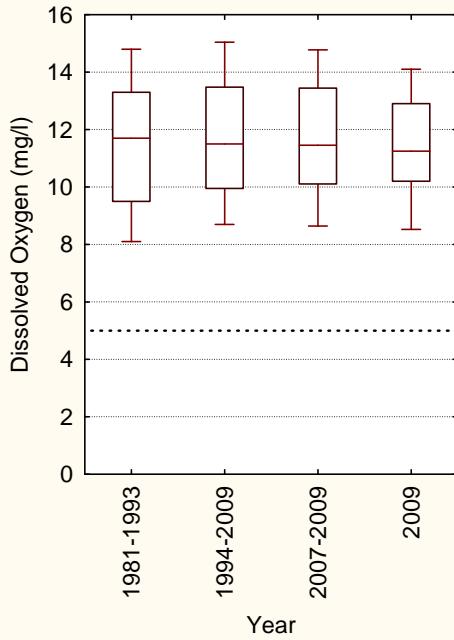


FIGURE 2
RIVERS (RI) SURVEY WATER
QUALITY SAMPLING LOCATIONS

1/9/09

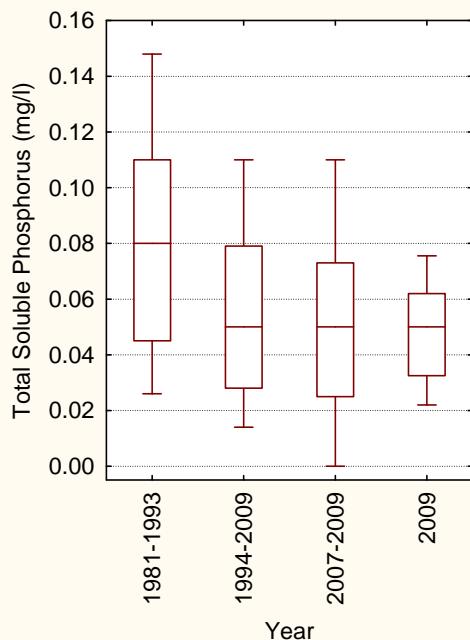
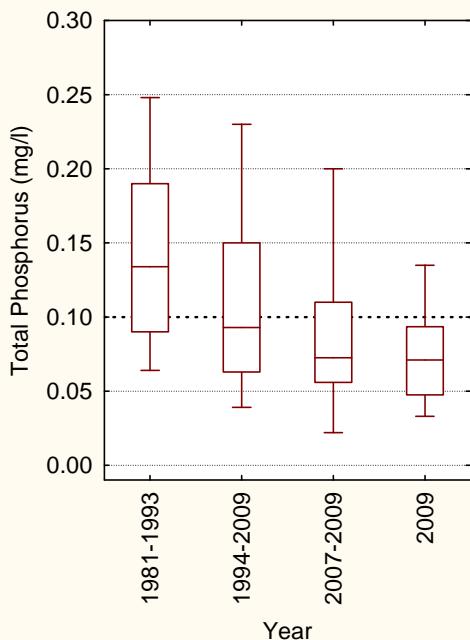
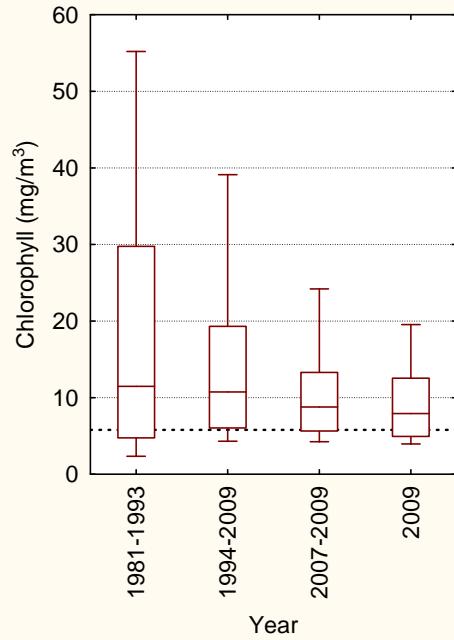
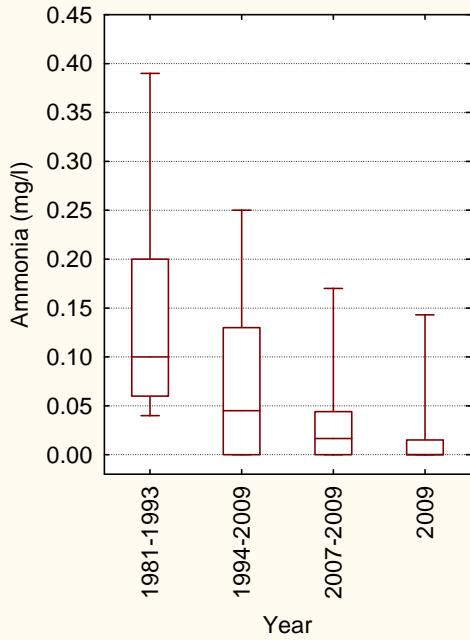
02-034 UWM survey

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



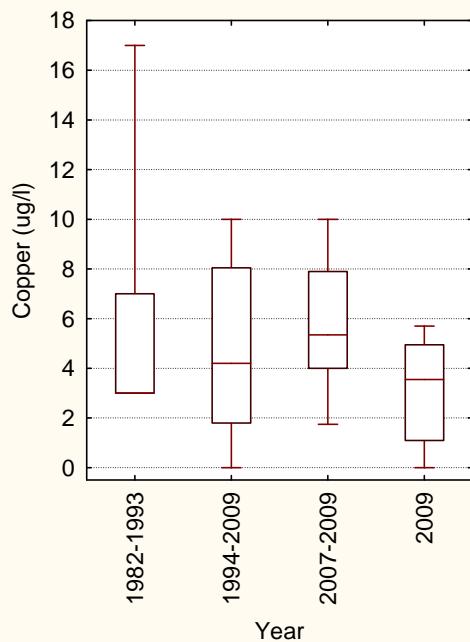
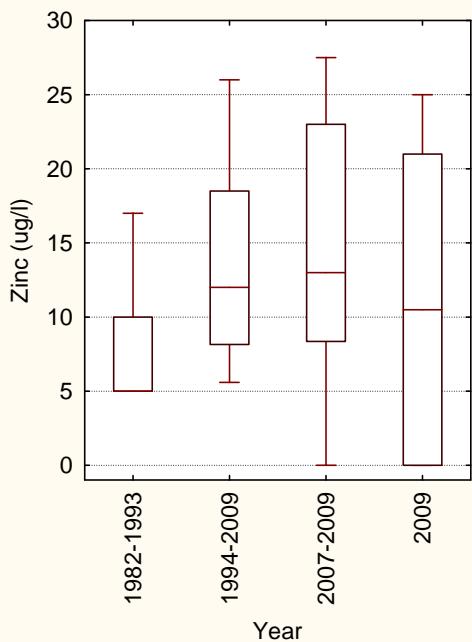
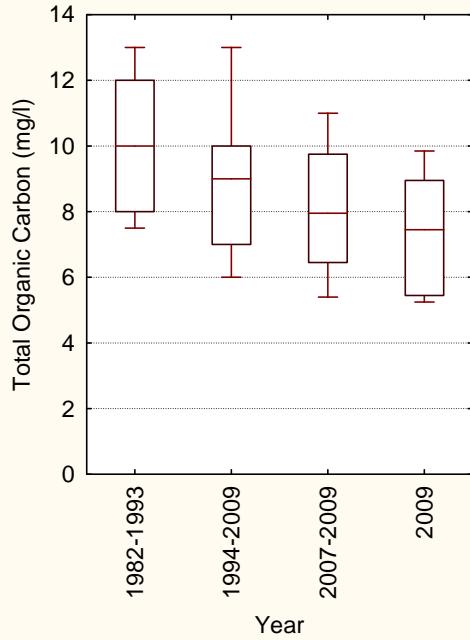
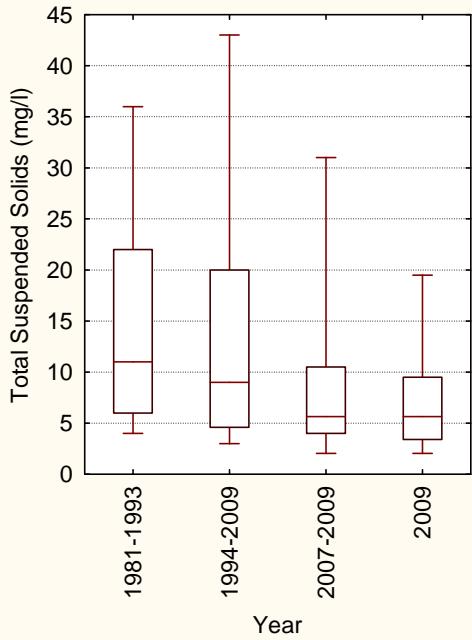
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.9	11.4	9.52	1.23	0.013	1.28	0.034	0.87	0.078	0.050	ND
Standard Error	0.1	1.7	0.5	1.35	0.07	0.001	0.08	0.020	0.07	0.009	0.006	ND
Median	8.4	13.5	11.3	7.93	1.30	0.011	1.35	0.000	0.74	0.071	0.050	ND
Mode	8.4	ND	12.9	ND	1.50	0.017	1.10	0.000	0.76	0.040	0.073	ND
Standard Deviation	0.3	7.6	2.3	6.04	0.31	0.005	0.34	0.088	0.33	0.042	0.026	ND
Sample Variance	0.1	57.3	5.1	36.48	0.10	0.000	0.11	0.008	0.11	0.002	0.001	ND
Kurtosis	1.5	-1.4	0.4	0.51	-0.99	4.711	-0.27	8.000	1.86	2.073	2.003	ND
Skewness	-1.1	-0.1	-0.7	1.10	-0.35	1.813	0.02	2.949	1.33	1.274	0.740	ND
Range	1.0	23.2	8.9	22.07	1.05	0.023	1.34	0.330	1.32	0.168	0.120	0.00
Minimum	7.6	-0.3	5.9	2.13	0.65	0.006	0.66	0.000	0.48	0.022	0.000	0.00
Maximum	8.6	22.9	14.8	24.20	1.70	0.029	2.00	0.330	1.80	0.190	0.120	0.00
Count	20	20	20	20	18	18	20	20	20	20	20	0
Confidence Level(95.0%)	0.1	3.5	1.1	2.83	0.15	0.003	0.16	0.041	0.15	0.019	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	454.0	446.1	2.4	7.9	4.7	765	74.9	271	2.2	350
Standard Error	ND	ND	17.2	18.0	0.5	1.6	1.0	22	5.2	79	0.1	102
Median	ND	ND	455.0	452.2	2.0	5.7	2.9	797	76.5	135	2.1	105
Mode	ND	ND	390.0	ND	0.0	11.0	ND	ND	120.0	70	1.8	410
Standard Deviation	ND	ND	76.9	80.7	2.3	7.0	4.6	97	23.0	352	0.4	458
Sample Variance	ND	ND	5920.0	6514.4	5.5	48.5	21.4	9474	530.8	123980	0.2	209703
Kurtosis	ND	ND	2.6	2.4	-0.4	2.9	5.1	1	-0.2	11	0.0	3
Skewness	ND	ND	1.2	1.0	0.8	1.8	2.2	-1	0.3	3	0.8	2
Range	0.0	0.0	330.0	356.8	7.2	26.8	18.4	382	82.0	1546	1.5	1572
Minimum	0.0	0.0	350.0	322.0	0.0	1.2	1.2	526	38.0	54	1.7	28
Maximum	0.0	0.0	680.0	678.8	7.2	28.0	19.6	908	120.0	1600	3.2	1600
Count	0	0	20	20	20	20	20	20	20	20	20	20
Confidence Level(95.0%)	ND	ND	36.0	37.8	1.1	3.3	2.2	46	10.8	165	0.2	214

ND = No Data

Provisional MMSD Water Quality Data

PIONEER ROAD - SITE 1
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	64.00	36.50	0.0	5.2	3.3	2.9	0.2	12.5	0.1	0.0	1.4	0.0
Standard Error	1.85	1.15	0.0	0.5	0.5	0.7	0.2	3.2	0.1	0.0	0.8	0.0
Median	64.50	37.00	0.0	4.7	3.6	2.4	0.0	10.5	0.0	0.0	0.0	0.0
Mode	54.00	37.00	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	8.28	5.15	0.0	2.0	2.4	2.9	1.0	14.2	0.3	0.0	3.1	0.0
Sample Variance	68.53	26.47	0.0	4.1	5.8	8.7	1.0	201.0	0.1	0.0	9.6	0.0
Kurtosis	-1.27	0.46	ND	3.7	-0.2	11.2	20.0	4.6	20.0	ND	2.4	ND
Skewness	-0.05	-1.00	ND	2.0	0.1	3.0	4.5	1.8	4.5	ND	2.0	ND
Range	27.00	18.00	0.0	7.5	8.7	14.0	4.4	58.0	1.2	0.0	8.9	0.0
Minimum	50.00	24.00	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	77.00	42.00	0.0	11.0	8.7	14.0	4.4	58.0	1.2	0.0	8.9	0.0
Count	20	20	20	20	20	20	20	20	20	20	16	4
Confidence Level(95.0%)	3.87	2.41	0.0	0.9	1.1	1.4	0.5	6.6	0.1	0.0	1.7	0.0

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	259	1.4	6.2	66.3	58.7	7.4	7.5
Standard Error	8	7	0.6	1.1	1.4	1.3	0.4	0.5
Median	315	270	0.0	5.2	66.5	60.0	7.5	7.3
Mode	330	270	0.0	0.0	69.0	61.0	8.1	8.7
Standard Deviation	37	30	2.8	4.6	6.2	6.0	2.0	2.3
Sample Variance	1352	915	8.0	21.6	38.1	36.3	4.0	5.1
Kurtosis	0	0	10.8	-0.6	0.5	2.7	-0.5	0.7
Skewness	-1	-1	3.0	0.2	-0.5	-1.3	0.5	0.9
Range	140	110	12.0	15.0	26.0	26.0	7.1	8.3
Minimum	220	190	0.0	0.0	51.0	41.0	4.9	4.7
Maximum	360	300	12.0	15.0	77.0	67.0	12.0	13.0
Count	20	20	20	18	20	20	20	20
Confidence Level(95.0%)	17	14	1.3	2.3	2.9	2.8	0.9	1.1

ND = No Data

Provisional MMSD Water Quality Data

BROWN DEER ROAD - SITE 2
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

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	11.9	10.1	10.58	1.15	0.014	1.21	0.042	0.86	0.100	0.050	ND
Standard Error	0.1	1.8	0.6	1.52	0.11	0.002	0.11	0.019	0.09	0.013	0.008	ND
Median	8.3	11.9	9.3	9.75	1.15	0.013	1.15	0.018	0.86	0.094	0.051	ND
Mode	8.4	ND	13.1	5.70	0.86	0.012	1.10	0.000	1.40	0.056	0.080	ND
Standard Deviation	0.3	7.7	2.5	6.47	0.45	0.007	0.48	0.082	0.38	0.054	0.034	ND
Sample Variance	0.1	59.6	6.4	41.82	0.20	0.000	0.23	0.007	0.15	0.003	0.001	ND
Kurtosis	2.6	-1.3	-1.5	0.10	3.39	6.875	2.20	14.992	-0.88	-0.118	2.064	ND
Skewness	-1.0	-0.1	0.1	0.89	1.26	2.080	1.15	3.767	0.38	0.577	0.877	ND
Range	1.4	22.4	7.9	22.45	1.95	0.032	2.04	0.360	1.29	0.189	0.140	0.00
Minimum	7.4	-0.2	6.1	2.75	0.45	0.004	0.46	0.000	0.31	0.021	0.000	0.00
Maximum	8.8	22.2	14.0	25.20	2.40	0.036	2.50	0.360	1.60	0.210	0.140	0.00
Count	18	18	18	18	16	16	18	18	18	17	17	0
Confidence Level(95.0%)	0.2	3.8	1.3	3.22	0.24	0.004	0.24	0.041	0.19	0.028	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	455.0	441.6	3.3	13.4	10.3	791	85.7	512	2.3	538
Standard Error	ND	ND	17.2	18.4	0.7	2.8	2.5	31	8.6	187	0.1	160
Median	ND	ND	460.0	457.5	3.1	9.4	6.6	806	86.5	205	2.3	230
Mode	ND	ND	440.0	ND	0.0	37.0	ND	ND	100.0	210	2.3	2000
Standard Deviation	ND	ND	73.1	78.2	3.1	12.0	10.5	132	36.7	794	0.6	678
Sample Variance	ND	ND	5344.1	6116.8	9.6	143.8	110.4	17365	1346.6	631153	0.4	459888
Kurtosis	ND	ND	0.4	0.2	-0.2	-0.1	1.7	0	4.9	5	-0.2	1
Skewness	ND	ND	-0.4	-0.3	0.8	1.1	1.6	0	1.8	2	0.2	1
Range	0.0	0.0	300.0	307.0	10.0	35.6	36.4	519	158.0	2684	2.2	1992
Minimum	0.0	0.0	300.0	291.6	0.0	1.4	1.7	511	42.0	16	1.2	8
Maximum	0.0	0.0	600.0	598.6	10.0	37.0	38.1	1030	200.0	2700	3.4	2000
Count	0	0	18	18	18	18	18	18	18	18	18	18
Confidence Level(95.0%)	ND	ND	36.4	38.9	1.5	6.0	5.2	66	18.2	395	0.3	337

ND = No Data

Provisional MMSD Water Quality Data

BROWN DEER ROAD - SITE 2
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

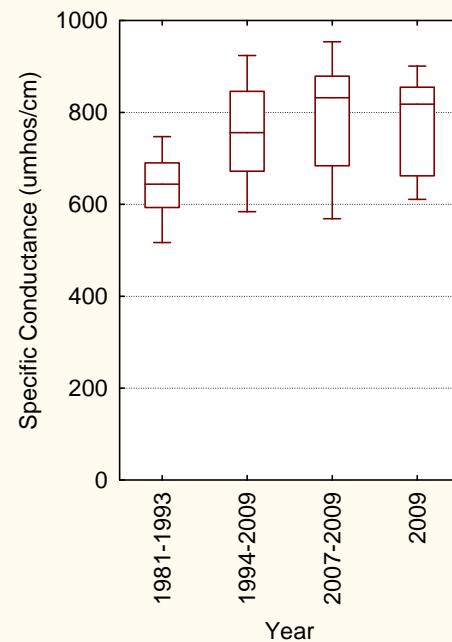
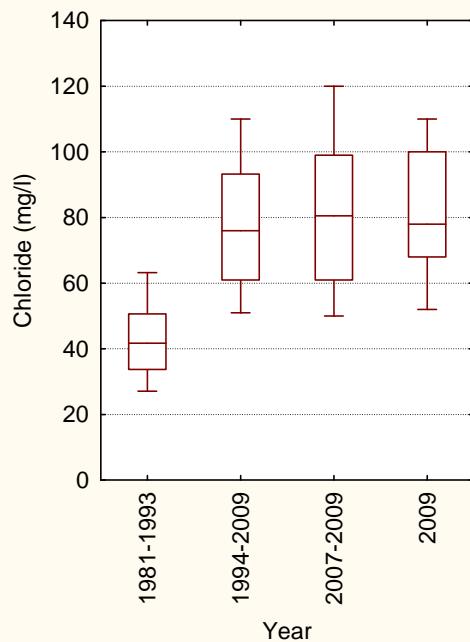
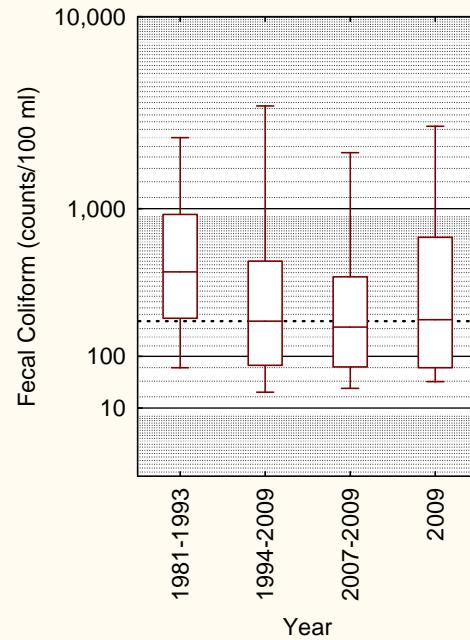
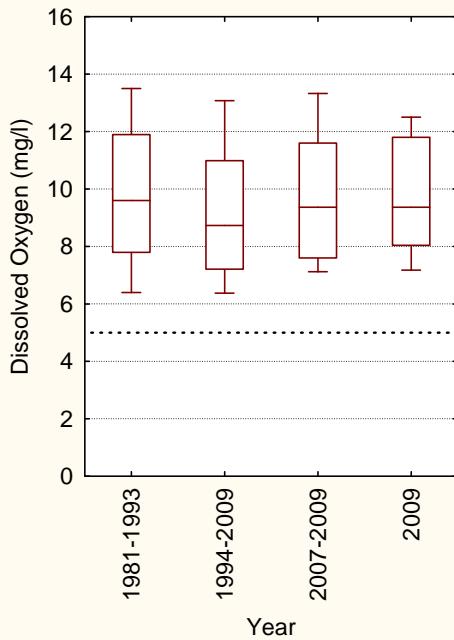
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	65.00	35.78	0.0	4.9	3.3	2.8	0.3	14.1	0.1	0.2	1.8	0.0
Standard Error	2.02	1.49	0.0	0.3	0.6	0.4	0.2	3.5	0.1	0.2	0.8	0.0
Median	64.50	36.00	0.0	4.7	3.2	2.5	0.0	12.0	0.0	0.0	0.0	0.0
Mode	70.00	40.00	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	8.59	6.30	0.0	1.1	2.4	1.6	0.8	14.3	0.3	0.9	3.3	0.0
Sample Variance	73.76	39.71	0.0	1.2	5.7	2.7	0.7	204.3	0.1	0.8	11.2	0.0
Kurtosis	1.33	-0.39	ND	-0.9	-1.3	0.3	9.9	3.7	18.0	18.0	0.3	ND
Skewness	0.72	-0.38	ND	0.6	-0.3	0.4	3.2	1.6	4.2	4.2	1.4	ND
Range	37.00	24.00	0.0	3.6	7.0	6.2	3.2	56.0	1.2	3.7	9.2	0.0
Minimum	50.00	23.00	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	87.00	47.00	0.0	7.2	7.0	6.2	3.2	56.0	1.2	3.7	9.2	0.0
Count	18	18	18	18	18	18	18	17	18	18	16	3
Confidence Level(95.0%)	4.27	3.13	0.0	0.5	1.2	0.8	0.4	7.3	0.1	0.4	1.8	0.0

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	309	256	1.7	7.6	65.8	58.4	7.5	7.4
Standard Error	10	9	0.7	1.2	1.8	1.9	0.4	0.4
Median	320	265	0.0	6.9	65.0	59.0	7.4	7.4
Mode	320	290	0.0	14.0	65.0	59.0	8.6	9.0
Standard Deviation	44	37	3.0	4.8	7.5	8.1	1.7	1.6
Sample Variance	1947	1379	8.9	23.0	56.8	65.4	2.8	2.7
Kurtosis	1	-1	8.5	-0.9	0.2	0.3	-0.7	-0.2
Skewness	0	-1	2.7	0.2	-0.3	-0.5	0.4	0.3
Range	190	130	12.0	15.0	30.0	33.0	5.8	6.0
Minimum	220	180	0.0	0.0	49.0	40.0	5.2	5.0
Maximum	410	310	12.0	15.0	79.0	73.0	11.0	11.0
Count	18	18	18	16	18	18	18	18
Confidence Level(95.0%)	22	18	1.5	2.6	3.7	4.0	0.8	0.8

ND = No Data

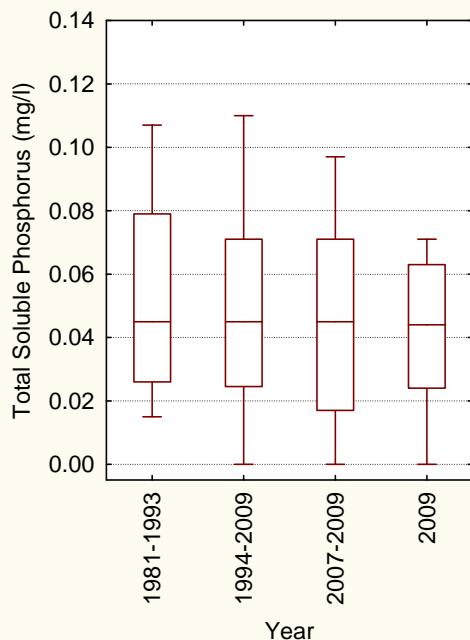
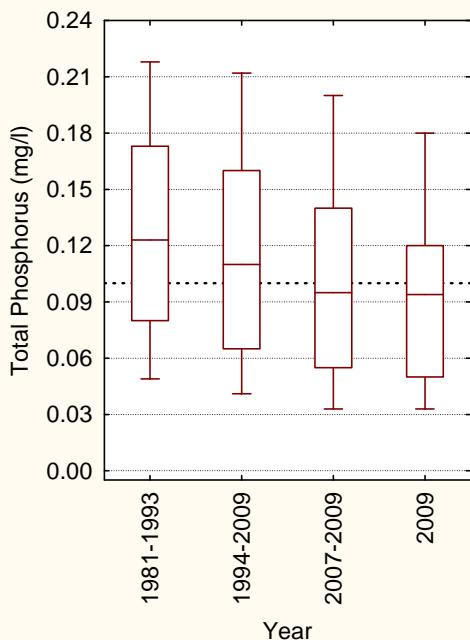
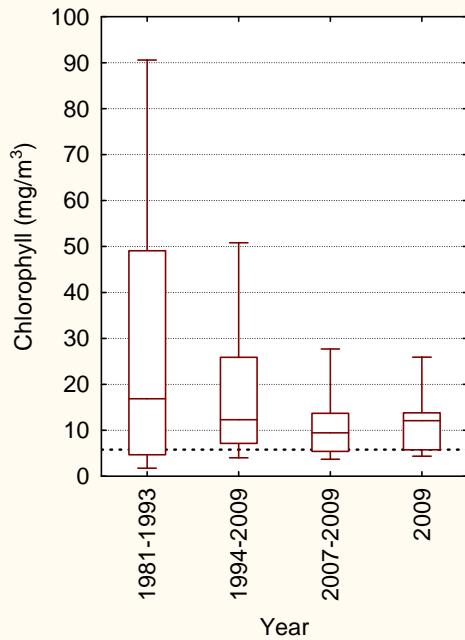
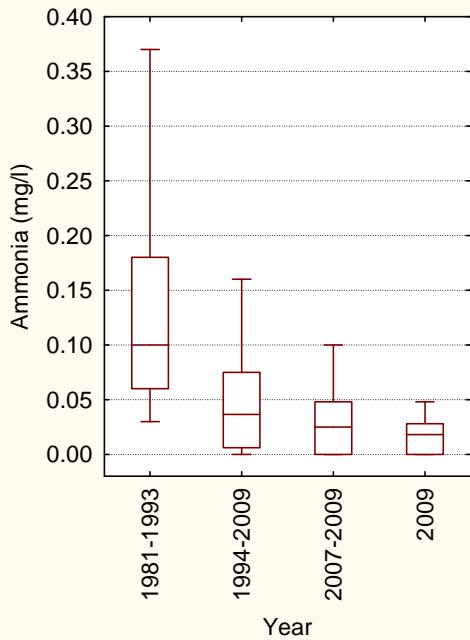
Provisional MMSD Water Quality Data

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



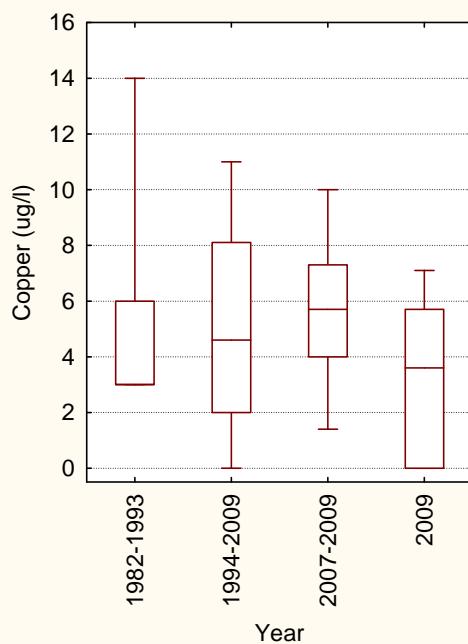
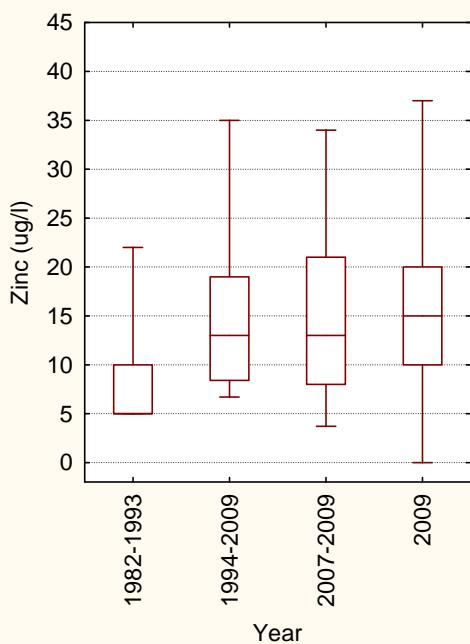
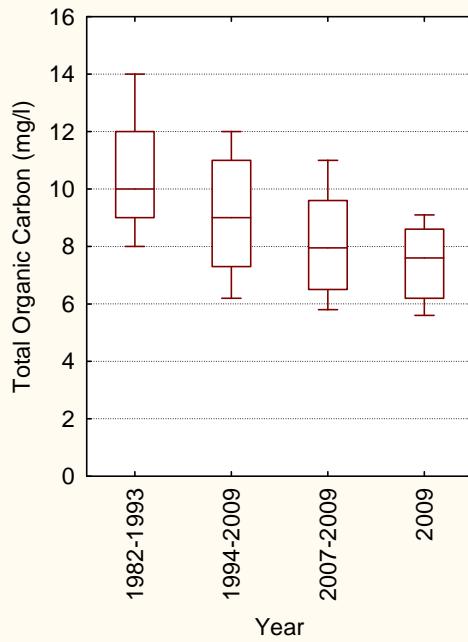
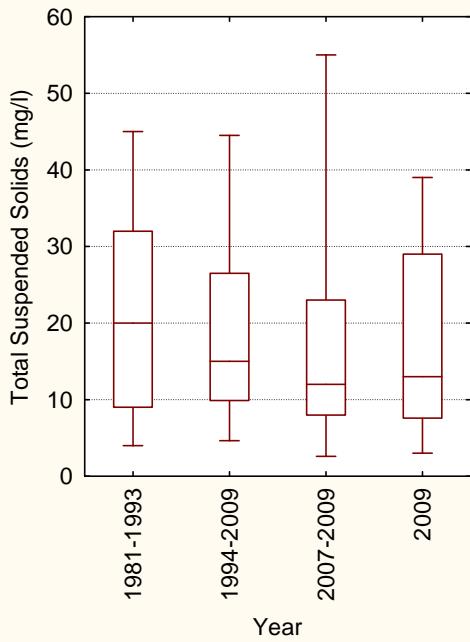
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.3	10.0	13.31	1.01	0.013	1.09	0.036	0.87	0.096	0.046	ND
Standard Error	0.1	1.7	0.5	2.23	0.12	0.002	0.12	0.017	0.10	0.012	0.007	ND
Median	8.3	13.4	9.4	12.10	1.00	0.012	1.10	0.018	0.69	0.094	0.044	ND
Mode	8.3	21.2	12.4	13.80	1.30	0.017	1.10	0.000	1.20	0.041	0.071	ND
Standard Deviation	0.2	7.9	2.3	10.22	0.50	0.007	0.55	0.079	0.47	0.057	0.032	ND
Sample Variance	0.1	62.5	5.4	104.46	0.25	0.000	0.30	0.006	0.22	0.003	0.001	ND
Kurtosis	5.2	-1.4	-1.1	3.98	2.54	4.126	1.44	17.465	0.76	-0.116	2.308	ND
Skewness	-1.9	-0.1	0.3	1.84	0.75	1.360	0.75	4.062	0.79	0.738	0.923	ND
Range	1.1	23.8	7.4	42.21	2.36	0.035	2.35	0.370	2.00	0.198	0.140	0.00
Minimum	7.4	-0.3	7.1	3.39	0.04	0.000	0.05	0.000	0.00	0.022	0.000	0.00
Maximum	8.5	23.5	14.4	45.60	2.40	0.035	2.40	0.370	2.00	0.220	0.140	0.00
Count	21	21	21	21	19	19	21	21	21	21	21	0
Confidence Level(95.0%)	0.1	3.6	1.1	4.65	0.24	0.003	0.25	0.036	0.21	0.026	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	443.3	423.5	5.0	19.9	13.9	782	84.9	752	2.4	680
Standard Error	ND	ND	21.8	23.1	1.1	4.5	3.2	28	5.6	265	0.1	222
Median	ND	ND	480.0	467.0	4.4	13.0	9.7	818	78.0	205	2.3	170
Mode	ND	ND	500.0	ND	4.8	16.0	ND	ND	100.0	160	2.2	260
Standard Deviation	ND	ND	100.1	105.9	4.9	20.7	14.7	127	25.8	1186	0.6	1017
Sample Variance	ND	ND	10023.3	11224.0	23.9	428.5	215.3	16128	664.3	1407100	0.4	1034244
Kurtosis	ND	ND	1.6	0.4	6.8	5.2	3.7	0	0.7	4	-0.6	2
Skewness	ND	ND	-1.0	-0.7	2.2	2.1	2.0	0	0.8	2	0.4	2
Range	0.0	0.0	440.0	446.3	22.0	86.8	54.2	487	102.0	4376	2.3	3286
Minimum	0.0	0.0	170.0	159.0	0.0	1.2	1.6	543	48.0	24	1.4	14
Maximum	0.0	0.0	610.0	605.3	22.0	88.0	55.8	1030	150.0	4400	3.6	3300
Count	0	0	21	21	21	21	21	21	21	20	20	21
Confidence Level(95.0%)	ND	ND	45.6	48.2	2.2	9.4	6.7	58	11.7	555	0.3	463

ND = No Data

Provisional MMSD Water Quality Data

SILVER SPRING DRIVE - SITE 3
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

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	63.81	35.67	0.0	5.1	3.4	2.7	0.1	17.0	0.1	0.3	1.2	0.0
Standard Error	2.36	1.38	0.0	0.3	0.6	0.2	0.1	3.0	0.1	0.2	0.6	0.0
Median	66.00	36.00	0.0	4.6	3.6	2.5	0.0	15.0	0.0	0.0	0.0	0.0
Mode	71.00	35.00	0.0	5.2	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	10.83	6.33	0.1	1.4	2.8	0.9	0.5	13.6	0.2	1.1	2.5	0.0
Sample Variance	117.36	40.03	0.0	2.0	7.6	0.8	0.3	185.7	0.1	1.3	6.3	0.0
Kurtosis	-0.02	-0.33	21.0	0.9	-1.3	-0.1	21.0	0.3	21.0	11.9	2.3	ND
Skewness	-0.29	-0.64	4.6	1.3	0.1	0.8	4.6	0.8	4.6	3.5	1.9	ND
Range	45.00	22.00	0.5	5.1	7.8	3.0	2.3	47.0	1.1	4.7	7.6	0.0
Minimum	41.00	24.00	0.0	3.6	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	86.00	46.00	0.5	8.7	7.8	4.7	2.3	47.0	1.1	4.7	7.6	0.0
Count	21	21	21	21	21	21	21	21	21	21	15	4
Confidence Level(95.0%)	4.93	2.88	0.0	0.6	1.3	0.4	0.2	6.2	0.1	0.5	1.4	0.0

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	249	1.6	7.9	64.4	57.0	7.5	7.2
Standard Error	11	9	0.5	1.0	1.9	1.9	0.3	0.4
Median	310	260	0.0	8.3	65.0	59.0	7.6	7.2
Mode	310	240	0.0	10.0	65.0	51.0	8.1	8.0
Standard Deviation	49	43	2.1	4.2	8.7	8.8	1.6	1.6
Sample Variance	2363	1853	4.3	17.7	75.4	78.2	2.5	2.6
Kurtosis	0	-1	0.5	-0.1	-0.4	-0.7	-0.4	-0.1
Skewness	0	-1	1.1	0.4	-0.5	-0.5	0.3	0.5
Range	200	150	7.0	16.0	31.0	31.0	5.9	6.1
Minimum	200	160	0.0	0.0	47.0	40.0	5.1	4.9
Maximum	400	310	7.0	16.0	78.0	71.0	11.0	11.0
Count	21	21	21	19	21	21	21	21
Confidence Level(95.0%)	22	20	0.9	2.0	4.0	4.0	0.7	0.7

ND = No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD - SITE 4
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

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	12.3	9.9	11.78	0.94	0.015	1.04	0.038	0.82	0.094	0.046	ND
Standard Error	0.0	1.7	0.5	1.58	0.11	0.002	0.13	0.018	0.07	0.011	0.007	ND
Median	8.3	13.4	9.2	9.67	1.00	0.011	1.00	0.015	0.76	0.100	0.047	ND
Mode	8.3	ND	ND	ND	1.30	0.016	1.10	0.000	1.10	0.110	0.000	ND
Standard Deviation	0.2	7.8	2.4	7.24	0.48	0.009	0.58	0.081	0.30	0.052	0.033	ND
Sample Variance	0.0	61.1	5.7	52.40	0.23	0.000	0.33	0.007	0.09	0.003	0.001	ND
Kurtosis	5.1	-1.4	-1.2	1.28	1.55	0.645	1.68	15.711	0.69	-0.140	2.104	ND
Skewness	-1.8	-0.1	0.4	1.21	0.56	1.115	0.98	3.797	0.94	0.518	0.873	ND
Range	1.0	23.7	7.5	25.75	2.18	0.029	2.47	0.370	1.20	0.180	0.140	0.00
Minimum	7.5	-0.3	7.0	4.15	0.02	0.005	0.03	0.000	0.40	0.020	0.000	0.00
Maximum	8.5	23.4	14.5	29.90	2.20	0.034	2.50	0.370	1.60	0.200	0.140	0.00
Count	21	21	21	21	19	19	21	21	21	21	21	0
Confidence Level(95.0%)	0.1	3.6	1.1	3.29	0.23	0.004	0.26	0.037	0.14	0.024	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	446.2	427.5	4.6	18.6	13.6	772	88.0	1131	2.5	4470
Standard Error	ND	ND	20.1	21.8	0.8	3.4	2.6	36	7.3	561	0.1	3622
Median	ND	ND	460.0	456.0	5.0	16.0	11.1	824	77.0	225	2.4	180
Mode	ND	ND	460.0	382.0	0.0	14.0	ND	ND	100.0	200	2.3	180
Standard Deviation	ND	ND	92.2	100.1	3.8	15.4	11.9	165	33.4	2509	0.7	16198
Sample Variance	ND	ND	8504.8	10021.3	14.8	238.3	142.2	27162	1118.0	6293617	0.4	262383159
Kurtosis	ND	ND	0.8	0.3	1.3	2.8	2.9	0	1.0	9	0.9	20
Skewness	ND	ND	-0.6	-0.6	1.0	1.5	1.6	0	1.1	3	0.6	4
Range	0.0	0.0	400.0	412.4	15.0	63.4	46.9	623	119.0	9986	2.9	72979
Minimum	0.0	0.0	230.0	213.0	0.0	1.6	2.1	467	51.0	14	1.1	21
Maximum	0.0	0.0	630.0	625.4	15.0	65.0	49.0	1090	170.0	10000	4.0	73000
Count	0	0	21	21	21	21	21	21	21	20	20	20
Confidence Level(95.0%)	ND	ND	42.0	45.6	1.7	7.0	5.4	75	15.2	1174	0.3	7581

ND = No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD - SITE 4
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

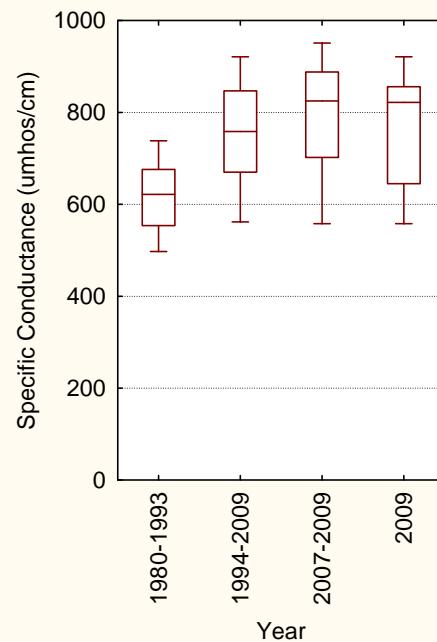
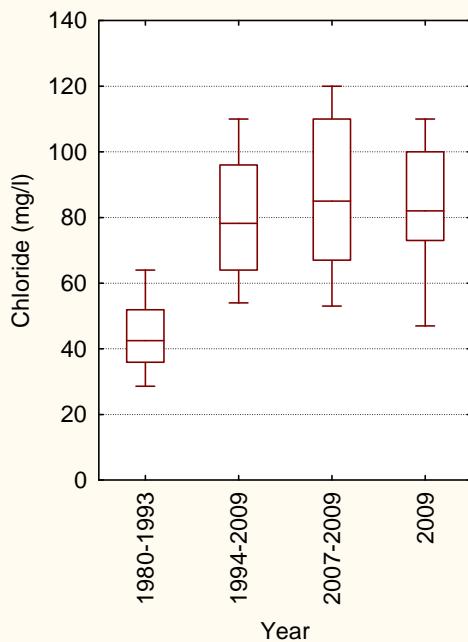
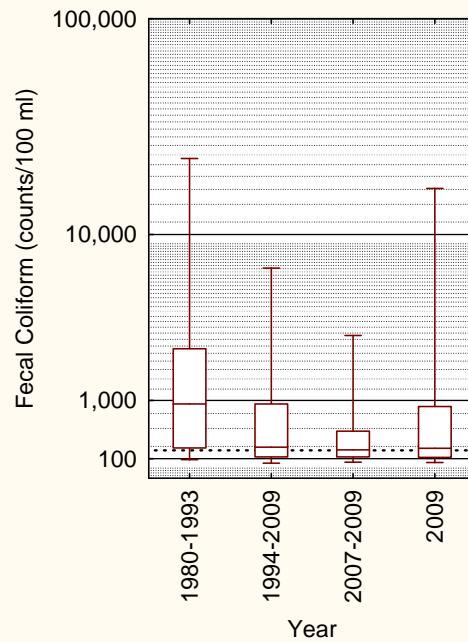
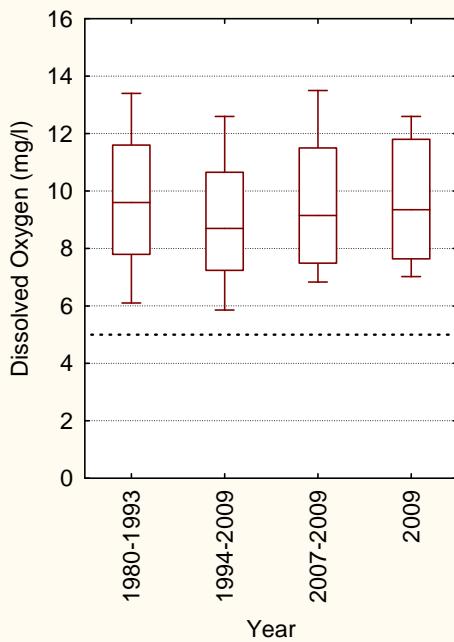
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	62.05	34.24	0.0	5.0	3.5	3.0	0.5	16.3	0.1	0.4	1.7	0.0
Standard Error	2.93	1.80	0.0	0.3	0.6	0.3	0.4	3.0	0.1	0.2	0.9	0.0
Median	66.00	36.00	0.0	4.6	3.7	2.7	0.0	15.0	0.0	0.0	0.0	0.0
Mode	66.00	40.00	0.0	6.1	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	13.43	8.26	0.0	1.2	2.7	1.3	1.7	13.6	0.3	0.9	3.5	0.0
Sample Variance	180.25	68.19	0.0	1.4	7.3	1.7	3.1	183.6	0.1	0.8	12.4	0.0
Kurtosis	0.41	-0.12	ND	-0.9	-1.0	1.7	14.2	3.3	21.0	4.3	1.0	ND
Skewness	-0.75	-0.90	ND	0.7	0.0	1.6	3.7	1.2	4.6	2.4	1.7	ND
Range	55.00	29.00	0.0	3.5	8.6	4.7	7.5	58.0	1.2	3.0	8.9	0.0
Minimum	29.00	16.00	0.0	3.7	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	84.00	45.00	0.0	7.2	8.6	6.5	7.5	58.0	1.2	3.0	8.9	0.0
Count	21	21	21	21	21	21	21	21	21	21	15	4
Confidence Level(95.0%)	6.11	3.76	0.0	0.5	1.2	0.6	0.8	6.2	0.1	0.4	2.0	0.0

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	296	238	1.3	8.6	62.2	55.0	7.1	6.9
Standard Error	14	12	0.4	0.9	2.5	2.5	0.4	0.4
Median	310	250	0.0	8.5	64.0	58.0	6.9	7.0
Mode	340	280	0.0	4.7	72.0	58.0	5.0	7.0
Standard Deviation	64	53	1.7	4.1	11.3	11.2	1.6	1.6
Sample Variance	4035	2846	2.8	17.0	127.4	126.5	2.7	2.6
Kurtosis	1	0	-1.4	-1.3	0.6	0.1	-1.3	-1.0
Skewness	-1	-1	0.6	0.5	-1.0	-1.0	0.1	0.1
Range	250	190	4.3	10.9	42.0	40.0	5.1	5.6
Minimum	140	110	0.0	4.1	34.0	29.0	4.9	4.4
Maximum	390	300	4.3	15.0	76.0	69.0	10.0	10.0
Count	21	21	21	19	21	21	21	21
Confidence Level(95.0%)	29	24	0.8	2.0	5.1	5.1	0.7	0.7

ND = No Data

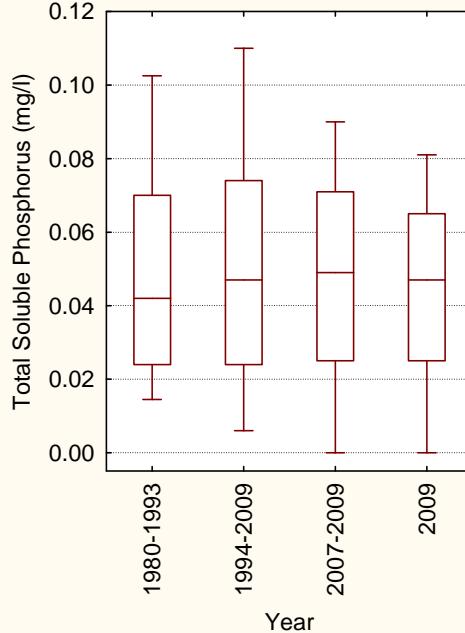
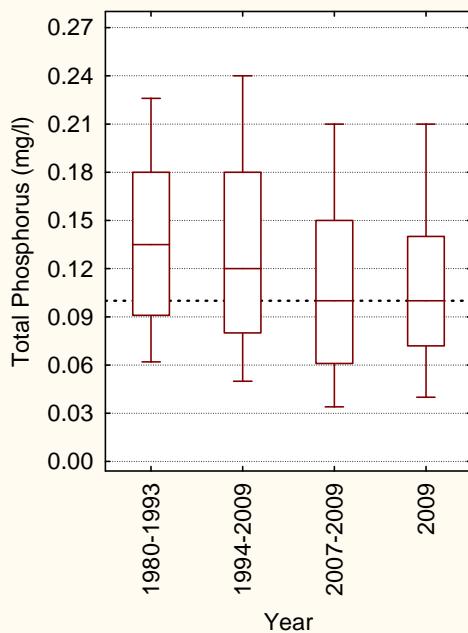
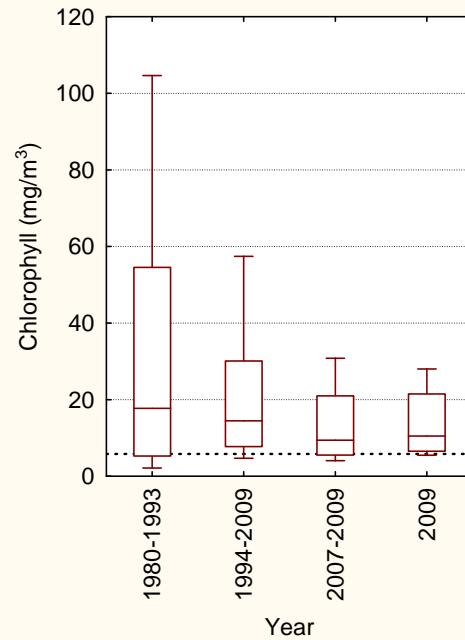
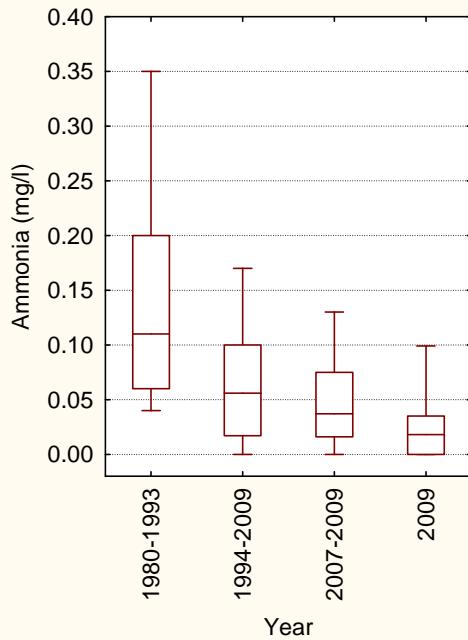
Provisional MMSD Water Quality Data

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



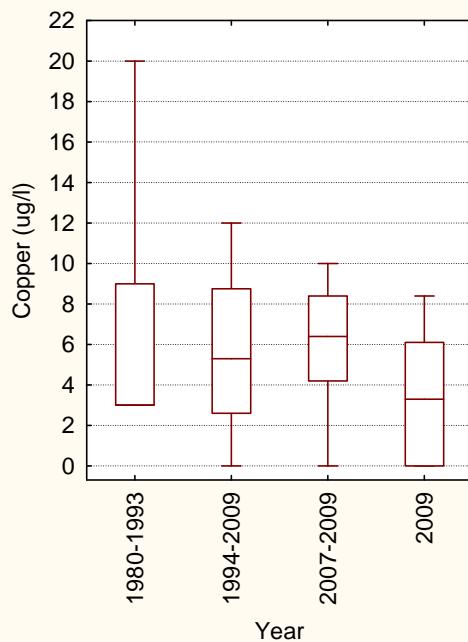
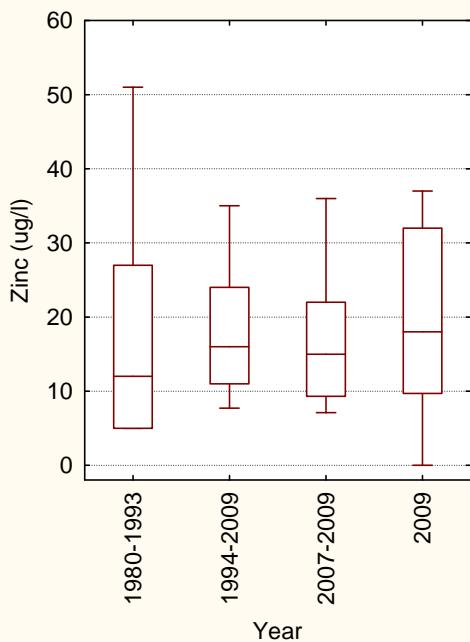
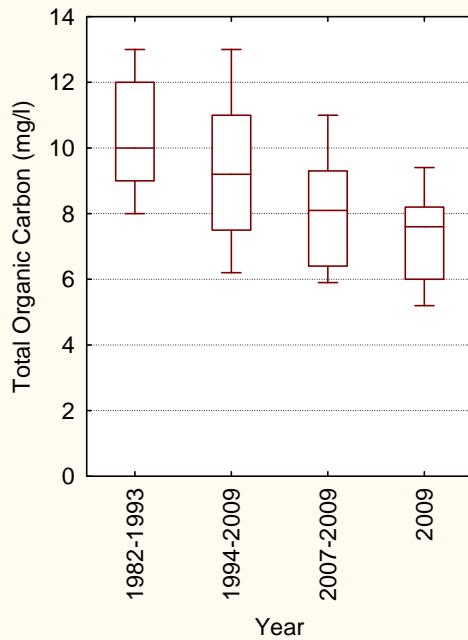
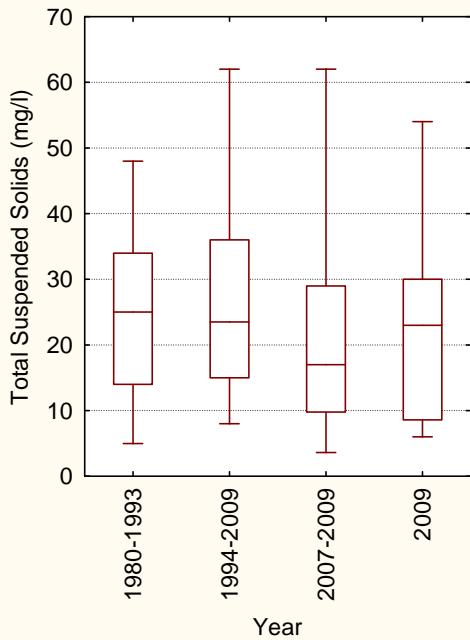
— Median □ 25%-75% █ 10%-90%
 --- WQ Standard/Criterion

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 - 2009

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	12.3	9.8	18.19	0.89	0.016	0.98	0.059	0.91	0.119	0.048	ND
Standard Error	0.1	1.7	0.5	5.26	0.11	0.002	0.12	0.025	0.11	0.020	0.007	ND
Median	8.2	12.7	9.4	10.50	0.91	0.013	0.94	0.018	0.80	0.100	0.047	ND
Mode	8.2	19.9	12.1	ND	1.10	0.016	1.10	0.000	1.00	0.210	0.000	ND
Standard Deviation	0.3	7.7	2.4	24.10	0.47	0.010	0.53	0.115	0.50	0.089	0.031	ND
Sample Variance	0.1	59.6	5.7	580.64	0.22	0.000	0.28	0.013	0.25	0.008	0.001	ND
Kurtosis	3.4	-1.3	-1.0	11.64	2.41	0.601	1.35	6.345	6.03	6.726	0.039	ND
Skewness	-1.3	-0.1	0.4	3.22	0.78	1.136	0.82	2.683	2.16	2.197	0.286	ND
Range	1.3	23.1	7.8	108.59	2.20	0.034	2.18	0.400	2.26	0.404	0.120	0.00
Minimum	7.4	-0.3	6.8	2.41	0.00	0.005	0.03	0.000	0.34	0.026	0.000	0.00
Maximum	8.7	22.8	14.6	111.00	2.20	0.039	2.20	0.400	2.60	0.430	0.120	0.00
Count	21	21	21	21	19	19	21	21	21	21	21	0
Confidence Level(95.0%)	0.1	3.5	1.1	10.97	0.23	0.005	0.24	0.052	0.23	0.041	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	440.0	406.6	8.8	33.4	20.4	759	88.2	3550	2.6	ND
Standard Error	ND	ND	18.3	22.4	3.2	10.1	4.7	39	7.4	2075	0.2	ND
Median	ND	ND	460.0	441.4	6.0	23.0	17.1	822	82.0	225	2.3	ND
Mode	ND	ND	490.0	484.0	6.0	26.0	ND	ND	100.0	140	2.1	ND
Standard Deviation	ND	ND	83.7	102.6	14.7	46.3	21.4	180	34.0	9280	0.8	ND
Sample Variance	ND	ND	7010.0	10522.6	217.2	2140.3	459.4	32369	1159.1	86126397	0.7	ND
Kurtosis	ND	ND	2.0	-0.1	18.0	14.5	5.7	0	1.7	7	1.0	ND
Skewness	ND	ND	-1.2	-0.9	4.1	3.6	2.2	-1	0.9	3	1.2	ND
Range	0.0	0.0	370.0	361.0	71.0	218.1	90.1	718	142.0	31981	3.2	0
Minimum	0.0	0.0	210.0	190.0	0.0	1.9	2.2	342	38.0	19	1.3	0
Maximum	0.0	0.0	580.0	551.0	71.0	220.0	92.3	1060	180.0	32000	4.5	0
Count	0	0	21	21	21	21	21	21	21	20	20	0
Confidence Level(95.0%)	ND	ND	38.1	46.7	6.7	21.1	9.8	82	15.5	4343	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

NORTH AVENUE - SITE 5
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	61.67	33.43	0.0	5.7	4.2	3.1	2.1	23.5	0.1	0.4	0.7	0.0
Standard Error	2.64	1.79	0.0	0.5	1.0	0.3	1.4	5.7	0.1	0.2	0.5	0.0
Median	65.00	36.00	0.0	5.4	3.3	2.6	0.0	18.0	0.0	0.0	0.0	0.0
Mode	54.00	39.00	0.0	6.1	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	12.11	8.21	0.0	2.2	4.7	1.4	6.2	26.1	0.2	0.9	2.0	0.0
Sample Variance	146.53	67.36	0.0	5.0	21.8	2.1	38.8	679.3	0.1	0.8	4.2	0.0
Kurtosis	-0.67	-0.53	ND	9.7	5.8	1.4	16.8	9.5	21.0	3.4	6.1	ND
Skewness	-0.19	-0.72	ND	2.7	2.0	1.5	4.0	2.7	4.6	2.2	2.7	ND
Range	44.00	29.00	0.0	10.4	20.0	5.3	28.0	120.0	1.1	2.7	6.6	0.0
Minimum	41.00	16.00	0.0	3.6	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	85.00	45.00	0.0	14.0	20.0	6.9	28.0	120.0	1.1	2.7	6.6	0.0
Count	21	21	21	21	21	21	21	21	21	21	18	4
Confidence Level(95.0%)	5.51	3.74	0.0	1.0	2.1	0.7	2.8	11.9	0.1	0.4	1.0	0.0

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	292	230	2.2	9.6	60.2	53.1	7.2	7.1
Standard Error	13	13	0.7	1.9	2.7	2.7	0.3	0.3
Median	310	250	2.0	9.3	64.0	58.0	7.6	7.0
Mode	320	280	0.0	0.0	68.0	64.0	9.8	7.0
Standard Deviation	60	61	3.2	8.2	12.2	12.5	1.6	1.4
Sample Variance	3636	3708	10.3	67.2	149.3	155.5	2.6	2.1
Kurtosis	0	1	9.1	3.2	1.2	1.3	-1.2	-1.0
Skewness	0	-1	2.6	1.3	-1.2	-1.2	0.1	0.1
Range	230	233	14.0	34.0	48.0	49.0	4.8	4.7
Minimum	170	67	0.0	0.0	27.0	19.0	5.0	4.9
Maximum	400	300	14.0	34.0	75.0	68.0	9.8	9.6
Count	21	21	21	19	21	21	21	21
Confidence Level(95.0%)	27	28	1.5	4.0	5.6	5.7	0.7	0.7

ND = No Data

Provisional MMSD Water Quality Data

WALNUT STREET - SITE 6
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

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	14.4	9.5	15.71	0.81	0.015	0.84	0.036	0.84	0.100	0.044	ND
Standard Error	0.0	1.1	0.3	3.12	0.06	0.001	0.06	0.006	0.05	0.008	0.004	ND
Median	8.4	14.4	8.8	10.40	0.82	0.012	0.85	0.022	0.78	0.099	0.041	ND
Mode	8.4	9.9	11.0	ND	1.10	0.019	1.10	0.000	1.20	0.120	0.024	ND
Standard Deviation	0.2	7.1	1.9	13.61	0.34	0.008	0.34	0.040	0.32	0.051	0.024	ND
Sample Variance	0.0	49.9	3.7	185.22	0.12	0.000	0.12	0.002	0.10	0.003	0.001	ND
Kurtosis	0.4	-1.5	-0.9	1.17	0.14	0.099	0.35	1.705	0.81	-0.280	-0.561	ND
Skewness	-0.5	0.0	0.2	1.33	-0.66	0.795	-0.72	1.393	0.82	0.567	0.022	ND
Range	0.9	21.3	6.9	48.05	1.40	0.036	1.40	0.150	1.42	0.192	0.092	0.00
Minimum	7.8	3.1	6.1	2.85	0.00	0.000	0.00	0.000	0.28	0.028	0.000	0.00
Maximum	8.7	24.4	13.0	50.90	1.40	0.036	1.40	0.150	1.70	0.220	0.092	0.00
Count	38	38	38	19	36	36	38	38	38	38	38	0
Confidence Level(95.0%)	0.1	2.3	0.6	6.56	0.12	0.003	0.11	0.013	0.11	0.017	0.008	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	442.9	419.4	7.7	23.5	16.9	735	79.7	3716	2.5	1644
Standard Error	ND	ND	12.5	14.3	2.1	4.0	2.7	23	3.4	2346	0.2	806
Median	ND	ND	445.0	437.2	4.4	13.5	10.5	811	78.5	120	2.1	120
Mode	ND	ND	420.0	475.0	5.6	14.0	10.2	743	100.0	ND	ND	1700
Standard Deviation	ND	ND	77.0	88.0	13.0	24.4	16.6	142	21.0	9953	1.0	3515
Sample Variance	ND	ND	5923.8	7752.7	168.1	597.3	275.7	20117	442.5	99057527	0.9	12351800
Kurtosis	ND	ND	1.4	1.1	24.4	1.0	1.2	0	0.0	10	0.2	9
Skewness	ND	ND	-1.0	-1.1	4.6	1.5	1.6	-1	-0.6	3	1.0	3
Range	0.0	0.0	340.0	353.0	78.0	81.8	55.4	553	80.0	38986	3.4	13984
Minimum	0.0	0.0	220.0	173.0	0.0	3.2	3.1	371	30.0	14	1.1	16
Maximum	0.0	0.0	560.0	526.0	78.0	85.0	58.5	924	110.0	39000	4.6	14000
Count	0	0	38	38	38	38	38	38	38	18	18	19
Confidence Level(95.0%)	ND	ND	25.3	28.9	4.3	8.0	5.5	47	6.9	4949	0.5	1694

ND = No Data

Provisional MMSD Water Quality Data

WALNUT STREET - SITE 6
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

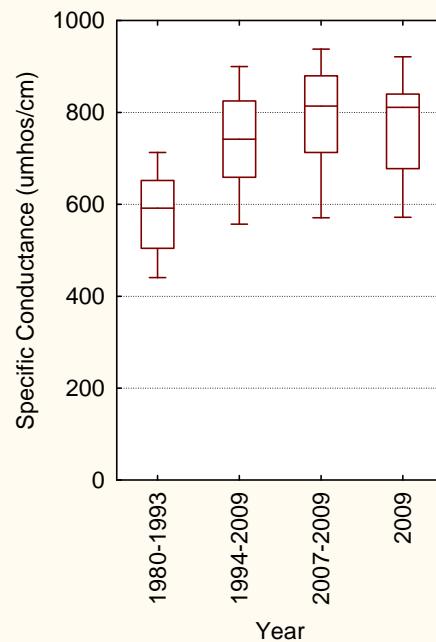
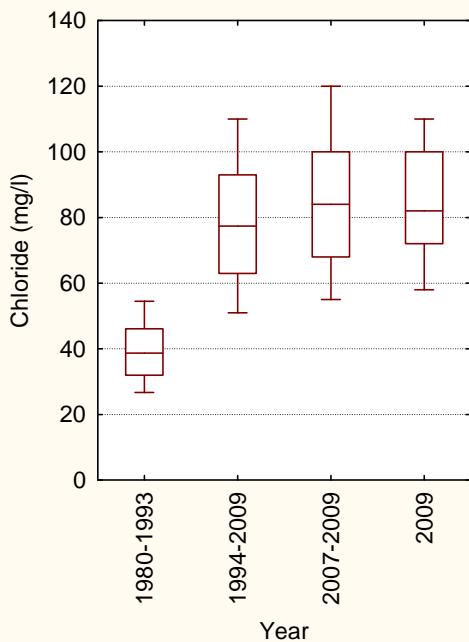
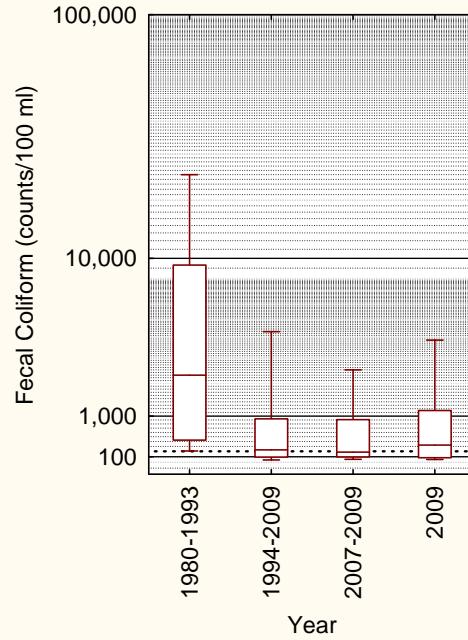
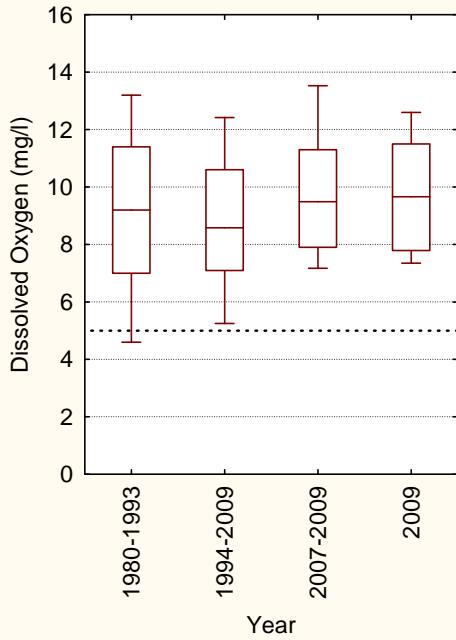
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	59.37	33.05	0.1	5.5	5.2	3.1	3.0	16.4	0.0	0.2	1.1	0.0
Standard Error	2.71	1.82	0.1	0.4	0.9	0.4	0.9	3.1	0.0	0.2	0.8	0.0
Median	61.00	36.00	0.0	5.0	4.9	2.5	0.0	14.0	0.0	0.0	0.0	0.0
Mode	71.00	39.00	0.0	4.6	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	11.83	7.93	0.3	1.7	3.7	1.6	4.0	13.4	0.0	0.9	3.1	0.0
Sample Variance	140.02	62.83	0.1	2.7	13.9	2.5	16.3	180.0	0.0	0.8	9.5	0.0
Kurtosis	-0.45	-0.44	19.0	0.4	1.3	3.8	1.4	0.3	ND	19.0	5.0	ND
Skewness	-0.49	-0.78	4.4	1.0	0.8	2.1	1.3	0.8	ND	4.4	2.5	ND
Range	41.00	27.00	1.4	6.2	15.0	5.4	14.0	45.0	0.0	3.9	9.4	0.0
Minimum	34.00	15.00	0.0	3.4	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	75.00	42.00	1.4	9.6	15.0	7.3	14.0	45.0	0.0	3.9	9.4	0.0
Count	19	19	19	19	19	19	19	19	19	19	16	4
Confidence Level(95.0%)	5.70	3.82	0.2	0.8	1.8	0.8	1.9	6.5	0.0	0.4	1.6	0.0

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	286	230	1.8	9.0	59.4	52.2	7.2	7.0
Standard Error	13	8	0.3	1.2	1.8	1.8	0.3	0.2
Median	300	250	2.2	9.2	62.0	57.0	7.2	6.7
Mode	320	280	0.0	16.0	69.0	49.0	8.1	8.0
Standard Deviation	58	52	1.8	5.1	11.0	11.0	1.6	1.5
Sample Variance	3348	2700	3.4	26.2	120.9	121.4	2.7	2.4
Kurtosis	0	0	-1.5	-0.9	0.1	-0.2	-1.2	-1.4
Skewness	-1	-1	0.3	0.2	-0.7	-0.8	0.2	0.1
Range	200	180	5.1	18.0	43.0	40.0	5.4	5.0
Minimum	150	110	0.0	0.0	33.0	26.0	4.6	4.6
Maximum	350	290	5.1	18.0	76.0	66.0	10.0	9.6
Count	19	38	37	18	38	38	38	38
Confidence Level(95.0%)	28	17	0.6	2.5	3.6	3.6	0.5	0.5

ND = No Data

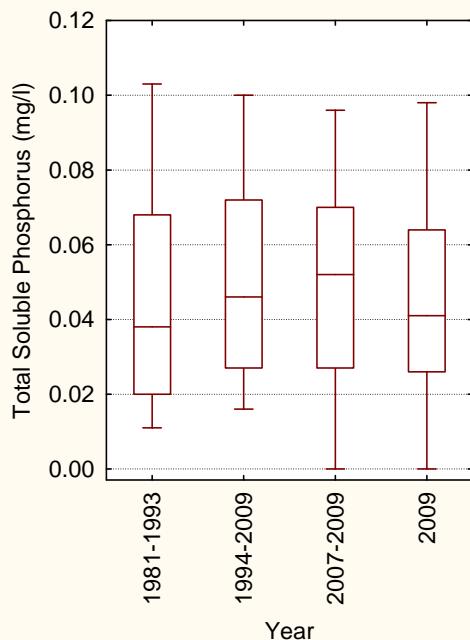
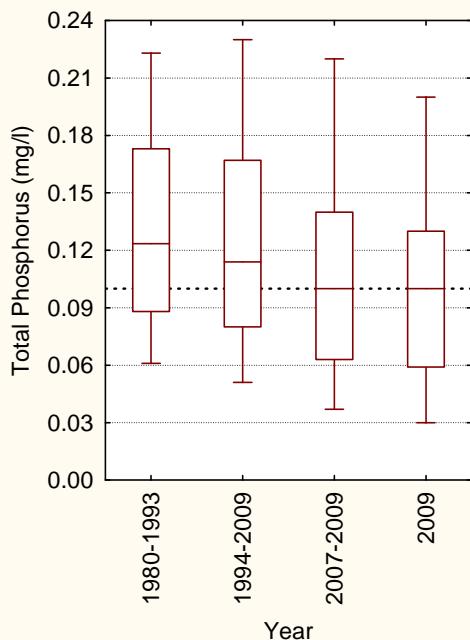
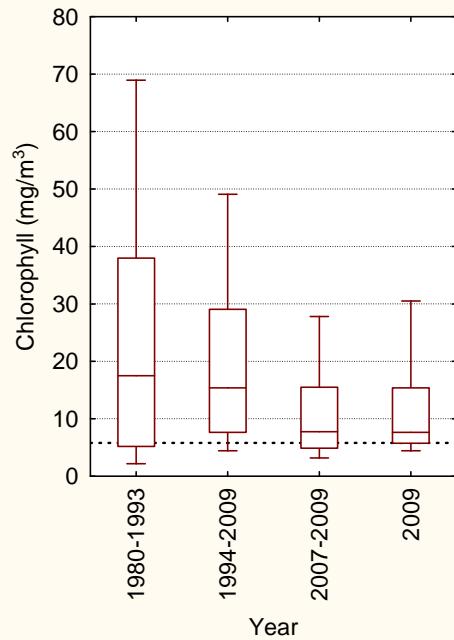
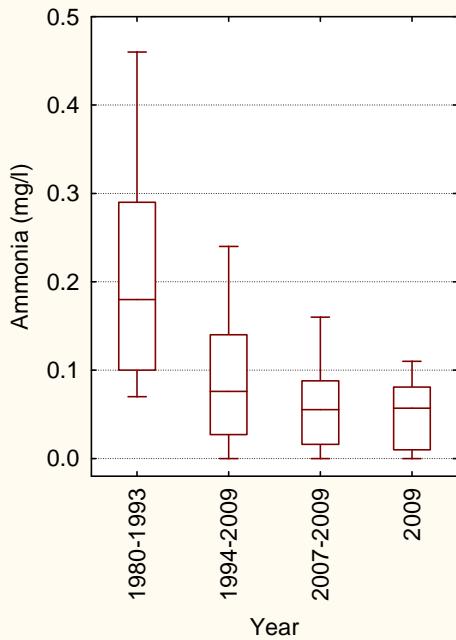
Provisional MMSD Water Quality Data

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



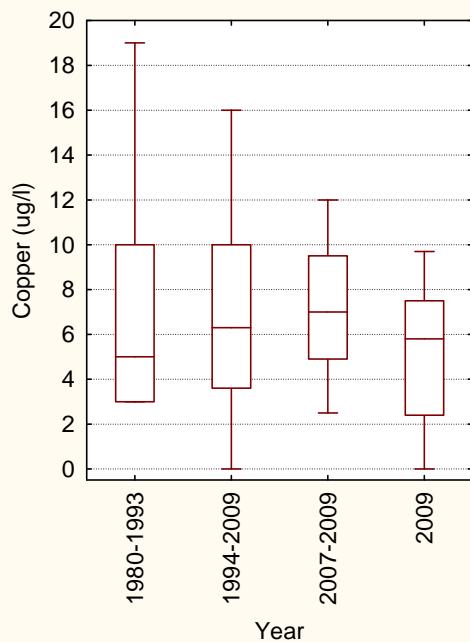
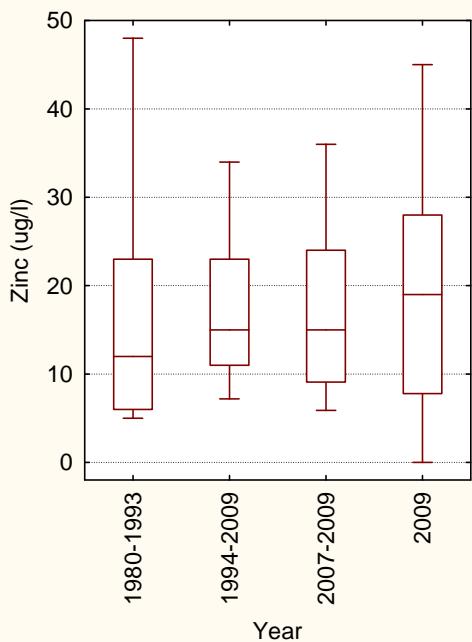
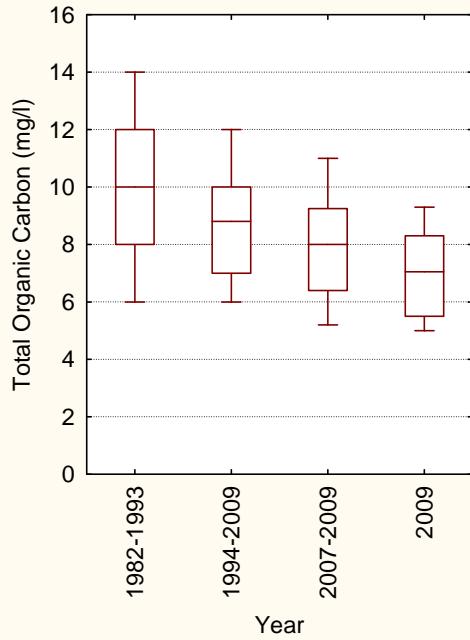
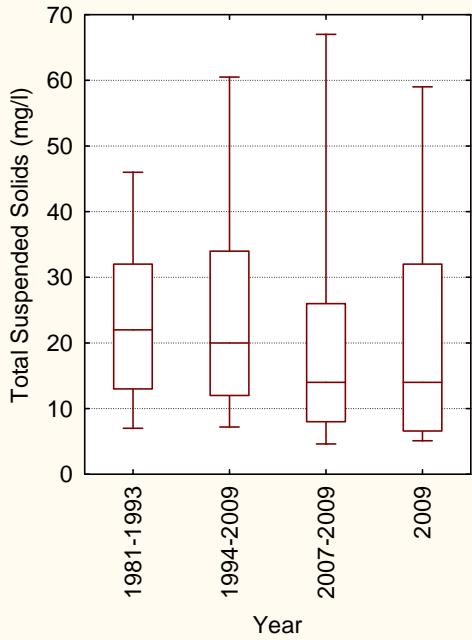
— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.2	9.8	12.67	0.86	0.015	0.94	0.070	0.89	0.103	0.047	ND
Standard Error	0.0	1.0	0.3	2.25	0.06	0.001	0.06	0.011	0.04	0.007	0.004	ND
Median	8.3	14.6	9.7	7.63	0.75	0.012	1.00	0.057	0.83	0.100	0.041	ND
Mode	8.2	10.2	10.3	ND	1.10	0.012	1.10	0.000	1.20	0.100	0.000	ND
Standard Deviation	0.3	7.7	2.1	10.32	0.46	0.008	0.51	0.090	0.35	0.058	0.032	ND
Sample Variance	0.1	59.8	4.5	106.54	0.22	0.000	0.26	0.008	0.12	0.003	0.001	ND
Kurtosis	0.5	-1.3	-1.0	-0.13	1.81	0.581	0.85	5.884	0.25	0.043	0.507	ND
Skewness	-0.2	-0.2	0.2	1.15	0.97	1.167	0.85	2.364	0.72	0.793	0.770	ND
Range	1.4	24.5	7.9	31.80	2.16	0.027	2.26	0.400	1.63	0.215	0.130	0.00
Minimum	7.5	-0.2	6.3	3.00	0.04	0.006	0.04	0.000	0.27	0.025	0.000	0.00
Maximum	8.9	24.3	14.2	34.80	2.20	0.033	2.30	0.400	1.90	0.240	0.130	0.00
Count	63	63	63	21	57	57	63	62	62	62	63	0
Confidence Level(95.0%)	0.1	1.9	0.5	4.70	0.12	0.002	0.13	0.023	0.09	0.015	0.008	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	445.2	421.8	6.2	23.4	18.5	767	90.2	1601	2.5	2758
Standard Error	ND	ND	13.2	14.5	0.8	3.2	2.5	25	5.5	900	0.2	1800
Median	ND	ND	450.0	440.0	4.0	14.0	11.7	811	82.0	325	2.5	1455
Mode	ND	ND	430.0	456.0	0.0	14.0	34.3	814	100.0	ND	ND	ND
Standard Deviation	ND	ND	104.5	114.7	6.3	25.0	19.8	199	43.6	4025	0.8	3601
Sample Variance	ND	ND	10928.6	13157.0	39.7	625.5	393.1	39673	1902.6	16202690	0.6	12966425
Kurtosis	ND	ND	0.8	1.1	3.6	2.8	3.0	2	7.0	16	0.1	2
Skewness	ND	ND	-0.3	-0.7	1.9	1.8	1.9	0	2.2	4	0.4	1
Range	0.0	0.0	530.0	577.0	28.0	107.8	81.9	1040	232.0	17991	3.3	7680
Minimum	0.0	0.0	180.0	95.0	0.0	2.2	2.2	210	18.0	9	1.0	220
Maximum	0.0	0.0	710.0	672.0	28.0	110.0	84.1	1250	250.0	18000	4.3	7900
Count	0	0	63	63	63	63	63	63	63	20	20	4
Confidence Level(95.0%)	ND	ND	26.3	28.9	1.6	6.3	5.0	50	11.0	1884	0.4	5730

ND = No Data

Provisional MMSD Water Quality Data

WELLS STREET - SITE 7
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

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	60.71	33.46	0.0	5.8	5.0	3.2	1.5	20.0	0.1	0.3	1.5	0.0
Standard Error	3.00	1.83	0.0	0.4	0.8	0.5	0.8	3.6	0.1	0.2	0.8	0.0
Median	65.00	36.00	0.0	5.0	5.8	2.4	0.0	19.0	0.0	0.0	0.0	0.0
Mode	74.00	38.00	0.0	4.6	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	13.77	8.37	0.0	1.9	3.6	2.5	3.6	16.3	0.3	0.8	2.8	0.0
Sample Variance	189.51	70.01	0.0	3.8	13.3	6.1	12.7	266.0	0.1	0.6	8.0	0.0
Kurtosis	1.08	1.86	ND	-1.2	-1.0	13.3	7.3	-0.5	21.0	3.8	0.4	ND
Skewness	-0.93	-1.34	ND	0.6	0.1	3.5	2.6	0.6	4.6	2.3	1.5	ND
Range	58.00	34.40	0.0	5.6	12.0	11.3	14.0	53.0	1.2	2.5	7.0	0.0
Minimum	25.00	9.60	0.0	3.6	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	83.00	44.00	0.0	9.2	12.0	13.0	14.0	53.0	1.2	2.5	7.0	0.0
Count	21	21	21	21	21	21	21	21	21	21	13	4
Confidence Level(95.0%)	6.27	3.81	0.0	0.9	1.7	1.1	1.6	7.4	0.1	0.4	1.7	0.0

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	289	231	1.6	8.4	59.9	52.5	7.1	6.8
Standard Error	14	7	0.2	0.9	1.7	1.6	0.2	0.2
Median	300	250	1.0	9.0	62.0	56.0	7.1	7.0
Mode	330	280	0.0	4.7	61.0	57.0	5.0	8.1
Standard Deviation	66	59	1.8	4.0	13.1	12.4	1.7	1.7
Sample Variance	4403	3439	3.3	15.8	172.2	154.8	2.8	2.8
Kurtosis	2	2	-0.4	-0.6	2.5	2.2	-1.2	-1.3
Skewness	-1	-1	0.7	0.7	-1.4	-1.4	0.0	-0.2
Range	290	252	6.3	11.9	57.0	54.0	5.7	6.1
Minimum	100	48	0.0	4.1	19.0	14.0	4.3	3.5
Maximum	390	300	6.3	16.0	76.0	68.0	10.0	9.6
Count	21	63	60	19	63	62	62	63
Confidence Level(95.0%)	30	15	0.5	1.9	3.3	3.2	0.4	0.4

ND = No Data

Provisional MMSD Water Quality Data

WATER STREET - SITE 8
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

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	14.4	9.1	10.00	0.72	0.017	0.81	0.093	0.80	0.097	0.045	ND
Standard Error	0.0	0.7	0.3	1.71	0.04	0.001	0.05	0.010	0.04	0.006	0.003	ND
Median	8.1	15.5	8.9	6.04	0.69	0.015	0.74	0.079	0.72	0.087	0.040	ND
Mode	8.2	20.0	10.5	ND	0.69	0.012	0.70	0.000	1.20	0.110	0.066	ND
Standard Deviation	0.3	5.8	2.2	7.64	0.27	0.009	0.38	0.078	0.34	0.048	0.024	ND
Sample Variance	0.1	33.5	4.6	58.31	0.07	0.000	0.14	0.006	0.12	0.002	0.001	ND
Kurtosis	0.0	-0.8	-0.8	1.54	-0.97	1.390	4.20	1.579	0.03	0.639	1.271	ND
Skewness	0.3	-0.3	0.2	1.37	0.16	1.372	1.60	1.240	0.24	1.157	0.938	ND
Range	1.1	23.5	8.1	29.26	0.94	0.037	2.02	0.330	1.60	0.206	0.110	0.00
Minimum	7.6	1.9	5.2	1.44	0.26	0.005	0.28	0.000	0.00	0.034	0.000	0.00
Maximum	8.7	25.4	13.3	30.70	1.20	0.042	2.30	0.330	1.60	0.240	0.110	0.00
Count	60	60	60	20	54	54	60	60	60	60	60	0
Confidence Level(95.0%)	0.1	1.5	0.6	3.57	0.07	0.002	0.10	0.020	0.09	0.012	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	422.3	400.8	5.4	21.5	17.6	728	88.6	1987	2.5	1221
Standard Error	ND	ND	12.8	14.1	0.7	3.0	2.6	32	6.1	1334	0.2	522
Median	ND	ND	420.0	410.7	4.0	13.0	10.2	705	84.0	235	2.4	295
Mode	ND	ND	520.0	494.0	0.0	11.0	5.6	849	110.0	3000	3.5	170
Standard Deviation	ND	ND	99.2	109.5	5.3	23.0	20.4	250	47.4	5967	0.7	2334
Sample Variance	ND	ND	9831.8	11995.7	27.9	528.7	417.5	62519	2243.8	35605716	0.5	5446499
Kurtosis	ND	ND	0.4	0.3	11.9	8.3	5.8	7	10.0	19	1.0	10
Skewness	ND	ND	0.2	-0.1	2.8	2.6	2.5	2	2.7	4	1.0	3
Range	0.0	0.0	510.0	562.0	33.0	125.9	95.4	1579	277.0	26969	2.9	9872
Minimum	0.0	0.0	220.0	150.0	0.0	4.1	3.4	301	23.0	31	1.5	28
Maximum	0.0	0.0	730.0	712.0	33.0	130.0	98.8	1880	300.0	27000	4.4	9900
Count	0	0	60	60	60	60	60	60	60	20	20	20
Confidence Level(95.0%)	ND	ND	25.6	28.3	1.4	5.9	5.3	65	12.2	2793	0.3	1092

ND = No Data

Provisional MMSD Water Quality Data

WATER STREET - SITE 8
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

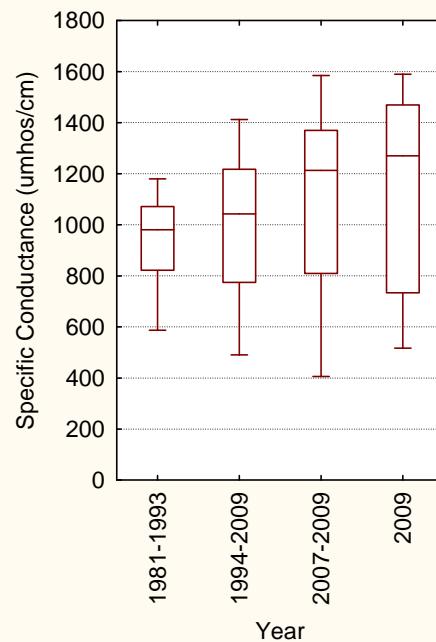
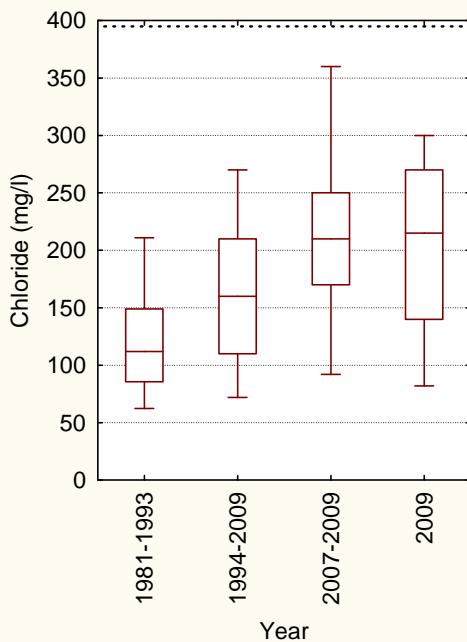
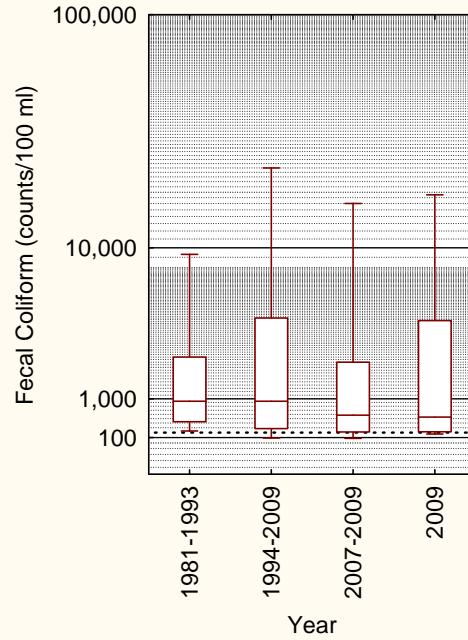
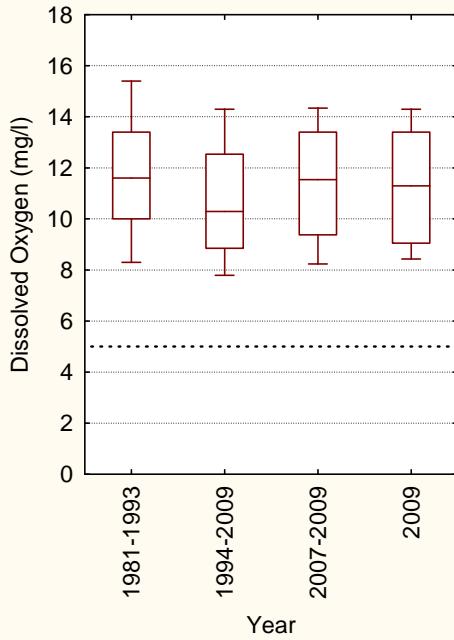
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	56.50	28.90	0.0	5.8	5.7	2.9	1.0	18.1	0.2	0.1	2.9	0.0
Standard Error	2.99	1.67	0.0	0.3	0.7	0.4	0.6	2.7	0.2	0.1	1.1	0.0
Median	55.50	29.50	0.0	5.3	6.0	2.4	0.0	15.0	0.0	0.0	0.0	0.0
Mode	71.00	36.00	0.0	5.2	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	13.38	7.48	0.0	1.6	3.0	1.6	2.9	12.0	0.7	0.5	4.6	0.0
Sample Variance	178.89	55.88	0.0	2.4	9.1	2.6	8.4	144.6	0.5	0.2	20.9	0.0
Kurtosis	-0.81	-0.44	ND	0.2	0.2	13.2	11.5	0.4	13.6	20.0	1.3	ND
Skewness	-0.37	-0.55	ND	0.9	-0.1	3.5	3.3	0.4	3.6	4.5	1.4	ND
Range	44.00	27.00	0.0	5.9	12.0	7.4	12.0	47.0	3.1	2.2	15.0	0.0
Minimum	30.00	12.00	0.0	3.7	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	74.00	39.00	0.0	9.6	12.0	9.2	12.0	47.0	3.1	2.2	15.0	0.0
Count	20	20	20	20	20	20	20	20	20	20	18	4
Confidence Level(95.0%)	6.26	3.50	0.0	0.7	1.4	0.8	1.4	5.6	0.3	0.2	2.3	0.0

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	261	204	1.3	10.2	53.0	46.6	6.5	6.2
Standard Error	14	8	0.2	1.1	1.7	1.6	0.2	0.2
Median	260	200	0.0	9.3	51.0	46.0	7.0	6.7
Mode	310	270	0.0	14.0	64.0	56.0	8.0	6.7
Standard Deviation	63	58	1.8	4.7	13.3	12.3	1.8	1.9
Sample Variance	3931	3393	3.1	22.2	177.0	152.0	3.3	3.4
Kurtosis	0	0	-0.1	-0.3	-0.8	-0.6	-0.9	-1.0
Skewness	-1	-1	1.0	-0.2	-0.4	-0.5	-0.4	-0.4
Range	220	228	5.8	18.0	50.0	46.0	6.8	6.7
Minimum	120	62	0.0	0.0	23.0	18.0	2.6	2.0
Maximum	340	290	5.8	18.0	73.0	64.0	9.4	8.7
Count	20	60	56	18	60	60	58	58
Confidence Level(95.0%)	29	15	0.5	2.3	3.4	3.2	0.5	0.5

ND = No Data

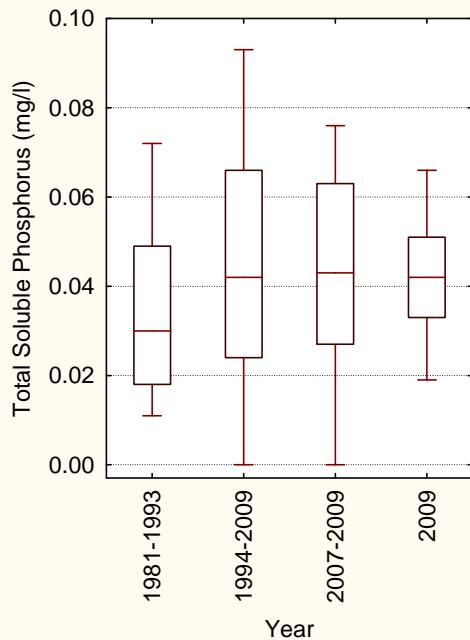
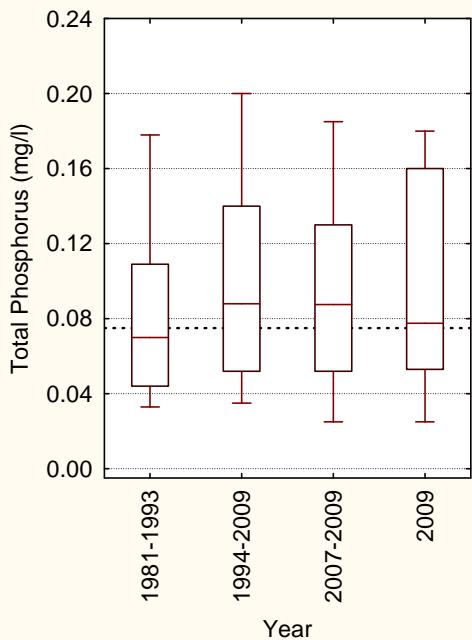
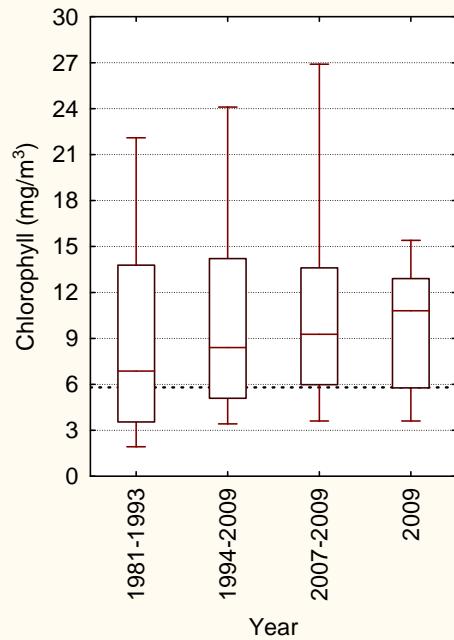
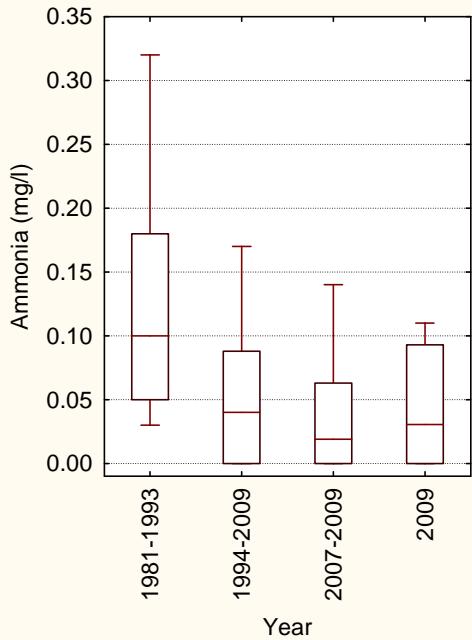
Provisional MMSD Water Quality Data

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



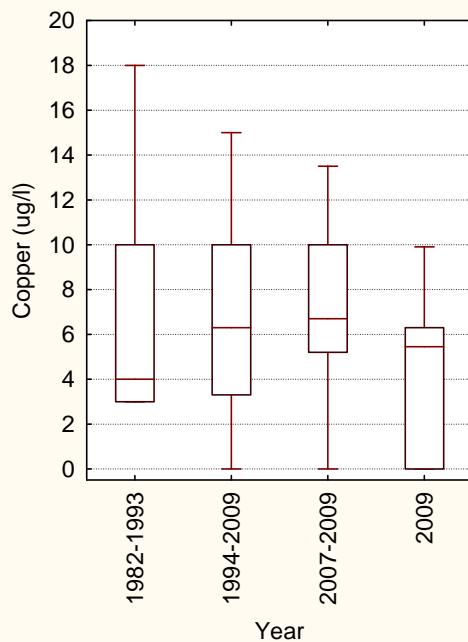
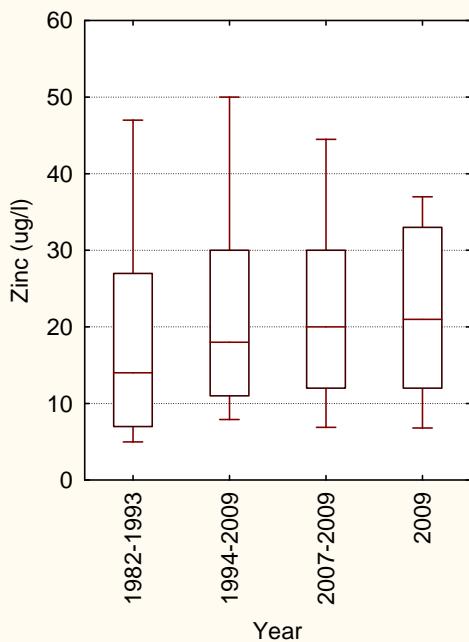
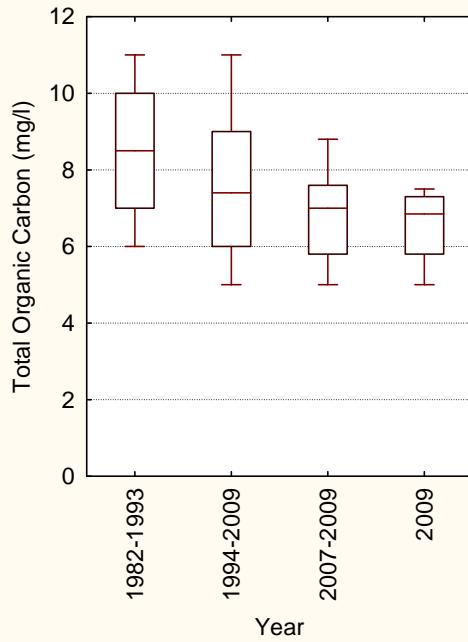
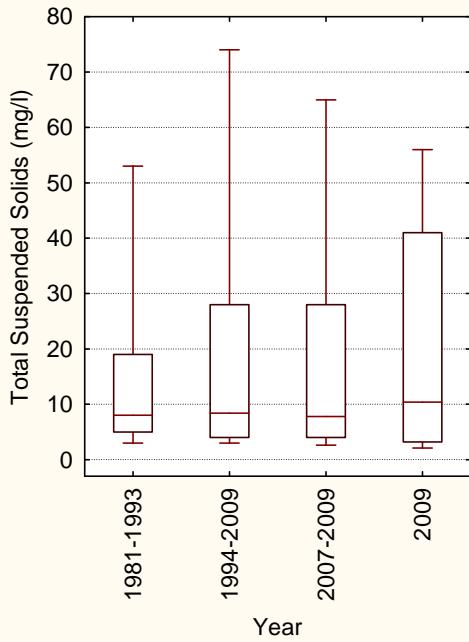
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	11.8	11.3	9.95	0.39	0.019	0.50	0.054	0.76	0.102	0.042	ND
Standard Error	0.1	1.6	0.5	1.13	0.06	0.003	0.07	0.017	0.07	0.015	0.005	ND
Median	8.1	12.5	11.3	10.80	0.41	0.016	0.50	0.031	0.72	0.078	0.042	ND
Mode	7.9	19.2	ND	12.90	0.53	0.034	1.00	0.000	1.30	0.160	0.042	ND
Standard Deviation	0.3	7.6	2.5	5.28	0.27	0.013	0.34	0.078	0.32	0.069	0.021	ND
Sample Variance	0.1	58.5	6.2	27.92	0.07	0.000	0.12	0.006	0.10	0.005	0.000	ND
Kurtosis	0.5	-1.2	-1.2	0.41	-0.50	-0.815	-0.81	6.064	-0.49	1.045	1.595	ND
Skewness	0.2	-0.1	0.1	0.62	0.49	0.583	0.43	2.299	0.69	1.063	0.224	ND
Range	1.3	23.3	8.6	20.77	0.93	0.046	1.16	0.320	1.06	0.266	0.096	0.00
Minimum	7.5	-0.4	7.2	2.93	0.04	0.000	0.04	0.000	0.34	0.024	0.000	0.00
Maximum	8.8	22.9	15.8	23.70	0.97	0.046	1.20	0.320	1.40	0.290	0.096	0.00
Count	22	22	22	22	19	19	22	22	22	22	22	0
Confidence Level(95.0%)	0.1	3.4	1.1	2.34	0.13	0.006	0.15	0.034	0.14	0.030	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	683.3	662.9	5.0	21.8	19.4	1180	218.0	3774	3.0	2832
Standard Error	ND	ND	53.7	56.4	1.1	5.2	4.7	115	26.6	1419	0.2	875
Median	ND	ND	760.0	758.2	3.1	10.4	8.9	1270	215.0	535	2.7	775
Mode	ND	ND	830.0	ND	0.0	ND	ND	1360	240.0	210	2.3	ND
Standard Deviation	ND	ND	246.2	258.5	5.2	24.4	22.1	541	124.9	6344	0.7	4102
Sample Variance	ND	ND	60633.3	66819.8	27.2	595.3	487.8	292451	15594.9	40250940	0.6	16829642
Kurtosis	ND	ND	-0.6	-0.6	1.5	0.3	-0.2	1	1.6	2	-0.9	2
Skewness	ND	ND	0.0	-0.1	1.3	1.2	1.1	1	1.1	2	0.6	2
Range	0.0	0.0	940.0	980.8	19.0	78.4	68.2	2184	498.0	18920	2.4	12917
Minimum	0.0	0.0	260.0	217.0	0.0	1.6	1.9	366	42.0	80	1.9	83
Maximum	0.0	0.0	1200.0	1197.8	19.0	80.0	70.0	2550	540.0	19000	4.3	13000
Count	0	0	21	21	22	22	22	22	22	20	20	22
Confidence Level(95.0%)	ND	ND	112.1	117.7	2.3	10.8	9.8	240	55.4	2969	0.4	1819

ND = No Data

Provisional MMSD Water Quality Data

70TH STREET - SITE 9
MENOMONEE RIVER
WATER QUALITY DATA - 2009

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	66.86	30.09	0.0	5.5	4.6	3.7	1.0	23.1	0.2	0.3	1.6	0.0
Standard Error	5.19	2.73	0.0	0.3	0.9	0.2	0.4	3.2	0.1	0.2	0.8	0.0
Median	72.50	33.50	0.0	5.1	5.5	3.5	0.0	21.0	0.0	0.0	0.0	0.0
Mode	93.00	43.00	0.0	5.2	0.0	2.8	0.0	31.0	0.0	0.0	0.0	0.0
Standard Deviation	24.33	12.81	0.0	1.4	4.4	1.1	2.0	15.2	0.6	0.9	3.3	0.0
Sample Variance	592.03	164.09	0.0	2.0	19.0	1.1	4.0	230.0	0.3	0.9	11.2	0.0
Kurtosis	-1.39	-1.61	ND	1.3	-0.1	0.8	3.9	0.0	10.9	10.4	1.4	ND
Skewness	-0.33	-0.16	ND	1.1	0.6	1.2	2.1	0.5	3.4	3.3	1.7	ND
Range	73.00	37.00	0.0	5.7	15.0	4.0	7.2	58.0	2.4	3.8	9.4	0.0
Minimum	27.00	11.00	0.0	3.7	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	100.00	48.00	0.0	9.4	15.0	6.5	7.2	58.0	2.4	3.8	9.4	0.0
Count	22	22	22	22	22	22	22	22	22	22	19	4
Confidence Level(95.0%)	10.79	5.68	0.0	0.6	1.9	0.5	0.9	6.7	0.3	0.4	1.6	0.0

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	2.0	9.5	50.2	43.5	6.6	6.2
Standard Error	24	16	0.6	1.5	3.1	3.2	0.3	0.3
Median	320	195	0.0	7.3	53.5	47.5	6.9	6.6
Mode	200	230	0.0	17.0	68.0	35.0	7.2	6.8
Standard Deviation	115	75	2.6	6.6	14.7	15.0	1.3	1.2
Sample Variance	13136	5672	6.8	43.0	215.4	224.0	1.6	1.5
Kurtosis	-2	-1	1.2	0.3	-1.2	-1.3	0.0	-0.1
Skewness	0	0	1.3	0.9	-0.3	-0.3	0.1	-0.4
Range	330	221	9.0	26.0	44.0	44.0	5.1	4.8
Minimum	110	69	0.0	0.0	24.0	18.0	4.1	3.6
Maximum	440	290	9.0	26.0	68.0	62.0	9.2	8.4
Count	22	22	21	20	22	22	22	22
Confidence Level(95.0%)	51	33	1.2	3.1	6.5	6.6	0.6	0.5

ND = No Data

Provisional MMSD Water Quality Data

MUSKEGO AVENUE - SITE 11
 MENOMONEE RIVER
 WATER QUALITY DATA - 2009

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	13.8	8.6	9.51	0.55	0.022	0.63	0.137	0.85	0.114	0.046	ND
Standard Error	0.0	0.9	0.3	2.00	0.03	0.001	0.03	0.016	0.04	0.009	0.003	ND
Median	7.8	13.2	8.0	6.45	0.50	0.019	0.60	0.100	0.78	0.086	0.037	ND
Mode	7.9	12.7	11.5	ND	0.44	0.016	1.00	0.100	1.80	0.180	0.033	ND
Standard Deviation	0.3	7.1	2.4	9.40	0.20	0.010	0.23	0.134	0.36	0.076	0.027	ND
Sample Variance	0.1	49.8	5.7	88.34	0.04	0.000	0.05	0.018	0.13	0.006	0.001	ND
Kurtosis	2.0	-0.7	-0.5	8.03	-0.02	0.373	-0.89	3.774	1.06	5.825	2.510	ND
Skewness	-0.5	-0.3	0.4	2.54	0.68	0.926	0.35	2.045	1.18	2.287	1.360	ND
Range	1.7	26.2	10.0	42.02	0.88	0.042	0.87	0.580	1.52	0.368	0.130	0.00
Minimum	6.8	0.1	3.9	1.68	0.22	0.008	0.23	0.000	0.28	0.042	0.000	0.00
Maximum	8.5	26.2	13.8	43.70	1.10	0.050	1.10	0.580	1.80	0.410	0.130	0.00
Count	66	66	66	22	57	57	66	66	66	66	66	0
Confidence Level(95.0%)	0.1	1.7	0.6	4.17	0.05	0.003	0.06	0.033	0.09	0.019	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	515.9	492.1	6.5	23.8	24.2	924	151.8	8591	2.7	ND
Standard Error	ND	ND	27.0	26.9	0.8	2.7	3.2	57	13.7	6654	0.2	ND
Median	ND	ND	440.0	426.2	4.5	12.0	10.0	838	125.0	235	2.3	ND
Mode	ND	ND	570.0	1022.0	4.8	12.0	63.1	2120	130.0	1700	3.2	ND
Standard Deviation	ND	ND	219.3	218.5	6.4	22.1	26.0	465	111.1	28232	1.0	ND
Sample Variance	ND	ND	48110.7	47730.7	41.0	490.3	676.9	215886	12344.9	797036481	1.0	ND
Kurtosis	ND	ND	1.4	0.7	3.8	-0.2	0.5	2	4.6	17	0.3	ND
Skewness	ND	ND	1.3	1.0	1.8	1.0	1.3	1	2.1	4	0.9	ND
Range	0.0	0.0	960.0	927.0	29.0	76.0	88.6	1876	484.0	119972	3.6	0
Minimum	0.0	0.0	240.0	194.0	0.0	3.0	3.4	334	46.0	28	1.4	0
Maximum	0.0	0.0	1200.0	1121.0	29.0	79.0	92.0	2210	530.0	120000	5.1	0
Count	0	0	66	66	66	66	66	66	66	18	18	0
Confidence Level(95.0%)	ND	ND	53.9	53.7	1.6	5.4	6.4	114	27.3	14039	0.5	ND

ND = No Data

Provisional MMSD Water Quality data

MUSKEGO AVENUE - SITE 11
MENOMONEE RIVER
WATER QUALITY DATA - 2009

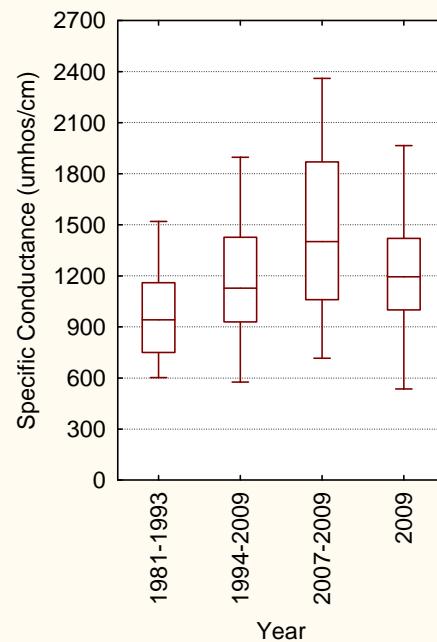
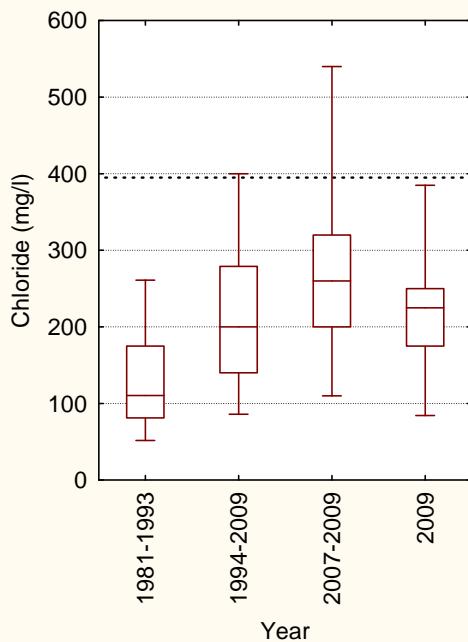
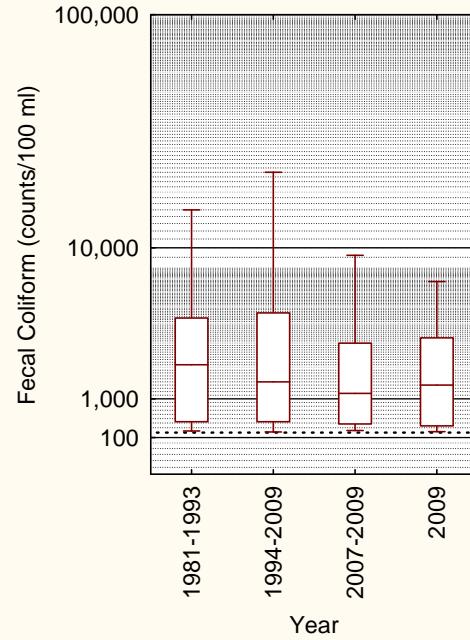
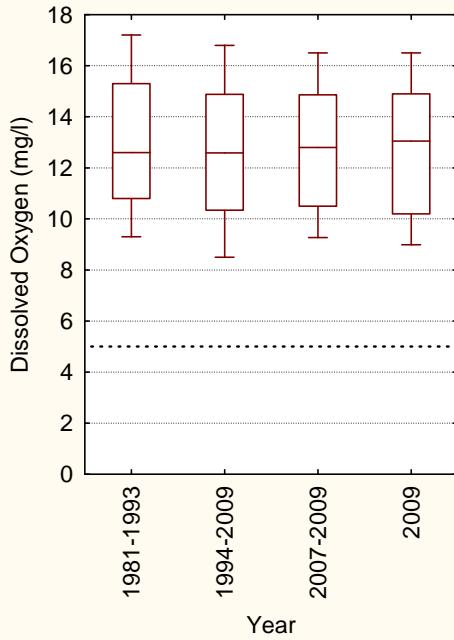
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	55.45	25.08	0.0	6.8	7.9	4.2	1.8	27.6	0.1	0.9	0.9	0.0
Standard Error	3.88	1.97	0.0	0.7	0.9	0.5	0.7	5.0	0.1	0.3	0.6	0.0
Median	51.50	24.00	0.0	5.7	7.0	3.1	0.0	20.0	0.0	0.0	0.0	0.0
Mode	47.00	40.00	0.0	4.7	11.0	2.5	0.0	14.0	0.0	0.0	0.0	0.0
Standard Deviation	18.19	9.24	0.2	3.2	4.1	2.1	3.3	23.4	0.5	1.4	2.6	0.0
Sample Variance	330.83	85.41	0.0	10.0	16.7	4.6	11.1	549.5	0.2	1.8	6.9	0.0
Kurtosis	-0.83	-0.87	22.0	4.0	2.8	0.2	2.8	6.6	11.7	0.3	6.0	ND
Skewness	0.15	0.12	4.7	1.8	1.5	1.1	1.9	2.2	3.4	1.3	2.7	ND
Range	67.00	31.30	0.9	13.3	17.2	7.1	11.0	110.0	1.9	4.0	8.3	0.0
Minimum	22.00	8.70	0.0	3.7	2.8	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	89.00	40.00	0.9	17.0	20.0	9.3	11.0	110.0	1.9	4.0	8.3	0.0
Count	22	22	22	22	22	22	22	22	22	22	18	4
Confidence Level(95.0%)	8.06	4.10	0.1	1.4	1.8	0.9	1.5	10.4	0.2	0.6	1.3	0.0

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	241	165	2.4	11.3	45.7	39.4	6.3	5.9
Standard Error	18	8	0.4	1.2	1.7	1.7	0.2	0.2
Median	225	160	2.1	9.4	42.0	38.5	6.6	6.2
Mode	180	170	0.0	8.7	38.0	51.0	6.4	6.2
Standard Deviation	84	67	2.8	5.6	13.9	13.7	1.6	1.5
Sample Variance	7028	4546	7.7	31.2	192.0	188.8	2.6	2.2
Kurtosis	-1	-1	1.2	3.2	-1.2	-1.1	-0.9	-0.5
Skewness	0	0	1.3	1.5	0.1	-0.1	-0.4	-0.5
Range	298	233	9.9	23.4	50.0	50.0	5.8	6.1
Minimum	92	47	0.0	4.6	20.0	12.0	3.2	2.6
Maximum	390	280	9.9	28.0	70.0	62.0	9.0	8.7
Count	22	66	60	20	66	66	65	65
Confidence Level(95.0%)	37	17	0.7	2.6	3.4	3.4	0.4	0.4

ND = No Data

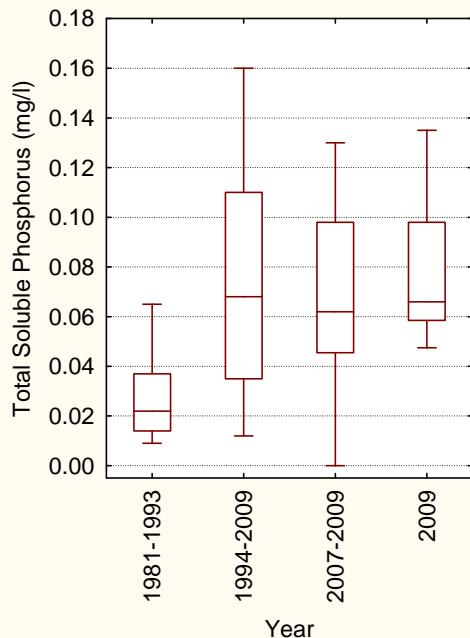
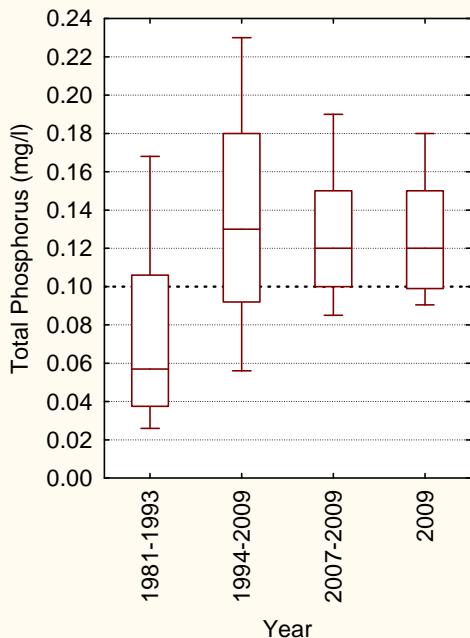
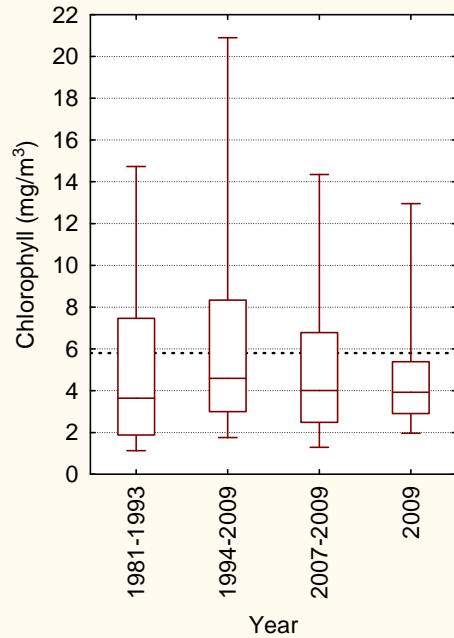
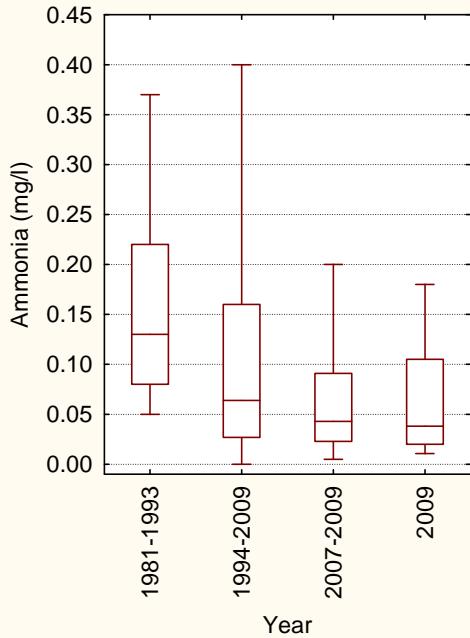
Provisional MMSD Water Quality data

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



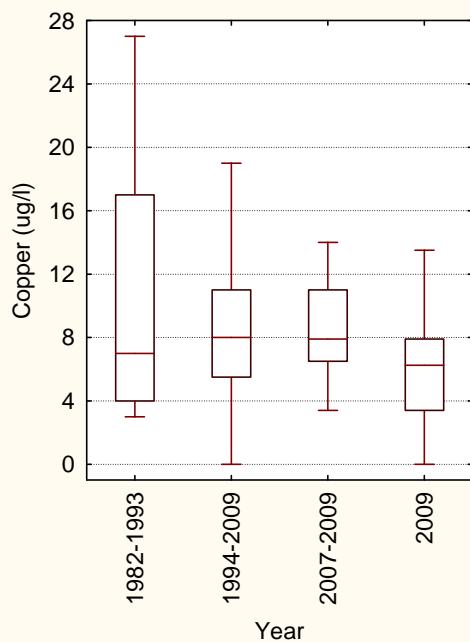
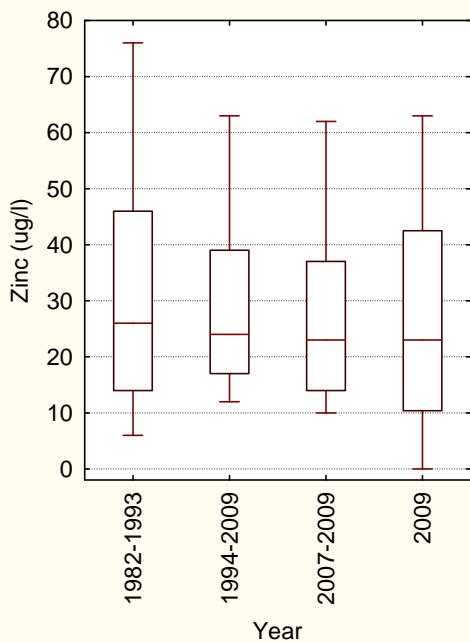
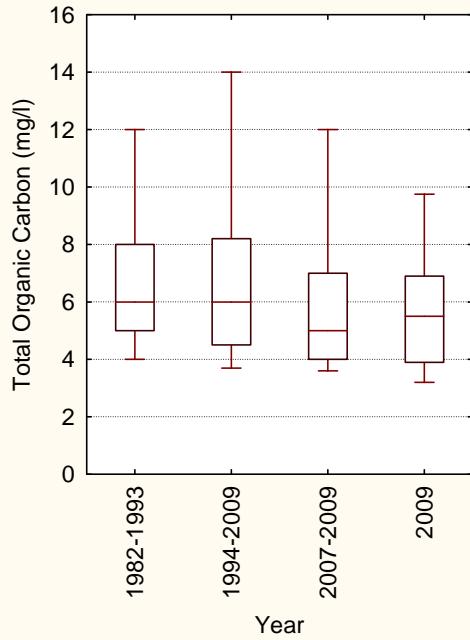
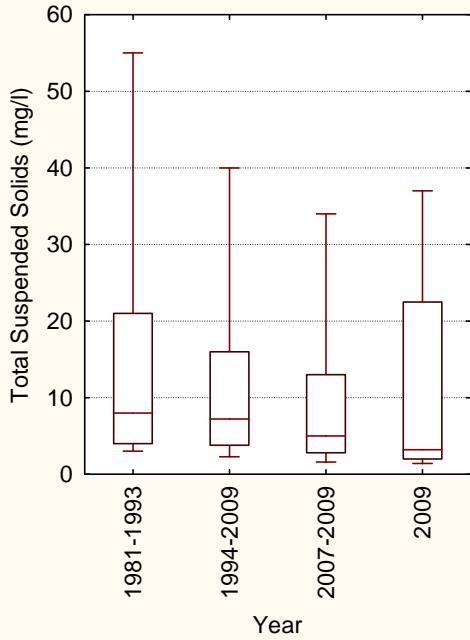
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.8	7.36	0.55	0.027	0.60	0.074	0.62	0.128	0.079	ND
Standard Error	0.1	1.4	0.7	2.79	0.09	0.004	0.08	0.020	0.09	0.010	0.008	ND
Median	8.2	12.7	13.1	3.92	0.48	0.023	0.57	0.038	0.49	0.120	0.066	ND
Mode	7.8	ND	16.5	ND	0.19	0.023	0.21	0.024	1.20	0.120	0.060	ND
Standard Deviation	0.4	6.0	3.0	12.47	0.36	0.017	0.35	0.089	0.40	0.043	0.034	ND
Sample Variance	0.2	36.5	9.2	155.60	0.13	0.000	0.12	0.008	0.16	0.002	0.001	ND
Kurtosis	0.0	-1.2	-0.9	17.05	5.46	4.429	4.16	5.925	-0.36	3.721	0.695	ND
Skewness	-0.4	0.0	0.1	4.03	2.05	1.613	1.65	2.264	0.56	1.756	1.056	ND
Range	1.5	19.7	10.9	57.49	1.51	0.078	1.49	0.361	1.40	0.177	0.131	0.00
Minimum	7.2	2.8	7.7	1.11	0.19	0.000	0.21	0.009	0.00	0.083	0.029	0.00
Maximum	8.7	22.5	18.6	58.60	1.70	0.078	1.70	0.370	1.40	0.260	0.160	0.00
Count	20	20	20	20	18	18	20	20	20	20	20	0
Confidence Level(95.0%)	0.2	2.8	1.4	5.84	0.18	0.008	0.16	0.041	0.19	0.020	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	688.5	676.4	3.3	12.2	13.9	1218	231.9	2624	3.1	2412
Standard Error	ND	ND	69.9	70.1	0.8	3.3	3.5	118	30.2	811	0.1	625
Median	ND	ND	675.0	673.1	1.8	3.2	4.3	1195	225.0	1400	3.1	1350
Mode	ND	ND	280.0	ND	0.0	2.0	ND	1060	250.0	1100	3.0	330
Standard Deviation	ND	ND	312.5	313.5	3.8	14.7	15.7	525	135.3	3625	0.6	2794
Sample Variance	ND	ND	97666.1	98269.1	14.3	215.7	245.5	276150	18298.3	13142886	0.4	7805108
Kurtosis	ND	ND	0.4	0.4	1.0	0.1	0.9	1	4.5	7	-0.6	4
Skewness	ND	ND	0.7	0.6	1.3	1.2	1.3	1	1.8	2	-0.1	2
Range	0.0	0.0	1130.0	1162.0	13.0	46.0	54.1	2030	592.0	14917	2.3	10900
Minimum	0.0	0.0	270.0	234.0	0.0	0.0	1.4	430	58.0	83	1.9	100
Maximum	0.0	0.0	1400.0	1396.0	13.0	46.0	55.5	2460	650.0	15000	4.2	11000
Count	0	0	20	20	20	20	20	20	20	20	20	20
Confidence Level(95.0%)	ND	ND	146.3	146.7	1.8	6.9	7.3	246	63.3	1697	0.3	1308

ND = No Data

Provisional MMSD Water Quality Data

27TH STREET - SITE 12
KINNICKINNICK RIVER
WATER QUALITY DATA - 2009

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	66.55	27.90	0.0	6.0	6.0	5.0	3.6	26.8	0.1	0.3	2.1	0.0
Standard Error	5.16	2.50	0.0	0.4	1.0	1.0	2.6	4.9	0.1	0.2	0.8	0.0
Median	67.50	31.00	0.0	5.9	6.3	3.6	0.0	23.0	0.0	0.0	0.0	0.0
Mode	ND	11.00	0.0	5.9	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	23.10	11.18	0.0	1.7	4.6	4.6	11.6	21.8	0.4	0.8	3.4	0.0
Sample Variance	533.52	125.04	0.0	2.8	21.0	21.6	135.1	475.4	0.1	0.6	11.6	0.0
Kurtosis	0.31	-0.05	ND	-0.8	0.0	12.7	18.2	-0.7	20.0	3.7	-0.5	ND
Skewness	0.03	0.00	ND	0.2	0.6	3.4	4.2	0.7	4.5	2.2	1.2	ND
Range	91.00	42.00	0.0	5.9	16.0	21.0	52.0	68.0	1.7	2.5	9.2	0.0
Minimum	29.00	11.00	0.0	3.5	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	120.00	53.00	0.0	9.4	16.0	23.0	52.0	68.0	1.7	2.5	9.2	0.0
Count	20	20	20	20	20	20	20	20	20	20	17	4
Confidence Level(95.0%)	10.81	5.23	0.0	0.8	2.1	2.2	5.4	10.2	0.2	0.4	1.7	0.0

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	183	3.9	10.0	48.5	41.1	7.4	6.7
Standard Error	23	15	1.1	1.2	2.5	2.8	2.0	1.8
Median	300	200	3.0	9.1	49.0	43.5	5.5	4.9
Mode	260	200	0.0	9.5	48.0	22.0	7.5	6.1
Standard Deviation	102	68	5.0	5.1	11.1	12.5	8.9	8.1
Sample Variance	10405	4641	24.7	26.3	122.6	155.5	78.4	65.3
Kurtosis	0	-1	3.6	-0.7	-0.5	-0.9	17.5	17.3
Skewness	0	0	1.9	0.7	-0.7	-0.6	4.1	4.0
Range	390	221	17.0	15.9	35.0	40.0	41.1	37.4
Minimum	120	79	0.0	4.1	28.0	19.0	2.9	2.6
Maximum	510	300	17.0	20.0	63.0	59.0	44.0	40.0
Count	20	20	20	18	20	20	20	20
Confidence Level(95.0%)	48	32	2.3	2.6	5.2	5.8	4.1	3.8

ND = No Data

Provisional MMSD Water Quality Data

8TH STREET - SITE 13
KINNICKINNICK RIVER
WATER QUALITY DATA - 2009

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	13.7	13.8	5.77	0.47	0.025	0.53	0.064	0.59	0.104	0.057	ND
Standard Error	0.1	1.5	0.8	0.98	0.10	0.005	0.09	0.023	0.10	0.012	0.007	ND
Median	8.5	12.9	13.9	4.43	0.46	0.021	0.54	0.014	0.49	0.091	0.053	ND
Mode	8.0	12.5	ND	ND	0.50	ND	ND	0.000	0.00	0.078	0.026	ND
Standard Deviation	0.4	6.7	3.4	4.38	0.42	0.022	0.42	0.103	0.44	0.053	0.033	ND
Sample Variance	0.2	44.6	11.4	19.15	0.18	0.000	0.17	0.011	0.19	0.003	0.001	ND
Kurtosis	-1.4	-1.2	-0.9	4.62	3.13	3.525	1.87	2.585	-0.52	4.032	1.170	ND
Skewness	0.1	0.1	0.1	2.03	1.52	1.587	1.08	1.791	0.56	1.820	1.252	ND
Range	1.3	21.8	12.0	17.80	1.67	0.091	1.67	0.360	1.40	0.227	0.120	0.00
Minimum	7.7	3.1	8.0	1.90	0.03	0.000	0.03	0.000	0.00	0.043	0.020	0.00
Maximum	9.0	24.8	20.0	19.70	1.70	0.091	1.70	0.360	1.40	0.270	0.140	0.00
Count	20	20	20	20	18	18	20	20	20	20	20	0
Confidence Level(95.0%)	0.2	3.1	1.6	2.05	0.21	0.011	0.20	0.048	0.21	0.025	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	675.5	662.9	3.4	12.6	14.2	1189	217.7	2291	2.9	1933
Standard Error	ND	ND	73.1	73.7	0.9	3.4	4.1	125	31.4	810	0.2	596
Median	ND	ND	650.0	647.2	2.0	4.6	3.7	1145	195.0	845	2.9	710
Mode	ND	ND	1400.0	ND	0.0	2.8	ND	ND	240.0	ND	ND	160
Standard Deviation	ND	ND	326.7	329.4	3.8	15.4	18.5	558	140.5	3624	0.7	2667
Sample Variance	ND	ND	106762.9	108510.6	14.6	237.0	341.8	311909	19747.1	13136263	0.5	7111640
Kurtosis	ND	ND	0.9	0.7	1.0	2.0	2.0	1	4.7	8	-0.9	3
Skewness	ND	ND	0.8	0.7	1.3	1.6	1.6	1	1.9	3	0.1	2
Range	0.0	0.0	1180.0	1180.0	13.0	56.0	59.5	2278	604.0	14960	2.6	9544
Minimum	0.0	0.0	220.0	217.2	0.0	0.0	0.9	202	56.0	40	1.6	56
Maximum	0.0	0.0	1400.0	1397.2	13.0	56.0	60.4	2480	660.0	15000	4.2	9600
Count	0	0	20	20	20	20	20	20	20	20	20	20
Confidence Level(95.0%)	ND	ND	152.9	154.2	1.8	7.2	8.7	261	65.8	1696	0.3	1248

ND = No Data

Provisional MMSD Water Quality Data

8TH STREET - SITE 13
KINNICKINNICK RIVER
WATER QUALITY DATA - 2009

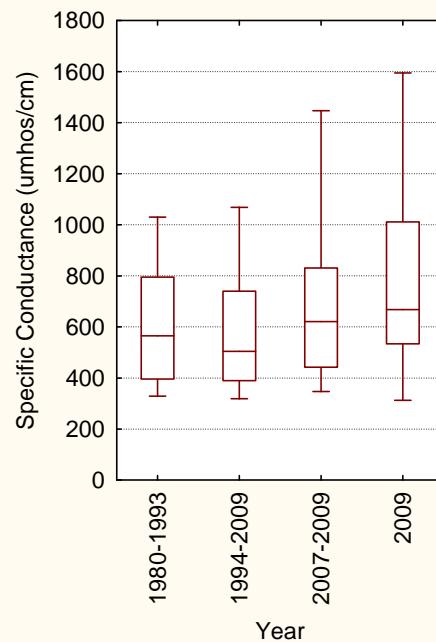
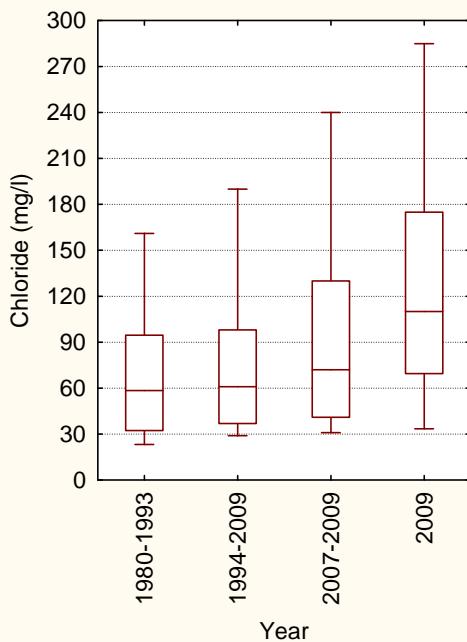
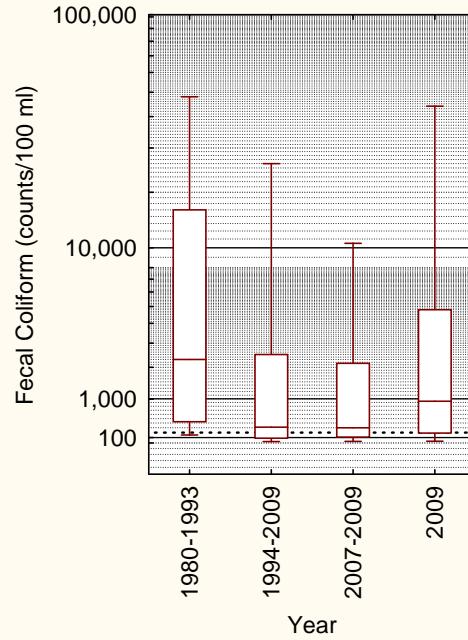
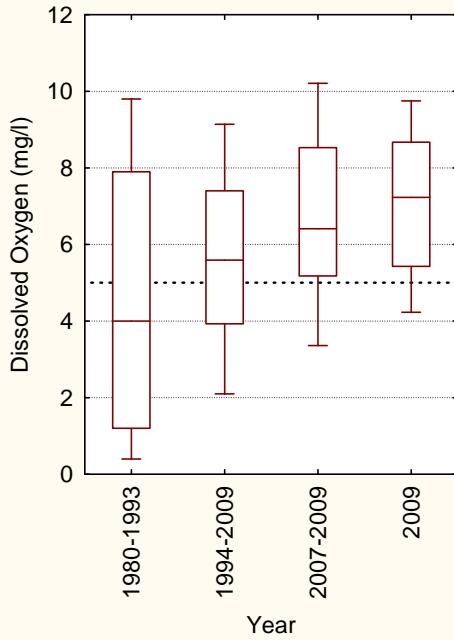
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	63.30	27.47	0.0	6.0	5.9	4.8	1.1	26.9	0.1	0.4	1.0	0.0
Standard Error	4.89	2.61	0.0	0.4	1.1	0.7	0.6	4.5	0.1	0.2	0.7	0.0
Median	66.00	31.00	0.0	5.8	5.5	3.9	0.0	20.5	0.0	0.0	0.0	0.0
Mode	78.00	31.00	0.0	6.6	0.0	4.0	0.0	14.0	0.0	0.0	0.0	0.0
Standard Deviation	21.86	11.67	0.0	1.6	5.0	3.2	2.8	20.2	0.3	1.0	2.9	0.0
Sample Variance	477.69	136.23	0.0	2.7	25.3	10.5	7.9	408.6	0.1	1.0	8.3	0.0
Kurtosis	0.08	-0.18	ND	-0.8	0.2	1.9	8.7	0.0	20.0	4.7	6.3	ND
Skewness	-0.23	-0.05	ND	0.3	0.8	1.7	2.9	0.9	4.5	2.4	2.7	ND
Range	86.00	44.30	0.0	5.5	17.0	11.2	11.0	73.0	1.3	3.4	9.8	0.0
Minimum	24.00	8.70	0.0	3.5	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	110.00	53.00	0.0	9.0	17.0	13.0	11.0	73.0	1.3	3.4	9.8	0.0
Count	20	20	20	20	20	20	20	20	20	20	16	4
Confidence Level(95.0%)	10.23	5.46	0.0	0.8	2.4	1.5	1.3	9.5	0.1	0.5	1.5	0.0

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	272	178	3.2	8.0	45.8	38.5	7.2	6.6
Standard Error	23	15	1.1	1.7	2.4	2.8	2.0	1.9
Median	295	200	0.0	6.9	47.5	42.5	4.9	4.5
Mode	240	200	0.0	0.0	48.0	36.0	3.6	4.5
Standard Deviation	103	68	5.0	7.1	10.6	12.7	9.1	8.5
Sample Variance	10693	4632	24.5	49.8	111.7	161.7	82.8	72.2
Kurtosis	0	-1	2.8	1.2	-0.3	-0.5	17.9	18.2
Skewness	0	0	1.8	1.1	-0.8	-0.8	4.1	4.2
Range	403	227	17.0	26.0	33.0	42.0	42.7	39.4
Minimum	97	63	0.0	0.0	26.0	13.0	2.3	2.6
Maximum	500	290	17.0	26.0	59.0	55.0	45.0	42.0
Count	20	20	20	18	20	20	20	20
Confidence Level(95.0%)	48	32	2.3	3.5	4.9	6.0	4.3	4.0

ND = No Data

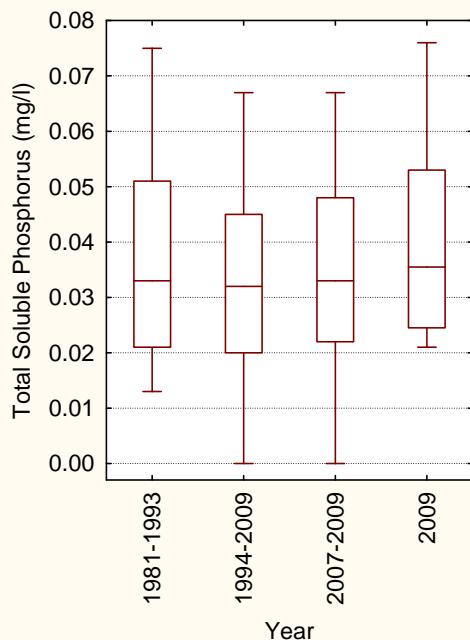
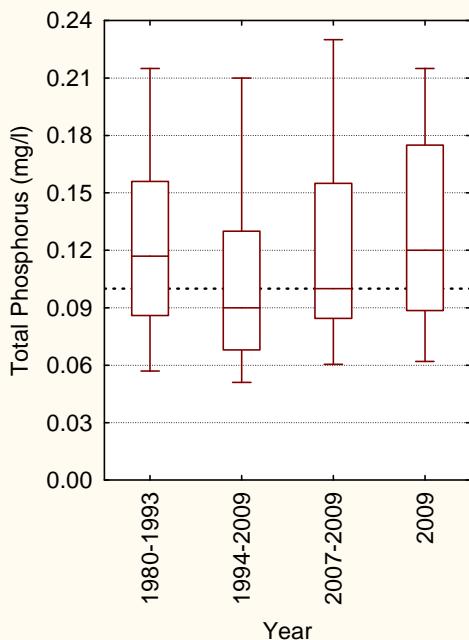
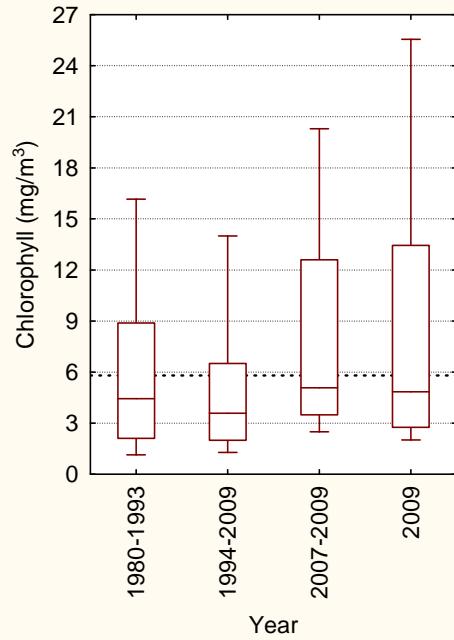
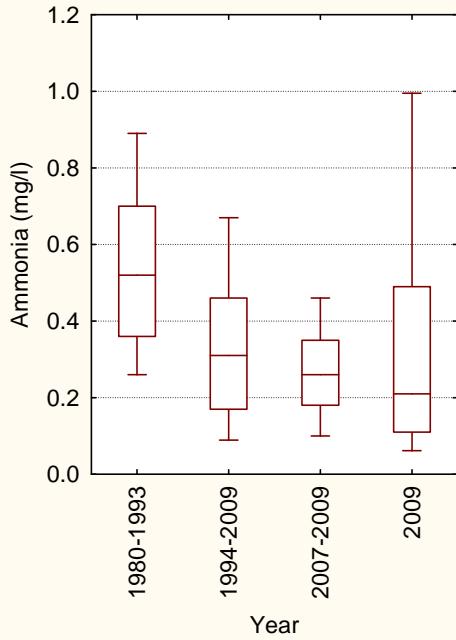
Provisional MMSD Water Quality Data

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



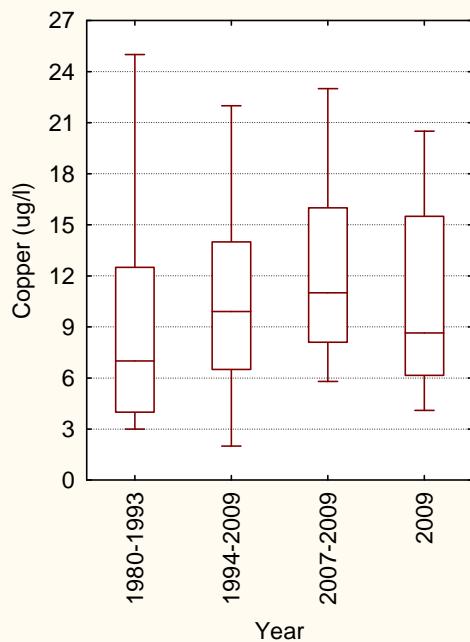
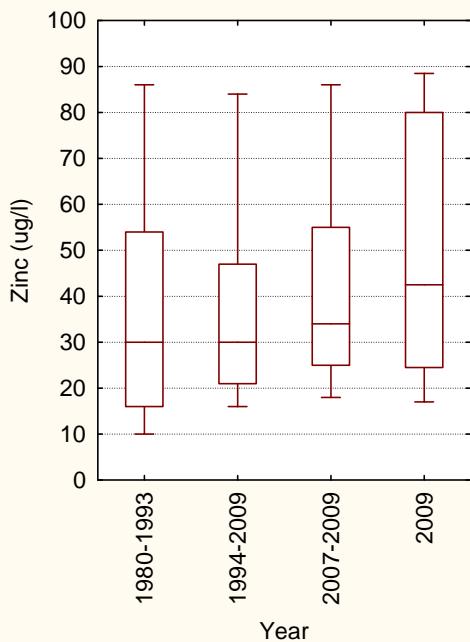
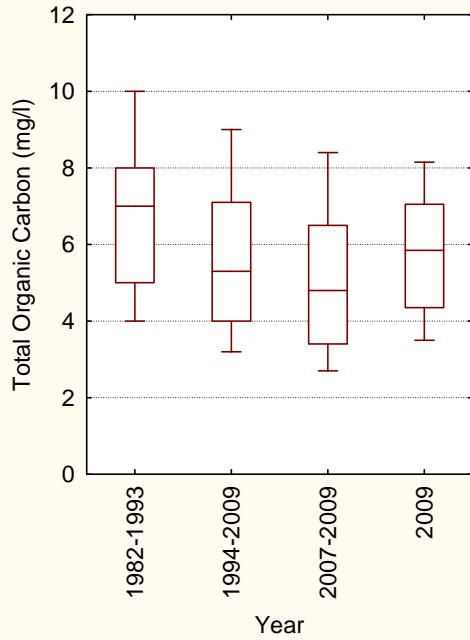
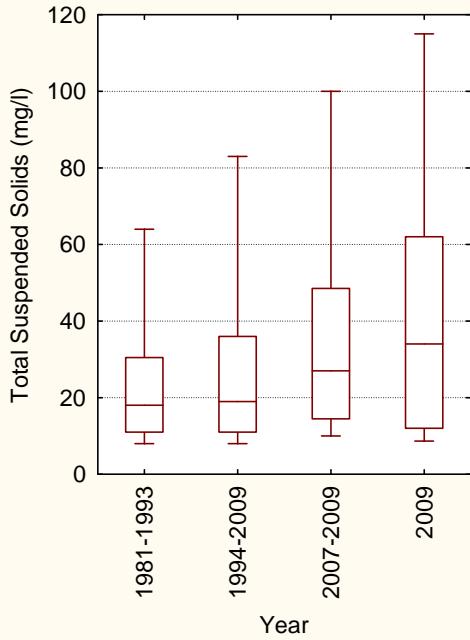
— Median □ 25%-75% ─ 10%-90%
 ---- WQ Standard/Criterion

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 - 2009

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	13.5	7.0	10.87	0.60	0.039	0.64	0.406	1.17	0.140	0.042	ND
Standard Error	0.1	1.3	0.5	3.15	0.09	0.004	0.09	0.125	0.20	0.017	0.006	ND
Median	7.6	13.6	7.2	4.85	0.43	0.037	0.50	0.210	0.88	0.120	0.036	ND
Mode	7.6	16.7	7.2	ND	0.33	0.032	0.40	0.210	1.00	0.160	0.022	ND
Standard Deviation	0.3	5.7	2.2	14.11	0.39	0.017	0.40	0.561	0.90	0.078	0.025	ND
Sample Variance	0.1	32.5	4.9	198.95	0.15	0.000	0.16	0.314	0.81	0.006	0.001	ND
Kurtosis	3.3	-0.3	0.1	8.38	4.92	-0.667	5.46	8.817	7.37	4.722	1.989	ND
Skewness	1.7	-0.4	-0.5	2.70	2.23	0.428	2.33	2.869	2.49	1.834	1.209	ND
Range	1.3	21.6	8.8	60.01	1.50	0.057	1.58	2.400	3.89	0.332	0.110	0.00
Minimum	7.3	0.8	1.9	0.99	0.30	0.014	0.32	0.000	0.41	0.058	0.000	0.00
Maximum	8.6	22.4	10.7	61.00	1.80	0.071	1.90	2.400	4.30	0.390	0.110	0.00
Count	20	20	19	20	19	19	20	20	20	20	20	0
Confidence Level(95.0%)	0.1	2.7	1.1	6.60	0.19	0.008	0.19	0.262	0.42	0.036	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	502.5	456.1	9.7	46.5	44.7	820	130.1	11076	3.0	8647
Standard Error	ND	ND	59.2	61.4	1.8	9.4	8.6	109	20.1	6819	0.3	5485
Median	ND	ND	395.0	371.9	7.8	34.0	36.1	668	110.0	930	2.9	375
Mode	ND	ND	510.0	280.0	18.0	10.0	ND	668	130.0	ND	ND	ND
Standard Deviation	ND	ND	264.6	274.5	8.1	42.2	38.4	486	89.9	28929	1.1	24532
Sample Variance	ND	ND	70009.2	75376.7	65.7	1779.2	1476.8	236018	8087.4	836900184	1.2	601799081
Kurtosis	ND	ND	1.6	1.0	-0.4	1.8	3.1	0	-0.5	13	-0.5	18
Skewness	ND	ND	1.4	1.3	0.8	1.5	1.6	1	0.8	4	0.1	4
Range	0.0	0.0	1010.0	999.0	27.0	154.3	156.0	1786	282.0	119991	4.1	109990
Minimum	0.0	0.0	190.0	140.0	0.0	5.7	5.0	154	18.0	9	1.0	10
Maximum	0.0	0.0	1200.0	1139.0	27.0	160.0	161.0	1940	300.0	120000	5.1	110000
Count	0	0	20	20	20	20	20	20	20	18	18	20
Confidence Level(95.0%)	ND	ND	123.8	128.5	3.8	19.7	18.0	227	42.1	14386	0.5	11481

ND = No Data

Provisional MMSD Water Quality Data

1ST STREET - SITE 14
KINNICKINNICK RIVER
WATER QUALITY DATA - 2009

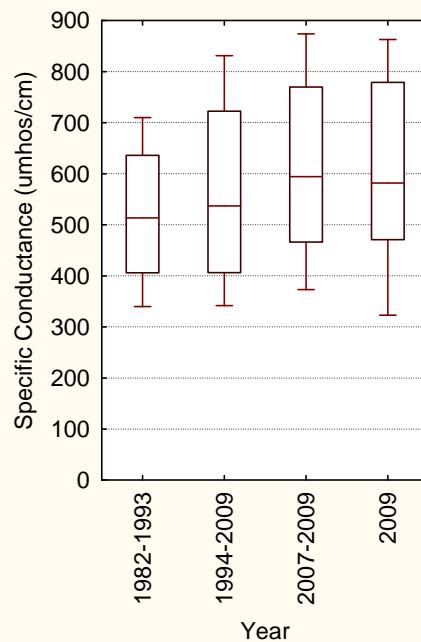
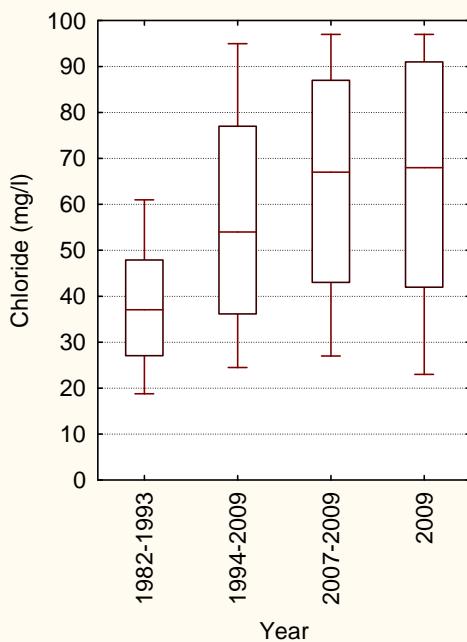
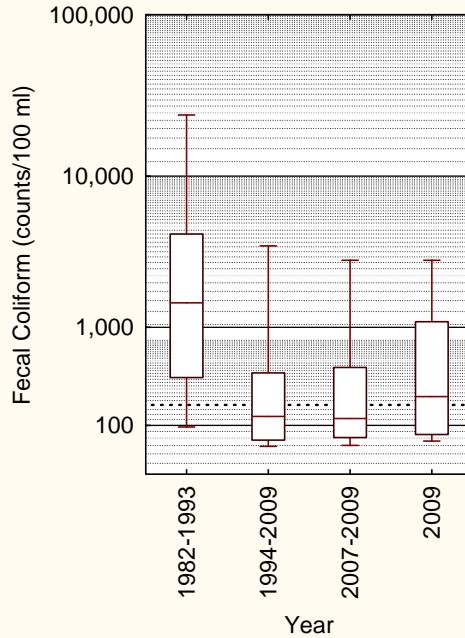
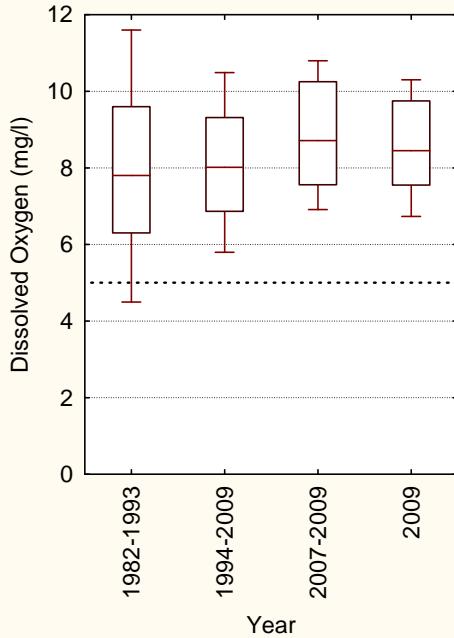
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	49.50	21.40	0.1	10.1	10.8	4.8	12.1	48.2	0.0	0.4	1.9	0.0
Standard Error	4.64	2.47	0.0	1.1	1.4	0.4	3.0	6.4	0.0	0.2	0.9	0.0
Median	50.00	20.00	0.0	9.6	8.7	4.1	7.5	42.5	0.0	0.0	0.0	0.0
Mode	51.00	19.00	0.0	9.8	ND	3.7	0.0	ND	0.0	0.0	0.0	0.0
Standard Deviation	20.77	11.06	0.2	4.8	6.4	1.8	13.4	28.5	0.0	1.1	3.6	0.0
Sample Variance	431.32	122.30	0.0	22.8	40.4	3.2	178.4	812.7	0.0	1.1	13.3	0.0
Kurtosis	-0.39	-0.55	7.4	0.3	-0.1	-0.2	0.5	-1.4	ND	4.9	0.3	ND
Skewness	0.41	0.59	2.9	1.0	0.9	0.9	1.2	0.4	ND	2.4	1.5	ND
Range	71.00	36.10	0.7	16.2	22.2	6.0	45.0	84.8	0.0	3.7	9.6	0.0
Minimum	18.00	5.90	0.0	4.8	2.8	2.9	0.0	9.2	0.0	0.0	0.0	0.0
Maximum	89.00	42.00	0.7	21.0	25.0	8.9	45.0	94.0	0.0	3.7	9.6	0.0
Count	20	20	20	20	20	20	20	20	20	20	17	4
Confidence Level(95.0%)	9.72	5.18	0.1	2.2	3.0	0.8	6.3	13.3	0.0	0.5	1.9	0.0

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	212	142	4.2	16.4	39.5	33.1	6.4	5.2
Standard Error	22	16	1.0	1.5	3.5	3.3	0.8	0.3
Median	205	140	3.1	15.5	37.0	33.0	5.9	5.4
Mode	150	130	0.0	16.0	37.0	31.0	6.2	5.6
Standard Deviation	97	69	4.5	6.5	15.6	14.9	3.8	1.4
Sample Variance	9457	4807	20.5	41.7	243.3	221.2	14.1	2.0
Kurtosis	0	-1	2.1	0.7	-1.0	-0.7	13.0	-0.4
Skewness	0	0	1.5	1.2	0.2	0.1	3.3	0.0
Range	319	233	17.0	21.4	51.0	51.9	17.8	5.3
Minimum	71	17	0.0	8.6	13.0	6.1	3.2	2.7
Maximum	390	250	17.0	30.0	64.0	58.0	21.0	8.0
Count	20	20	20	18	20	20	20	20
Confidence Level(95.0%)	46	32	2.1	3.2	7.3	7.0	1.8	0.7

ND = No Data

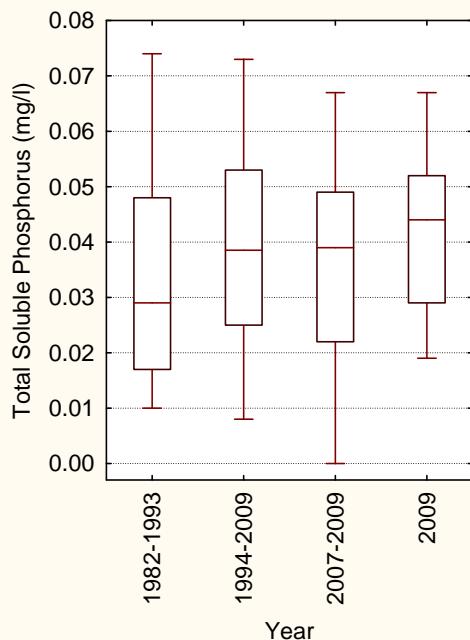
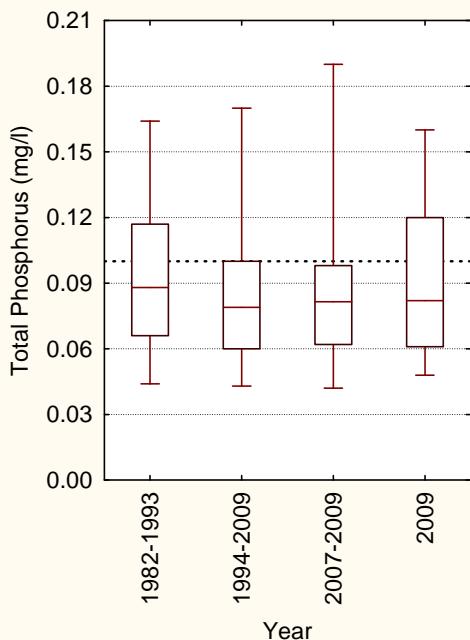
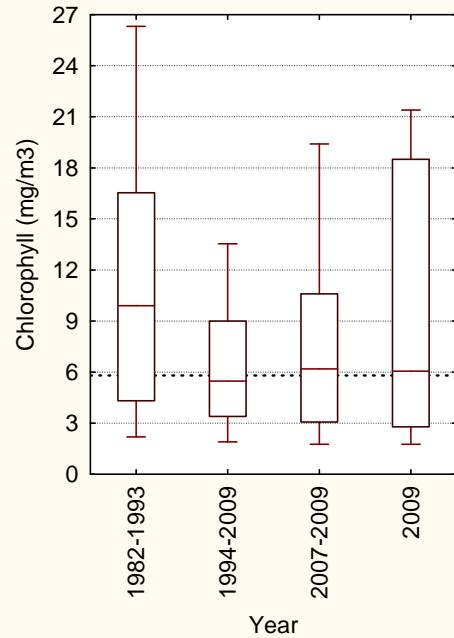
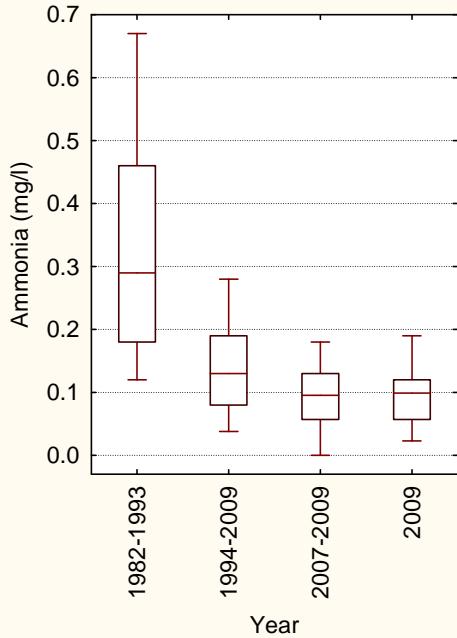
Provisional MMSD Water Quality Data

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



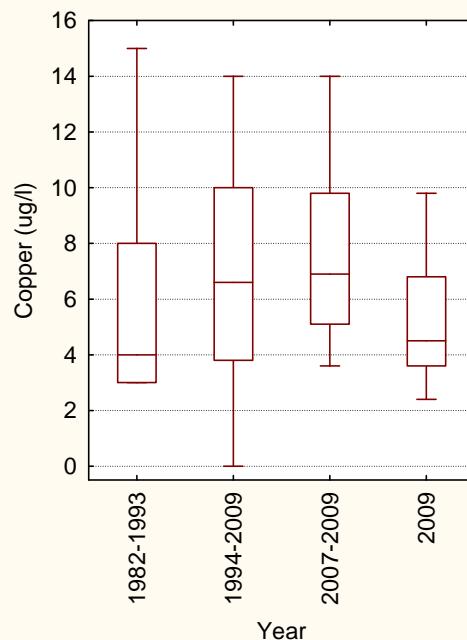
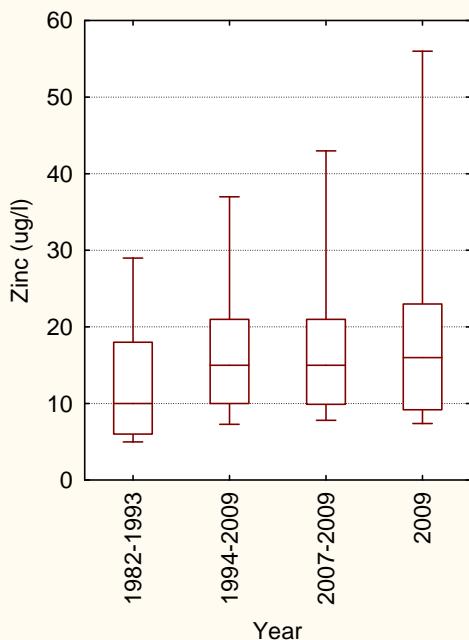
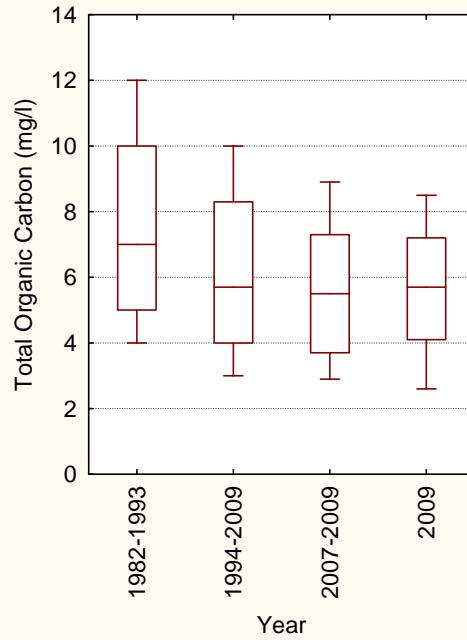
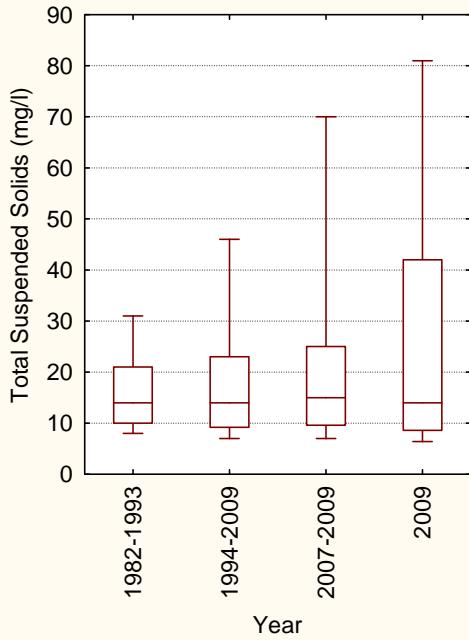
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	8.5	10.20	0.70	0.019	0.71	0.098	0.76	0.096	0.041	ND
Standard Error	0.0	0.5	0.2	2.16	0.03	0.002	0.03	0.008	0.07	0.008	0.003	ND
Median	8.0	14.1	8.5	6.06	0.67	0.017	0.68	0.099	0.70	0.082	0.044	ND
Mode	8.1	15.5	10.0	1.76	1.00	0.014	1.00	0.110	1.40	0.160	0.067	ND
Standard Deviation	0.2	3.6	1.4	8.36	0.21	0.010	0.21	0.054	0.44	0.056	0.018	ND
Sample Variance	0.0	12.9	2.0	69.88	0.04	0.000	0.04	0.003	0.19	0.003	0.000	ND
Kurtosis	0.0	-1.0	-0.6	-0.83	-1.51	1.254	-1.51	-0.225	-0.62	2.451	-0.307	ND
Skewness	-0.2	0.2	0.0	0.74	0.14	1.175	0.07	0.233	0.21	1.601	-0.161	ND
Range	0.8	14.1	5.8	25.24	0.66	0.043	0.65	0.210	1.60	0.239	0.072	0.00
Minimum	7.6	8.1	5.6	1.76	0.34	0.004	0.35	0.000	0.00	0.021	0.000	0.00
Maximum	8.4	22.2	11.4	27.00	1.00	0.047	1.00	0.210	1.60	0.260	0.072	0.00
Count	45	45	45	15	45	45	45	45	45	45	45	0
Confidence Level(95.0%)	0.1	1.1	0.4	4.63	0.06	0.003	0.06	0.016	0.13	0.017	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	0.7	1.7	376.8	347.0	7.1	29.8	23.7	602	65.4	13307	2.6	ND
Standard Error	0.1	0.2	18.4	19.0	1.2	5.2	4.6	28	4.3	12623	0.3	ND
Median	0.8	1.7	390.0	341.0	4.0	14.0	10.8	582	68.0	250	2.4	ND
Mode	1.0	1.3	410.0	498.0	0.0	12.0	12.5	581	71.0	800	2.9	ND
Standard Deviation	0.3	0.8	123.6	127.5	7.8	34.9	31.2	188	28.7	48890	1.0	ND
Sample Variance	0.1	0.7	15280.9	16245.3	60.1	1220.1	972.6	35365	825.8	2390211087	1.0	ND
Kurtosis	-1.0	-1.0	0.1	-0.5	1.1	2.9	5.3	-1	-0.8	15	2.6	ND
Skewness	-0.5	0.0	-0.4	-0.2	1.4	1.9	2.4	0	0.0	4	1.3	ND
Range	1.0	2.8	555.0	557.4	30.0	135.2	126.1	595	104.0	189981	4.0	0
Minimum	0.1	0.3	35.0	26.6	0.0	4.8	2.9	296	16.0	19	1.3	0
Maximum	1.1	3.1	590.0	584.0	30.0	140.0	129.0	891	120.0	190000	5.3	0
Count	15	14	45	45	45	45	45	45	45	15	15	0
Confidence Level(95.0%)	0.2	0.5	37.1	38.3	2.3	10.5	9.4	56	8.6	27074	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

C-NW RAILWAY - SITE 15
MILWAUKEE RIVER
WATER QUALITY DATA - 2009

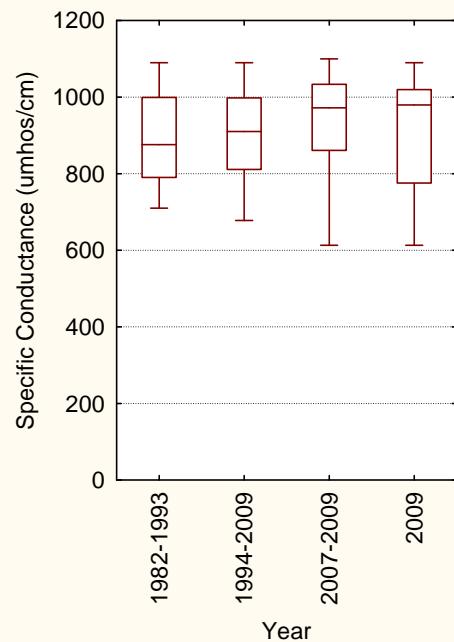
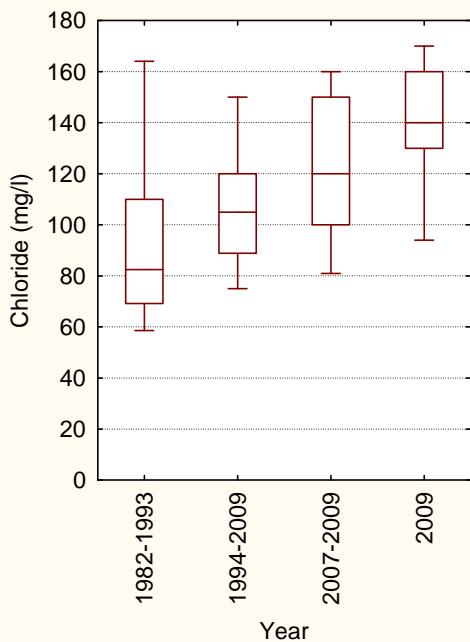
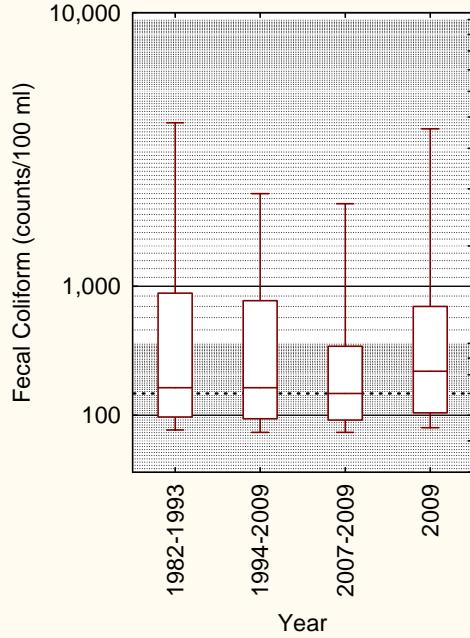
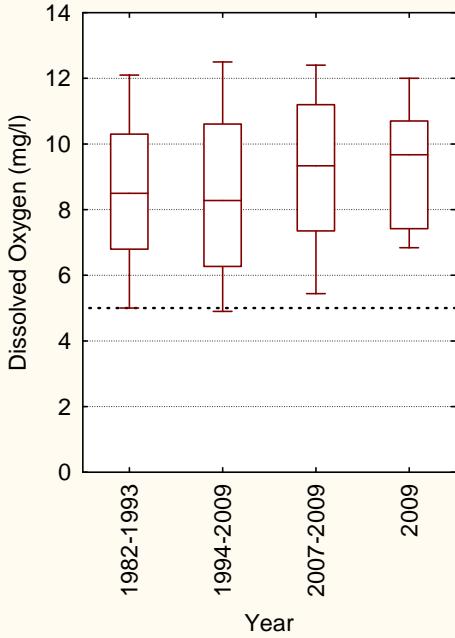
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	49.87	23.53	0.0	6.0	5.5	2.9	1.2	20.7	0.0	0.5	2.8	0.0
Standard Error	3.25	2.07	0.0	0.5	0.8	0.4	0.9	4.6	0.0	0.3	1.0	0.0
Median	49.00	21.00	0.0	5.2	4.5	2.4	0.0	16.0	0.0	0.0	0.0	0.0
Mode	40.00	36.00	0.0	ND	6.8	2.4	0.0	ND	0.0	0.0	0.0	0.0
Standard Deviation	12.59	8.00	0.0	1.8	3.3	1.6	3.5	17.9	0.0	1.0	3.7	0.0
Sample Variance	158.41	63.98	0.0	3.4	10.8	2.5	12.1	319.2	0.0	0.9	14.0	0.0
Kurtosis	-0.96	-0.84	ND	-0.3	4.5	8.0	11.0	0.7	ND	1.2	-1.6	ND
Skewness	0.44	0.41	ND	0.9	2.0	2.7	3.3	1.3	ND	1.7	0.7	ND
Range	39.00	24.00	0.0	6.0	12.9	6.2	13.0	58.0	0.0	2.6	8.9	0.0
Minimum	32.00	12.00	0.0	4.0	2.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	71.00	36.00	0.0	10.0	15.0	8.0	13.0	58.0	0.0	2.6	8.9	0.0
Count	15	15	15	15	15	15	15	15	15	15	13	4
Confidence Level(95.0%)	6.97	4.43	0.0	1.0	1.8	0.9	1.9	9.9	0.0	0.5	2.3	0.0

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	223	173	1.3	9.0	46.6	40.8	5.7	5.3
Standard Error	16	9	0.3	1.4	1.9	1.8	0.3	0.3
Median	210	160	0.0	7.6	43.0	38.0	5.7	5.4
Mode	320	150	0.0	4.2	42.0	35.0	8.4	7.6
Standard Deviation	63	58	2.1	5.3	12.9	11.7	2.2	2.0
Sample Variance	4021	3359	4.3	28.1	167.7	137.8	4.6	4.0
Kurtosis	-1	-1	0.5	-0.4	-1.0	-0.9	-1.2	-1.1
Skewness	1	0	1.4	0.4	0.3	0.2	-0.1	-0.1
Range	200	214	6.4	19.0	45.0	42.0	7.1	6.6
Minimum	130	56	0.0	0.0	24.0	18.0	2.2	1.8
Maximum	330	270	6.4	19.0	69.0	60.0	9.3	8.4
Count	15	45	45	15	45	45	45	45
Confidence Level(95.0%)	35	17	0.6	2.9	3.9	3.5	0.6	0.6

ND = No Data

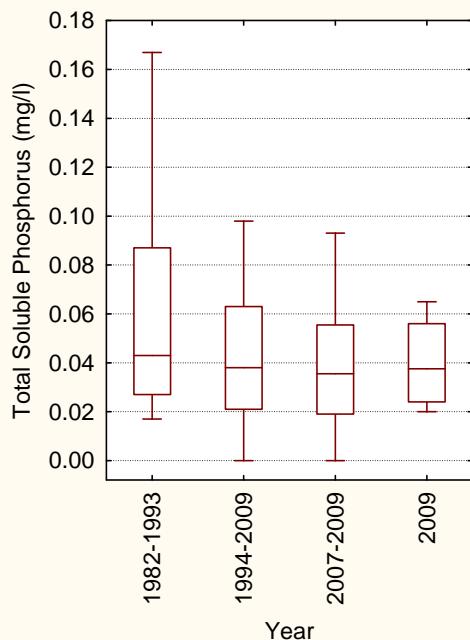
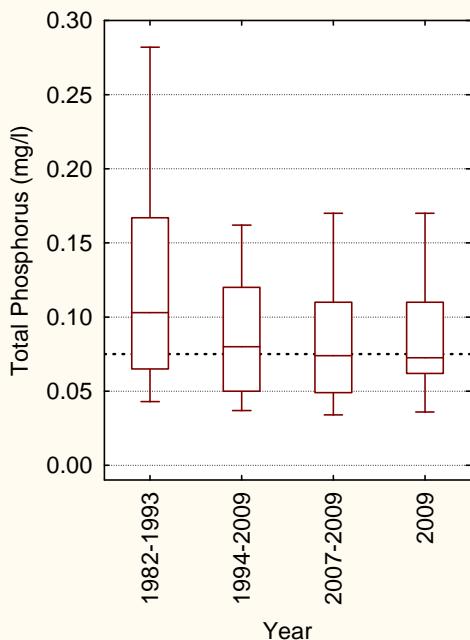
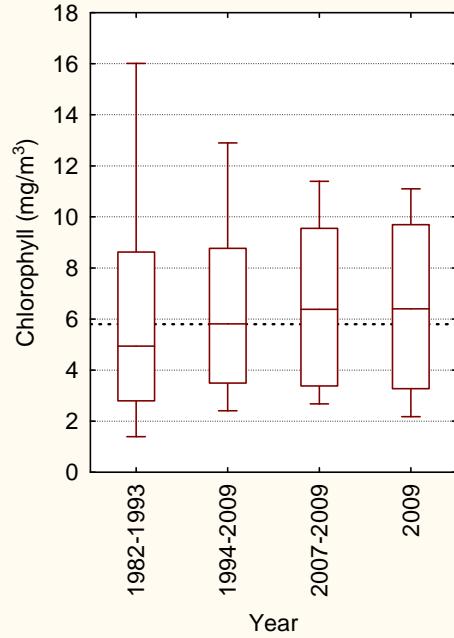
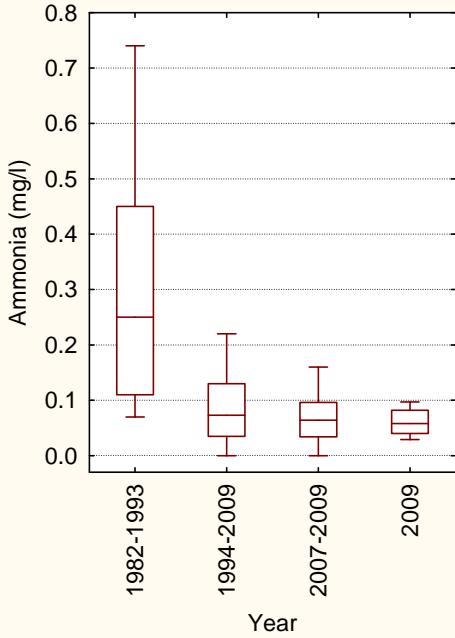
Provisional MMSD Water Quality Data

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



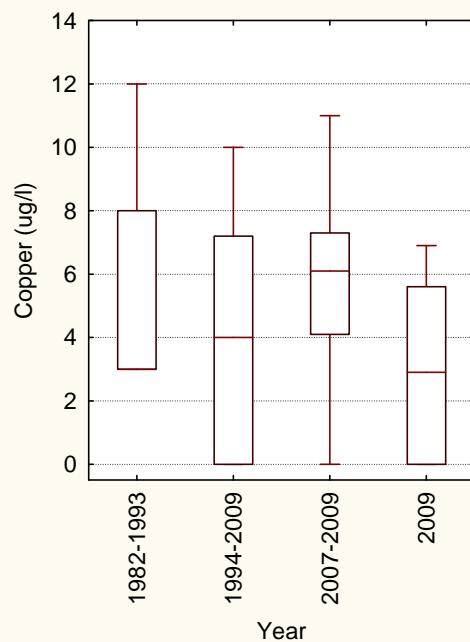
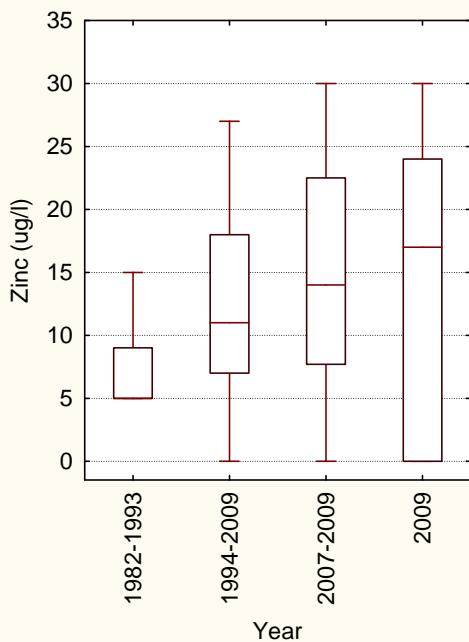
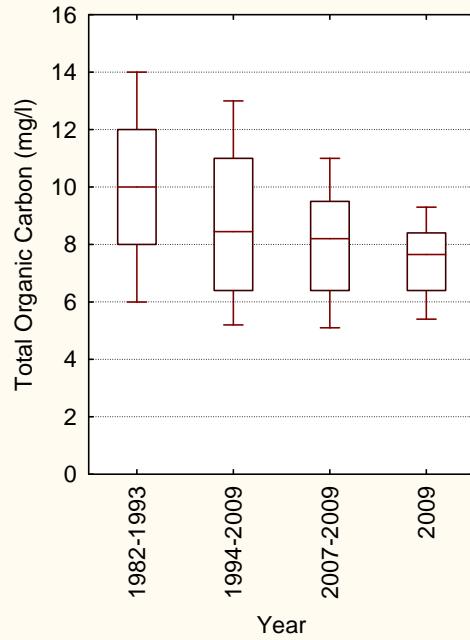
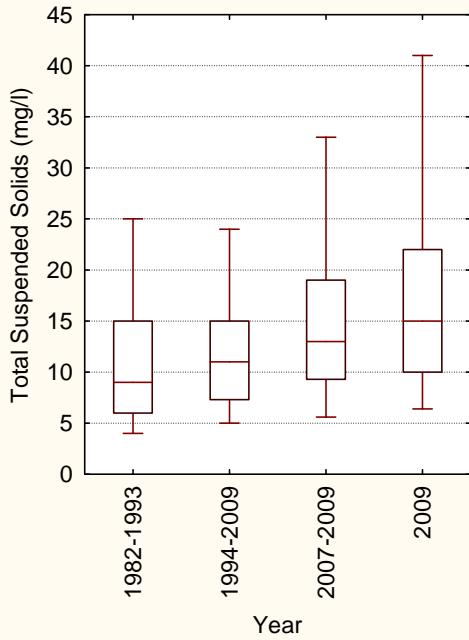
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	11.2	9.3	6.33	0.52	0.019	0.65	0.086	0.83	0.091	0.042	ND
Standard Error	0.1	1.6	0.5	0.76	0.07	0.002	0.08	0.022	0.09	0.011	0.005	ND
Median	7.8	11.8	9.7	6.40	0.56	0.017	0.70	0.058	0.81	0.073	0.038	ND
Mode	7.8	11.8	10.7	ND	0.24	0.032	1.20	0.082	1.80	0.170	0.018	ND
Standard Deviation	0.3	7.4	2.1	3.56	0.32	0.008	0.38	0.104	0.44	0.050	0.021	ND
Sample Variance	0.1	54.1	4.6	12.67	0.10	0.000	0.15	0.011	0.19	0.003	0.000	ND
Kurtosis	1.3	-1.3	-1.1	-1.01	-1.61	-0.550	-1.49	15.844	1.12	1.413	0.138	ND
Skewness	-1.2	-0.1	-0.1	0.36	-0.04	0.686	-0.09	3.813	0.73	1.235	0.861	ND
Range	1.1	21.9	7.4	11.85	0.89	0.026	1.09	0.498	1.80	0.197	0.075	0.00
Minimum	7.1	-0.2	5.4	1.45	0.10	0.007	0.11	0.022	0.00	0.033	0.018	0.00
Maximum	8.2	21.7	12.8	13.30	0.99	0.033	1.20	0.520	1.80	0.230	0.093	0.00
Count	22	22	22	22	19	18	22	22	22	22	22	0
Confidence Level(95.0%)	0.1	3.3	0.9	1.58	0.15	0.004	0.17	0.046	0.19	0.022	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	537.3	514.8	5.0	22.4	14.5	903	136.0	1216	2.5	ND
Standard Error	ND	ND	23.3	25.2	1.1	5.3	2.8	42	6.3	533	0.2	ND
Median	ND	ND	575.0	557.9	3.3	15.0	11.5	980	140.0	320	2.5	ND
Mode	ND	ND	600.0	ND	5.6	11.0	ND	1000	150.0	110	2.0	ND
Standard Deviation	ND	ND	109.3	118.2	5.2	25.0	13.2	196	29.7	2261	0.8	ND
Sample Variance	ND	ND	11944.6	13981.6	26.8	623.0	175.5	38454	879.2	5114222	0.7	ND
Kurtosis	ND	ND	0.9	0.0	8.4	11.5	7.8	0	-0.4	7	1.0	ND
Skewness	ND	ND	-1.2	-1.0	2.6	3.1	2.6	-1	-0.7	3	-0.3	ND
Range	0.0	0.0	430.0	430.0	24.0	116.8	59.4	788	105.0	8797	3.5	0
Minimum	0.0	0.0	270.0	254.0	0.0	3.2	3.1	442	75.0	3	0.5	0
Maximum	0.0	0.0	700.0	684.0	24.0	120.0	62.5	1230	180.0	8800	3.9	0
Count	0	0	22	22	22	22	22	22	22	18	18	0
Confidence Level(95.0%)	ND	ND	48.5	52.4	2.3	11.1	5.9	87	13.1	1125	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

COUNTY LINE ROAD - SITE 16
MENOMONEE RIVER
WATER QUALITY DATA - 2009

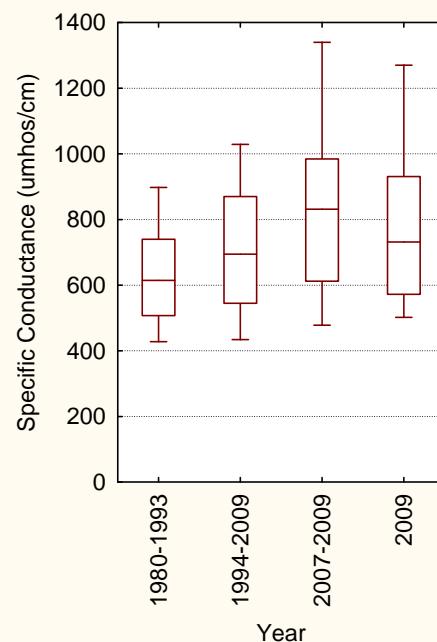
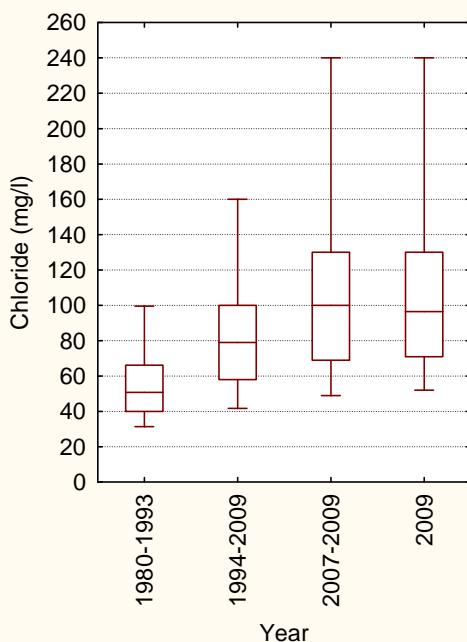
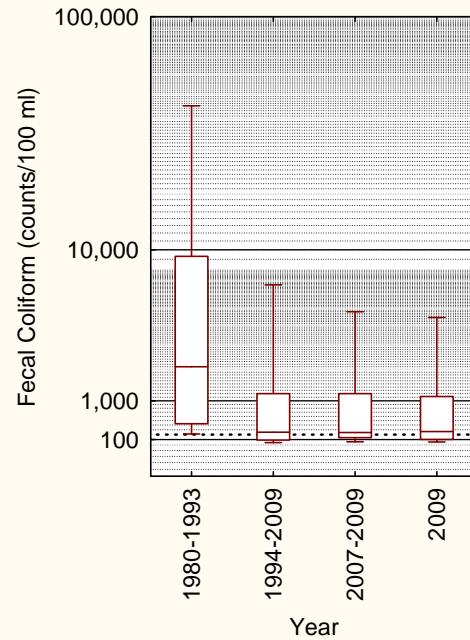
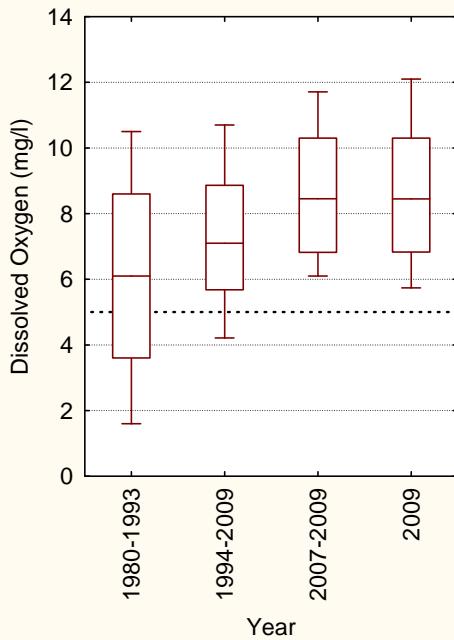
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	66.73	34.91	0.0	5.2	3.4	4.1	0.3	15.2	0.0	0.6	1.7	0.0
Standard Error	3.40	1.71	0.0	0.2	0.6	0.9	0.2	2.7	0.0	0.2	0.7	0.0
Median	63.50	37.00	0.0	5.1	2.9	3.3	0.0	17.0	0.0	0.0	0.0	0.0
Mode	82.00	41.00	0.0	5.6	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	15.97	8.02	0.0	1.0	3.0	4.1	0.9	12.9	0.0	1.1	3.1	0.0
Sample Variance	254.97	64.28	0.0	0.9	8.8	16.6	0.8	166.4	0.0	1.2	9.4	0.0
Kurtosis	-1.01	0.01	ND	-0.6	-0.8	19.8	12.7	-0.7	ND	0.3	1.1	ND
Skewness	0.18	-0.87	ND	0.2	0.4	4.4	3.6	0.3	ND	1.5	1.5	ND
Range	57.00	30.00	0.0	3.4	9.8	20.1	3.8	43.0	0.0	3.0	9.6	0.0
Minimum	39.00	16.00	0.0	3.5	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	96.00	46.00	0.0	6.9	9.8	22.0	3.8	43.0	0.0	3.0	9.6	0.0
Count	22	22	22	22	22	22	22	22	22	22	19	4
Confidence Level(95.0%)	7.08	3.55	0.0	0.4	1.3	1.8	0.4	5.7	0.0	0.5	1.5	0.0

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	233	1.4	11.2	60.3	52.7	7.5	7.1
Standard Error	15	12	0.4	0.8	2.5	2.7	0.4	0.4
Median	315	245	0.0	12.0	61.5	55.0	7.7	7.4
Mode	310	300	0.0	12.0	71.0	55.0	8.2	7.8
Standard Deviation	69	55	1.9	3.6	11.8	12.6	1.8	1.7
Sample Variance	4709	2994	3.8	13.0	139.5	157.9	3.1	3.1
Kurtosis	0	0	-0.2	-0.7	1.1	0.9	0.7	0.7
Skewness	0	-1	1.1	-0.1	-1.0	-1.1	0.3	-0.2
Range	270	200	5.9	13.0	47.0	49.0	7.8	7.9
Minimum	160	100	0.0	5.0	29.0	20.0	4.2	3.1
Maximum	430	300	5.9	18.0	76.0	69.0	12.0	11.0
Count	22	22	21	20	22	22	22	22
Confidence Level(95.0%)	30	24	0.9	1.7	5.2	5.6	0.8	0.8

ND = No Data

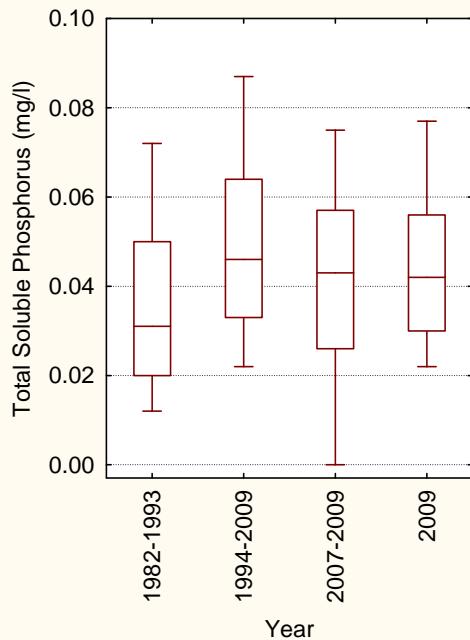
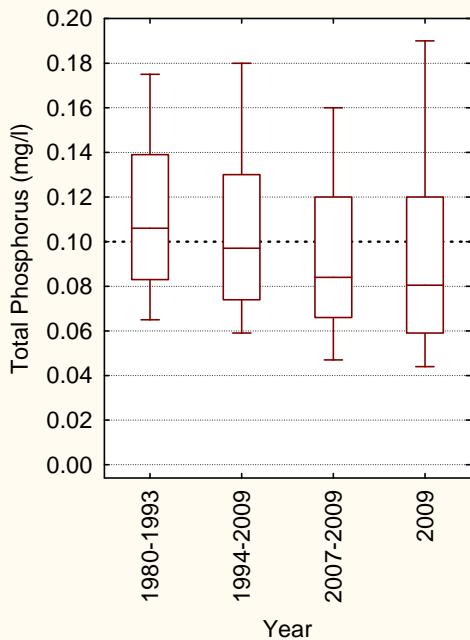
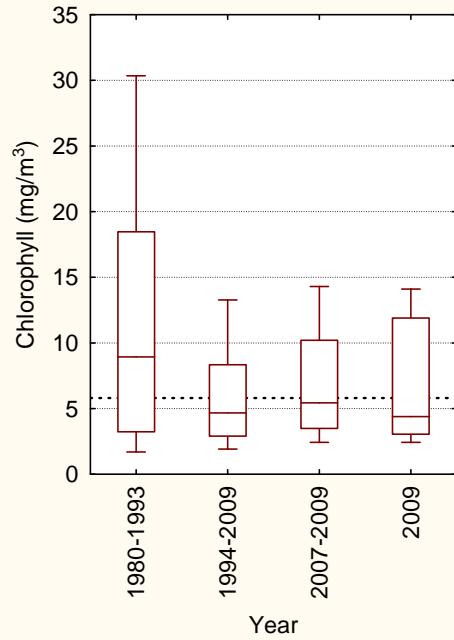
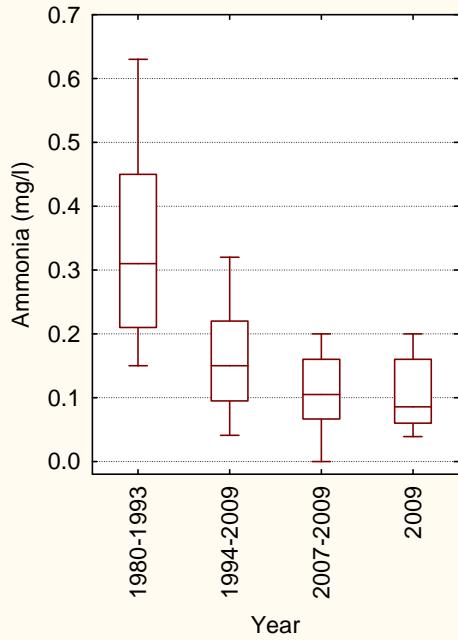
Provisional MMSD Water Quality Data

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



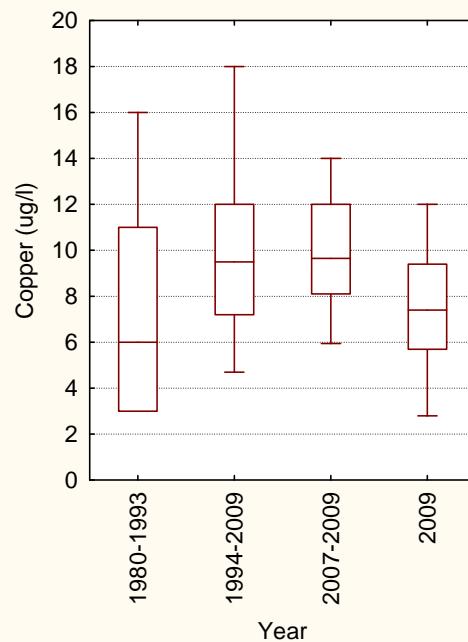
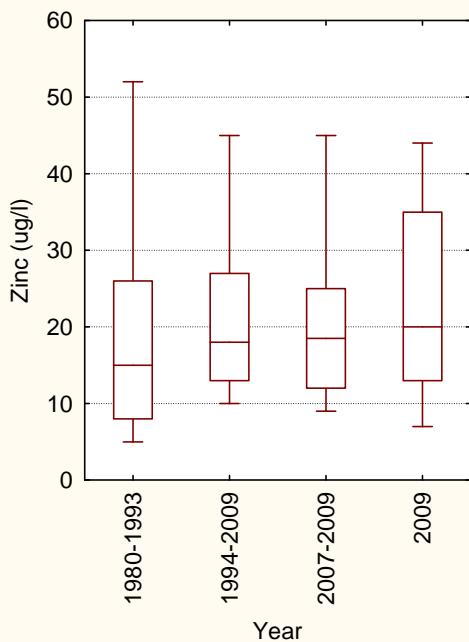
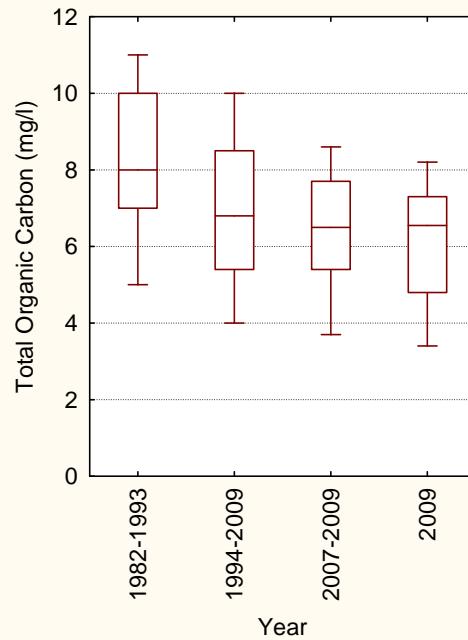
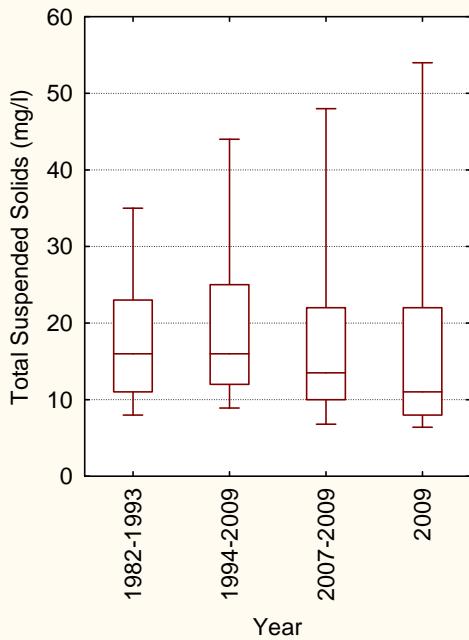
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	14.6	8.8	6.76	0.70	0.019	0.78	0.114	0.75	0.095	0.045	ND
Standard Error	0.0	0.8	0.3	1.11	0.04	0.001	0.04	0.010	0.04	0.006	0.003	ND
Median	8.0	15.1	8.5	4.40	0.65	0.016	0.73	0.086	0.71	0.081	0.042	ND
Mode	7.9	11.2	10.3	ND	0.46	0.016	1.00	0.160	1.20	0.190	0.038	ND
Standard Deviation	0.3	6.2	2.2	5.21	0.30	0.010	0.34	0.084	0.35	0.049	0.022	ND
Sample Variance	0.1	38.6	5.0	27.13	0.09	0.000	0.12	0.007	0.13	0.002	0.001	ND
Kurtosis	0.4	-0.6	-0.7	0.16	3.75	3.136	2.59	2.464	0.43	-0.390	0.257	ND
Skewness	0.2	-0.3	0.3	1.18	1.61	1.641	1.48	1.495	0.43	0.899	0.632	ND
Range	1.3	25.3	8.6	17.73	1.49	0.043	1.57	0.400	1.70	0.164	0.100	0.00
Minimum	7.4	0.9	4.9	1.87	0.31	0.007	0.33	0.000	0.00	0.036	0.000	0.00
Maximum	8.7	26.2	13.5	19.60	1.80	0.050	1.90	0.400	1.70	0.200	0.100	0.00
Count	66	66	66	22	57	57	66	66	66	66	66	0
Confidence Level(95.0%)	0.1	1.5	0.5	2.31	0.08	0.003	0.08	0.021	0.09	0.012	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	473.6	453.3	5.0	20.3	20.8	825	121.3	1655	2.6	1534
Standard Error	ND	ND	23.0	23.4	0.5	2.4	2.9	47	10.6	865	0.2	775
Median	ND	ND	435.0	410.4	3.7	11.0	10.9	732	96.5	260	2.4	260
Mode	ND	ND	380.0	268.0	4.0	11.0	13.5	398	120.0	140	2.1	210
Standard Deviation	ND	ND	187.0	190.5	4.1	19.3	23.7	379	86.2	3867	0.7	3637
Sample Variance	ND	ND	34971.2	36280.4	16.7	371.7	562.6	143300	7431.6	14950855	0.5	13229176
Kurtosis	ND	ND	5.2	4.8	0.2	1.4	2.9	6	7.0	14	-0.1	17
Skewness	ND	ND	1.7	1.7	1.1	1.6	2.0	2	2.3	4	0.9	4
Range	0.0	0.0	1110.0	1115.0	15.0	72.0	94.1	1998	498.0	16946	2.5	16957
Minimum	0.0	0.0	190.0	168.0	0.0	4.0	3.9	352	22.0	54	1.7	43
Maximum	0.0	0.0	1300.0	1283.0	15.0	76.0	98.0	2350	520.0	17000	4.2	17000
Count	0	0	66	66	66	66	66	66	66	20	20	22
Confidence Level(95.0%)	ND	ND	46.0	46.8	1.0	4.7	5.8	93	21.2	1810	0.3	1613

ND = No Data

Provisional MMSD Water Quality Data

2ND STREET - SITE 17
MENOMONEE RIVER
WATER QUALITY DATA - 2009

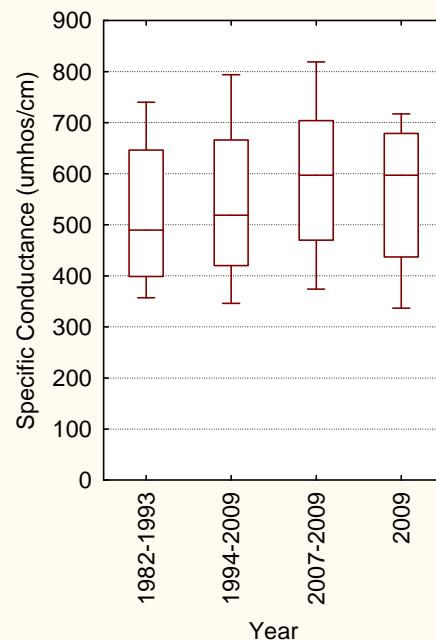
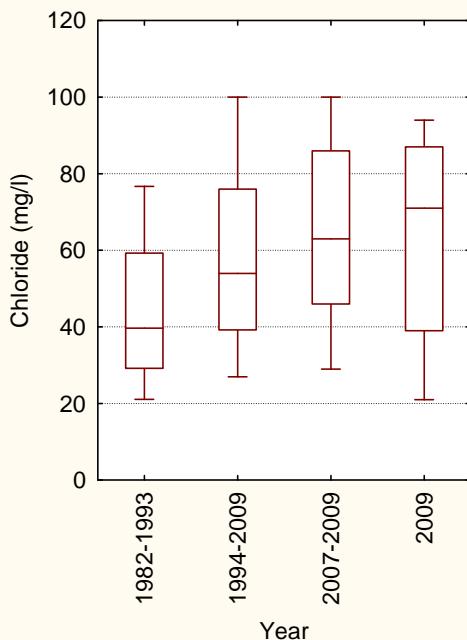
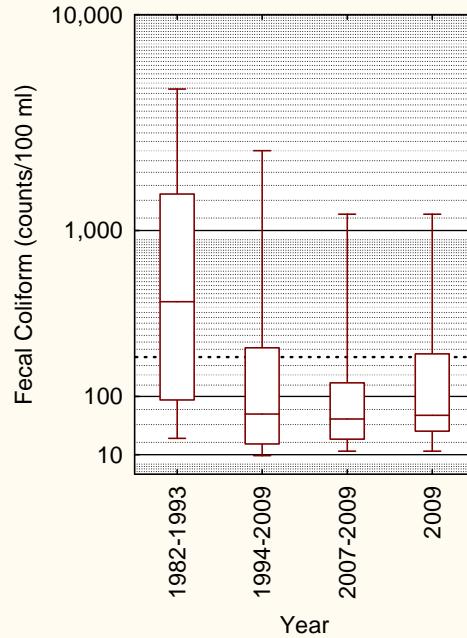
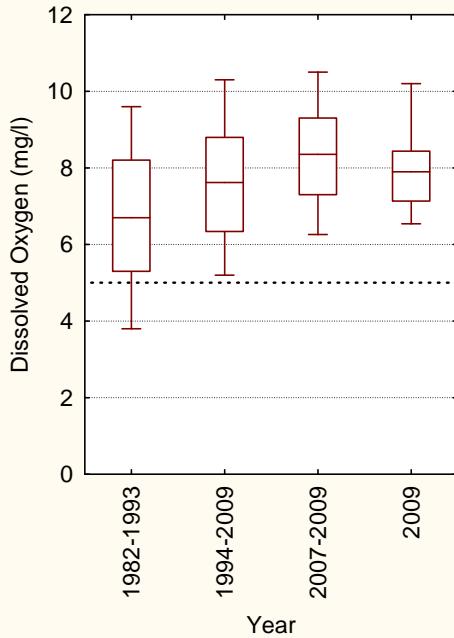
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	57.14	27.41	0.0	5.8	7.4	3.3	0.8	23.0	0.1	0.2	1.5	0.0
Standard Error	3.30	1.87	0.0	0.3	0.7	0.3	0.4	3.3	0.1	0.1	0.7	0.0
Median	54.50	28.00	0.0	5.9	7.4	2.9	0.0	20.0	0.0	0.0	0.0	0.0
Mode	73.00	34.00	0.0	6.2	12.0	2.5	0.0	14.0	0.0	0.0	0.0	0.0
Standard Deviation	15.49	8.76	0.0	1.3	3.3	1.6	2.0	15.4	0.2	0.6	3.0	0.0
Sample Variance	240.03	76.73	0.0	1.7	10.8	2.6	3.8	237.6	0.1	0.3	9.2	0.0
Kurtosis	-1.31	-0.65	ND	-0.4	0.3	14.1	6.1	0.6	22.0	8.2	2.1	ND
Skewness	0.16	0.11	ND	0.4	-0.2	3.5	2.5	0.9	4.7	3.1	1.9	ND
Range	51.00	32.00	0.0	4.6	14.0	7.9	7.4	63.0	1.1	2.1	8.8	0.0
Minimum	33.00	12.00	0.0	3.8	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	84.00	44.00	0.0	8.4	14.0	9.8	7.4	63.0	1.1	2.1	8.8	0.0
Count	22	22	22	22	22	22	22	22	22	22	19	4
Confidence Level(95.0%)	6.87	3.88	0.0	0.6	1.5	0.7	0.9	6.8	0.1	0.3	1.5	0.0

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	256	188	1.4	10.2	49.6	43.4	6.1	5.8
Standard Error	16	8	0.3	1.0	1.7	1.6	0.2	0.2
Median	255	180	0.0	8.8	48.0	43.0	6.6	6.1
Mode	170	160	0.0	19.0	40.0	32.0	6.8	6.9
Standard Deviation	74	61	2.0	4.5	13.4	12.6	1.8	1.7
Sample Variance	5473	3766	4.0	20.1	180.1	159.7	3.1	2.8
Kurtosis	-1	-1	0.8	-0.3	-1.3	-1.2	-0.6	-0.6
Skewness	0	0	1.3	0.9	0.1	0.0	-0.3	-0.4
Range	260	221	7.2	14.4	50.0	46.0	7.4	7.2
Minimum	130	69	0.0	4.6	24.0	18.0	2.4	1.9
Maximum	390	290	7.2	19.0	74.0	64.0	9.8	9.1
Count	22	66	60	20	66	66	66	66
Confidence Level(95.0%)	33	15	0.5	2.1	3.3	3.1	0.4	0.4

ND = No Data

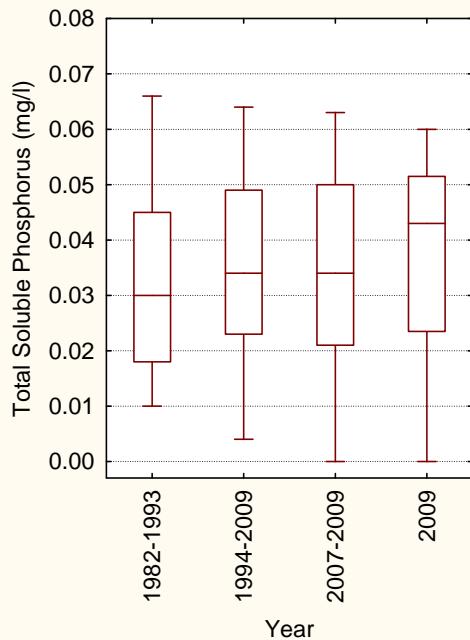
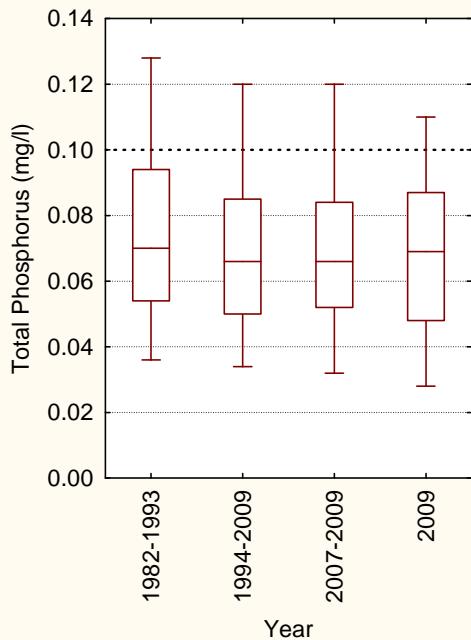
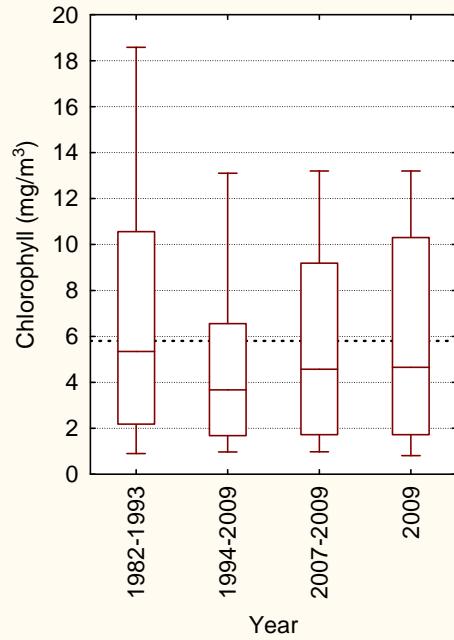
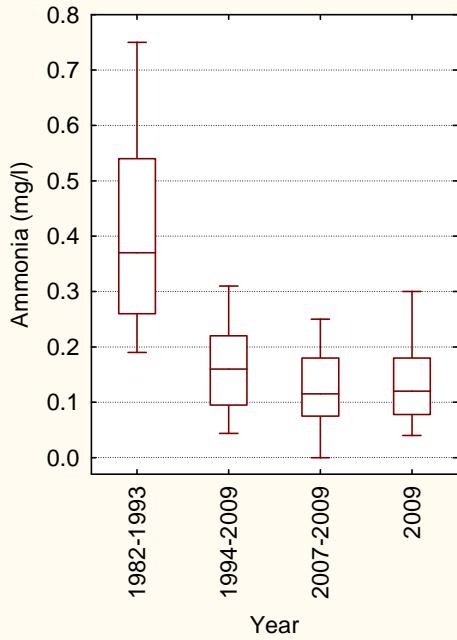
Provisional MMSD Water Quality Data

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



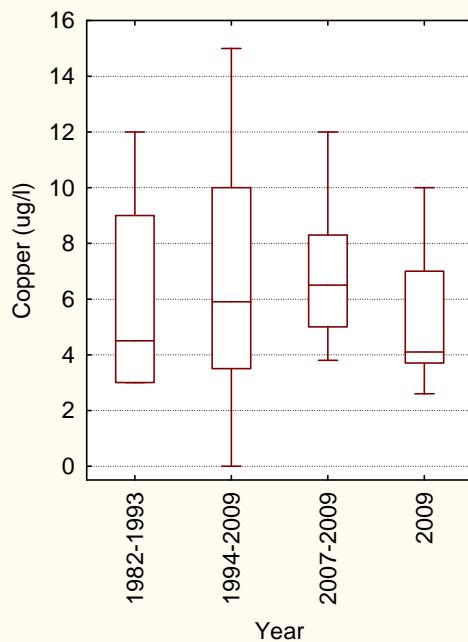
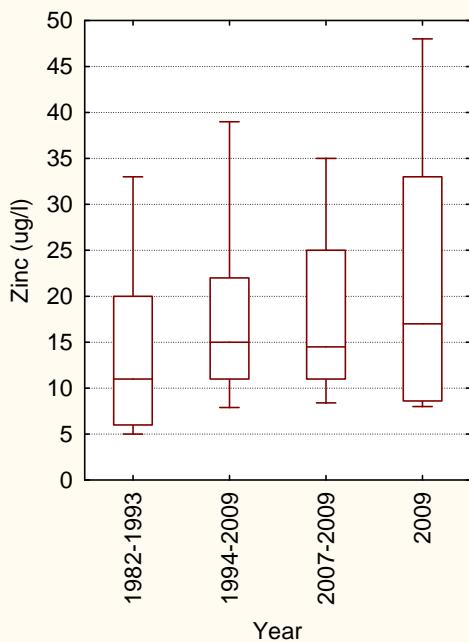
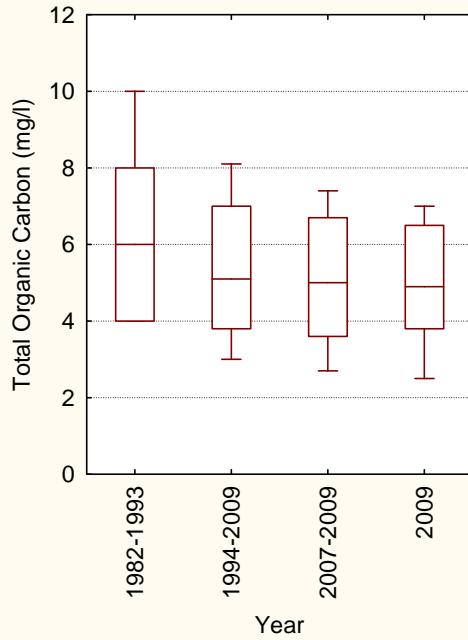
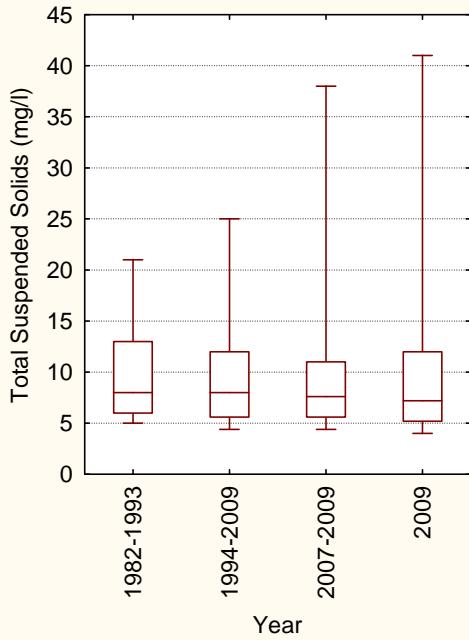
— Median □ 25%-75% █ 10%-90%
 ---- WQ Standard/Criterion

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 - 2009

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	13.7	7.9	6.00	0.68	0.022	0.70	0.144	0.64	0.074	0.037	ND
Standard Error	0.0	0.5	0.2	1.38	0.03	0.002	0.03	0.014	0.06	0.006	0.003	ND
Median	7.9	13.1	7.9	4.65	0.71	0.018	0.76	0.120	0.68	0.069	0.043	ND
Mode	8.0	11.0	7.8	ND	0.76	0.018	0.79	0.130	0.00	0.100	0.050	ND
Standard Deviation	0.2	3.2	1.4	4.99	0.19	0.014	0.19	0.096	0.40	0.042	0.020	ND
Sample Variance	0.0	9.9	2.1	24.92	0.04	0.000	0.04	0.009	0.16	0.002	0.000	ND
Kurtosis	-0.2	-1.0	0.4	-0.98	-0.20	1.307	-0.52	1.053	-0.59	3.791	-0.713	ND
Skewness	-0.6	0.3	0.3	0.62	0.32	1.418	0.15	1.226	-0.11	1.756	-0.535	ND
Range	0.7	11.9	6.7	14.50	0.75	0.054	0.74	0.390	1.40	0.189	0.068	0.00
Minimum	7.5	7.6	4.8	0.70	0.35	0.007	0.36	0.030	0.00	0.021	0.000	0.00
Maximum	8.2	19.5	11.5	15.20	1.10	0.061	1.10	0.420	1.40	0.210	0.068	0.00
Count	45	45	45	13	45	45	45	45	45	45	44	0
Confidence Level(95.0%)	0.1	0.9	0.4	3.02	0.06	0.004	0.06	0.029	0.12	0.013	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	1.1	2.4	334.4	317.5	3.3	16.9	19.8	562	61.8	2804	2.0	ND
Standard Error	0.1	0.4	16.1	15.8	0.5	3.2	4.6	23	4.0	2632	0.2	ND
Median	1.3	2.5	340.0	327.0	2.4	7.2	6.9	597	71.0	65	1.8	ND
Mode	1.3	ND	420.0	210.0	0.0	6.0	4.2	680	74.0	40	1.6	ND
Standard Deviation	0.5	1.4	107.7	105.9	3.6	21.7	31.1	153	26.9	9847	0.9	ND
Sample Variance	0.3	1.9	11597.8	11208.7	13.0	471.3	967.2	23516	724.2	96966695	0.9	ND
Kurtosis	-0.7	-0.7	0.4	0.3	4.9	3.5	6.3	-1	-1.2	14	3.8	ND
Skewness	-0.7	0.1	-0.6	-0.5	2.1	2.1	2.6	0	-0.3	4	1.7	ND
Range	1.7	4.8	475.0	473.0	16.0	87.2	125.9	567	84.0	36993	3.7	0
Minimum	0.1	0.2	65.0	61.4	0.0	2.8	3.1	292	16.0	7	0.8	0
Maximum	1.8	5.0	540.0	534.4	16.0	90.0	129.0	859	100.0	37000	4.6	0
Count	15	14	45	45	45	45	45	45	45	14	14	0
Confidence Level(95.0%)	0.3	0.8	32.4	31.8	1.1	6.5	9.3	46	8.1	5686	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

GREENFIELD AVENUE EXTENDED - SITE 18
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2009

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	45.80	20.53	0.0	5.9	5.4	3.1	2.1	23.1	0.2	0.4	0.0	0.0
Standard Error	2.75	1.70	0.0	0.7	0.8	0.5	1.4	4.4	0.2	0.3	0.0	0.0
Median	44.00	21.00	0.0	5.0	4.1	2.5	0.0	17.0	0.0	0.0	0.0	0.0
Mode	50.00	21.00	0.0	4.6	4.1	2.7	0.0	33.0	0.0	0.0	0.0	0.0
Standard Deviation	10.66	6.58	0.0	2.5	3.1	1.8	5.2	16.9	0.9	1.0	0.0	0.0
Sample Variance	113.60	43.27	0.0	6.4	9.5	3.1	27.4	286.9	0.8	1.0	0.0	0.0
Kurtosis	0.74	0.65	ND	8.0	3.8	9.4	11.4	1.6	15.0	4.9	ND	ND
Skewness	0.90	0.76	ND	2.7	1.9	2.9	3.3	1.3	3.9	2.5	ND	ND
Range	40.00	24.00	0.0	10.4	11.6	7.2	20.0	58.2	3.4	3.1	0.0	0.0
Minimum	31.00	12.00	0.0	3.6	2.4	1.7	0.0	7.8	0.0	0.0	0.0	0.0
Maximum	71.00	36.00	0.0	14.0	14.0	8.9	20.0	66.0	3.4	3.1	0.0	0.0
Count	15	15	15	15	15	15	15	15	15	15	12	4
Confidence Level(95.0%)	5.90	3.64	0.0	1.4	1.7	1.0	2.9	9.4	0.5	0.5	0.0	0.0

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	199	153	0.7	8.8	41.1	36.2	4.9	4.5
Standard Error	14	7	0.2	1.4	1.5	1.4	0.2	0.2
Median	200	150	0.0	7.8	39.5	34.5	4.9	4.6
Mode	200	130	0.0	14.0	47.0	31.0	7.1	6.5
Standard Deviation	53	44	1.4	5.4	10.2	9.1	1.6	1.6
Sample Variance	2841	1907	2.0	28.8	103.7	82.4	2.5	2.5
Kurtosis	0	0	0.8	-0.8	-0.6	-0.3	-1.1	-1.0
Skewness	1	0	1.6	-0.2	0.3	0.2	-0.2	-0.2
Range	190	188	4.4	18.0	42.0	40.0	5.0	5.0
Minimum	130	62	0.0	0.0	20.0	15.0	2.2	1.7
Maximum	320	250	4.4	18.0	62.0	55.0	7.2	6.7
Count	15	45	45	15	44	44	44	44
Confidence Level(95.0%)	30	13	0.4	3.0	3.1	2.8	0.5	0.5

ND = No Data

Provisional MMSD Water Quality Data

JONES ISLAND FERRY - SITE 19
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2009

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	13.9	8.3	6.20	0.68	0.020	0.70	0.109	0.61	0.074	0.036	ND
Standard Error	0.0	0.5	0.2	1.08	0.03	0.002	0.03	0.010	0.07	0.006	0.003	ND
Median	8.0	13.7	8.1	4.12	0.68	0.017	0.71	0.100	0.62	0.067	0.037	ND
Mode	8.1	10.8	8.4	ND	0.84	0.017	0.81	0.140	0.00	0.200	0.026	ND
Standard Deviation	0.2	3.3	1.4	4.19	0.19	0.013	0.19	0.069	0.50	0.042	0.018	ND
Sample Variance	0.0	10.8	1.9	17.54	0.04	0.000	0.04	0.005	0.25	0.002	0.000	ND
Kurtosis	0.0	-1.0	-0.3	-1.82	-0.35	2.541	-0.57	6.625	11.70	3.866	-0.279	ND
Skewness	-0.5	0.4	0.6	0.14	0.38	1.554	0.21	1.976	2.40	1.681	-0.341	ND
Range	0.7	12.1	5.5	11.24	0.73	0.058	0.72	0.379	3.00	0.200	0.067	0.00
Minimum	7.6	8.4	5.9	0.86	0.37	0.000	0.38	0.021	0.00	0.000	0.000	0.00
Maximum	8.3	20.5	11.4	12.10	1.10	0.058	1.10	0.400	3.00	0.200	0.067	0.00
Count	45	45	45	15	45	45	45	44	44	45	45	0
Confidence Level(95.0%)	0.1	1.0	0.4	2.32	0.06	0.004	0.06	0.021	0.15	0.013	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	0.9	2.2	360.4	342.7	3.5	17.7	18.5	569	60.7	2583	2.3	ND
Standard Error	0.1	0.3	15.7	16.1	0.7	3.2	4.8	25	4.1	1885	0.2	ND
Median	1.0	1.9	370.0	350.8	2.3	8.4	8.1	607	66.0	130	2.1	ND
Mode	1.1	1.5	410.0	379.0	0.0	31.0	12.6	607	93.0	ND	ND	ND
Standard Deviation	0.4	1.2	105.2	108.1	4.7	21.3	31.9	169	27.5	7302	0.9	ND
Sample Variance	0.2	1.5	11077.1	11676.5	22.5	455.8	1020.0	28670	758.4	53312069	0.8	ND
Kurtosis	0.5	-0.1	0.7	0.8	11.1	6.1	9.7	-1	-1.4	12	1.3	ND
Skewness	0.1	0.6	0.4	0.5	3.0	2.5	3.2	0	-0.3	3	1.3	ND
Range	1.7	4.4	510.0	513.6	26.0	89.6	137.4	571	84.0	27988	3.4	0
Minimum	0.2	0.3	180.0	174.0	0.0	2.4	2.6	262	14.0	12	1.1	0
Maximum	1.9	4.7	690.0	687.6	26.0	92.0	140.0	833	98.0	28000	4.4	0
Count	15	14	45	45	45	45	45	45	45	15	15	0
Confidence Level(95.0%)	0.2	0.7	31.6	32.5	1.4	6.4	9.6	51	8.3	4043	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

JONES ISLAND FERRY - SITE 19
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2009

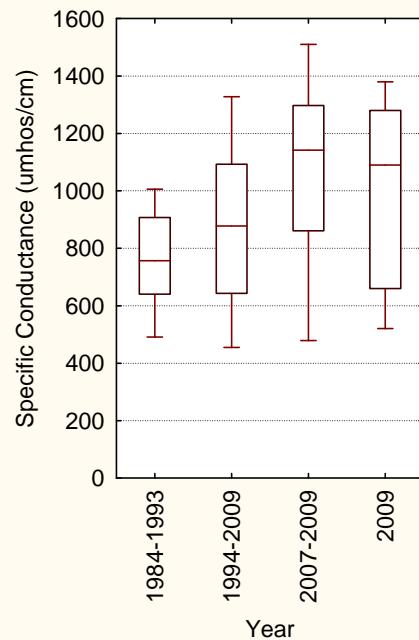
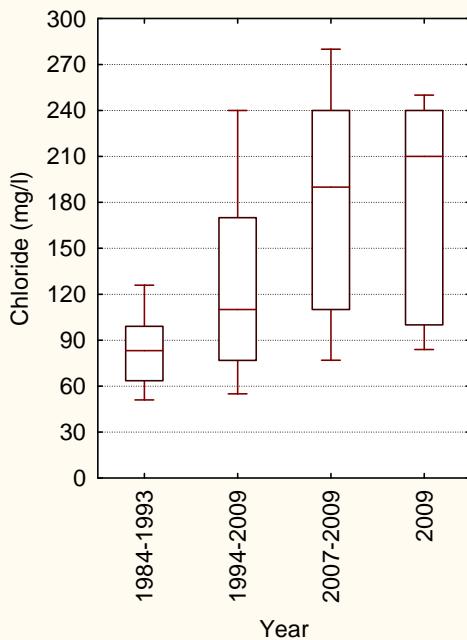
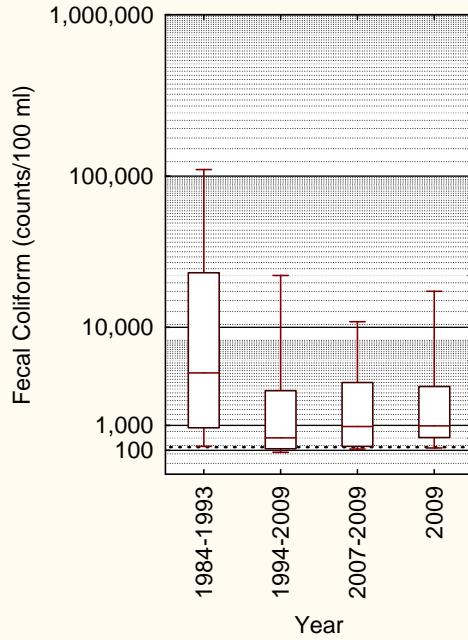
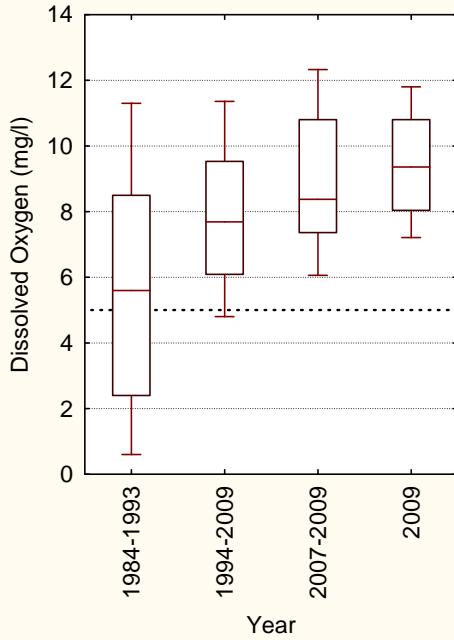
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	48.40	22.53	0.0	5.7	5.9	2.8	1.6	20.3	0.0	0.1	2.6	0.0
Standard Error	2.97	1.86	0.0	0.7	0.9	0.6	1.3	3.9	0.0	0.1	1.0	0.0
Median	47.00	22.00	0.0	5.0	5.4	2.3	0.0	23.0	0.0	0.0	0.0	0.0
Mode	39.00	12.00	0.0	5.0	3.8	2.3	0.0	23.0	0.0	0.0	0.0	0.0
Standard Deviation	11.49	7.22	0.0	2.8	3.5	2.3	4.9	14.9	0.0	0.6	3.9	0.0
Sample Variance	132.11	52.12	0.0	7.7	12.1	5.1	24.1	223.2	0.0	0.3	14.9	0.0
Kurtosis	-0.40	-0.38	ND	10.5	4.6	7.9	13.4	3.5	ND	15.0	-1.4	ND
Skewness	0.32	0.29	ND	3.1	1.9	2.3	3.6	1.4	ND	3.9	0.9	ND
Range	42.00	25.00	0.0	11.2	13.6	9.9	19.0	62.0	0.0	2.2	8.5	0.0
Minimum	30.00	12.00	0.0	3.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	72.00	37.00	0.0	15.0	16.0	9.9	19.0	62.0	0.0	2.2	8.5	0.0
Count	15	15	15	15	15	15	15	15	15	15	15	4
Confidence Level(95.0%)	6.37	4.00	0.0	1.5	1.9	1.2	2.7	8.3	0.0	0.3	2.1	0.0

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	214	164	0.7	7.8	43.0	37.7	5.1	4.8
Standard Error	15	7	0.2	1.3	1.7	1.5	0.3	0.3
Median	210	160	0.0	4.9	41.0	36.0	5.0	4.7
Mode	250	180	0.0	4.9	40.0	34.0	4.8	5.8
Standard Deviation	58	49	1.4	5.0	11.6	10.2	1.9	1.8
Sample Variance	3311	2429	2.1	25.5	133.8	103.2	3.7	3.4
Kurtosis	0	0	1.7	-0.4	-1.1	-0.9	-0.1	-0.1
Skewness	0	0	1.8	0.7	0.1	0.0	0.4	0.3
Range	210	206	4.8	18.0	39.0	37.0	8.0	7.7
Minimum	120	44	0.0	0.0	23.0	18.0	2.0	1.5
Maximum	330	250	4.8	18.0	62.0	55.0	10.0	9.2
Count	15	45	45	15	45	45	45	45
Confidence Level(95.0%)	32	15	0.4	2.8	3.5	3.1	0.6	0.6

ND = No Data

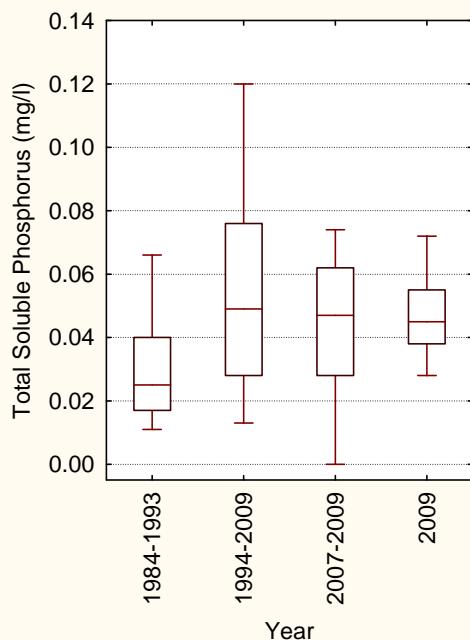
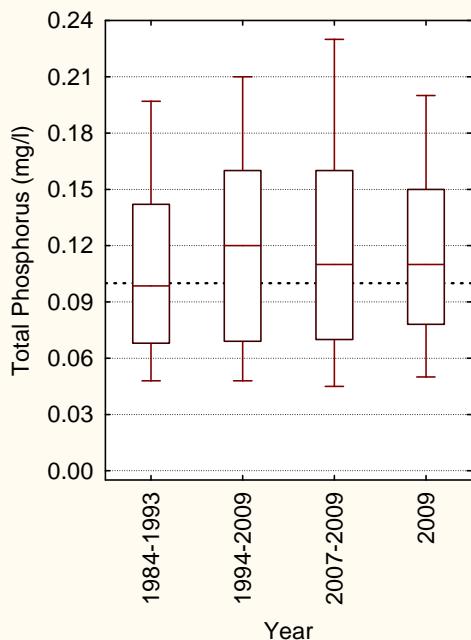
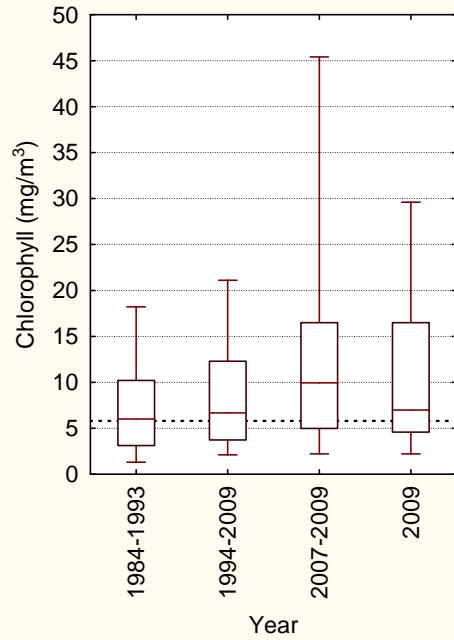
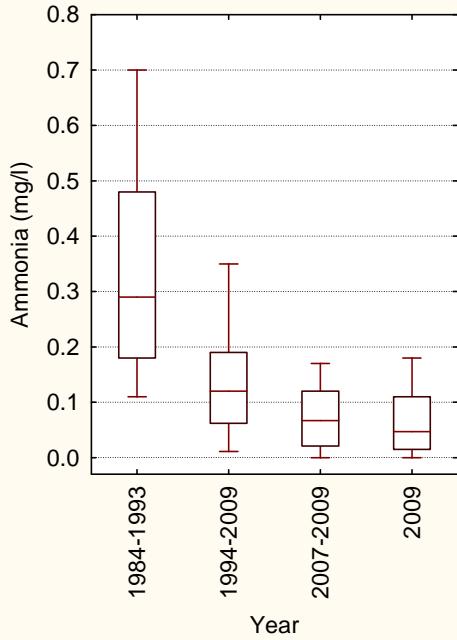
Provisional MMSD Water Quality Data

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



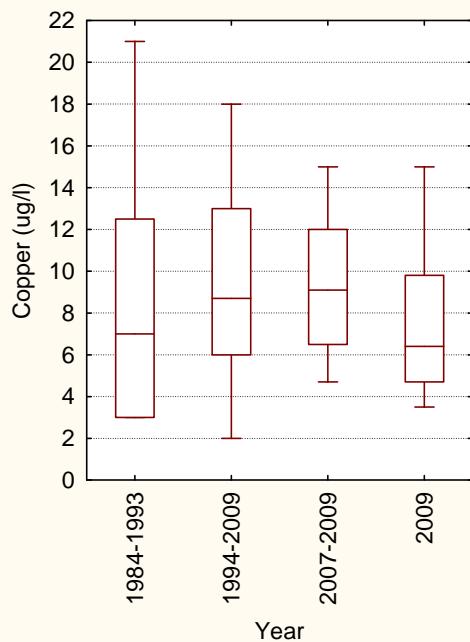
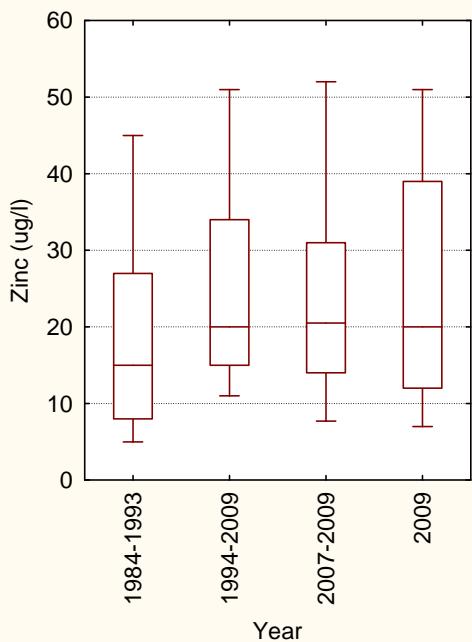
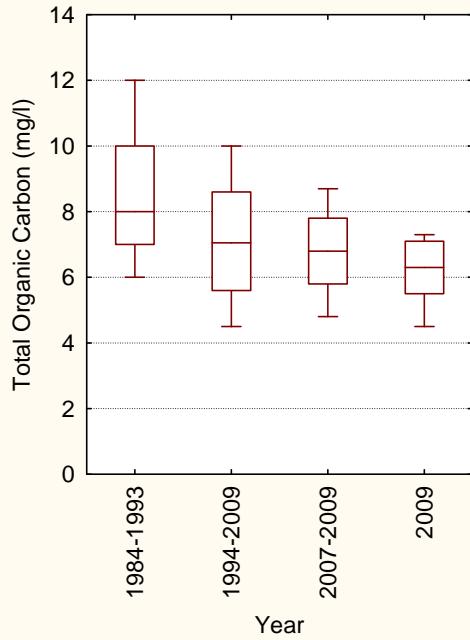
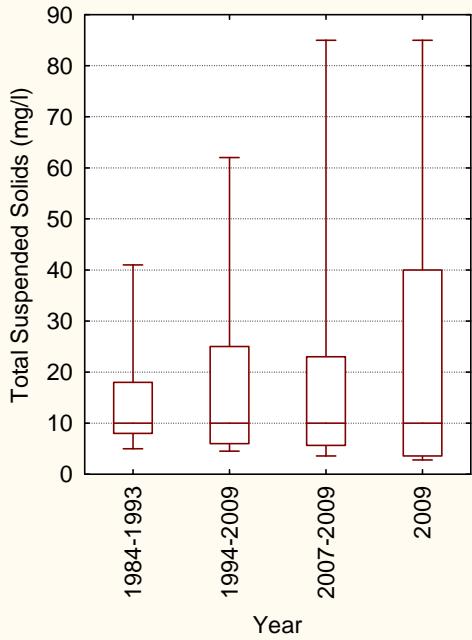
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.7	9.4	15.50	0.44	0.021	0.51	0.086	0.86	0.124	0.049	ND
Standard Error	0.0	1.6	0.4	4.73	0.06	0.003	0.06	0.024	0.10	0.015	0.004	ND
Median	8.0	12.7	9.4	6.99	0.48	0.023	0.50	0.047	0.71	0.110	0.045	ND
Mode	8.0	ND	10.8	12.80	0.49	0.031	0.52	0.000	ND	0.120	0.044	ND
Standard Deviation	0.2	7.3	2.0	21.66	0.27	0.012	0.30	0.109	0.46	0.069	0.018	ND
Sample Variance	0.0	53.4	3.9	469.08	0.07	0.000	0.09	0.012	0.21	0.005	0.000	ND
Kurtosis	-0.2	-1.1	0.2	10.62	-0.49	-0.194	-0.82	3.903	0.53	1.158	1.877	ND
Skewness	0.1	-0.1	0.3	3.08	0.25	0.433	0.11	2.040	1.11	1.141	1.038	ND
Range	0.8	22.9	8.3	95.19	0.91	0.043	1.00	0.400	1.70	0.259	0.078	0.00
Minimum	7.6	0.2	5.5	2.11	0.00	0.005	0.00	0.000	0.30	0.041	0.021	0.00
Maximum	8.4	23.1	13.7	97.30	0.91	0.048	1.00	0.400	2.00	0.300	0.099	0.00
Count	21	21	21	21	19	19	21	21	21	21	21	0
Confidence Level(95.0%)	0.1	3.3	0.9	9.86	0.13	0.006	0.13	0.050	0.21	0.031	0.008	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	558.1	528.6	6.4	29.5	23.4	1048	189.6	5993	3.1	3555
Standard Error	ND	ND	55.1	58.8	2.0	9.2	6.8	107	25.6	3164	0.2	1320
Median	ND	ND	460.0	434.7	3.2	10.0	5.9	1090	210.0	975	3.0	890
Mode	ND	ND	690.0	ND	0.0	10.0	ND	660	240.0	180	2.3	ND
Standard Deviation	ND	ND	252.7	269.3	8.7	42.2	31.2	490	117.1	14148	0.7	6048
Sample Variance	ND	ND	63866.2	72519.6	76.3	1781.2	971.4	239916	13719.1	200164738	0.5	36582276
Kurtosis	ND	ND	2.3	1.8	6.4	3.9	1.3	4	6.2	12	0.1	7
Skewness	ND	ND	1.3	1.2	2.4	2.0	1.5	1	1.9	3	0.7	3
Range	0.0	0.0	1050.0	1116.8	36.0	157.4	105.8	2296	550.0	59900	2.8	23830
Minimum	0.0	0.0	250.0	180.0	0.0	2.6	2.2	264	40.0	100	2.0	170
Maximum	0.0	0.0	1300.0	1296.8	36.0	160.0	108.0	2560	590.0	60000	4.8	24000
Count	0	0	21	21	20	21	21	21	21	20	20	21
Confidence Level(95.0%)	ND	ND	115.0	122.6	4.1	19.2	14.2	223	53.3	6621	0.3	2753

ND = No Data

Provisional MMSD Water Quality Data

25TH STREET - SITE 20
MENOMONEE RIVER
WATER QUALITY DATA - 2009

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	62.14	28.10	0.0	6.0	7.6	4.7	3.7	27.6	0.0	0.4	1.9	0.0
Standard Error	4.98	2.52	0.0	0.6	1.0	0.8	1.1	4.5	0.0	0.2	0.9	0.0
Median	58.00	27.00	0.0	5.0	6.4	3.6	0.0	20.0	0.0	0.0	0.0	0.0
Mode	46.00	16.00	0.0	3.9	16.0	3.6	0.0	20.0	0.0	0.0	0.0	0.0
Standard Deviation	22.82	11.54	0.1	2.6	4.7	3.6	5.1	20.4	0.0	0.9	3.5	0.0
Sample Variance	520.63	133.09	0.0	6.6	21.8	12.7	25.7	418.2	0.0	0.9	12.1	0.0
Kurtosis	-1.39	-1.48	20.0	3.5	-0.4	9.7	-0.8	1.0	ND	4.6	0.8	ND
Skewness	-0.06	-0.03	4.5	1.7	0.4	2.9	0.9	1.1	ND	2.4	1.5	ND
Range	71.00	35.00	0.6	10.9	16.0	16.0	14.0	81.0	0.0	3.2	9.9	0.0
Minimum	24.00	11.00	0.0	3.1	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	95.00	46.00	0.6	14.0	16.0	18.0	14.0	81.0	0.0	3.2	9.9	0.0
Count	21	21	20	21	21	21	21	21	21	21	16	4
Confidence Level(95.0%)	10.39	5.25	0.1	1.2	2.1	1.6	2.3	9.3	0.0	0.4	1.9	0.0

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	270	175	3.6	13.5	46.7	40.4	6.3	5.9
Standard Error	22	15	0.8	1.7	3.0	3.2	0.3	0.3
Median	240	170	3.1	13.0	46.0	42.0	6.3	6.1
Mode	330	120	0.0	13.0	61.0	51.0	6.8	5.8
Standard Deviation	103	70	3.6	7.6	13.9	14.5	1.4	1.4
Sample Variance	10520	4956	13.0	57.5	193.8	210.2	2.1	2.0
Kurtosis	-1	-1	2.5	0.9	-1.2	-1.3	0.7	0.3
Skewness	0	0	1.4	1.0	-0.3	-0.4	0.7	0.5
Range	310	233	14.0	27.5	46.0	46.0	5.3	5.1
Minimum	110	37	0.0	4.5	19.0	13.0	4.3	3.9
Maximum	420	270	14.0	32.0	65.0	59.0	9.6	9.0
Count	21	21	20	20	21	21	21	21
Confidence Level(95.0%)	47	32	1.7	3.5	6.3	6.6	0.7	0.6

ND = No Data

Provisional MMSD Water Quality Data

127TH STREET EXTENDED - SITE 21
MENOMONEE RIVER
WATER QUALITY DATA - 2009

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	12.6	10.3	6.24	0.35	0.016	0.45	0.063	0.75	0.094	0.046	ND
Standard Error	0.1	1.5	0.5	0.76	0.05	0.003	0.07	0.018	0.06	0.012	0.005	ND
Median	8.1	13.2	10.0	5.40	0.40	0.012	0.48	0.022	0.66	0.087	0.049	ND
Mode	8.2	14.1	12.9	10.60	ND	0.005	0.52	0.000	0.50	0.200	0.024	ND
Standard Deviation	0.3	7.1	2.2	3.49	0.21	0.012	0.30	0.084	0.29	0.054	0.023	ND
Sample Variance	0.1	50.1	4.9	12.15	0.05	0.000	0.09	0.007	0.09	0.003	0.001	ND
Kurtosis	0.0	-0.9	-0.7	0.64	0.03	-0.460	-0.30	1.985	-0.27	-0.117	-0.796	ND
Skewness	-0.8	-0.2	0.2	0.94	0.52	0.892	0.64	1.640	0.78	0.762	-0.053	ND
Range	1.0	23.4	8.2	13.74	0.79	0.034	1.02	0.290	0.99	0.183	0.081	0.00
Minimum	7.4	-0.3	6.4	1.46	0.07	0.005	0.08	0.000	0.41	0.017	0.000	0.00
Maximum	8.4	23.1	14.6	15.20	0.86	0.039	1.10	0.290	1.40	0.200	0.081	0.00
Count	21	21	21	21	18	18	21	21	21	21	21	0
Confidence Level(95.0%)	0.1	3.2	1.0	1.59	0.11	0.006	0.14	0.038	0.13	0.024	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	562.9	544.5	4.3	18.4	18.4	979	177.0	3575	2.6	1538
Standard Error	ND	ND	38.4	40.6	0.8	4.3	4.6	73	17.2	1869	0.2	540
Median	ND	ND	600.0	590.0	3.4	10.0	8.4	1050	190.0	320	2.5	520
Mode	ND	ND	640.0	ND	2.0	10.0	ND	1200	230.0	1400	3.1	740
Standard Deviation	ND	ND	176.2	185.8	3.6	19.5	20.9	333	78.7	7931	0.9	2473
Sample Variance	ND	ND	31041.4	34530.7	13.1	379.7	438.4	111202	6186.7	62897551	0.9	6113400
Kurtosis	ND	ND	1.1	0.4	1.4	5.6	3.1	1	2.2	9	-0.8	4
Skewness	ND	ND	-0.2	-0.4	1.2	2.1	1.8	0	0.6	3	0.6	2
Range	0.0	0.0	800.0	783.0	14.0	82.2	76.0	1431	357.0	30977	3.1	9276
Minimum	0.0	0.0	180.0	161.0	0.0	1.8	2.2	369	43.0	23	1.4	24
Maximum	0.0	0.0	980.0	944.0	14.0	84.0	78.2	1800	400.0	31000	4.5	9300
Count	0	0	21	21	21	21	21	21	21	18	18	21
Confidence Level(95.0%)	ND	ND	80.2	84.6	1.6	8.9	9.5	152	35.8	3944	0.5	1125

ND = No Data

Provisional MMSD Water Quality Data

127TH STREET EXTENDED - SITE 21
 MENOMONEE RIVER
 WATER QUALITY DATA - 2009

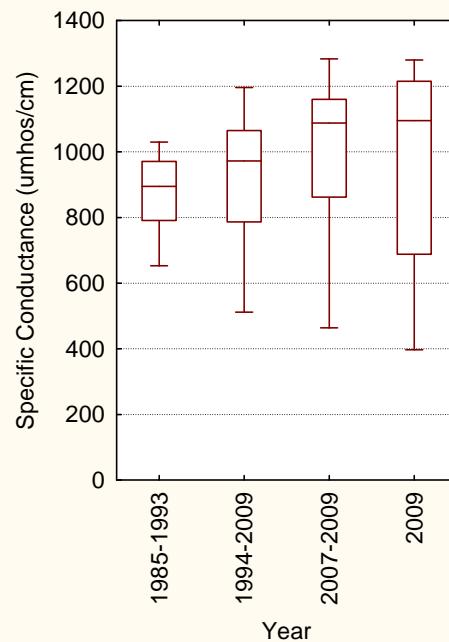
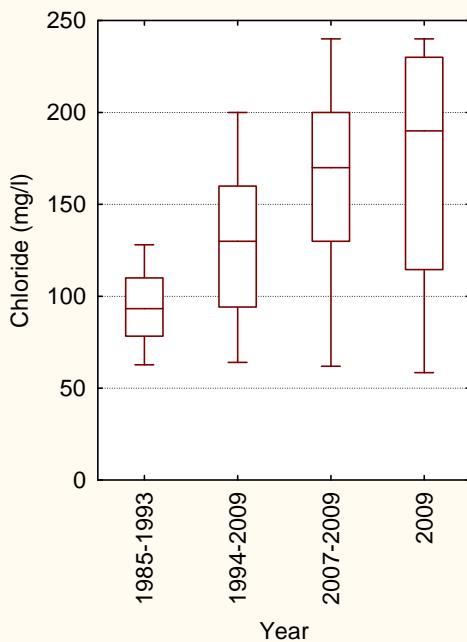
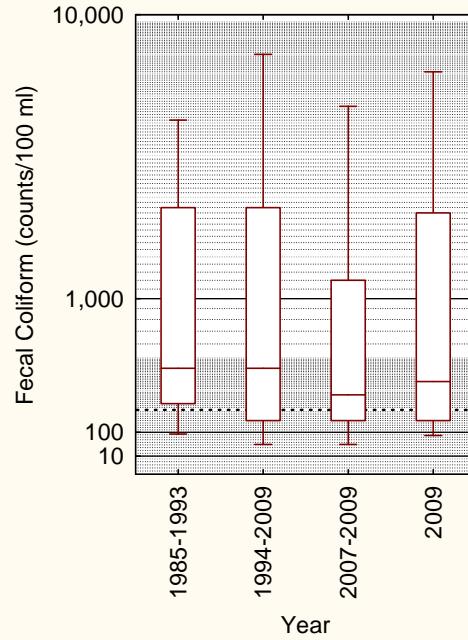
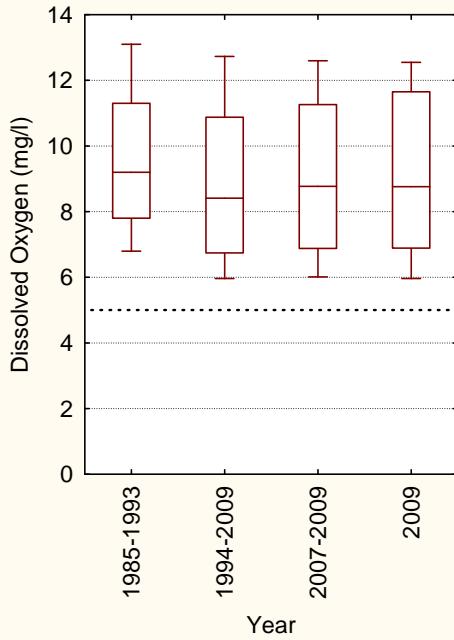
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	60.81	29.71	0.0	5.0	5.0	3.9	0.4	19.9	0.1	0.3	2.1	0.0
Standard Error	4.40	2.57	0.0	0.2	0.9	0.5	0.2	2.9	0.1	0.2	0.8	0.0
Median	62.00	28.00	0.0	5.0	4.7	3.0	0.0	22.0	0.0	0.0	0.0	0.0
Mode	28.00	39.00	0.0	5.2	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	20.15	11.77	0.0	1.1	4.1	2.1	0.8	13.3	0.2	0.9	3.3	0.0
Sample Variance	406.06	138.61	0.0	1.1	17.0	4.6	0.7	176.7	0.1	0.7	11.2	0.0
Kurtosis	-0.46	-1.23	ND	-1.1	-0.8	10.9	2.2	-0.8	21.0	5.6	-0.6	ND
Skewness	-0.17	-0.22	ND	0.1	0.3	3.0	1.9	-0.1	4.6	2.5	1.1	ND
Range	73.00	37.00	0.0	3.7	13.0	9.6	2.6	44.0	1.1	3.1	8.9	0.0
Minimum	24.00	10.00	0.0	3.3	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	97.00	47.00	0.0	7.0	13.0	12.0	2.6	44.0	1.1	3.1	8.9	0.0
Count	21	21	21	21	21	21	21	21	21	21	19	4
Confidence Level(95.0%)	9.17	5.36	0.0	0.5	1.9	1.0	0.4	6.1	0.1	0.4	1.6	0.0

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	194	1.5	7.6	51.5	45.0	6.6	6.1
Standard Error	21	15	0.4	1.2	3.2	3.2	0.2	0.2
Median	270	200	0.0	8.3	52.0	45.0	6.9	6.4
Mode	270	160	0.0	0.0	46.0	61.0	5.6	5.1
Standard Deviation	97	71	2.0	5.3	14.5	14.7	1.0	0.9
Sample Variance	9346	5017	3.9	27.6	208.9	216.0	1.1	0.7
Kurtosis	-1	-1	-0.5	-0.7	-0.8	-1.0	-1.0	-0.3
Skewness	0	0	0.9	0.3	-0.5	-0.4	-0.5	-0.6
Range	340	232	5.8	17.0	47.0	46.0	3.6	3.1
Minimum	100	68	0.0	0.0	25.0	20.0	4.5	4.1
Maximum	440	300	5.8	17.0	72.0	66.0	8.1	7.2
Count	21	21	20	19	21	21	21	21
Confidence Level(95.0%)	44	32	0.9	2.5	6.6	6.7	0.5	0.4

ND = No Data

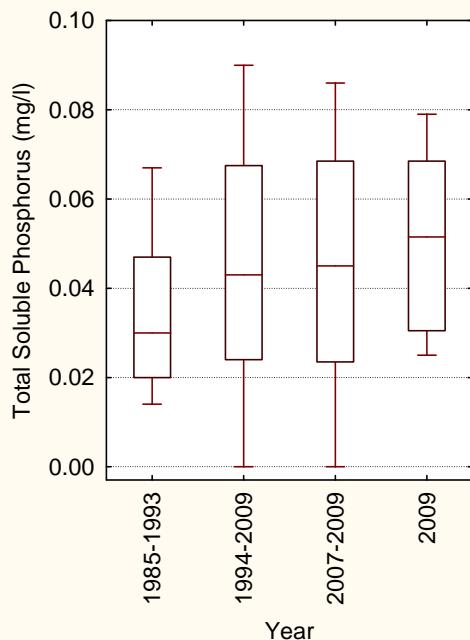
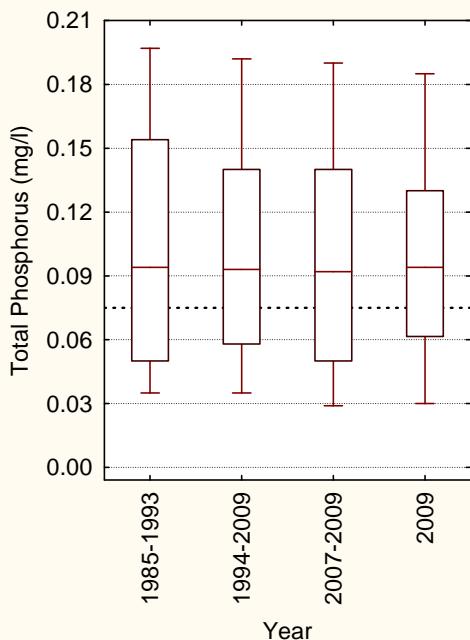
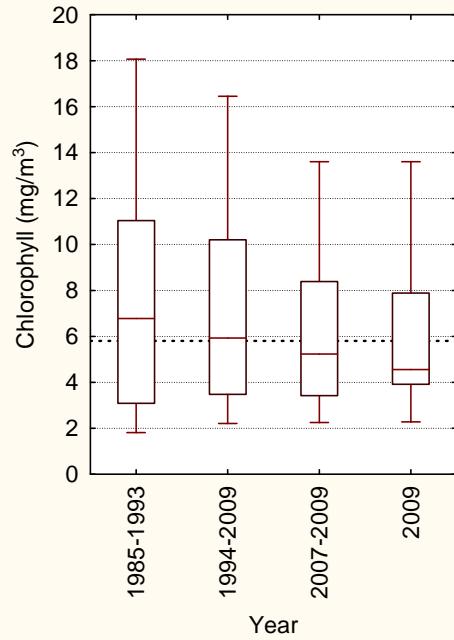
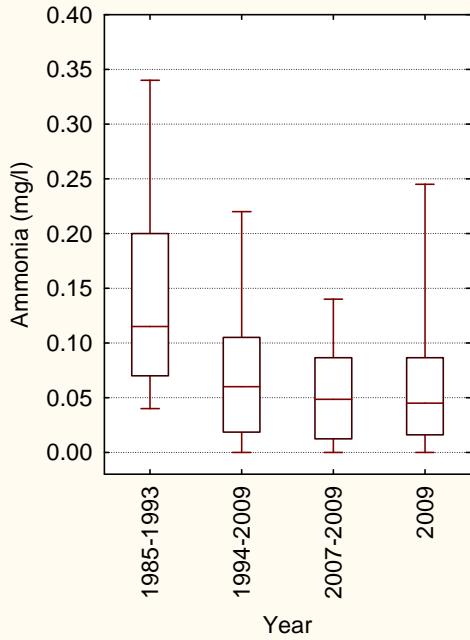
Provisional MMSD Water Quality Data

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



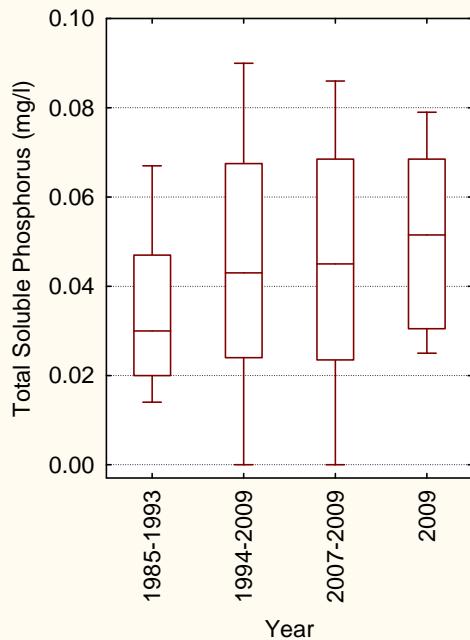
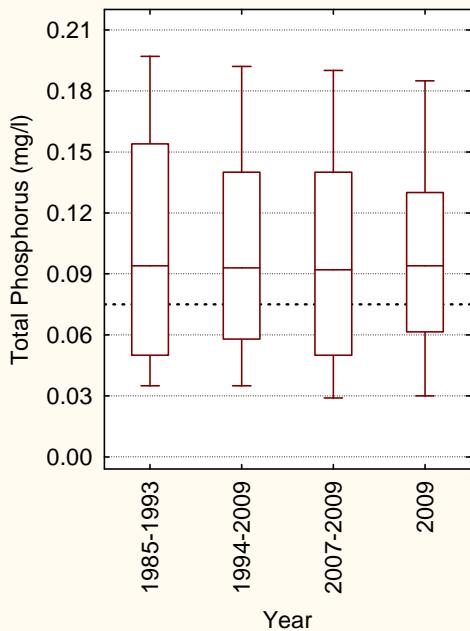
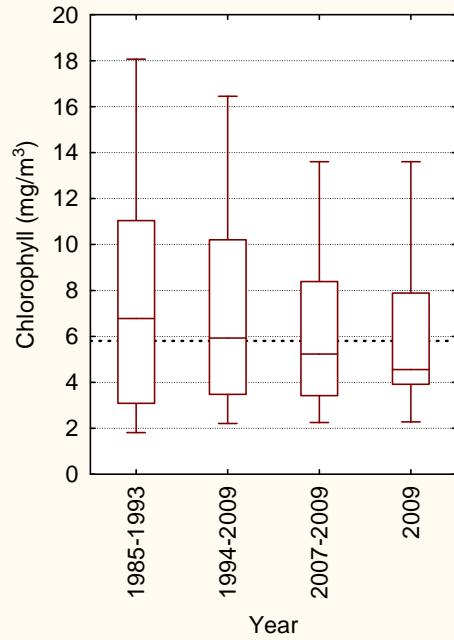
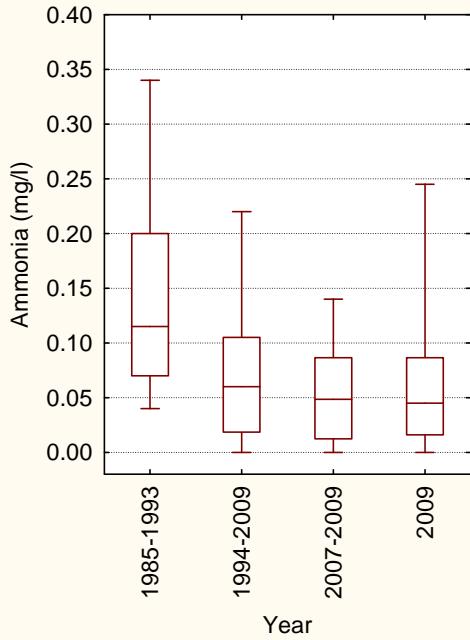
— Median □ 25%-75% □ 10%-90%
----WQ Standard/Criterion

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



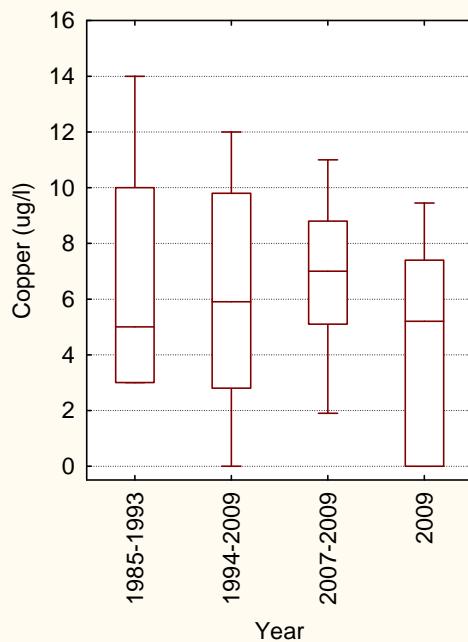
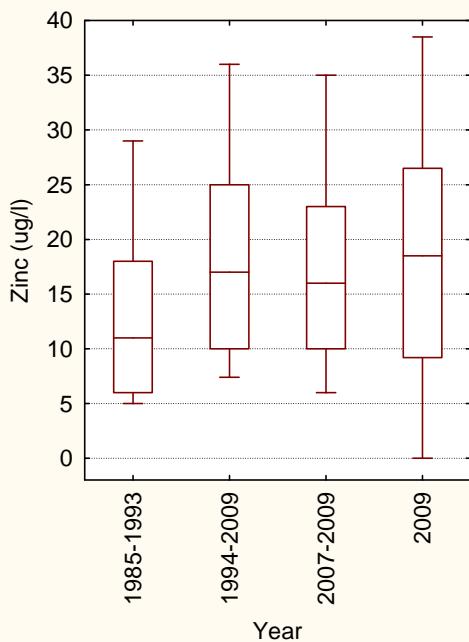
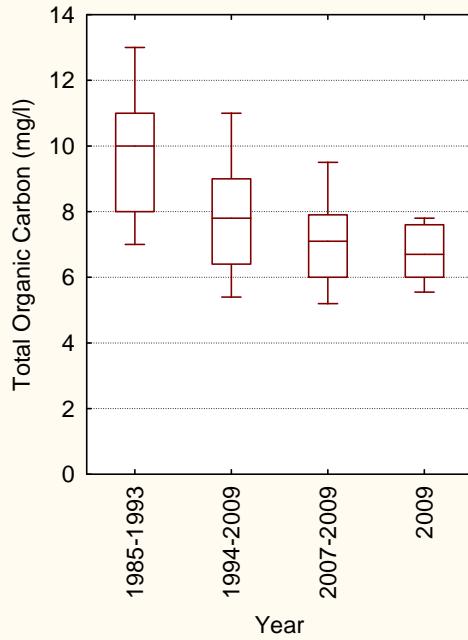
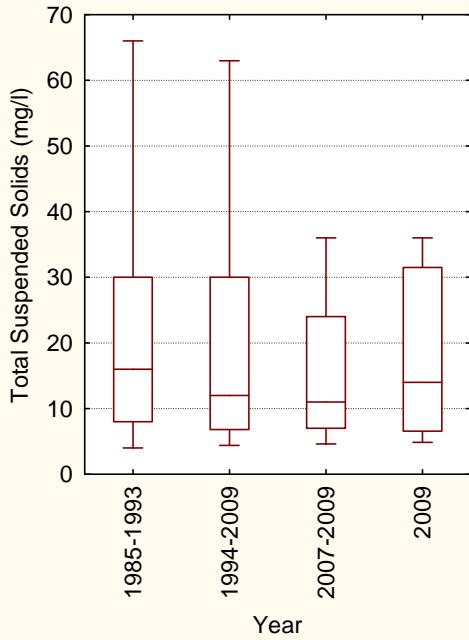
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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



— Median □ 25%-75% ┤ 10%-90%
---- 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 - 2009

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	11.9	9.2	5.84	0.39	0.020	0.49	0.074	0.75	0.101	0.051	ND
Standard Error	0.1	1.7	0.6	0.77	0.06	0.003	0.07	0.021	0.06	0.012	0.005	ND
Median	7.9	12.3	8.8	4.56	0.35	0.016	0.45	0.045	0.69	0.094	0.052	ND
Mode	7.9	19.0	12.5	ND	0.17	0.022	0.45	0.000	1.10	0.120	0.079	ND
Standard Deviation	0.3	7.4	2.6	3.35	0.24	0.012	0.31	0.093	0.28	0.053	0.025	ND
Sample Variance	0.1	55.1	6.6	11.23	0.06	0.000	0.10	0.009	0.08	0.003	0.001	ND
Kurtosis	1.0	-1.3	-1.4	1.73	0.05	0.537	-0.84	2.802	0.10	-0.505	-0.325	ND
Skewness	-0.4	-0.1	0.1	1.37	0.82	1.056	0.56	1.866	0.77	0.389	-0.013	ND
Range	1.1	22.8	7.7	12.57	0.81	0.043	0.98	0.330	1.09	0.178	0.100	0.00
Minimum	7.3	-0.2	5.4	1.33	0.11	0.005	0.12	0.000	0.31	0.022	0.000	0.00
Maximum	8.4	22.6	13.1	13.90	0.92	0.048	1.10	0.330	1.40	0.200	0.100	0.00
Count	20	20	20	19	17	17	20	20	20	20	20	0
Confidence Level(95.0%)	0.1	3.5	1.2	1.62	0.12	0.006	0.15	0.043	0.13	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	579.0	558.2	5.5	20.8	22.1	982	177.0	1895	2.8	ND
Standard Error	ND	ND	43.1	45.4	1.0	4.1	4.0	86	19.9	705	0.2	ND
Median	ND	ND	660.0	637.4	5.2	14.0	15.2	1095	190.0	350	2.5	ND
Mode	ND	ND	670.0	ND	0.0	11.0	24.4	ND	240.0	1200	3.1	ND
Standard Deviation	ND	ND	192.8	203.0	4.3	18.5	17.8	385	89.0	2908	0.7	ND
Sample Variance	ND	ND	37177.9	41221.3	18.1	341.3	317.9	148170	7921.5	8454925	0.5	ND
Kurtosis	ND	ND	-0.6	-0.7	-0.7	4.5	0.7	1	1.7	3	-1.2	ND
Skewness	ND	ND	-0.4	-0.5	0.6	1.8	1.1	0	0.6	2	0.4	ND
Range	0.0	0.0	700.0	704.0	14.0	78.7	63.7	1586	388.0	9933	2.2	0
Minimum	0.0	0.0	250.0	210.0	0.0	1.3	3.2	324	32.0	67	1.8	0
Maximum	0.0	0.0	950.0	914.0	14.0	80.0	66.8	1910	420.0	10000	4.0	0
Count	0	0	20	20	20	20	20	20	20	17	17	0
Confidence Level(95.0%)	ND	ND	90.2	95.0	2.0	8.6	8.3	180	41.7	1495	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

HAMPTON AVENUE - SITE 22
MENOMONEE RIVER
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	60.15	28.73	0.1	5.2	4.8	4.0	0.3	19.2	0.1	0.5	0.5	0.0
Standard Error	5.01	2.86	0.1	0.3	0.9	0.5	0.2	3.2	0.1	0.2	0.5	0.0
Median	61.50	29.00	0.0	5.1	5.2	3.2	0.0	18.5	0.0	0.0	0.0	0.0
Mode	56.00	42.00	0.0	4.9	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation	22.42	12.80	0.4	1.3	4.0	2.4	1.1	14.2	0.4	1.0	1.8	0.0
Sample Variance	502.87	163.72	0.2	1.6	16.0	5.6	1.2	201.4	0.1	1.0	3.1	0.0
Kurtosis	-0.92	-1.53	11.3	0.6	-0.3	11.9	12.3	-0.4	7.0	1.4	14.0	ND
Skewness	-0.12	-0.17	3.4	0.8	0.4	3.2	3.5	0.3	2.9	1.8	3.7	ND
Range	76.00	39.50	1.6	5.0	14.0	10.8	4.6	50.0	1.2	3.0	6.6	0.0
Minimum	21.00	7.50	0.0	3.3	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	97.00	47.00	1.6	8.3	14.0	13.0	4.6	50.0	1.2	3.0	6.6	0.0
Count	20	20	20	20	20	20	20	20	20	20	14	4
Confidence Level(95.0%)	10.50	5.99	0.2	0.6	1.9	1.1	0.5	6.6	0.2	0.5	1.0	0.0

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	268	187	1.7	9.8	49.8	43.2	6.7	6.3
Standard Error	24	18	0.5	1.0	3.6	3.6	0.2	0.2
Median	270	190	0.0	8.7	48.5	40.5	6.7	6.3
Mode	270	270	0.0	14.0	37.0	56.0	7.6	6.6
Standard Deviation	107	81	2.1	4.1	16.2	16.1	1.1	1.0
Sample Variance	11381	6576	4.2	16.6	263.3	257.6	1.2	1.0
Kurtosis	-1	-1	-0.9	-0.3	-1.1	-1.3	1.0	0.8
Skewness	0	0	0.8	0.8	-0.3	-0.2	0.5	0.8
Range	356	248	5.7	13.5	50.0	49.0	5.0	4.1
Minimum	84	52	0.0	4.5	22.0	17.0	4.6	4.8
Maximum	440	300	5.7	18.0	72.0	66.0	9.6	8.9
Count	20	20	19	18	20	20	20	20
Confidence Level(95.0%)	50	38	1.0	2.0	7.6	7.5	0.5	0.5

ND = No Data

Provisional MMSD Water Quality Data

BURNHAM SHIP CANAL - SITE 31
MENOMONEE RIVER
WATER QUALITY DATA - 2009

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	18.8	7.1	11.27	0.57	0.020	0.65	0.149	0.92	0.085	0.043	ND
Standard Error	0.1	1.1	0.4	3.59	0.04	0.001	0.05	0.019	0.13	0.008	0.004	ND
Median	7.8	19.2	7.2	4.99	0.54	0.019	0.64	0.145	0.78	0.075	0.040	ND
Mode	7.8	22.6	ND	ND	0.54	0.018	0.55	0.150	0.93	0.086	0.082	ND
Standard Deviation	0.3	5.2	1.8	16.82	0.18	0.006	0.25	0.091	0.62	0.039	0.021	ND
Sample Variance	0.1	26.8	3.2	282.93	0.03	0.000	0.06	0.008	0.39	0.002	0.000	ND
Kurtosis	-0.1	-0.6	-0.6	10.28	0.56	0.843	1.13	2.017	12.47	3.493	-0.124	ND
Skewness	0.1	-0.4	-0.3	3.04	0.43	0.549	0.96	1.082	3.19	1.979	0.211	ND
Range	1.1	17.9	6.5	73.97	0.72	0.025	1.01	0.410	3.03	0.150	0.082	0.00
Minimum	7.3	9.4	3.5	1.23	0.28	0.010	0.29	0.000	0.37	0.050	0.000	0.00
Maximum	8.4	27.3	10.0	75.20	1.00	0.035	1.30	0.410	3.40	0.200	0.082	0.00
Count	22	22	22	22	19	19	22	22	22	22	22	0
Confidence Level(95.0%)	0.1	2.3	0.8	7.46	0.09	0.003	0.11	0.040	0.28	0.017	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	549.5	539.4	3.7	10.1	9.9	974	155.4	1397	2.5	ND
Standard Error	ND	ND	49.0	48.4	0.6	1.3	1.6	94	23.5	678	0.2	ND
Median	ND	ND	495.0	487.5	2.7	8.5	7.7	856	125.0	160	2.2	ND
Mode	ND	ND	490.0	ND	2.6	6.2	ND	ND	130.0	100	2.0	ND
Standard Deviation	ND	ND	230.0	227.2	2.9	6.2	7.3	440	110.1	3106	0.7	ND
Sample Variance	ND	ND	52918.8	51617.1	8.4	38.9	53.8	193967	12125.8	9650283	0.5	ND
Kurtosis	ND	ND	2.0	2.1	4.4	6.5	5.9	3	4.0	7	0.5	ND
Skewness	ND	ND	1.3	1.4	1.9	2.2	2.3	2	1.9	3	1.1	ND
Range	0.0	0.0	930.0	918.2	13.0	28.4	31.3	1742	459.0	11965	2.5	0
Minimum	0.0	0.0	270.0	264.8	0.0	3.6	3.6	468	41.0	35	1.5	0
Maximum	0.0	0.0	1200.0	1183.0	13.0	32.0	34.9	2210	500.0	12000	4.1	0
Count	0	0	22	22	22	22	22	22	22	21	21	0
Confidence Level(95.0%)	ND	ND	102.0	100.7	1.3	2.8	3.3	195	48.8	1414	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

BURNHAM SHIP CANAL - SITE 31
MENOMONEE RIVER
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	60.45	28.23	0.0	5.3	9.0	3.6	1.6	21.2	0.1	0.3	0.4	0.0
Standard Error	3.02	1.45	0.0	0.2	0.5	0.3	0.5	2.0	0.1	0.2	0.4	0.0
Median	58.50	27.50	0.0	5.2	9.0	3.2	0.0	20.0	0.0	0.0	0.0	0.0
Mode	80.00	34.00	0.0	6.4	12.0	3.1	0.0	13.0	0.0	0.0	0.0	0.0
Standard Deviation	14.18	6.81	0.0	1.1	2.3	1.4	2.3	9.4	0.2	0.9	1.8	0.0
Sample Variance	201.21	46.37	0.0	1.3	5.1	2.0	5.5	88.1	0.1	0.8	3.3	0.0
Kurtosis	-1.13	-0.21	ND	-0.9	-0.4	1.1	-0.2	-0.6	22.0	8.2	17.0	ND
Skewness	0.13	0.36	ND	0.3	0.3	1.3	1.2	0.7	4.7	3.1	4.1	ND
Range	45.00	27.00	0.0	3.9	8.8	5.1	6.9	30.4	1.1	3.1	7.5	0.0
Minimum	38.00	16.00	0.0	3.7	5.2	2.0	0.0	9.6	0.0	0.0	0.0	0.0
Maximum	83.00	43.00	0.0	7.6	14.0	7.1	6.9	40.0	1.1	3.1	7.5	0.0
Count	22	22	22	22	22	22	22	21	22	22	17	4
Confidence Level(95.0%)	6.29	3.02	0.0	0.5	1.0	0.6	1.0	4.3	0.1	0.4	0.9	0.0

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	267	196	0.8	8.7	51.1	45.0	6.1	5.8
Standard Error	13	10	0.3	0.7	2.2	2.0	0.3	0.3
Median	265	205	0.0	8.2	52.0	46.0	6.1	5.6
Mode	310	210	0.0	5.6	55.0	49.0	7.4	5.6
Standard Deviation	63	45	1.5	3.3	10.4	9.4	1.6	1.6
Sample Variance	3985	2024	2.3	10.8	107.5	88.7	2.6	2.5
Kurtosis	-1	-1	1.3	0.0	-1.4	-1.4	-0.4	-0.3
Skewness	0	0	1.6	0.9	0.1	0.1	-0.2	-0.3
Range	230	160	4.6	11.1	33.0	30.0	5.8	5.7
Minimum	160	120	0.0	4.9	35.0	31.0	3.0	2.6
Maximum	390	280	4.6	16.0	68.0	61.0	8.8	8.3
Count	22	22	21	20	22	22	22	21
Confidence Level(95.0%)	28	20	0.7	1.5	4.6	4.2	0.7	0.7

ND = No Data

Provisional MMSD Water Quality Data

BURLEIGH STREET - SITE 32
 MENOMONEE RIVER
 WATER QUALITY DATA - 2009

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	10.4	11.2	8.36	0.39	0.017	0.51	0.066	0.95	0.108	0.049	ND
Standard Error	0.1	1.8	0.6	0.92	0.06	0.003	0.08	0.022	0.19	0.021	0.007	ND
Median	8.1	8.7	11.5	8.30	0.32	0.013	0.48	0.023	0.71	0.095	0.042	ND
Mode	8.1	19.4	ND	12.20	ND	ND	0.48	0.000	1.20	0.057	0.040	ND
Standard Deviation	0.3	7.5	2.7	3.91	0.24	0.011	0.32	0.095	0.80	0.089	0.030	ND
Sample Variance	0.1	56.7	7.2	15.29	0.06	0.000	0.10	0.009	0.64	0.008	0.001	ND
Kurtosis	-0.1	-1.0	-1.1	-0.91	-1.06	0.287	-1.01	3.299	10.13	5.269	-1.174	ND
Skewness	-0.5	0.2	0.2	0.04	0.34	0.977	0.35	1.913	2.91	2.008	-0.069	ND
Range	1.0	23.0	8.6	13.56	0.77	0.037	1.04	0.340	3.46	0.368	0.088	0.00
Minimum	7.4	-0.3	7.4	1.74	0.05	0.005	0.06	0.000	0.34	0.022	0.000	0.00
Maximum	8.4	22.7	16.0	15.30	0.82	0.042	1.10	0.340	3.80	0.390	0.088	0.00
Count	18	18	18	18	15	15	18	18	18	18	18	0
Confidence Level(95.0%)	0.1	3.7	1.3	1.94	0.13	0.006	0.16	0.047	0.40	0.044	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	602.8	578.5	5.5	22.7	18.6	1125	211.4	4580	2.8	3736
Standard Error	ND	ND	36.2	44.5	1.8	8.2	5.6	97	23.1	3481	0.2	2521
Median	ND	ND	630.0	625.2	2.6	5.9	8.2	1145	200.0	720	2.9	710
Mode	ND	ND	710.0	ND	0.0	4.8	ND	1180	200.0	ND	ND	1100
Standard Deviation	ND	ND	153.7	183.6	7.2	34.0	23.6	411	98.0	14351	0.8	10698
Sample Variance	ND	ND	23621.2	33693.7	52.3	1154.8	555.4	169004	9595.2	205951102	0.6	114441359
Kurtosis	ND	ND	1.4	0.8	3.8	4.4	2.6	2	2.8	17	1.7	17
Skewness	ND	ND	0.1	-0.3	2.1	2.2	1.8	1	1.5	4	0.6	4
Range	0.0	0.0	680.0	772.4	25.0	118.2	81.7	1584	404.0	59976	3.4	45956
Minimum	0.0	0.0	290.0	195.0	0.0	1.8	2.6	556	76.0	24	1.4	44
Maximum	0.0	0.0	970.0	967.4	25.0	120.0	84.3	2140	480.0	60000	4.8	46000
Count	0	0	18	17	17	17	18	18	18	17	17	18
Confidence Level(95.0%)	ND	ND	76.4	94.4	3.7	17.5	11.7	204	48.7	7379	0.4	5320

ND = No Data

Provisional MMSD Water Quality Data

BURLEIGH STREET - SITE 32
 MENOMONEE RIVER
 WATER QUALITY DATA - 2009

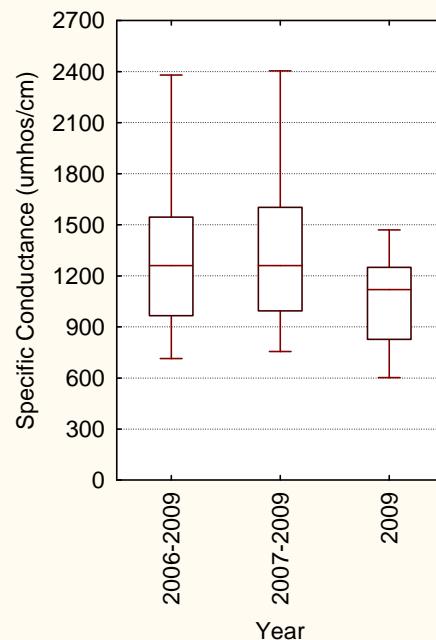
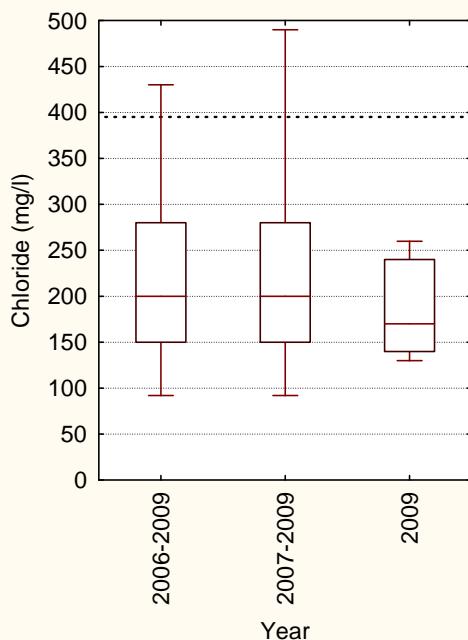
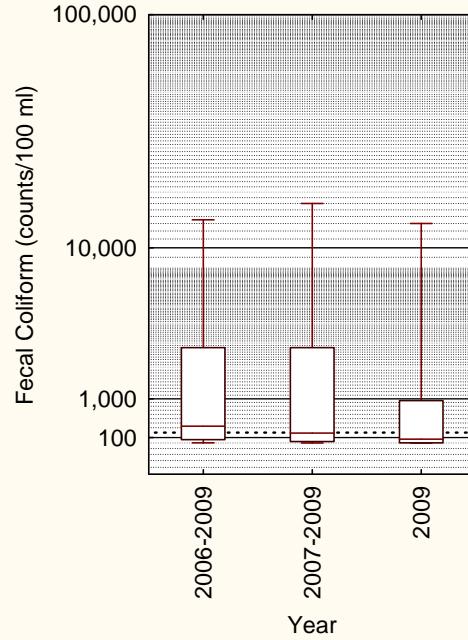
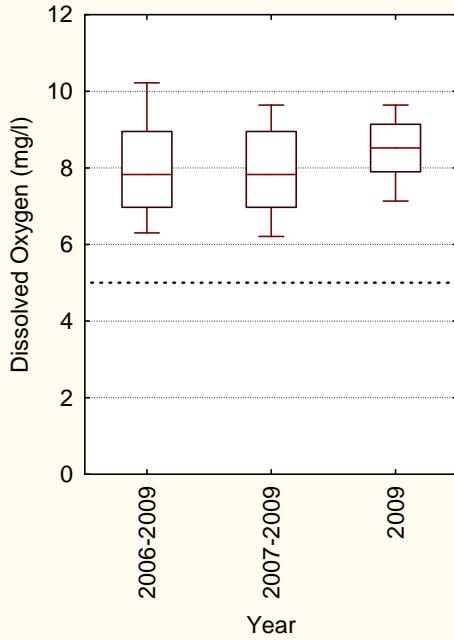
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	66.11	30.94	0.0	5.9	4.3	4.1	0.7	21.4	0.0	0.5	0.6	ND
Standard Error	4.94	2.50	0.0	0.5	1.0	0.6	0.4	4.3	0.0	0.3	0.6	ND
Median	64.00	32.00	0.0	5.6	3.7	3.5	0.0	16.0	0.0	0.0	0.0	ND
Mode	63.00	16.00	0.0	3.7	0.0	2.6	0.0	13.0	0.0	0.0	0.0	ND
Standard Deviation	20.94	10.60	0.0	2.1	4.4	2.4	1.9	18.3	0.0	1.2	2.5	ND
Sample Variance	438.58	112.41	0.0	4.2	19.3	5.6	3.6	333.7	0.0	1.3	6.0	ND
Kurtosis	-1.09	-1.44	ND	1.4	-0.2	7.7	5.3	1.1	ND	2.4	16.0	ND
Skewness	0.18	-0.18	ND	1.2	0.7	2.7	2.5	1.2	ND	2.0	4.0	ND
Range	64.00	31.00	0.0	7.3	14.0	9.6	6.2	68.0	0.0	3.4	9.8	0.0
Minimum	36.00	16.00	0.0	3.7	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	100.00	47.00	0.0	11.0	14.0	12.0	6.2	68.0	0.0	3.4	9.8	0.0
Count	18	18	18	18	18	18	18	18	18	18	16	0
Confidence Level(95.0%)	10.41	5.27	0.0	1.0	2.2	1.2	0.9	9.1	0.0	0.6	1.3	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	292	196	2.0	9.2	51.9	45.1	6.7	6.4
Standard Error	22	16	0.6	1.4	2.9	2.9	0.3	0.3
Median	285	205	0.0	6.7	54.0	47.0	6.4	6.4
Mode	390	220	0.0	4.5	54.0	29.0	5.5	7.0
Standard Deviation	94	68	2.6	5.5	12.2	12.5	1.4	1.3
Sample Variance	8759	4568	6.6	30.3	149.6	156.2	2.0	1.6
Kurtosis	-1	-1	-0.3	-0.8	-1.4	-1.5	4.3	3.3
Skewness	0	0	1.0	0.9	-0.2	-0.1	1.6	1.1
Range	280	203	7.1	15.6	37.0	37.0	6.4	5.9
Minimum	160	87	0.0	4.4	32.0	26.0	4.6	4.1
Maximum	440	290	7.1	20.0	69.0	63.0	11.0	10.0
Count	18	18	17	16	18	18	18	18
Confidence Level(95.0%)	47	34	1.3	2.9	6.1	6.2	0.7	0.6

ND = No Data

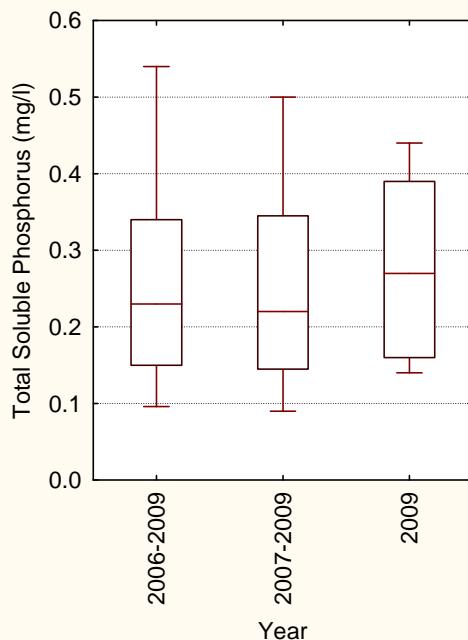
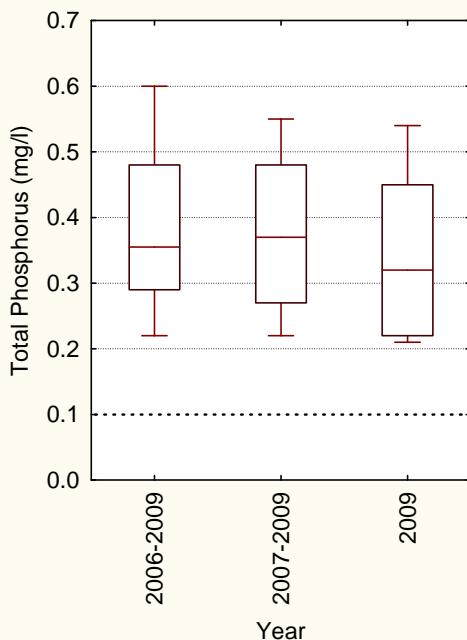
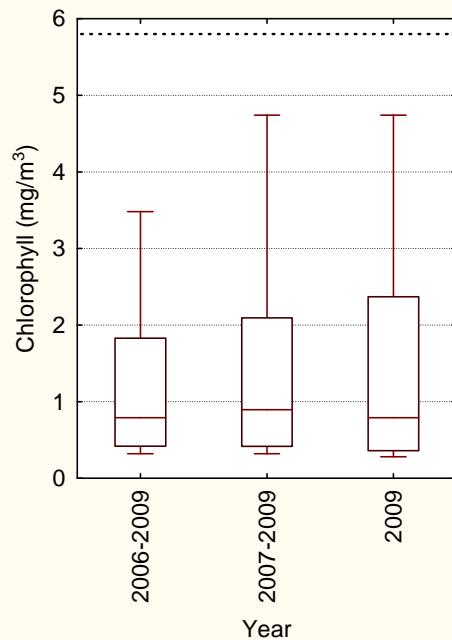
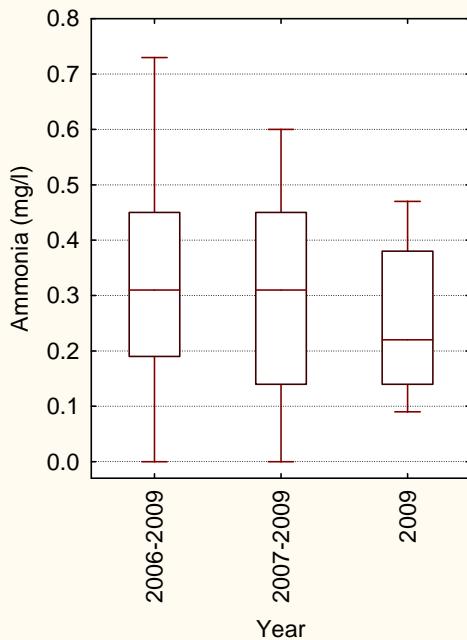
Provisional MMSD Water Quality Data

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



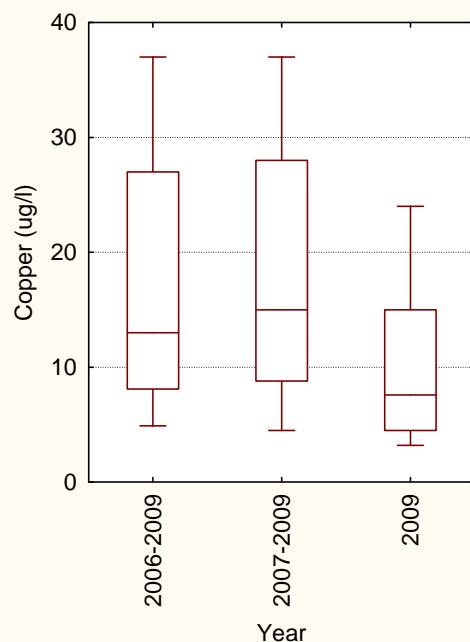
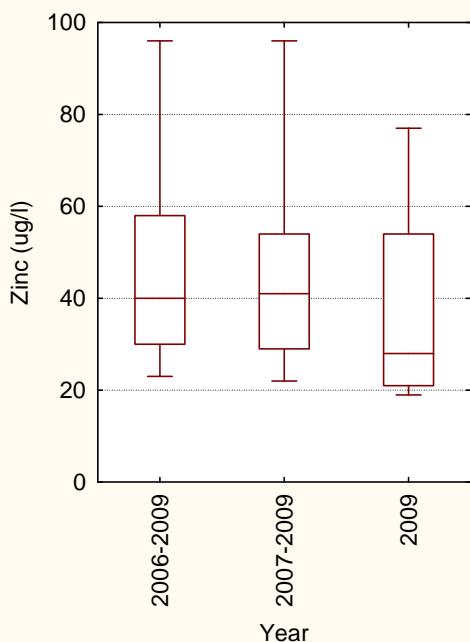
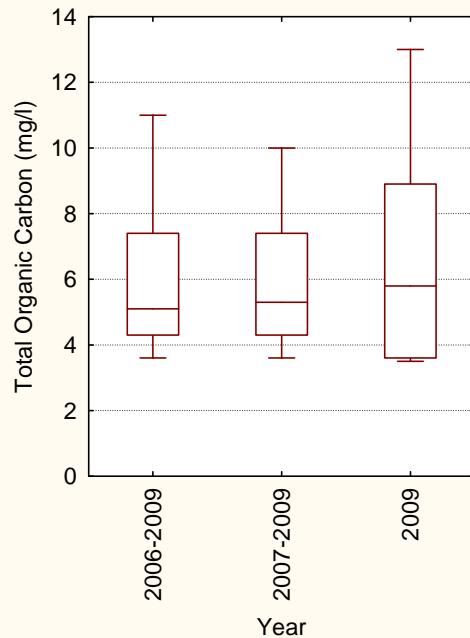
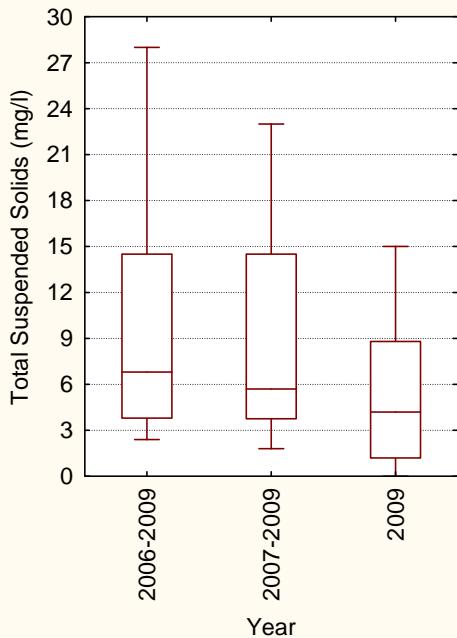
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.7	8.6	1.81	0.73	0.049	0.74	0.284	0.77	0.363	0.269	ND
Standard Error	0.1	0.9	0.3	0.58	0.10	0.007	0.10	0.054	0.12	0.042	0.033	ND
Median	7.8	13.1	8.5	0.79	0.58	0.042	0.62	0.220	0.65	0.320	0.270	ND
Mode	7.8	ND	ND	ND	1.20	0.035	0.62	0.380	1.20	0.210	0.270	ND
Standard Deviation	0.2	3.5	1.3	2.24	0.38	0.026	0.39	0.207	0.43	0.162	0.128	ND
Sample Variance	0.0	12.0	1.7	5.03	0.14	0.001	0.16	0.043	0.19	0.026	0.016	ND
Kurtosis	0.5	-1.2	4.1	4.58	0.68	3.863	0.02	4.138	0.49	3.621	-0.140	ND
Skewness	0.0	0.2	1.6	2.08	1.17	1.898	0.96	1.764	0.49	1.682	0.871	ND
Range	0.8	9.9	5.3	8.19	1.28	0.096	1.33	0.814	1.70	0.610	0.420	0.00
Minimum	7.4	9.0	7.0	0.14	0.32	0.024	0.27	0.066	0.00	0.210	0.130	0.00
Maximum	8.2	18.9	12.3	8.33	1.60	0.120	1.60	0.880	1.70	0.820	0.550	0.00
Count	15	15	15	15	14	14	15	15	14	15	15	0
Confidence Level(95.0%)	0.1	1.9	0.7	1.24	0.22	0.015	0.22	0.115	0.25	0.090	0.071	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	664.7	673.4	2.2	5.9	6.7	1051	184.8	2670	1.8	1617
Standard Error	ND	ND	60.1	62.2	0.8	1.5	1.4	82	15.1	1414	0.4	695
Median	ND	ND	560.0	613.9	0.7	4.2	4.7	1120	170.0	73	1.9	120
Mode	ND	ND	520.0	ND	0.0	0.0	ND	1120	150.0	0	0.0	120
Standard Deviation	ND	ND	232.9	232.9	3.1	5.6	5.4	319	58.4	5097	1.6	2691
Sample Variance	ND	ND	54226.7	54230.8	9.9	31.3	29.4	101510	3414.2	25980943	2.5	7240447
Kurtosis	ND	ND	1.0	0.7	1.5	0.3	-1.1	0	-1.0	2	-1.5	2
Skewness	ND	ND	1.3	1.2	1.5	1.0	0.7	0	0.4	2	0.2	2
Range	0.0	0.0	780.0	766.1	9.6	18.0	15.0	1165	198.0	14000	4.1	8300
Minimum	0.0	0.0	420.0	418.9	0.0	0.0	0.8	435	92.0	0	0.0	0
Maximum	0.0	0.0	1200.0	1185.0	9.6	18.0	15.8	1600	290.0	14000	4.1	8300
Count	0	0	15	14	14	14	15	15	15	13	13	15
Confidence Level(95.0%)	ND	ND	129.0	134.5	1.8	3.2	3.0	176	32.4	3080	1.0	1490

ND = No Data

Provisional MMSD Water Quality Data

43RD STREET DITCH - SITE 33
TRIBUTARY TO KINNICKINNIC RIVER
WATER QUALITY DATA - 2009

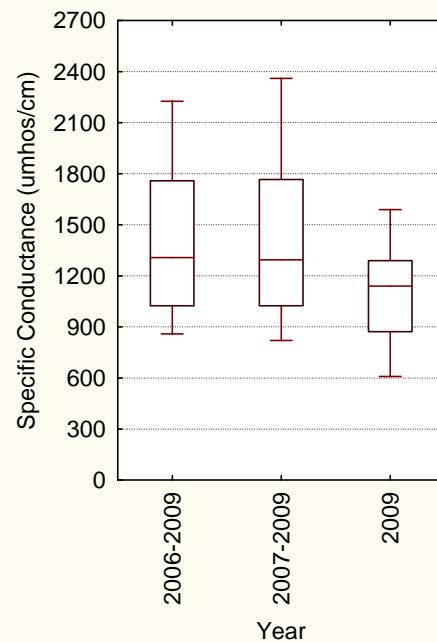
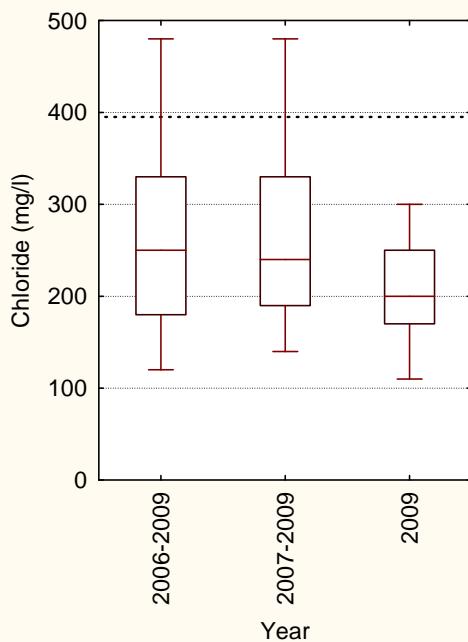
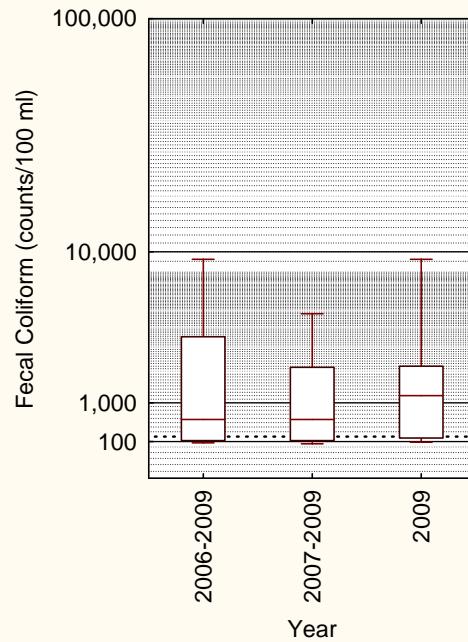
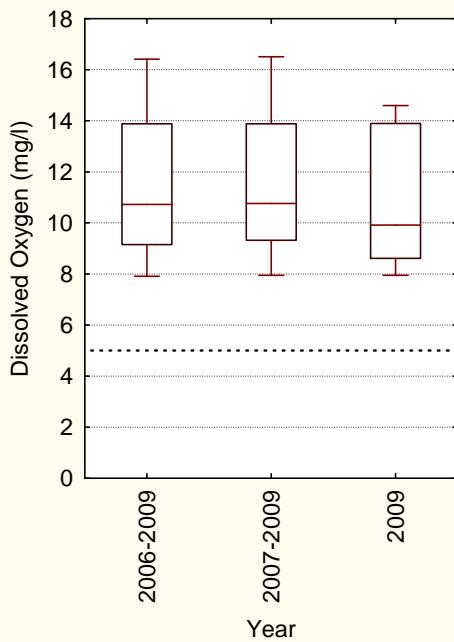
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	83.13	23.67	0.0	7.5	9.9	6.1	0.9	39.3	0.0	0.0	1.6	ND
Standard Error	11.31	2.09	0.0	2.6	2.0	2.4	0.4	6.4	0.0	0.0	1.1	ND
Median	71.00	23.00	0.0	4.8	7.6	3.8	0.0	28.0	0.0	0.0	0.0	ND
Mode	180.00	30.00	0.0	3.4	15.0	5.1	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	43.81	8.11	0.0	9.9	7.7	9.4	1.7	24.7	0.0	0.0	3.6	ND
Sample Variance	1919.70	65.81	0.0	97.9	58.9	89.1	2.8	612.2	0.0	0.0	13.3	ND
Kurtosis	1.75	-0.44	ND	14.5	0.7	14.6	0.8	1.2	ND	ND	2.0	ND
Skewness	1.62	0.35	ND	3.8	1.1	3.8	1.5	1.4	ND	ND	1.9	ND
Range	136.00	28.00	0.0	39.6	27.0	38.1	4.9	85.0	0.0	0.0	9.1	0.0
Minimum	44.00	12.00	0.0	3.4	0.0	1.9	0.0	15.0	0.0	0.0	0.0	0.0
Maximum	180.00	40.00	0.0	43.0	27.0	40.0	4.9	100.0	0.0	0.0	9.1	0.0
Count	15	15	15	15	15	15	15	15	15	15	11	0
Confidence Level(95.0%)	24.26	4.49	0.0	5.5	4.3	5.2	0.9	13.7	0.0	0.0	2.4	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	188	5.1	15.0	47.3	40.0	7.3	6.6
Standard Error	35	13	1.5	3.6	2.2	2.1	1.3	1.2
Median	270	170	3.5	13.0	46.0	40.0	5.8	5.3
Mode	250	170	0.0	0.0	50.0	42.0	3.6	3.1
Standard Deviation	136	51	6.0	13.3	8.7	8.0	5.1	4.6
Sample Variance	18497	2560	35.8	177.4	74.9	64.7	26.0	21.2
Kurtosis	1	0	0.2	1.7	-0.6	0.1	4.4	4.5
Skewness	1	0	1.1	1.1	0.3	0.2	1.9	2.0
Range	450	190	17.0	48.0	27.0	30.0	19.6	17.2
Minimum	160	100	0.0	0.0	35.0	27.0	2.4	2.8
Maximum	610	290	17.0	48.0	62.0	57.0	22.0	20.0
Count	15	15	15	14	15	15	15	15
Confidence Level(95.0%)	75	28	3.3	7.7	4.8	4.5	2.8	2.5

ND = No Data

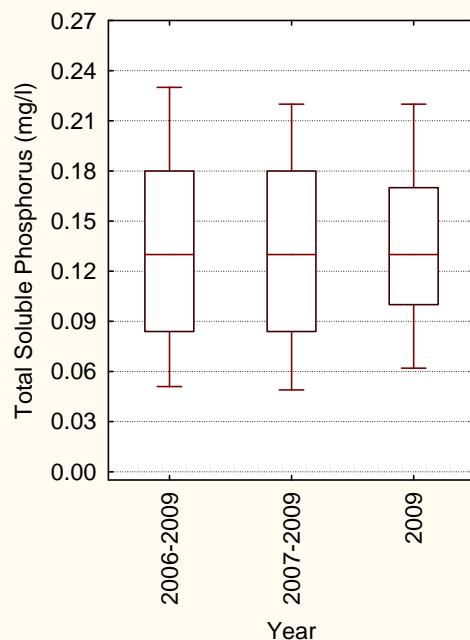
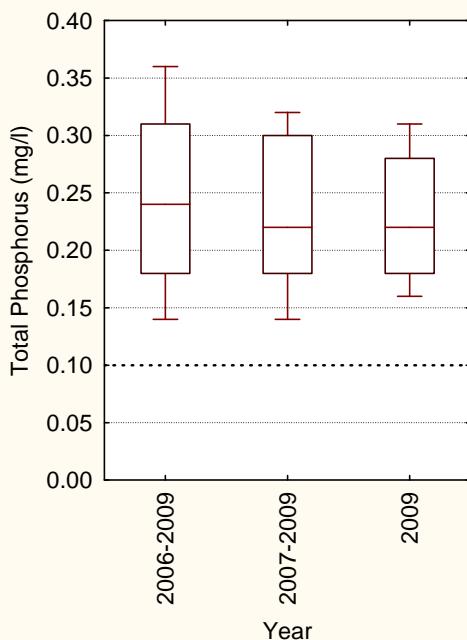
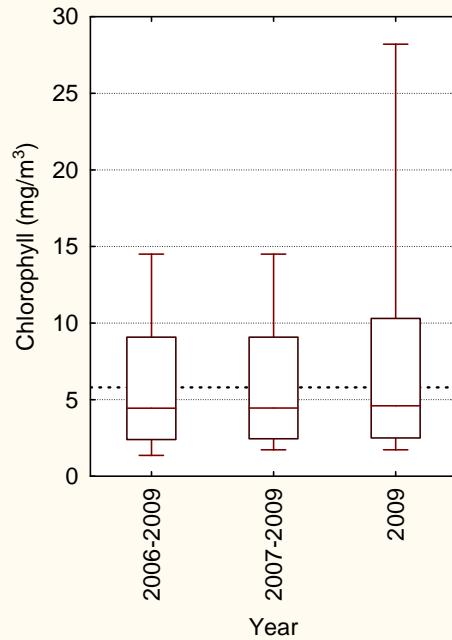
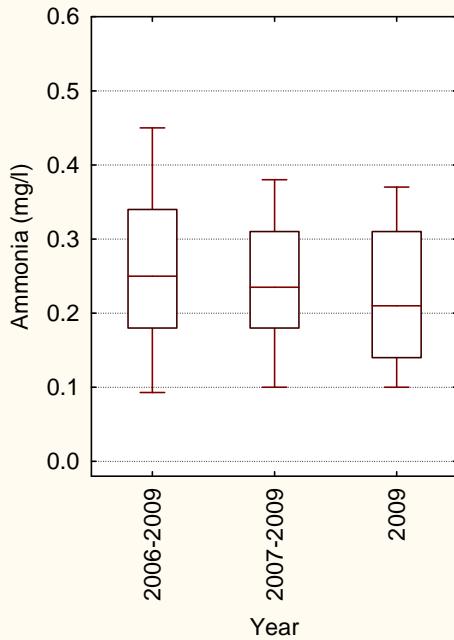
Provisional MMSD Water Quality Data

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



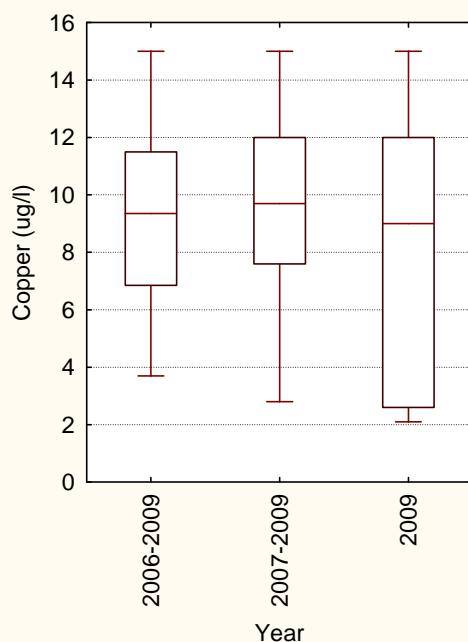
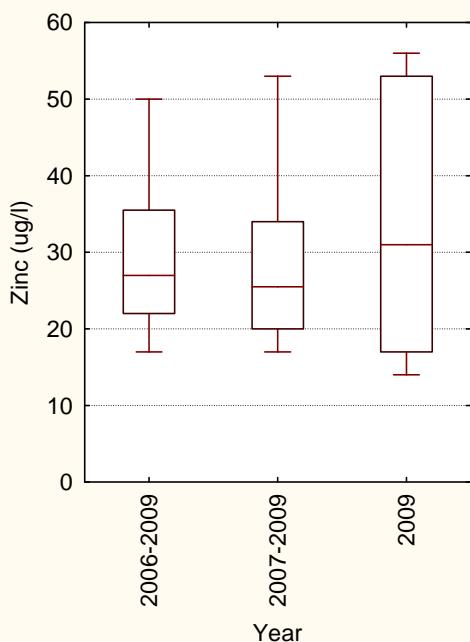
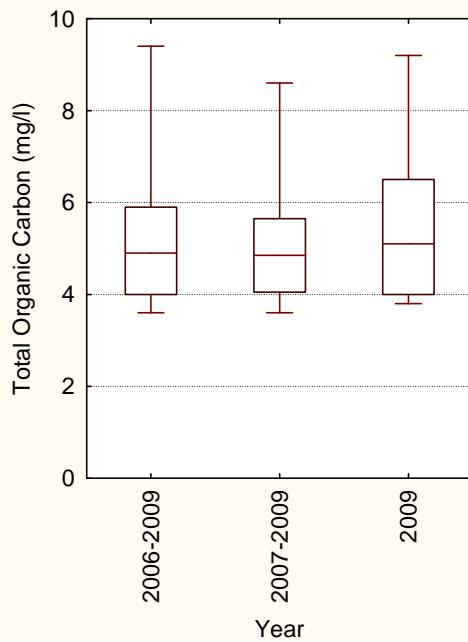
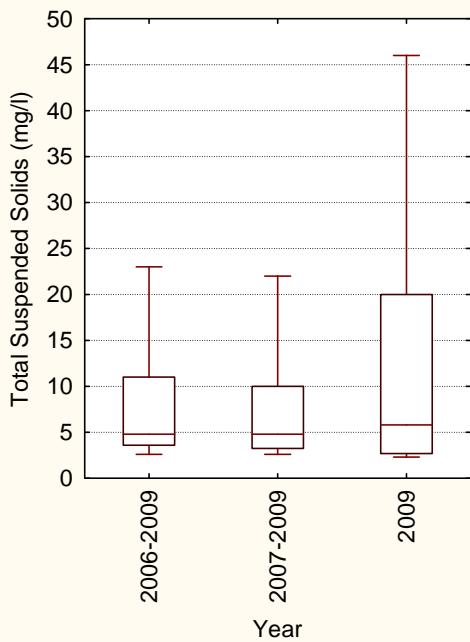
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.6	11.1	9.26	0.72	0.040	0.76	0.235	0.91	0.229	0.134	ND
Standard Error	0.1	1.4	0.7	2.59	0.10	0.003	0.09	0.034	0.10	0.016	0.014	ND
Median	7.7	13.5	9.9	4.60	0.58	0.036	0.63	0.210	0.87	0.220	0.130	ND
Mode	7.7	ND	ND	ND	0.56	0.030	1.10	0.230	0.89	0.220	0.140	ND
Standard Deviation	0.3	5.3	2.9	10.03	0.37	0.012	0.35	0.132	0.39	0.062	0.056	ND
Sample Variance	0.1	28.2	8.2	100.67	0.14	0.000	0.12	0.017	0.15	0.004	0.003	ND
Kurtosis	0.0	-1.3	-0.3	3.02	2.58	-0.300	2.81	3.986	-0.76	-0.339	0.483	ND
Skewness	0.6	0.1	0.8	1.88	1.59	0.859	1.55	1.733	0.40	0.546	0.382	ND
Range	1.0	15.8	9.4	34.77	1.36	0.038	1.33	0.521	1.26	0.220	0.218	0.00
Minimum	7.3	6.2	7.9	0.83	0.34	0.027	0.37	0.089	0.34	0.140	0.032	0.00
Maximum	8.3	22.0	17.3	35.60	1.70	0.065	1.70	0.610	1.60	0.360	0.250	0.00
Count	15	15	15	15	14	14	15	15	15	15	15	0
Confidence Level(95.0%)	0.2	2.9	1.6	5.56	0.21	0.007	0.19	0.073	0.22	0.034	0.031	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	698.7	685.0	3.9	13.7	14.8	1151	216.1	2907	2.9	2046
Standard Error	ND	ND	61.1	63.0	1.0	4.3	4.8	121	25.9	1421	0.2	631
Median	ND	ND	670.0	667.0	2.8	5.8	5.5	1140	200.0	1200	3.1	730
Mode	ND	ND	540.0	ND	2.8	ND	28.3	1190	170.0	ND	ND	110
Standard Deviation	ND	ND	236.7	244.1	3.7	16.5	18.4	469	100.2	5503	0.8	2443
Sample Variance	ND	ND	56012.4	59608.9	14.0	271.3	339.2	220390	10041.4	30279433	0.6	5969589
Kurtosis	ND	ND	5.3	4.7	5.2	2.4	3.6	2	5.1	9	-0.7	0
Skewness	ND	ND	2.0	1.8	2.0	1.8	1.9	1	1.7	3	0.1	1
Range	0.0	0.0	1000.0	1041.6	15.0	53.0	65.0	2031	438.0	20941	2.6	7385
Minimum	0.0	0.0	400.0	354.0	0.0	2.0	1.7	329	72.0	59	1.8	15
Maximum	0.0	0.0	1400.0	1395.6	15.0	55.0	66.7	2360	510.0	21000	4.3	7400
Count	0	0	15	15	15	15	15	15	15	15	15	15
Confidence Level(95.0%)	ND	ND	131.1	135.2	2.1	9.1	10.2	260	55.5	3047	0.4	1353

ND = No Data

Provisional MMSD Water Quality Data

JACKSON PARK LAGOON - SITE 34
 KINNICKINNICK RIVER
 WATER QUALITY DATA - 2009

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	68.20	24.53	0.0	5.2	8.3	3.9	0.8	32.7	0.0	0.3	0.4	ND
Standard Error	5.85	2.73	0.0	0.3	1.3	0.4	0.4	4.5	0.0	0.2	0.4	ND
Median	68.00	25.00	0.0	5.0	9.0	3.8	0.0	31.0	0.0	0.0	0.0	ND
Mode	ND	24.00	0.0	4.2	12.0	4.0	0.0	19.0	0.0	0.0	0.0	ND
Standard Deviation	22.67	10.59	0.0	1.3	5.2	1.4	1.7	17.5	0.0	0.7	1.6	ND
Sample Variance	514.03	112.10	0.0	1.8	26.6	1.9	3.0	306.5	0.0	0.5	2.5	ND
Kurtosis	-0.07	0.80	ND	-0.2	-1.4	3.8	3.2	-1.8	ND	4.6	13.0	ND
Skewness	-0.14	0.57	ND	0.8	-0.2	1.7	2.0	0.3	ND	2.4	3.6	ND
Range	84.00	40.90	0.0	4.5	16.0	5.5	5.5	44.0	0.0	2.1	5.7	0.0
Minimum	26.00	8.10	0.0	3.5	0.0	2.3	0.0	13.0	0.0	0.0	0.0	0.0
Maximum	110.00	49.00	0.0	8.0	16.0	7.8	5.5	57.0	0.0	2.1	5.7	0.0
Count	15	15	15	15	15	15	15	15	15	15	13	0
Confidence Level(95.0%)	12.56	5.86	0.0	0.7	2.9	0.8	1.0	9.7	0.0	0.4	1.0	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	270	177	2.8	13.4	44.9	39.5	5.5	5.0
Standard Error	26	16	0.8	1.5	2.8	3.0	0.5	0.5
Median	270	190	3.2	12.5	47.0	42.0	5.1	4.6
Mode	270	190	0.0	11.0	54.0	49.0	3.8	3.6
Standard Deviation	101	63	2.9	5.5	10.9	11.8	2.1	1.9
Sample Variance	10220	4022	8.5	30.2	119.6	138.4	4.4	3.5
Kurtosis	0	0	0.4	2.8	0.1	0.2	-0.2	-0.5
Skewness	0	-1	0.8	1.4	-0.4	-0.6	1.0	0.9
Range	382	215	9.6	20.6	41.0	45.0	6.7	5.0
Minimum	98	55	0.0	7.4	24.0	15.0	2.8	3.2
Maximum	480	270	9.6	28.0	65.0	60.0	9.5	8.2
Count	15	15	15	14	15	15	15	15
Confidence Level(95.0%)	56	35	1.6	3.2	6.1	6.5	1.2	1.0

ND = No Data

Provisional MMSD Water Quality Data

WILSON PARK CREEK - SITE 35
TRIBUTARY TO KINNICKINNICK RIVER
WATER QUALITY DATA - 2009

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	12.1	12.6	4.12	0.28	0.014	0.34	0.045	0.49	0.121	0.077	ND
Standard Error	0.1	1.5	0.7	0.78	0.05	0.003	0.06	0.018	0.10	0.011	0.008	ND
Median	8.3	12.0	12.5	3.32	0.23	0.012	0.33	0.020	0.33	0.110	0.077	ND
Mode	8.6	20.4	13.4	ND	0.37	0.013	0.64	0.032	0.00	0.110	0.110	ND
Standard Deviation	0.4	5.8	2.7	3.12	0.20	0.011	0.24	0.074	0.40	0.043	0.032	ND
Sample Variance	0.1	34.0	7.5	9.71	0.04	0.000	0.06	0.005	0.16	0.002	0.001	ND
Kurtosis	-1.5	-1.0	-0.5	1.48	-0.80	0.534	-1.38	8.533	-1.10	0.396	-0.973	ND
Skewness	-0.1	0.3	0.4	1.41	0.64	0.985	0.37	2.823	0.48	0.974	-0.192	ND
Range	1.1	18.8	9.5	10.68	0.59	0.039	0.68	0.290	1.20	0.153	0.105	0.00
Minimum	7.7	3.1	8.9	0.72	0.06	0.000	0.06	0.000	0.00	0.067	0.025	0.00
Maximum	8.8	21.9	18.4	11.40	0.65	0.039	0.74	0.290	1.20	0.220	0.130	0.00
Count	16	16	16	16	14	14	16	16	16	16	16	0
Confidence Level(95.0%)	0.2	3.1	1.5	1.66	0.12	0.006	0.13	0.039	0.21	0.023	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	701.3	693.8	2.5	7.5	9.1	1238	218.8	1101	2.7	1091
Standard Error	ND	ND	76.9	75.5	0.8	2.5	3.0	135	37.6	426	0.1	311
Median	ND	ND	600.0	596.6	1.5	3.4	2.2	1055	175.0	515	2.7	520
Mode	ND	ND	560.0	ND	0.0	ND	ND	1040	160.0	120	2.1	410
Standard Deviation	ND	ND	307.4	302.1	3.2	9.8	11.9	541	150.3	1703	0.6	1246
Sample Variance	ND	ND	94505.0	91270.8	10.3	96.6	141.4	292744	22585.0	2901245	0.3	1551612
Kurtosis	ND	ND	2.6	2.4	8.1	5.9	3.0	2	8.1	4	-0.3	3
Skewness	ND	ND	1.8	1.7	2.7	2.4	1.8	2	2.7	2	0.4	2
Range	0.0	0.0	1130.0	1112.0	13.0	38.0	40.6	2021	600.0	5551	2.1	4370
Minimum	0.0	0.0	370.0	350.0	0.0	0.0	1.5	609	110.0	49	1.7	130
Maximum	0.0	0.0	1500.0	1462.0	13.0	38.0	42.1	2630	710.0	5600	3.7	4500
Count	0	0	16	16	16	16	16	16	16	16	16	16
Confidence Level(95.0%)	ND	ND	163.8	161.0	1.7	5.2	6.3	288	80.1	908	0.3	664

ND = No Data

Provisional MMSD Water Quality Data

WILSON PARK CREEK - SITE 35
TRIBUTARY TO KINNICKINNICK RIVER
WATER QUALITY DATA - 2009

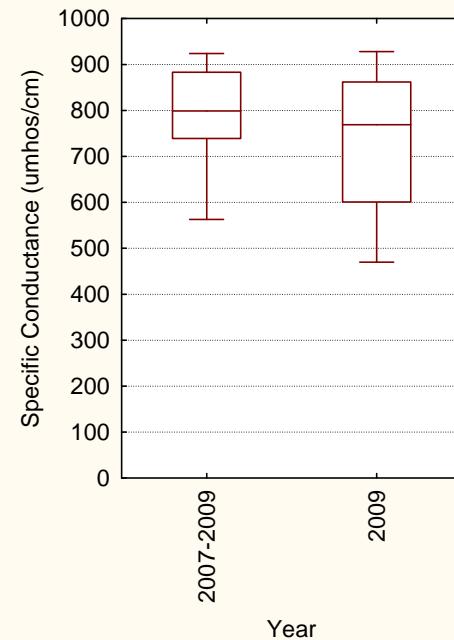
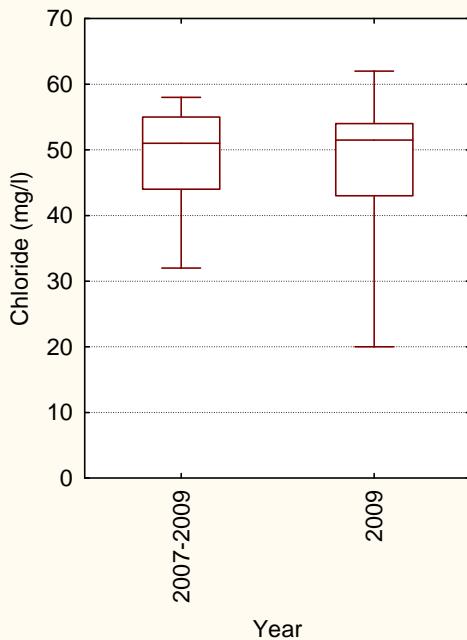
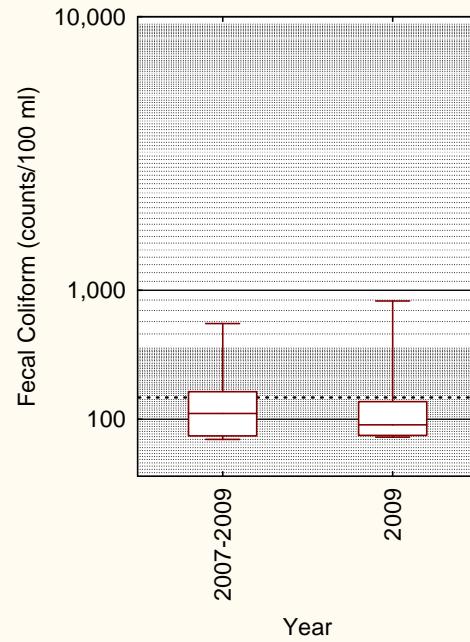
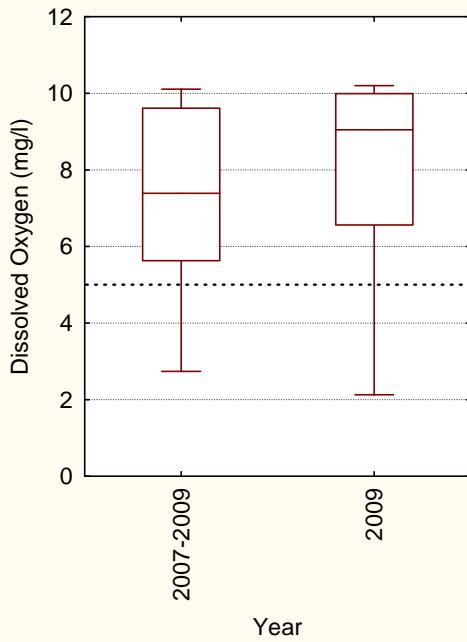
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	66.88	29.81	0.0	6.7	4.4	3.6	0.3	21.8	0.1	0.2	0.5	ND
Standard Error	5.19	2.56	0.0	0.9	1.0	0.5	0.3	5.0	0.1	0.2	0.5	ND
Median	65.00	31.00	0.0	5.7	4.3	3.4	0.0	13.5	0.0	0.0	0.0	ND
Mode	62.00	26.00	0.0	4.3	0.0	3.6	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	20.76	10.25	0.0	3.5	3.9	2.2	1.2	19.8	0.3	0.8	1.6	ND
Sample Variance	430.92	105.10	0.0	12.6	15.2	4.6	1.3	392.6	0.1	0.6	2.4	ND
Kurtosis	2.19	0.94	ND	4.1	-1.5	10.1	16.0	-1.0	16.0	16.0	12.0	ND
Skewness	0.72	0.19	ND	1.9	0.2	2.9	4.0	0.6	4.0	4.0	3.5	ND
Range	90.00	42.00	0.0	13.4	11.0	9.1	4.6	60.0	1.1	3.1	5.4	0.0
Minimum	30.00	11.00	0.0	3.6	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	120.00	53.00	0.0	17.0	11.0	11.0	4.6	60.0	1.1	3.1	5.4	0.0
Count	16	16	16	16	16	16	16	16	16	16	12	0
Confidence Level(95.0%)	11.06	5.46	0.0	1.9	2.1	1.1	0.6	10.6	0.1	0.4	1.0	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	197	3.5	4.9	50.4	42.1	8.3	7.8
Standard Error	23	15	1.4	1.6	3.0	2.7	3.6	3.4
Median	285	200	1.1	2.2	50.0	43.5	4.0	3.6
Mode	270	200	0.0	0.0	54.0	48.0	ND	3.0
Standard Deviation	92	62	5.4	6.1	11.8	10.9	14.4	13.7
Sample Variance	8507	3835	29.6	36.8	140.0	119.0	206.8	187.4
Kurtosis	1	0	2.9	-0.5	2.6	0.4	14.3	14.4
Skewness	0	0	1.9	0.9	0.6	-1.0	3.7	3.7
Range	390	230	17.0	16.0	53.0	38.0	58.7	55.8
Minimum	120	80	0.0	0.0	28.0	19.0	2.3	2.2
Maximum	510	310	17.0	16.0	81.0	57.0	61.0	58.0
Count	16	16	16	14	16	16	16	16
Confidence Level(95.0%)	49	33	2.9	3.5	6.3	5.8	7.7	7.3

ND = No Data

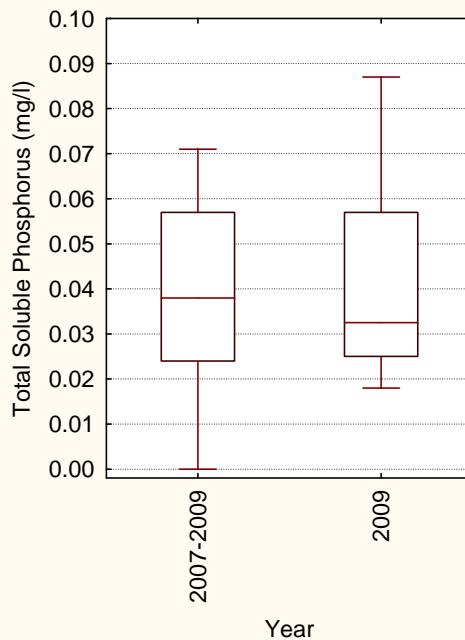
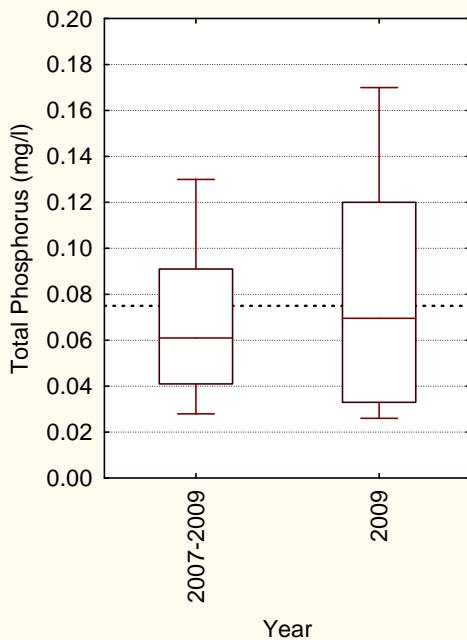
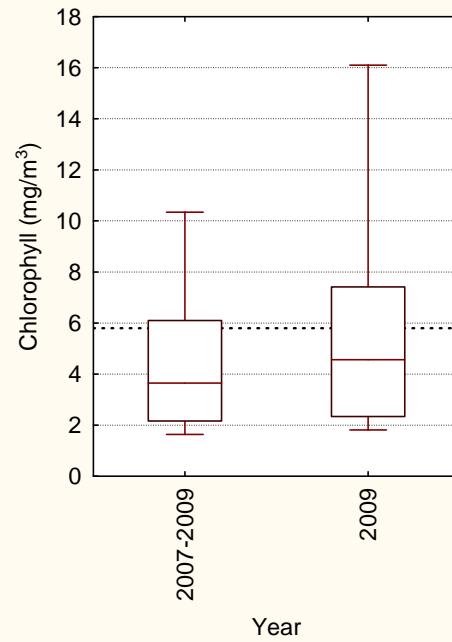
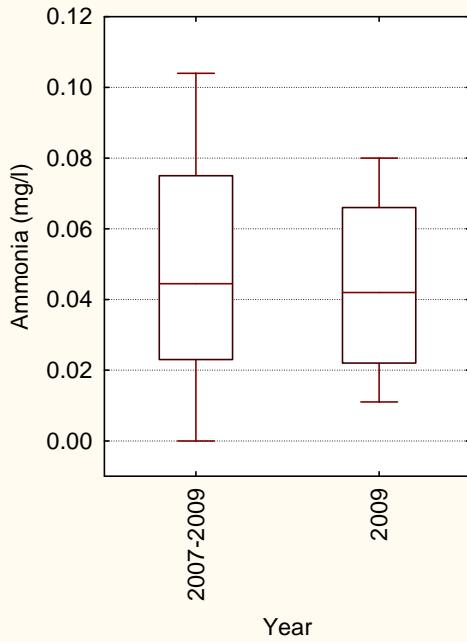
Provisional MMSD Water Quality Data

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



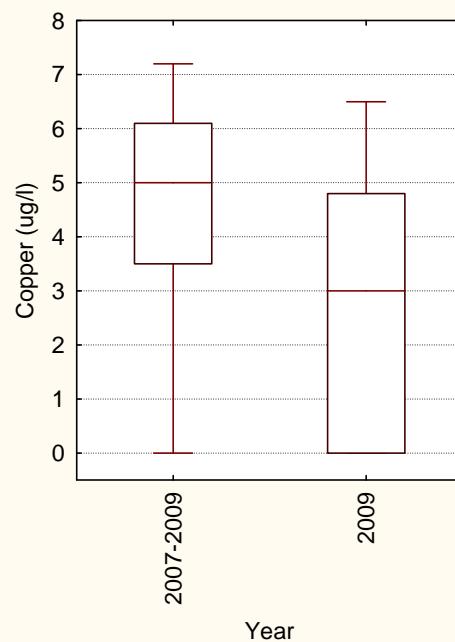
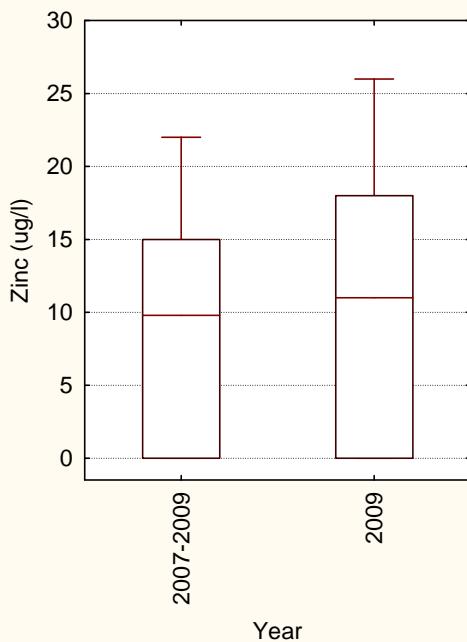
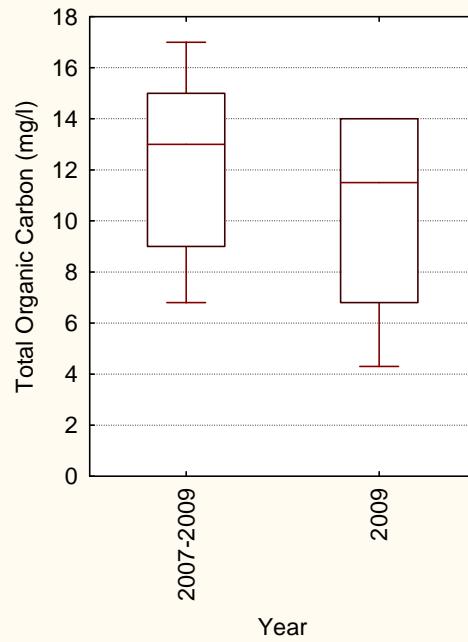
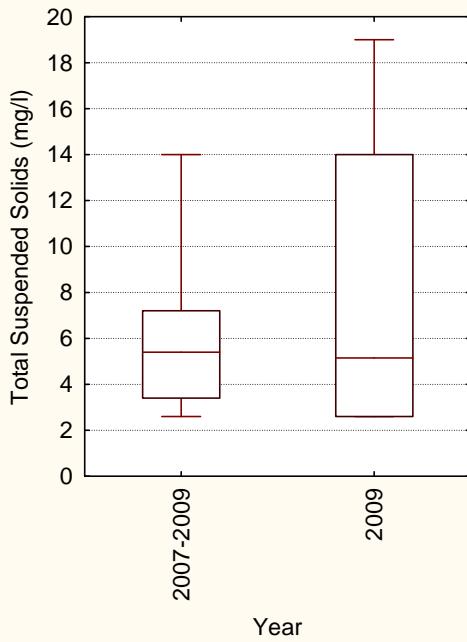
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	9.0	7.4	6.23	1.00	0.034	1.08	0.044	0.88	0.079	0.041	ND
Standard Error	0.1	1.6	0.8	1.34	0.08	0.008	0.07	0.006	0.10	0.012	0.006	ND
Median	7.5	7.2	9.0	4.57	1.10	0.020	1.10	0.042	0.84	0.070	0.033	ND
Mode	7.6	12.0	ND	ND	1.10	0.019	1.10	0.080	1.40	ND	ND	ND
Standard Deviation	0.2	7.0	3.2	5.69	0.32	0.031	0.31	0.025	0.40	0.052	0.025	ND
Sample Variance	0.1	48.5	10.5	32.34	0.10	0.001	0.10	0.001	0.16	0.003	0.001	ND
Kurtosis	0.6	-1.1	0.0	3.36	-0.69	3.518	-0.38	-1.287	1.04	-0.592	-0.159	ND
Skewness	0.1	0.4	-1.0	1.87	-0.59	1.824	-0.68	-0.065	0.91	0.823	0.653	ND
Range	1.0	21.4	10.9	21.02	1.03	0.112	1.01	0.080	1.56	0.157	0.090	0.00
Minimum	7.0	-0.1	0.2	1.68	0.47	0.008	0.49	0.000	0.34	0.023	0.000	0.00
Maximum	8.0	21.3	11.0	22.70	1.50	0.120	1.50	0.080	1.90	0.180	0.090	0.00
Count	18	18	18	18	15	15	18	18	18	18	18	0
Confidence Level(95.0%)	0.1	3.5	1.6	2.83	0.18	0.017	0.16	0.013	0.20	0.026	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	472.8	463.9	3.0	8.9	9.6	736	47.9	298	2.0	478
Standard Error	ND	ND	34.8	36.0	0.7	2.1	2.9	42	3.0	148	0.1	252
Median	ND	ND	445.0	442.3	2.1	5.2	4.5	769	51.5	77	1.9	130
Mode	ND	ND	410.0	396.0	0.0	2.6	ND	ND	20.0	180	2.3	250
Standard Deviation	ND	ND	147.8	152.5	3.1	8.7	12.1	177	12.9	612	0.6	1070
Sample Variance	ND	ND	21856.5	23270.5	9.7	75.8	146.7	31330	166.5	374231	0.3	1145761
Kurtosis	ND	ND	0.8	0.7	-0.9	3.6	3.7	0	1.1	12	0.6	15
Skewness	ND	ND	0.6	0.5	0.7	1.8	2.1	-1	-1.0	3	1.1	4
Range	0.0	0.0	620.0	633.8	9.0	32.7	39.8	664	50.0	2479	2.1	4580
Minimum	0.0	0.0	210.0	193.0	0.0	2.3	1.9	317	20.0	21	1.3	20
Maximum	0.0	0.0	830.0	826.8	9.0	35.0	41.7	981	70.0	2500	3.4	4600
Count	0	0	18	18	18	18	18	18	18	17	17	18
Confidence Level(95.0%)	ND	ND	73.5	75.9	1.5	4.3	6.0	88	6.4	315	0.3	532

ND = No Data

Provisional MMSD Water Quality Data

HWY 145, NORTH OF FREISTADT ROAD - SITE 36
 MENOMONEE RIVER
 WATER QUALITY DATA - 2009

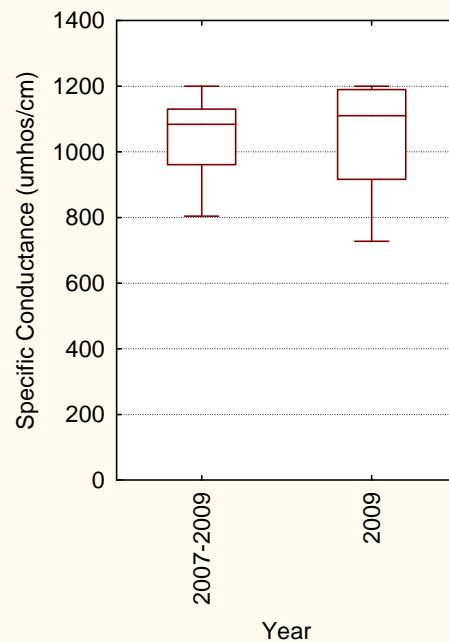
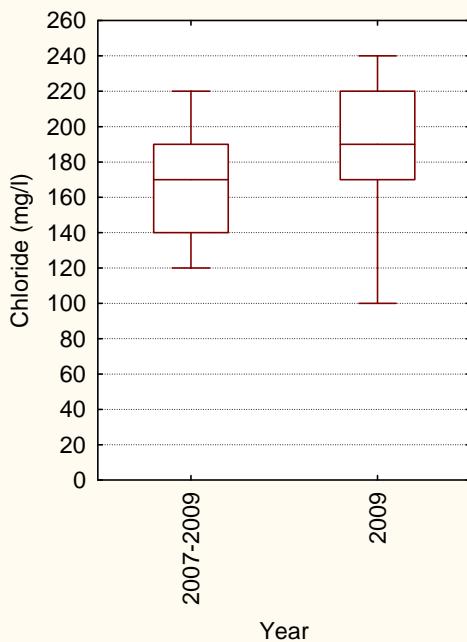
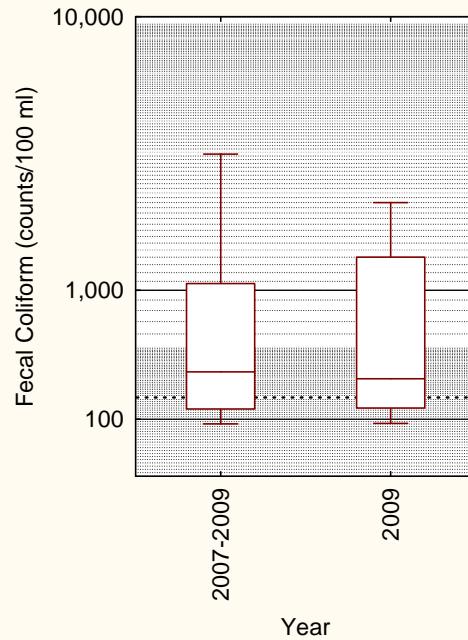
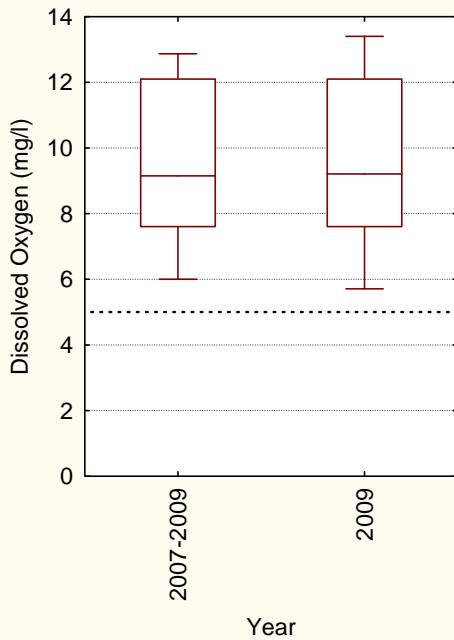
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	75.22	36.83	0.0	4.7	2.7	3.3	0.0	10.2	0.0	0.1	1.0	ND
Standard Error	5.02	2.44	0.0	0.2	0.6	0.4	0.0	2.4	0.0	0.1	0.7	ND
Median	71.50	38.50	0.0	4.7	3.0	3.1	0.0	11.0	0.0	0.0	0.0	ND
Mode	100.00	49.00	0.0	4.6	0.0	3.3	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	21.30	10.37	0.0	0.8	2.7	1.6	0.0	10.3	0.0	0.5	2.8	ND
Sample Variance	453.83	107.56	0.0	0.7	7.1	2.6	0.0	107.0	0.0	0.3	7.8	ND
Kurtosis	-0.68	-0.26	ND	1.6	-1.7	12.1	ND	-1.4	ND	18.0	4.9	ND
Skewness	-0.05	-0.69	ND	1.0	0.2	3.2	ND	0.3	ND	4.2	2.5	ND
Range	78.00	35.00	0.0	3.4	6.6	7.4	0.0	28.0	0.0	2.2	8.2	0.0
Minimum	32.00	14.00	0.0	3.5	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	110.00	49.00	0.0	6.9	6.6	9.2	0.0	28.0	0.0	2.2	8.2	0.0
Count	18	18	18	18	18	18	18	18	18	18	16	0
Confidence Level(95.0%)	10.59	5.16	0.0	0.4	1.3	0.8	0.0	5.1	0.0	0.3	1.5	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	340	254	0.6	8.4	68.3	57.8	10.4	10.0
Standard Error	22	14	0.3	1.2	2.6	2.7	0.9	0.9
Median	340	280	0.0	7.2	70.0	60.0	11.5	11.5
Mode	450	300	0.0	4.4	70.0	60.0	14.0	14.0
Standard Deviation	95	61	1.3	4.9	11.0	11.6	3.9	3.9
Sample Variance	9012	3715	1.6	23.9	120.7	134.4	15.3	15.4
Kurtosis	-1	2	2.3	-1.4	4.4	3.3	-1.2	-1.3
Skewness	0	-2	2.0	0.0	-1.8	-1.6	-0.6	-0.5
Range	340	211	3.7	16.0	49.0	48.0	10.5	11.2
Minimum	140	89	0.0	0.0	35.0	24.0	3.5	3.8
Maximum	480	300	3.7	16.0	84.0	72.0	14.0	15.0
Count	18	18	17	16	18	18	18	18
Confidence Level(95.0%)	47	30	0.6	2.6	5.5	5.8	1.9	2.0

ND = No Data

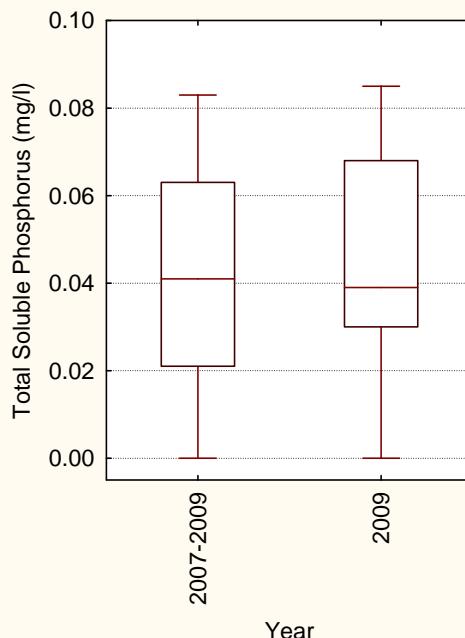
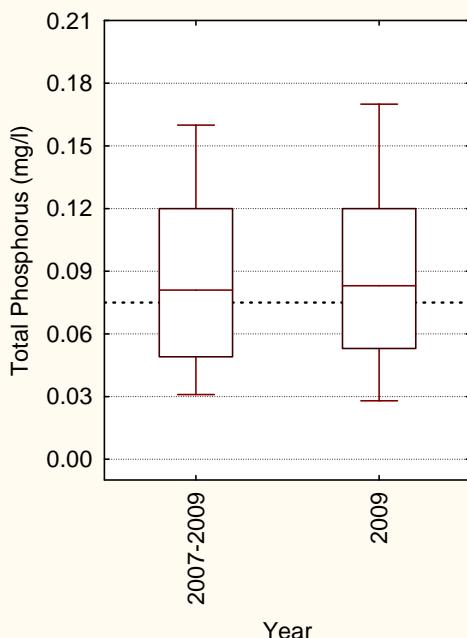
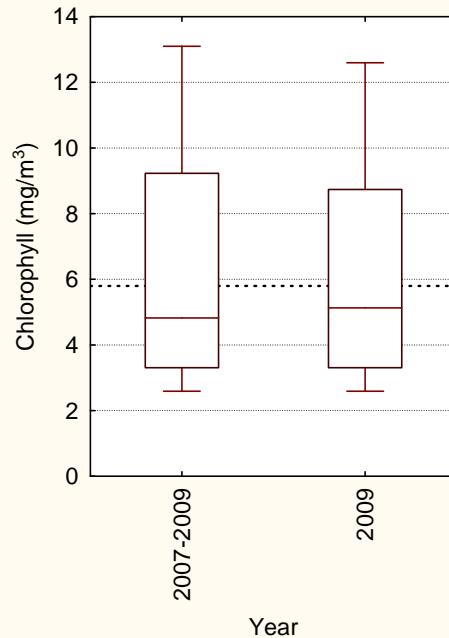
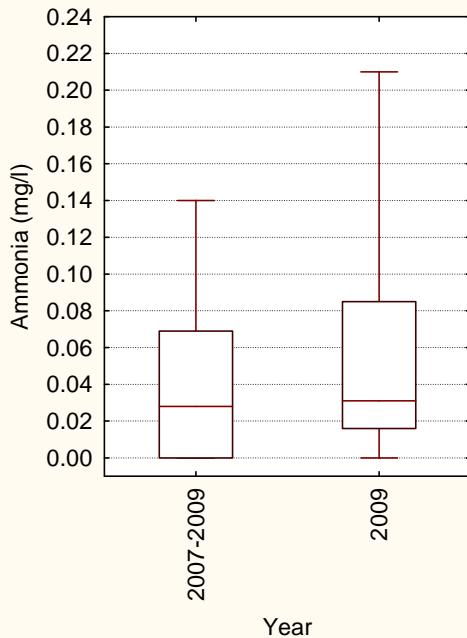
Provisional MMSD Water Quality Data

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



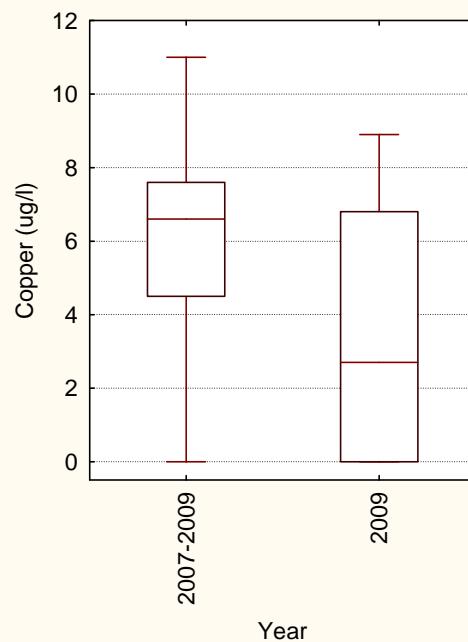
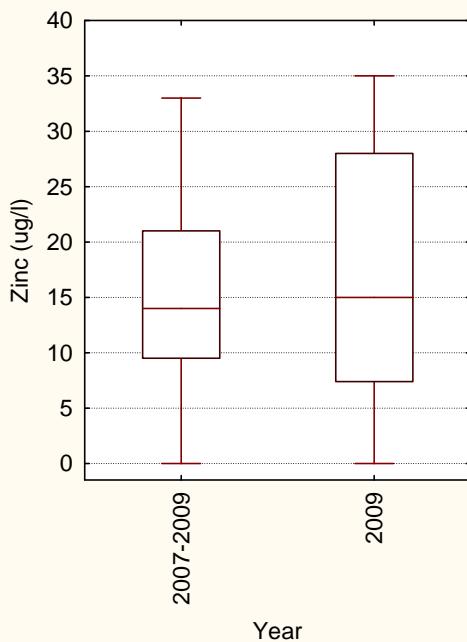
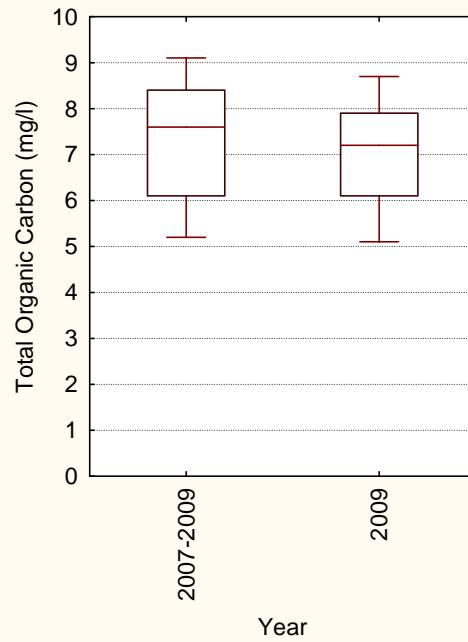
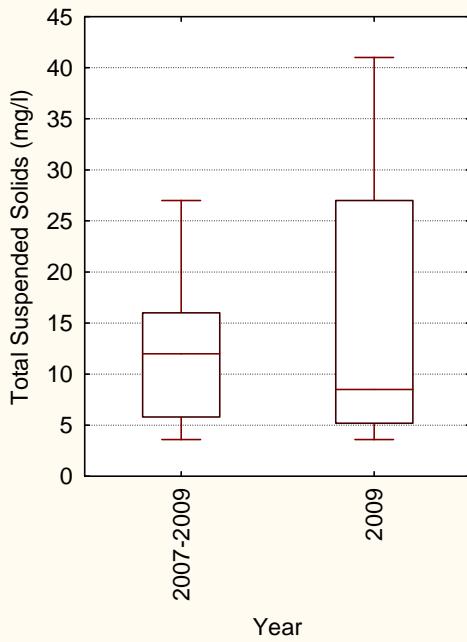
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	10.4	9.6	6.28	0.41	0.016	0.53	0.067	0.97	0.091	0.046	ND
Standard Error	0.1	1.7	0.7	0.86	0.06	0.002	0.07	0.020	0.23	0.013	0.007	ND
Median	7.9	9.1	9.2	5.13	0.46	0.012	0.55	0.031	0.66	0.083	0.039	ND
Mode	8.0	ND	12.6	ND	ND	0.024	ND	0.000	1.20	0.120	0.000	ND
Standard Deviation	0.2	6.9	2.8	3.56	0.21	0.009	0.30	0.081	0.93	0.054	0.028	ND
Sample Variance	0.1	47.0	7.6	12.70	0.04	0.000	0.09	0.007	0.87	0.003	0.001	ND
Kurtosis	0.6	-1.1	-1.2	-0.75	-1.42	0.640	-0.63	2.009	13.25	-0.999	-0.986	ND
Skewness	-1.0	0.2	-0.1	0.64	-0.17	1.084	0.31	1.657	3.47	0.192	-0.064	ND
Range	0.8	22.2	8.5	11.34	0.63	0.030	1.02	0.280	4.11	0.180	0.087	0.00
Minimum	7.4	-0.2	5.0	1.76	0.08	0.008	0.08	0.000	0.29	0.000	0.000	0.00
Maximum	8.2	22.0	13.5	13.10	0.71	0.037	1.10	0.280	4.40	0.180	0.087	0.00
Count	17	17	17	17	14	14	17	17	17	17	17	0
Confidence Level(95.0%)	0.1	3.5	1.4	1.83	0.12	0.005	0.15	0.042	0.48	0.028	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	604.7	589.3	4.2	15.4	16.2	1052	188.2	9878	2.7	3496
Standard Error	ND	ND	26.8	29.4	0.9	3.5	3.9	62	14.0	9242	0.2	2266
Median	ND	ND	640.0	634.9	2.6	8.5	10.0	1110	190.0	300	2.5	410
Mode	ND	ND	610.0	ND	0.0	27.0	ND	1200	170.0	ND	ND	ND
Standard Deviation	ND	ND	110.6	121.3	3.7	14.2	16.0	255	57.6	34581	0.8	9343
Sample Variance	ND	ND	12226.5	14723.9	14.0	202.8	257.6	65123	3316.5	1195861081	0.7	87288332
Kurtosis	ND	ND	0.5	0.7	-0.5	0.8	3.0	1	2.6	14	4.7	15
Skewness	ND	ND	-0.9	-1.1	0.8	1.3	1.7	0	0.6	4	1.9	4
Range	0.0	0.0	420.0	443.0	11.0	47.0	59.5	1148	261.0	129923	3.2	38934
Minimum	0.0	0.0	340.0	290.0	0.0	3.0	2.5	492	79.0	77	1.9	66
Maximum	0.0	0.0	760.0	733.0	11.0	50.0	62.0	1640	340.0	130000	5.1	39000
Count	0	0	17	17	17	17	17	17	17	14	14	17
Confidence Level(95.0%)	ND	ND	56.9	62.4	1.9	7.3	8.3	131	29.6	19967	0.5	4804

ND = No Data

Provisional MMSD Water Quality Data

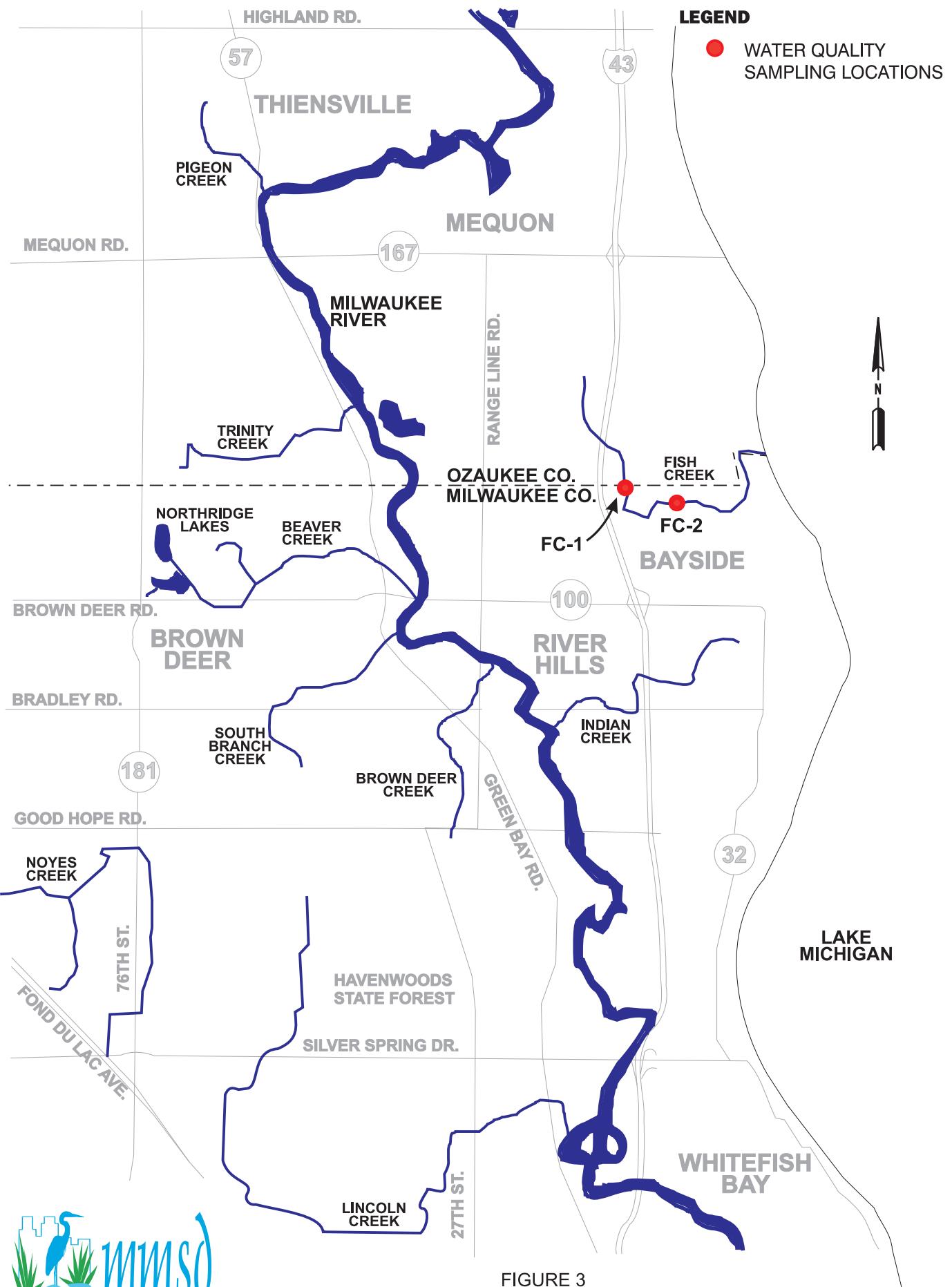
GOOD HOPE ROAD, EAST OF 124TH STREET - SITE 37
 MENOMONEE RIVER
 WATER QUALITY DATA - 2009

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	66.18	32.24	0.0	5.1	4.1	4.1	0.1	16.7	0.0	0.3	1.2	ND
Standard Error	4.49	2.43	0.0	0.3	0.9	0.8	0.1	3.2	0.0	0.2	0.8	ND
Median	67.00	36.00	0.0	4.8	2.7	3.1	0.0	15.0	0.0	0.0	0.0	ND
Mode	67.00	28.00	0.0	6.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	18.49	10.02	0.0	1.4	3.7	3.4	0.5	13.4	0.0	0.9	3.0	ND
Sample Variance	342.03	100.44	0.0	1.9	13.8	11.6	0.2	178.6	0.0	0.7	9.0	ND
Kurtosis	-0.55	-1.00	ND	2.8	-0.7	10.1	17.0	-1.3	ND	6.3	4.7	ND
Skewness	-0.26	-0.40	ND	1.4	0.4	3.0	4.1	0.2	ND	2.7	2.4	ND
Range	65.00	33.00	0.0	5.4	12.0	14.2	2.0	39.0	0.0	2.9	9.3	0.0
Minimum	29.00	13.00	0.0	3.6	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	94.00	46.00	0.0	9.0	12.0	16.0	2.0	39.0	0.0	2.9	9.3	0.0
Count	17	17	17	17	17	17	17	17	17	17	13	0
Confidence Level(95.0%)	9.51	5.15	0.0	0.7	1.9	1.7	0.2	6.9	0.0	0.4	1.8	ND

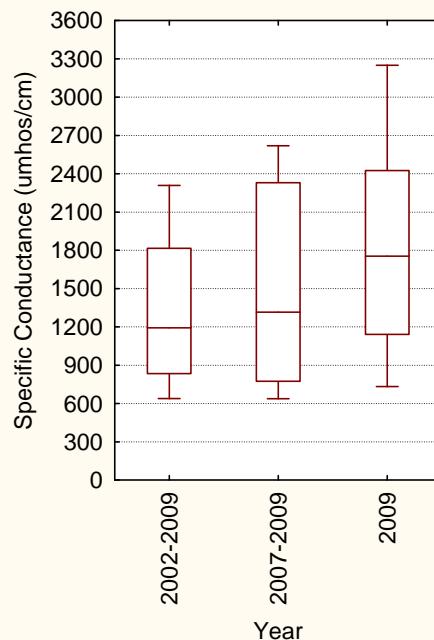
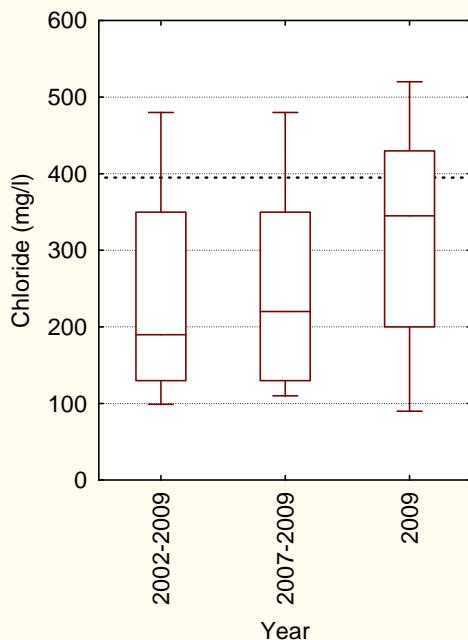
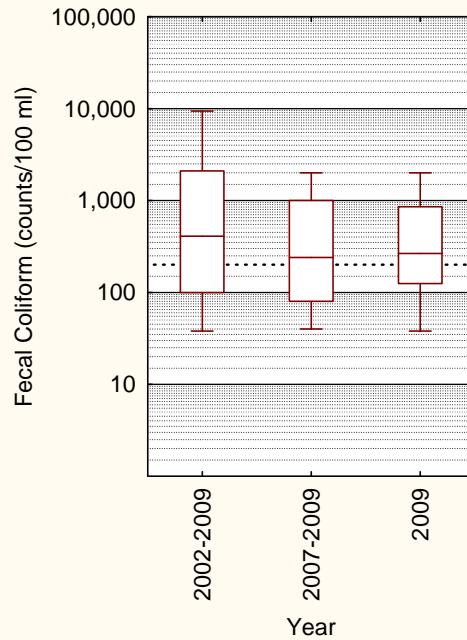
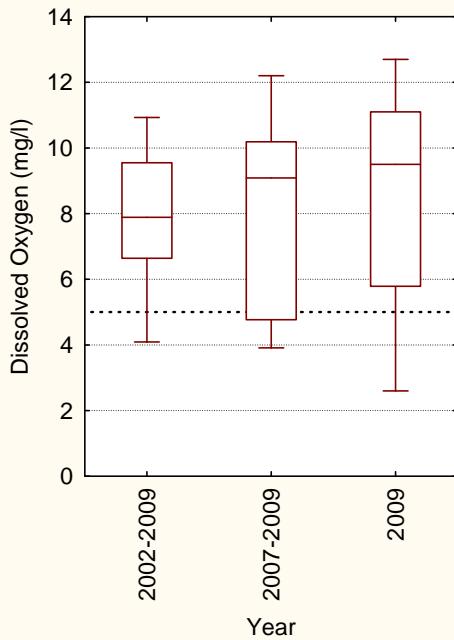
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	298	209	1.4	8.7	55.3	48.4	6.9	6.5
Standard Error	20	15	0.6	1.5	3.0	3.1	0.3	0.3
Median	310	220	0.0	7.7	55.0	50.0	7.2	6.7
Mode	220	150	0.0	15.0	68.0	60.0	6.8	7.0
Standard Deviation	83	63	2.3	5.6	12.5	12.8	1.4	1.3
Sample Variance	6853	3967	5.3	31.8	155.5	163.0	2.0	1.6
Kurtosis	-1	0	1.5	-0.3	-0.3	-0.6	-0.3	-0.7
Skewness	0	-1	1.5	0.7	-0.7	-0.6	-0.6	-0.5
Range	290	213	7.3	20.0	42.0	42.0	5.1	4.2
Minimum	130	77	0.0	0.0	28.0	22.0	3.8	4.2
Maximum	420	290	7.3	20.0	70.0	64.0	8.9	8.4
Count	17	17	16	15	17	17	17	17
Confidence Level(95.0%)	43	32	1.2	3.1	6.4	6.6	0.7	0.7

ND = No Data

Provisional MMSD Water Quality Data

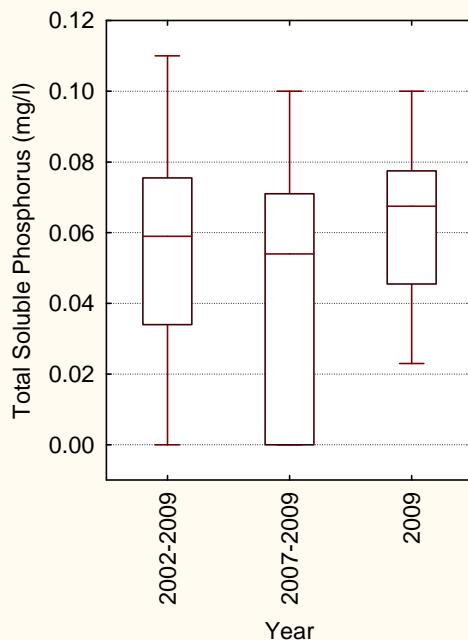
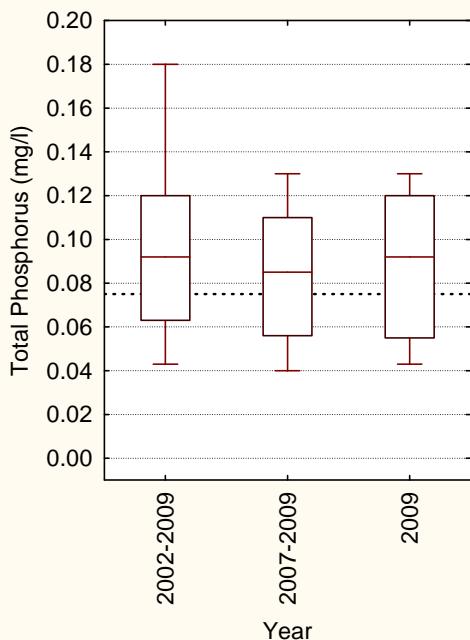
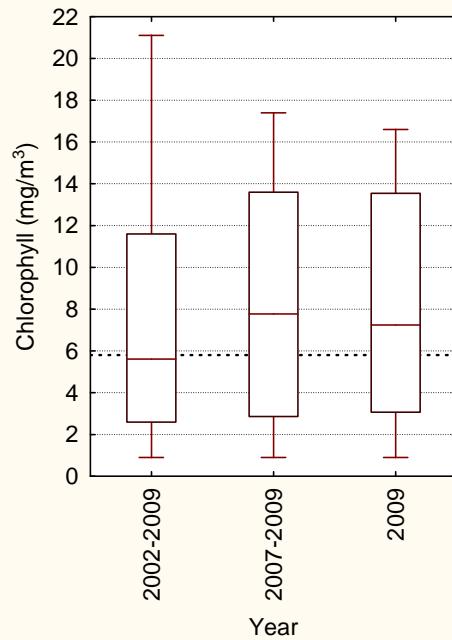
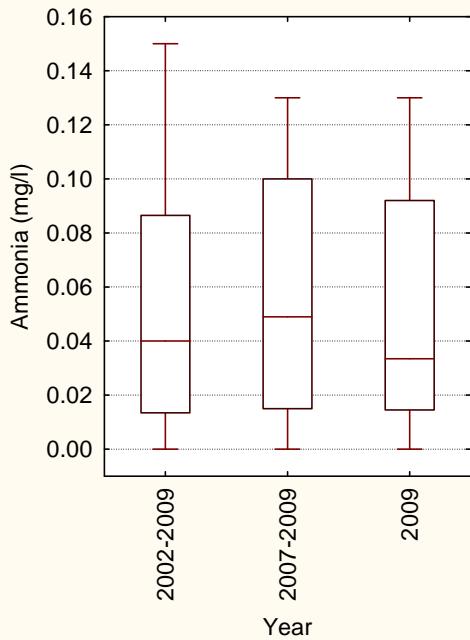


MMSD Water Quality Monitoring Program Data
Fish Creek at Port Washington Rd. and Katherine Ln., Site FC-01



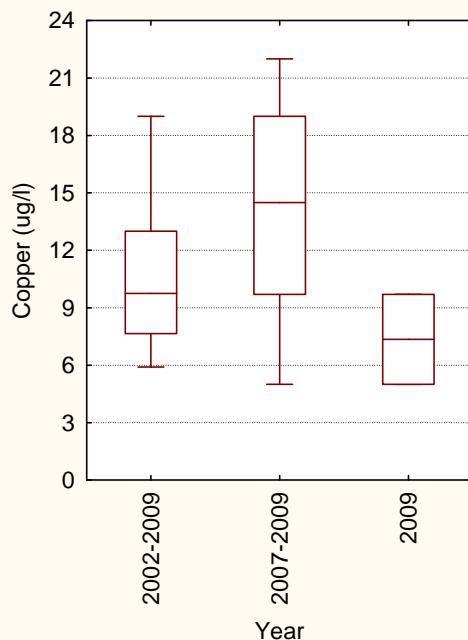
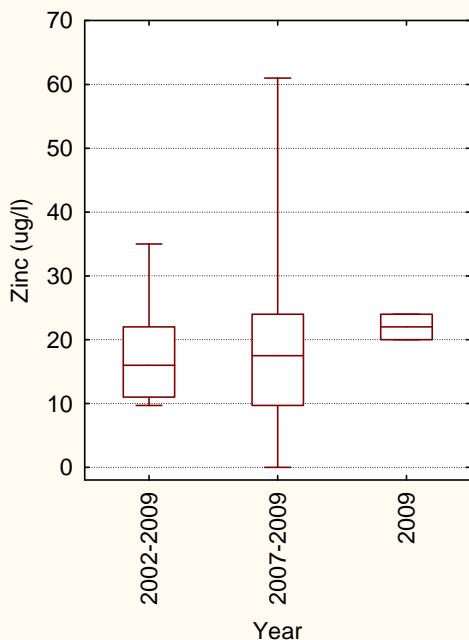
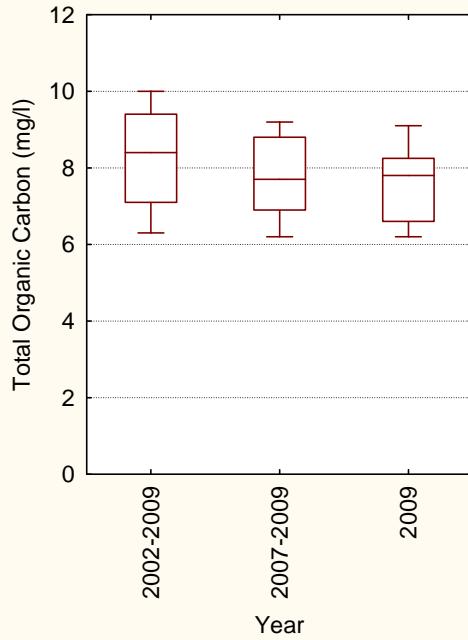
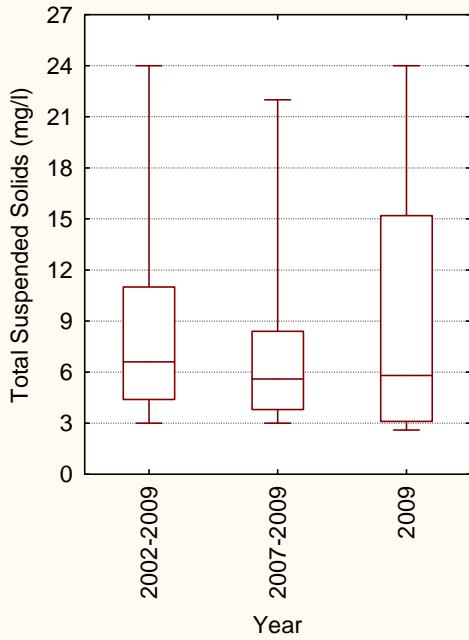
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.2	8.5	8.15	0.46	0.012	0.47	0.051	0.78	0.088	0.063	ND
Standard Error	0.1	2.0	1.3	2.09	0.08	0.002	0.08	0.017	0.05	0.014	0.009	ND
Median	7.7	13.8	9.5	7.24	0.38	0.010	0.39	0.034	0.74	0.092	0.068	ND
Mode	7.8	ND	ND	ND	0.30	ND	0.31	ND	ND	0.120	ND	ND
Standard Deviation	0.3	5.7	3.6	5.92	0.24	0.006	0.24	0.048	0.14	0.036	0.025	ND
Sample Variance	0.1	32.4	13.2	35.04	0.06	0.000	0.06	0.002	0.02	0.001	0.001	ND
Kurtosis	2.7	0.3	-0.6	-1.63	2.42	-1.059	2.36	-1.163	-0.87	-2.305	-0.191	ND
Skewness	-1.5	-1.0	-0.7	0.30	1.64	0.475	1.61	0.655	0.41	-0.104	-0.340	ND
Range	0.9	16.5	10.1	15.70	0.72	0.016	0.72	0.130	0.40	0.087	0.077	0.00
Minimum	7.0	1.6	2.6	0.90	0.24	0.005	0.25	0.000	0.60	0.043	0.023	0.00
Maximum	7.9	18.1	12.7	16.60	0.96	0.021	0.97	0.130	1.00	0.130	0.100	0.00
Count	8	8	8	8	8	8	8	8	8	7	8	0
Confidence Level(95.0%)	0.2	4.8	3.0	4.95	0.20	0.005	0.20	0.040	0.11	0.033	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	896.3	886.9	3.2	9.4	6.5	1828	320.0	566	2.5	1037
Standard Error	ND	ND	124.5	124.1	0.7	3.1	2.2	304	53.4	234	0.2	498
Median	ND	ND	870.0	847.0	4.0	5.8	3.3	1755	345.0	265	2.4	250
Mode	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	250
Standard Deviation	ND	ND	352.0	351.0	2.0	8.7	6.1	861	150.9	663	0.6	1410
Sample Variance	ND	ND	123912.5	123235.3	3.9	75.5	37.3	740823	22771.4	439728	0.3	1987419
Kurtosis	ND	ND	-1.3	-1.3	-1.3	-0.2	2.8	-1	-0.8	3	-0.8	0
Skewness	ND	ND	0.2	0.2	-0.6	1.2	1.8	0	-0.3	2	-0.1	1
Range	0.0	0.0	980.0	977.2	5.3	21.4	17.4	2517	430.0	1962	1.7	3356
Minimum	0.0	0.0	420.0	415.6	0.0	2.6	2.3	733	90.0	38	1.6	44
Maximum	0.0	0.0	1400.0	1392.8	5.3	24.0	19.6	3250	520.0	2000	3.3	3400
Count	0	0	8	8	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	294.3	293.5	1.6	7.3	5.1	720	126.2	554	0.5	1179

ND = No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD AND KATHERINE LANE - SITE 1
 FISH CREEK
 WATER QUALITY DATA - 2009

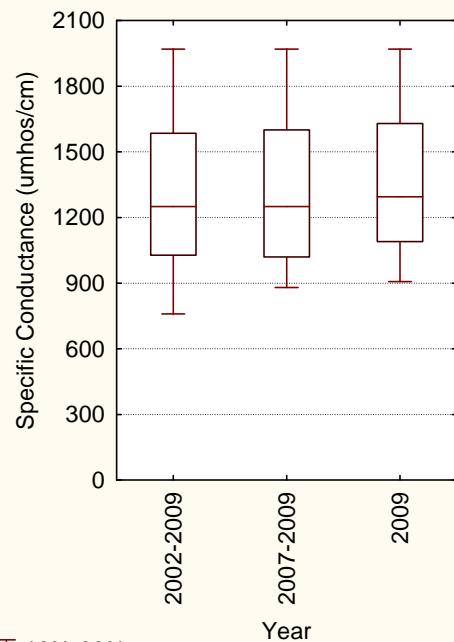
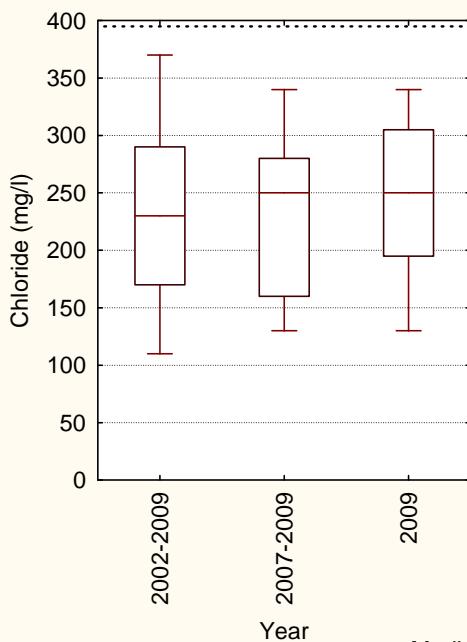
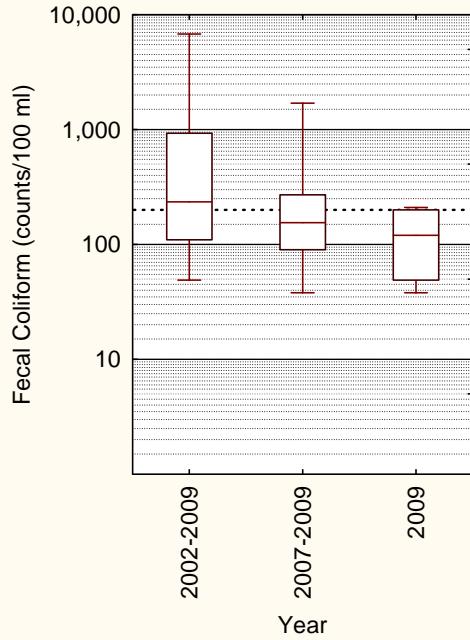
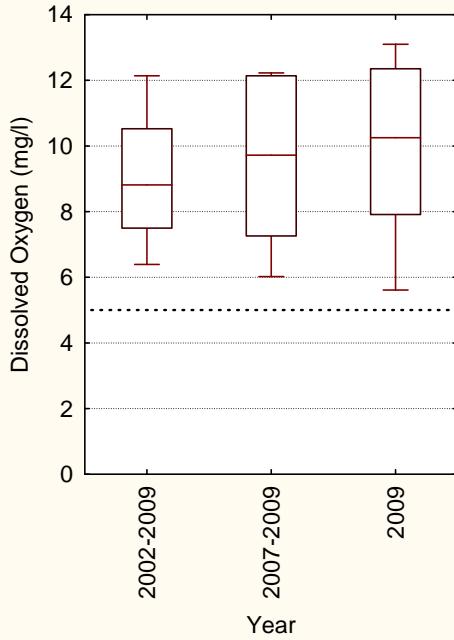
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	68.50	32.00	0.0	5.1	7.4	4.7	0.0	22.0	0.0	0.0	0.0	0.0
Standard Error	16.50	11.00	0.0	0.0	2.4	0.5	0.0	2.0	0.0	0.0	0.0	0.0
Median	68.50	32.00	0.0	5.1	7.4	4.7	0.0	22.0	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	0.0	0.0
Standard Deviation	23.33	15.56	0.0	0.1	3.3	0.7	0.0	2.8	0.0	0.0	0.0	0.0
Sample Variance	544.50	242.00	0.0	0.0	11.0	0.5	0.0	8.0	0.0	0.0	0.0	0.0
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	33.00	22.00	0.0	0.1	4.7	1.0	0.0	4.0	0.0	0.0	0.0	0.0
Minimum	52.00	21.00	0.0	5.0	5.0	4.2	0.0	20.0	0.0	0.0	0.0	0.0
Maximum	85.00	43.00	0.0	5.1	9.7	5.2	0.0	24.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	209.65	139.77	0.0	0.6	29.9	6.4	0.0	25.4	0.0	0.0	0.0	0.0

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	228	0.7	5.5	60.5	53.0	7.6	7.4
Standard Error	85	17	0.5	0.6	3.9	4.1	0.4	0.4
Median	305	240	0.0	5.3	62.5	55.5	7.8	7.6
Mode	ND	250	0.0	5.4	ND	59.0	ND	5.9
Standard Deviation	120	48	1.3	1.6	11.1	11.6	1.0	1.1
Sample Variance	14450	2307	1.8	2.4	123.7	134.6	1.1	1.3
Kurtosis	ND	2	2.0	1.0	0.8	0.5	-1.1	-1.7
Skewness	ND	-1	1.8	1.1	-1.0	-0.9	-0.1	-0.3
Range	170	150	3.5	4.8	33.0	34.0	2.9	2.9
Minimum	220	130	0.0	3.7	39.0	31.0	6.2	5.9
Maximum	390	280	3.5	8.5	72.0	65.0	9.1	8.8
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1080	40	1.1	1.3	9.3	9.7	0.9	0.9

ND = No Data

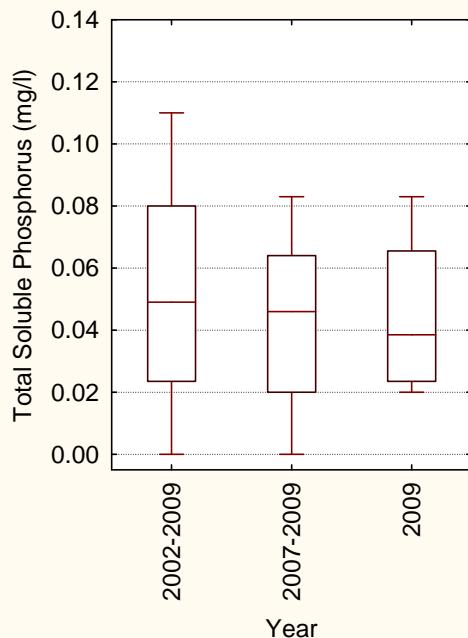
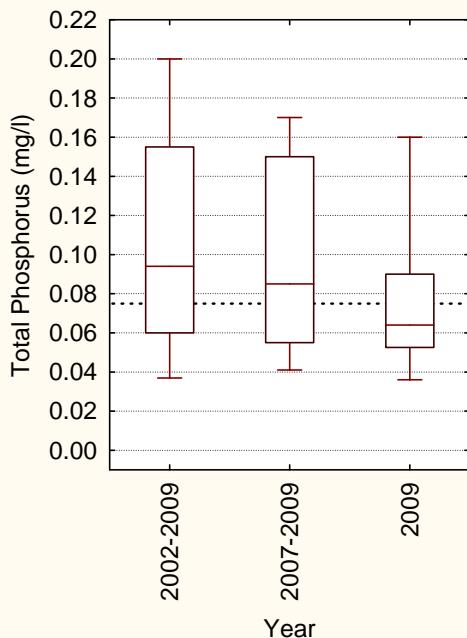
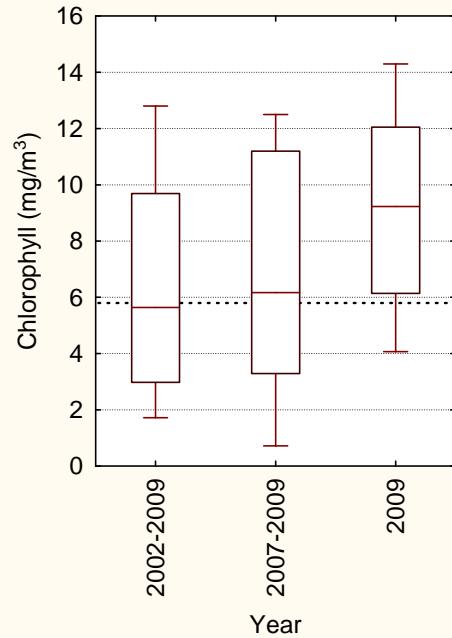
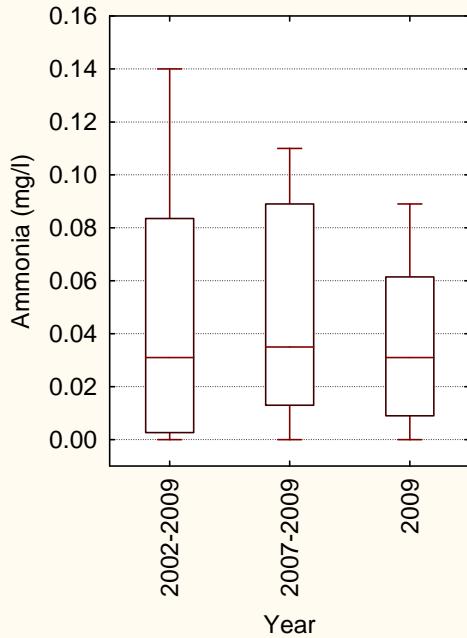
Provisional MMSD Water Quality Data

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



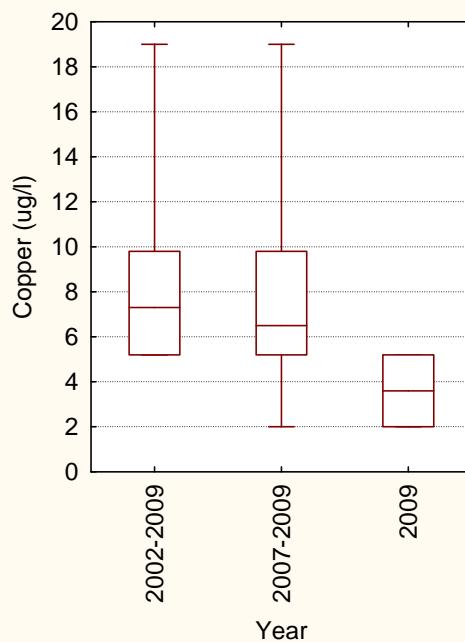
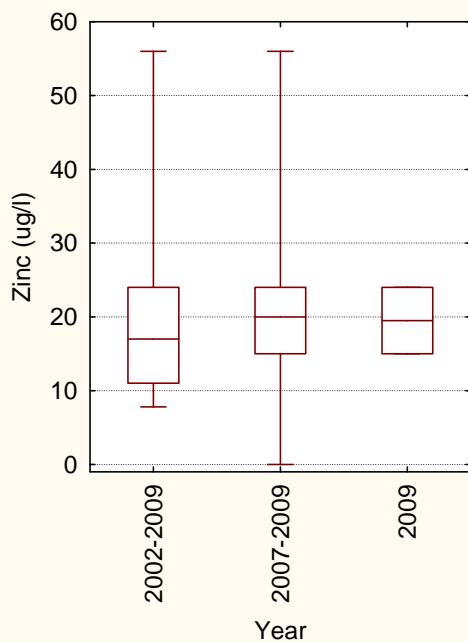
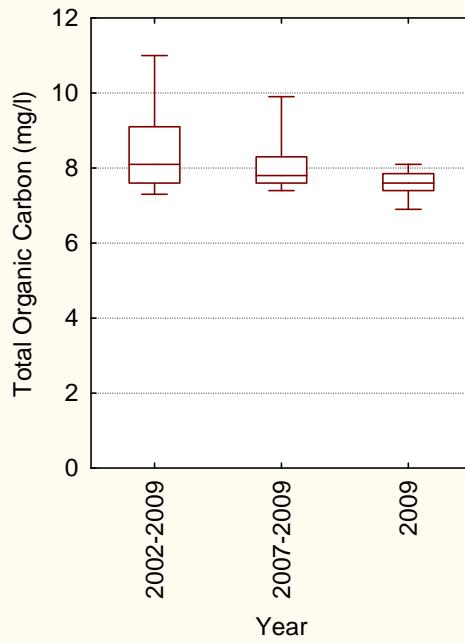
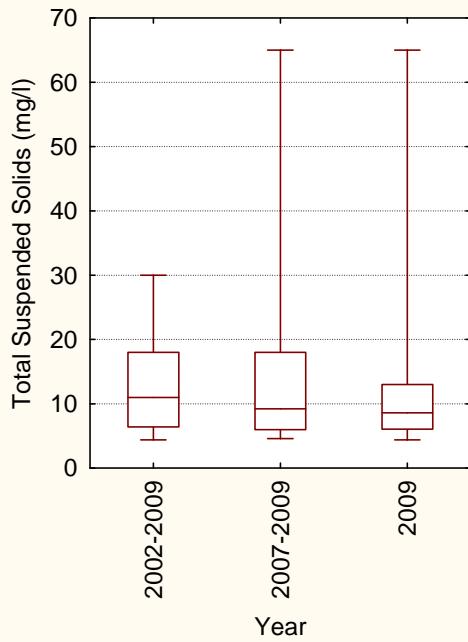
— Median □ 25%-75% █ 10%-90%
--- WQ Standard/Criterion

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 - 2009

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	12.3	10.0	9.15	0.25	0.011	0.26	0.037	0.76	0.076	0.045	ND
Standard Error	0.1	2.3	1.0	1.27	0.06	0.002	0.06	0.012	0.07	0.014	0.008	ND
Median	7.9	13.9	10.3	9.23	0.23	0.009	0.24	0.031	0.77	0.064	0.039	ND
Mode	7.8	ND	ND	ND	0.23	ND	0.24	0.000	1.00	ND	ND	ND
Standard Deviation	0.2	6.4	2.8	3.58	0.16	0.006	0.17	0.034	0.21	0.039	0.024	ND
Sample Variance	0.0	41.6	8.1	12.80	0.03	0.000	0.03	0.001	0.04	0.002	0.001	ND
Kurtosis	0.6	-0.4	-0.8	-1.18	3.18	1.977	3.42	-0.731	-1.22	3.049	-1.447	ND
Skewness	0.9	-0.8	-0.7	-0.04	1.60	1.533	1.66	0.693	-0.28	1.597	0.507	ND
Range	0.6	18.4	7.5	10.23	0.49	0.018	0.52	0.089	0.58	0.124	0.063	0.00
Minimum	7.7	1.0	5.6	4.07	0.10	0.005	0.10	0.000	0.42	0.036	0.020	0.00
Maximum	8.3	19.4	13.1	14.30	0.59	0.023	0.62	0.089	1.00	0.160	0.083	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	5.4	2.4	2.99	0.13	0.005	0.14	0.028	0.18	0.033	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	768.8	753.2	4.0	15.6	12.7	1363	246.3	124	2.0	549
Standard Error	ND	ND	79.9	80.3	1.0	7.1	5.7	133	27.1	26	0.1	411
Median	ND	ND	700.0	664.9	4.0	8.6	7.4	1295	250.0	120	2.1	108
Mode	ND	ND	1100.0	ND	ND	13.0	ND	ND	250.0	ND	ND	ND
Standard Deviation	ND	ND	225.9	227.1	3.0	20.2	16.2	377	76.5	68	0.3	1161
Sample Variance	ND	ND	51041.1	51572.8	8.8	408.8	262.4	142417	5855.4	4577	0.1	1349003
Kurtosis	ND	ND	-1.0	-0.9	-0.9	7.4	7.9	-1	-0.7	-1	-1.1	8
Skewness	ND	ND	0.8	0.9	0.3	2.7	2.8	1	-0.3	0	-0.7	3
Range	0.0	0.0	580.0	585.0	8.8	60.6	47.6	1063	210.0	172	0.7	3373
Minimum	0.0	0.0	520.0	507.0	0.0	4.4	5.1	907	130.0	38	1.6	27
Maximum	0.0	0.0	1100.0	1092.0	8.8	65.0	52.7	1970	340.0	210	2.3	3400
Count	0	0	8	8	8	8	8	8	8	7	7	8
Confidence Level(95.0%)	ND	ND	188.9	189.9	2.5	16.9	13.5	315	64.0	63	0.3	971

ND = No Data

Provisional MMSD Water Quality Data

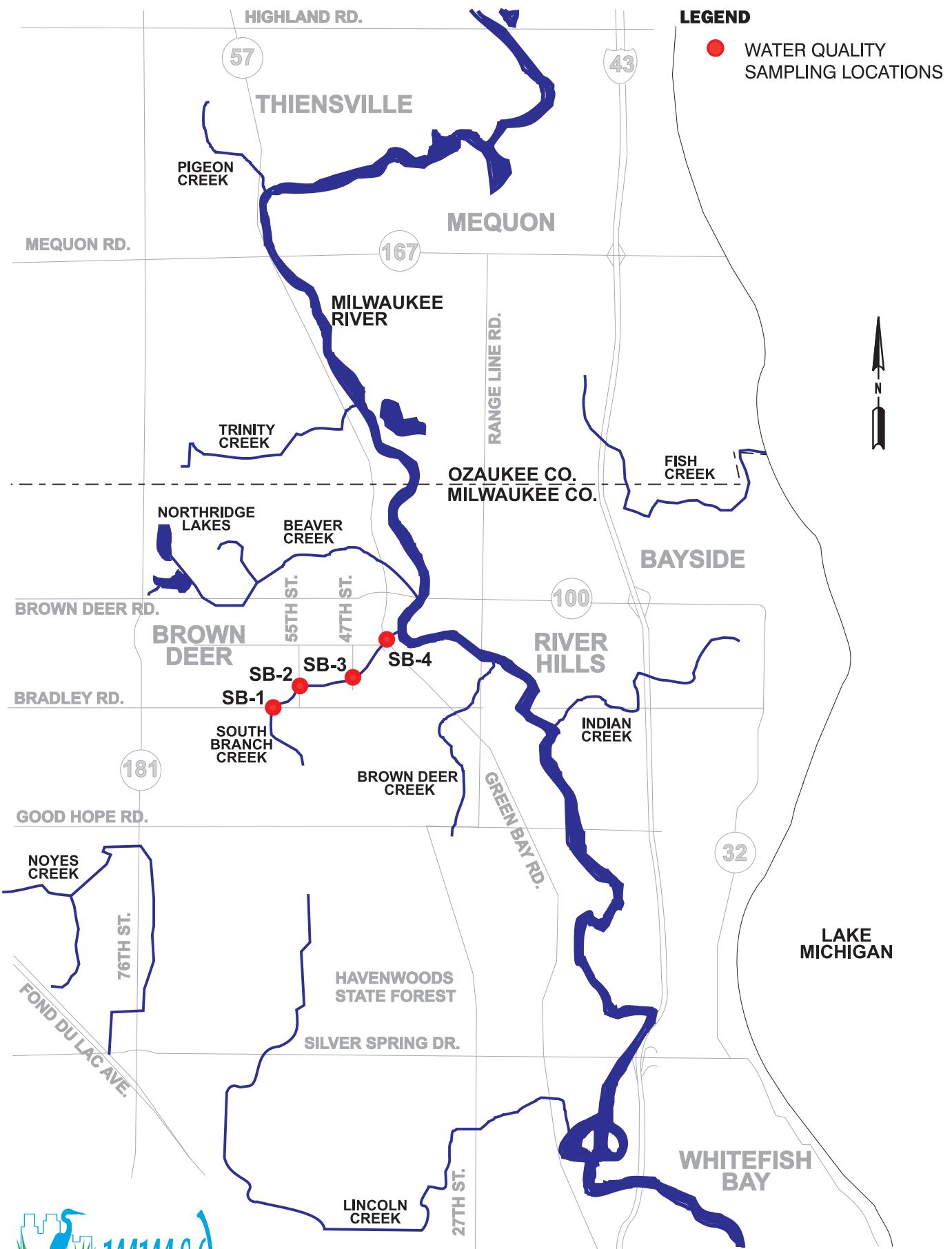
RAVINE BAYE ROAD - SITE 2
FISH CREEK
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	69.50	33.50	0.0	5.8	3.6	4.7	0.0	19.5	0.0	0.0	0.0	0.0
Standard Error	18.50	12.50	0.0	0.2	1.6	0.4	0.0	4.5	0.0	0.0	0.0	0.0
Median	69.50	33.50	0.0	5.8	3.6	4.7	0.0	19.5	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	0.0	0.0
Standard Deviation	26.16	17.68	0.0	0.3	2.3	0.6	0.0	6.4	0.0	0.0	0.0	0.0
Sample Variance	684.50	312.50	0.0	0.1	5.1	0.4	0.0	40.5	0.0	0.0	0.0	0.0
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	25.00	0.0	0.4	3.2	0.9	0.0	9.0	0.0	0.0	0.0	0.0
Minimum	51.00	21.00	0.0	5.6	2.0	4.2	0.0	15.0	0.0	0.0	0.0	0.0
Maximum	88.00	46.00	0.0	6.0	5.2	5.1	0.0	24.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	235.06	158.83	0.0	2.5	20.3	5.7	0.0	57.2	0.0	0.0	0.0	0.0

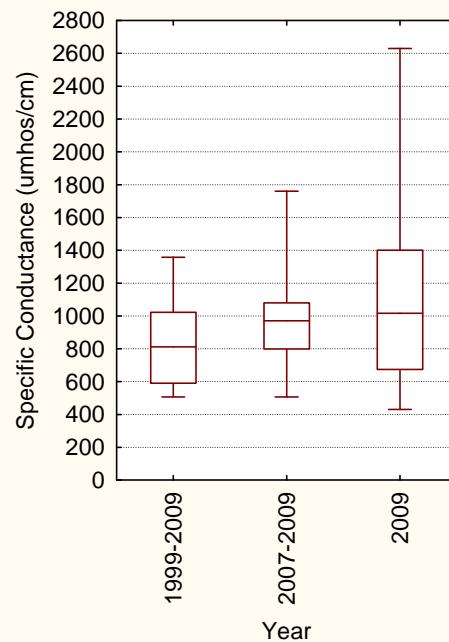
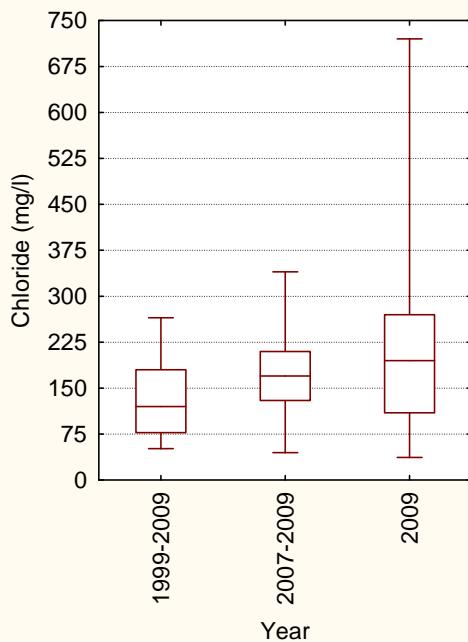
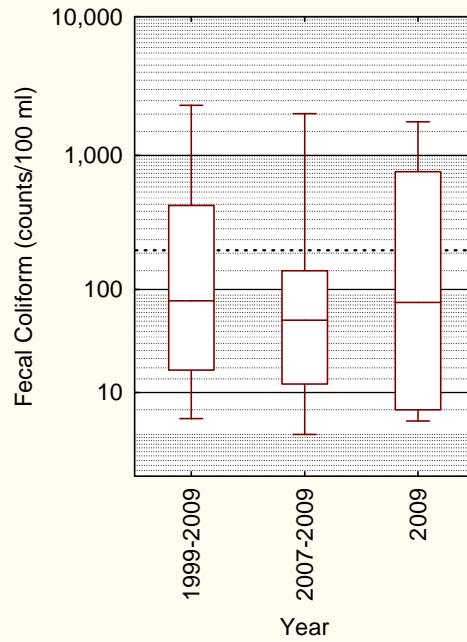
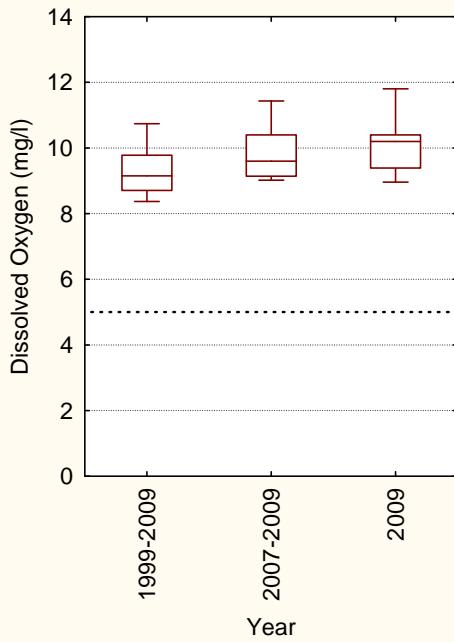
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	315	231	0.5	6.1	61.9	54.4	7.6	7.4
Standard Error	95	20	0.5	0.6	5.0	5.0	0.1	0.1
Median	315	235	0.0	5.3	63.5	56.0	7.6	7.5
Mode	ND	230	0.0	5.2	72.0	ND	7.4	6.8
Standard Deviation	134	57	1.4	1.7	14.1	14.3	0.4	0.4
Sample Variance	18050	3241	1.9	2.9	199.3	203.1	0.1	0.2
Kurtosis	ND	0	8.0	3.1	-0.1	0.1	0.7	-0.9
Skewness	ND	-1	2.8	1.7	-0.7	-0.7	-0.5	-0.7
Range	190	170	3.9	5.3	43.0	44.0	1.2	1.1
Minimum	220	130	0.0	4.5	37.0	29.0	6.9	6.8
Maximum	410	300	3.9	9.8	80.0	73.0	8.1	7.9
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1207	48	1.2	1.4	11.8	11.9	0.3	0.3

ND = No Data

Provisional MMSD Water Quality Data

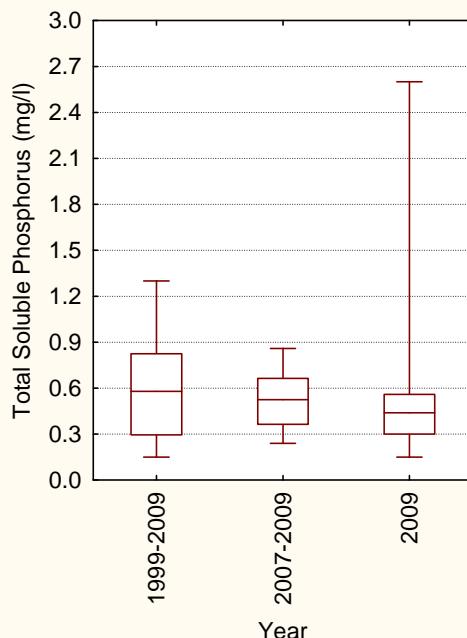
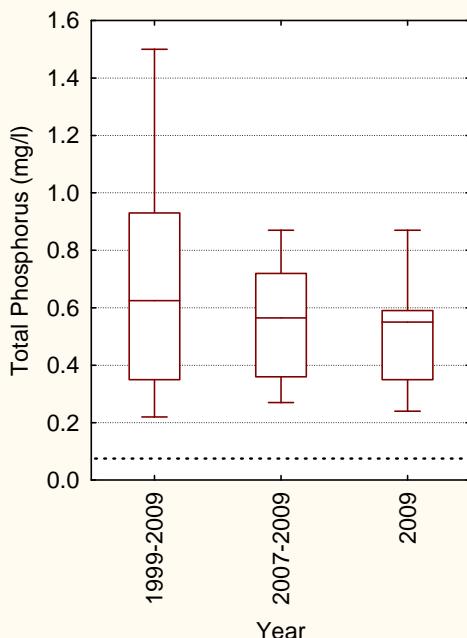
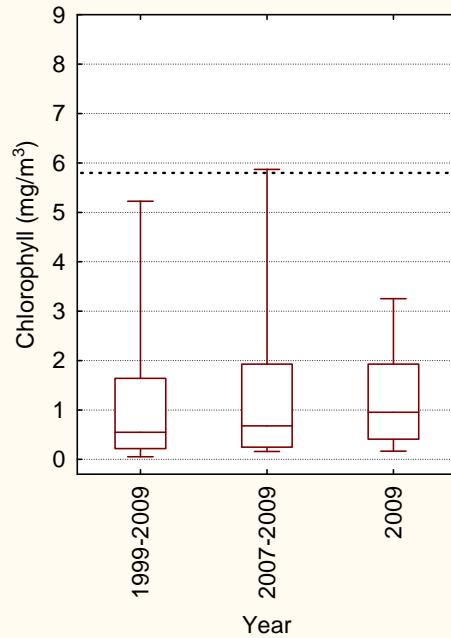
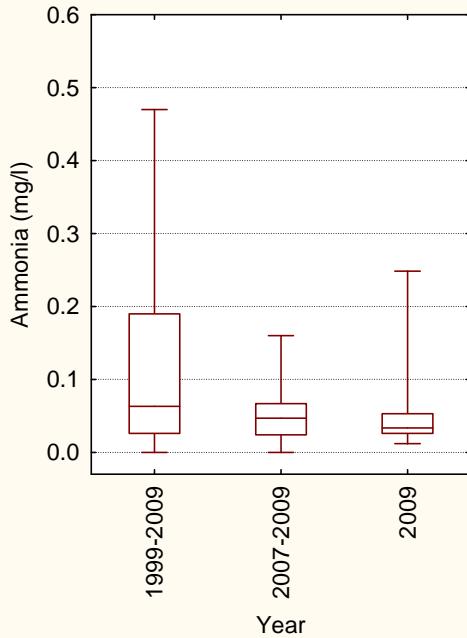


MMSD Water Quality Monitoring Program Data
Southbranch Creek at Bradley Rd., Site SB-01



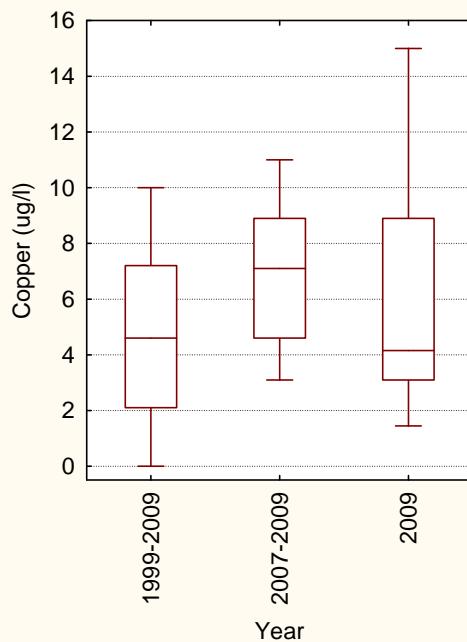
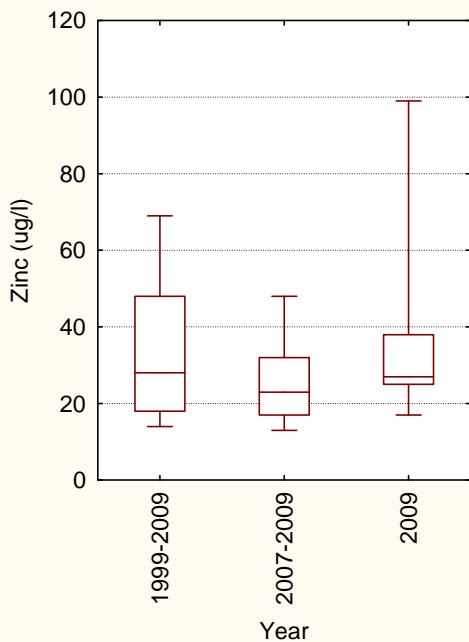
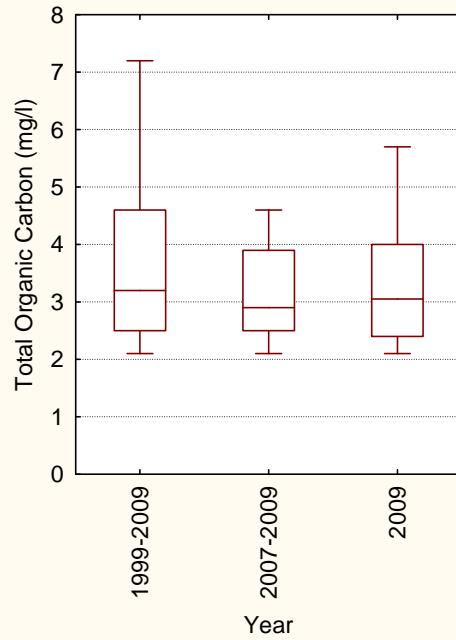
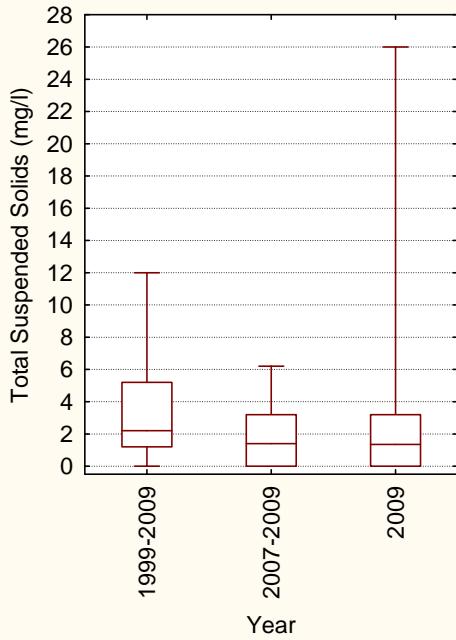
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.0	10.2	1.32	0.85	0.024	0.88	0.075	0.46	0.491	0.684	ND
Standard Error	0.1	1.3	0.3	0.38	0.06	0.006	0.07	0.040	0.12	0.068	0.251	ND
Median	8.1	13.4	10.2	0.96	0.85	0.021	0.88	0.034	0.47	0.550	0.440	ND
Mode	8.1	ND	10.2	ND	1.10	ND	1.00	ND	0.00	ND	ND	ND
Standard Deviation	0.2	4.2	1.0	1.21	0.20	0.019	0.21	0.126	0.39	0.203	0.754	ND
Sample Variance	0.0	17.3	1.0	1.46	0.04	0.000	0.04	0.016	0.15	0.041	0.568	ND
Kurtosis	1.7	0.4	-0.5	0.75	-0.82	1.788	-0.27	9.428	-1.43	-0.114	6.729	ND
Skewness	-0.9	-0.5	0.7	1.14	-0.27	1.302	-0.18	3.037	0.10	0.511	2.516	ND
Range	0.7	14.5	2.8	3.71	0.59	0.060	0.69	0.430	1.00	0.630	2.450	0.00
Minimum	7.6	5.1	9.0	0.15	0.51	0.005	0.51	0.000	0.00	0.240	0.150	0.00
Maximum	8.3	19.6	11.8	3.86	1.10	0.065	1.20	0.430	1.00	0.870	2.600	0.00
Count	10	10	9	10	10	10	10	10	10	9	9	0
Confidence Level(95.0%)	0.1	3.0	0.8	0.86	0.14	0.013	0.15	0.090	0.28	0.156	0.579	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	614.0	2.4	6.0	7.7	1228	267.4	458	1.8	ND
Standard Error	ND	ND	154.7	150.7	1.1	4.7	6.7	283	97.3	233	0.4	ND
Median	ND	ND	515.0	513.0	1.8	1.4	0.8	1017	195.0	79	1.9	ND
Mode	ND	ND	ND	ND	0.0	0.0	ND	ND	210.0	5	0.7	ND
Standard Deviation	ND	ND	489.2	476.6	3.6	14.8	21.1	896	307.6	737	1.1	ND
Sample Variance	ND	ND	239288.9	227165.6	13.1	219.6	444.0	803624	94592.0	542578	1.3	ND
Kurtosis	ND	ND	3.6	3.3	6.5	9.7	10.0	5	7.5	2	-1.2	ND
Skewness	ND	ND	1.7	1.6	2.4	3.1	3.2	2	2.6	2	-0.1	ND
Range	0.0	0.0	1700.0	1652.0	12.0	48.0	67.3	3086	1066.0	2100	3.3	0
Minimum	0.0	0.0	100.0	100.0	0.0	0.0	0.3	414	34.0	0	0.0	0
Maximum	0.0	0.0	1800.0	1752.0	12.0	48.0	67.6	3500	1100.0	2100	3.3	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	349.9	341.0	2.6	10.6	15.1	641	220.0	527	0.8	ND

ND = No Data

Provisional MMSD Water Quality Data

BRADLEY RD., WEST OF EDGEWORTH DR. - SITE 1
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2009

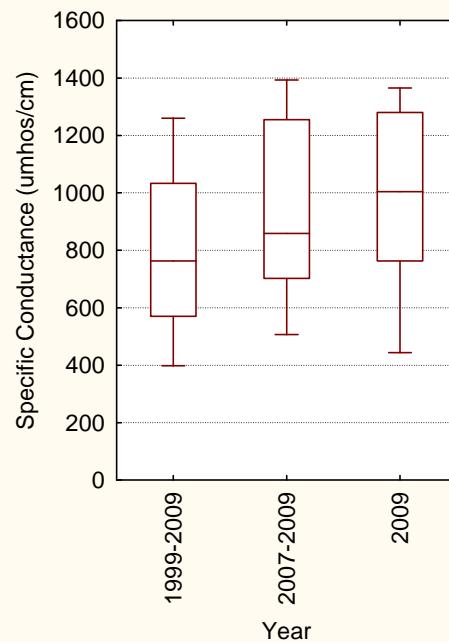
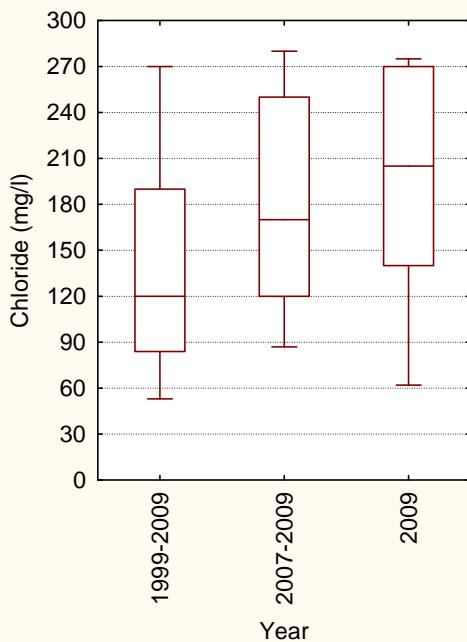
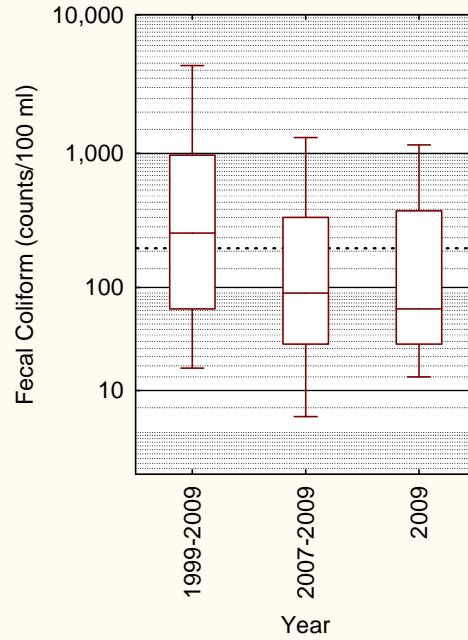
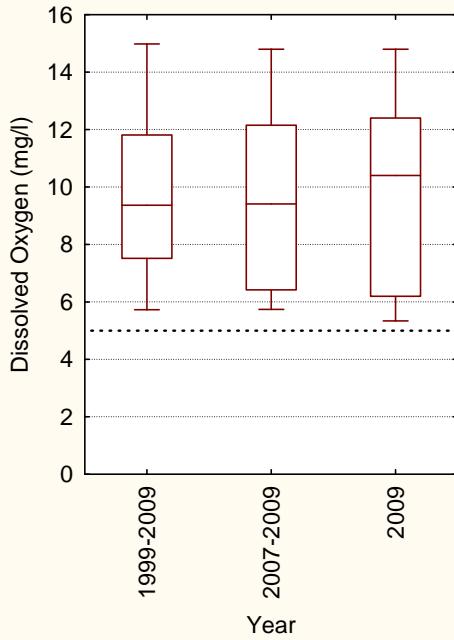
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	56.40	21.10	0.1	5.5	6.2	2.5	0.5	40.7	0.0	0.0	2.7	0.0
Standard Error	5.74	2.52	0.1	1.4	1.7	0.4	0.5	12.5	0.0	0.0	1.8	0.0
Median	55.50	21.50	0.0	4.2	4.2	2.6	0.0	27.0	0.0	0.0	0.0	0.0
Mode	ND	25.00	0.0	3.6	ND	3.0	0.0	27.0	0.0	0.0	0.0	0.0
Standard Deviation	18.16	7.96	0.2	4.5	5.5	1.4	1.4	39.5	0.0	0.0	4.3	0.0
Sample Variance	329.82	63.43	0.0	20.2	30.1	1.9	2.0	1560.7	0.0	0.0	18.7	0.0
Kurtosis	-0.66	-0.98	10.0	9.0	2.7	1.9	10.0	8.5	ND	ND	-0.6	ND
Skewness	0.45	0.11	3.2	2.9	1.6	0.2	3.2	2.9	ND	ND	1.2	ND
Range	55.00	23.00	0.6	15.8	19.0	5.3	4.5	134.0	0.0	0.0	9.7	0.0
Minimum	31.00	10.00	0.0	2.2	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0
Maximum	86.00	33.00	0.6	18.0	19.0	5.3	4.5	150.0	0.0	0.0	9.7	0.0
Count	10	10	10	10	10	10	10	10	10	10	6	2
Confidence Level(95.0%)	12.99	5.70	0.1	3.2	3.9	1.0	1.0	28.3	0.0	0.0	4.5	0.0

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	226	141	0.9	4.4	37.1	33.5	3.5	3.4
Standard Error	25	17	0.6	0.8	3.7	3.6	0.5	0.5
Median	225	150	0.0	3.5	39.0	36.0	3.1	2.8
Mode	260	150	0.0	ND	ND	ND	2.1	2.3
Standard Deviation	79	55	1.9	2.5	11.6	11.4	1.5	1.7
Sample Variance	6204	2980	3.6	6.1	135.2	129.4	2.4	2.8
Kurtosis	-1	0	3.1	2.0	-0.3	-0.3	4.3	5.3
Skewness	0	-1	2.0	1.6	-0.2	-0.3	1.9	2.2
Range	230	186	5.3	7.5	39.0	38.0	5.2	5.7
Minimum	120	34	0.0	2.5	17.0	13.0	2.1	2.0
Maximum	350	220	5.3	10.0	56.0	51.0	7.3	7.7
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	56	39	1.4	1.8	8.3	8.1	1.1	1.2

ND = No Data

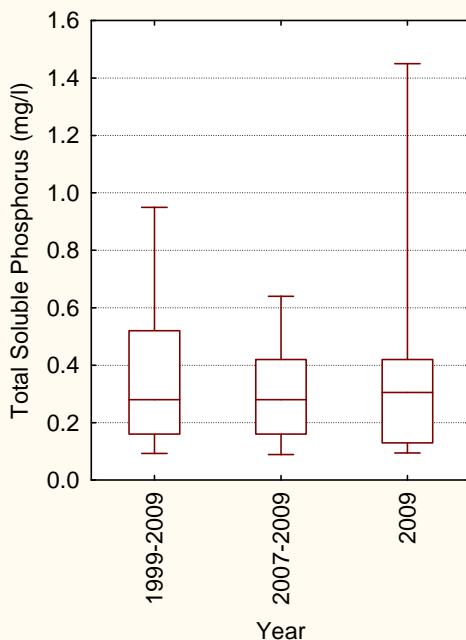
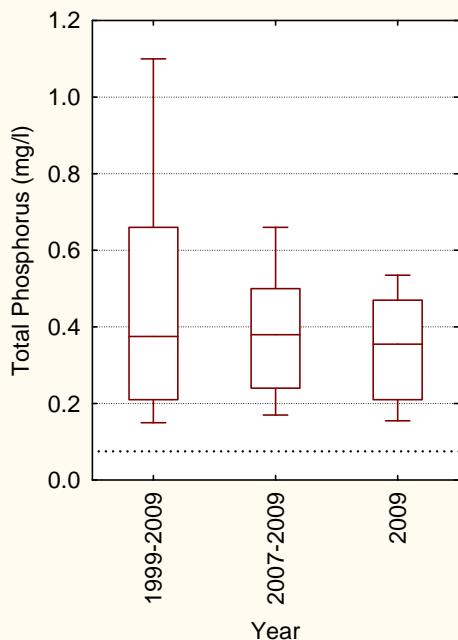
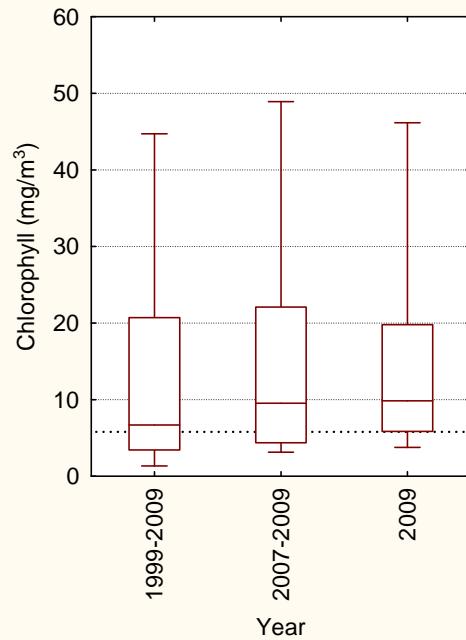
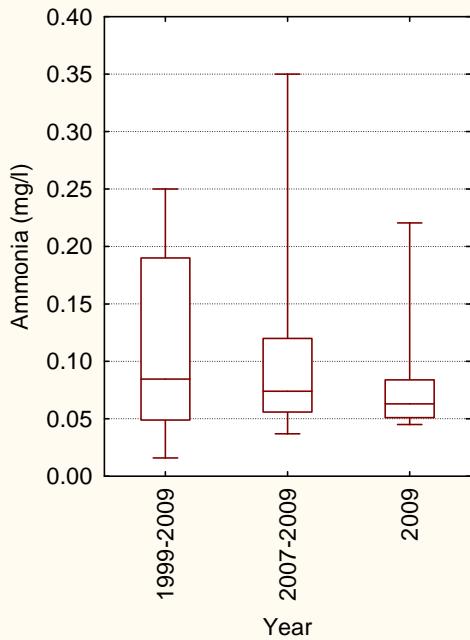
Provisional MMSD Water Quality Data

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



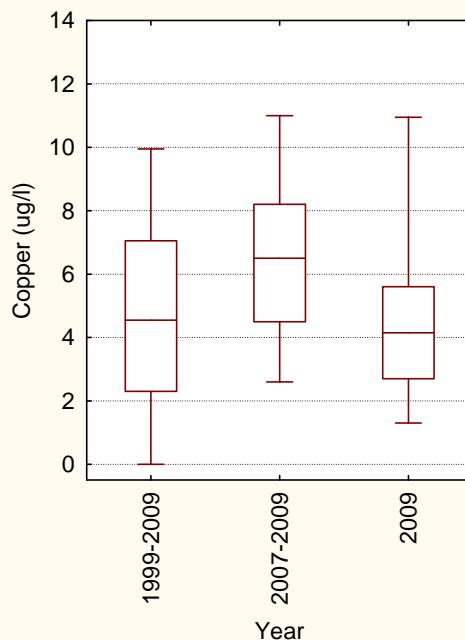
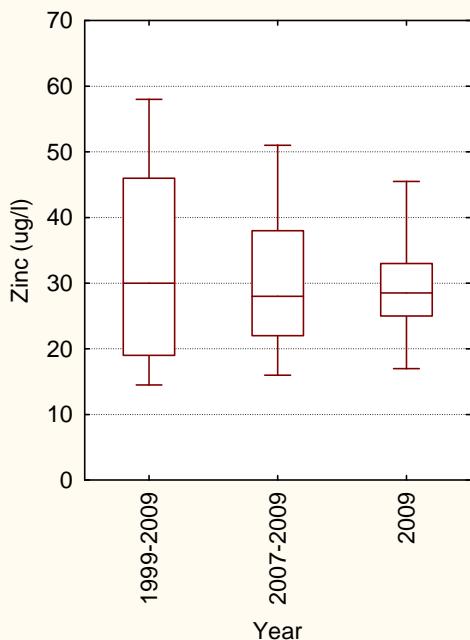
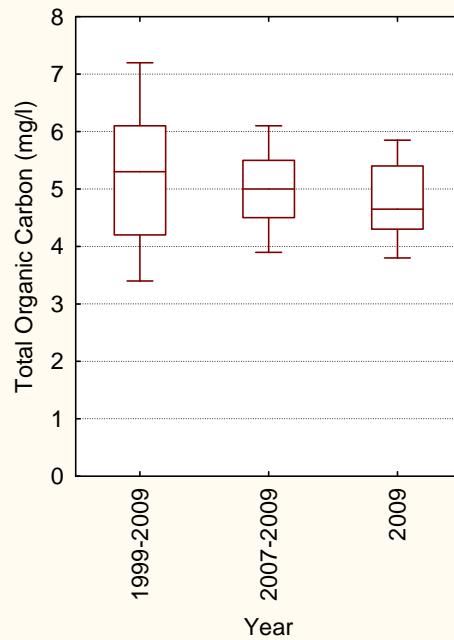
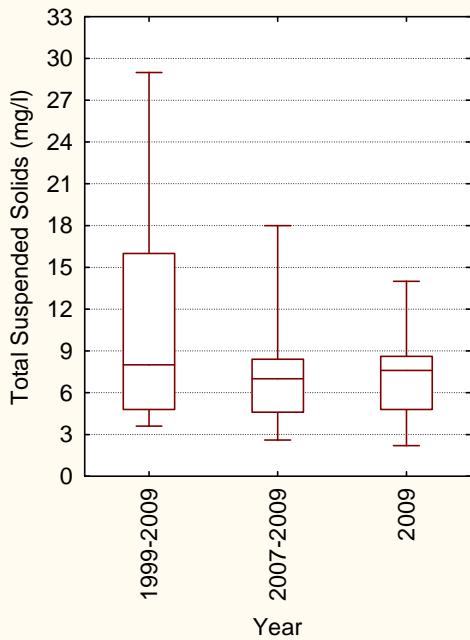
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	17.3	9.9	16.33	0.31	0.018	0.33	0.092	0.80	0.340	0.480	ND
Standard Error	0.2	2.1	1.2	5.26	0.08	0.004	0.08	0.029	0.11	0.047	0.218	ND
Median	8.4	20.8	10.4	9.86	0.20	0.014	0.21	0.063	0.74	0.355	0.305	ND
Mode	ND	22.0	ND	ND	ND	ND	0.77	ND	0.65	ND	ND	ND
Standard Deviation	0.6	6.5	3.5	16.62	0.26	0.011	0.26	0.092	0.36	0.149	0.690	ND
Sample Variance	0.4	42.7	11.9	276.27	0.07	0.000	0.07	0.008	0.13	0.022	0.477	ND
Kurtosis	-1.1	1.1	-1.4	1.49	-0.63	-0.281	-0.58	9.204	-0.05	-1.649	8.786	ND
Skewness	-0.3	-1.4	-0.1	1.60	0.97	1.006	0.98	2.993	0.66	0.028	2.900	ND
Range	1.9	19.0	9.5	48.95	0.66	0.033	0.68	0.308	1.14	0.400	2.331	0.00
Minimum	7.3	3.4	5.3	3.15	0.08	0.007	0.09	0.042	0.36	0.140	0.069	0.00
Maximum	9.2	22.4	14.8	52.10	0.74	0.040	0.77	0.350	1.50	0.540	2.400	0.00
Count	10	10	9	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.5	4.7	2.7	11.89	0.18	0.008	0.19	0.066	0.26	0.107	0.494	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	512.0	504.5	3.1	7.5	6.6	976	190.4	303	2.0	ND
Standard Error	ND	ND	63.7	62.8	0.5	1.5	1.6	115	26.7	147	0.2	ND
Median	ND	ND	530.0	523.6	2.6	7.6	5.4	1005	205.0	67	1.8	ND
Mode	ND	ND	490.0	562.0	2.0	8.0	ND	ND	270.0	67	1.8	ND
Standard Deviation	ND	ND	201.4	198.7	1.7	4.7	5.1	364	84.4	464	0.7	ND
Sample Variance	ND	ND	40573.3	39497.0	2.9	21.7	26.4	132170	7116.5	215221	0.5	ND
Kurtosis	ND	ND	-0.3	-0.3	1.4	2.9	7.7	-1	-0.6	2	-0.8	ND
Skewness	ND	ND	-0.4	-0.4	1.3	1.0	2.7	-1	-0.7	2	0.6	ND
Range	0.0	0.0	650.0	642.8	5.6	18.0	17.9	1093	247.0	1286	2.0	0
Minimum	0.0	0.0	160.0	160.0	1.2	0.0	2.7	317	33.0	14	1.1	0
Maximum	0.0	0.0	810.0	802.8	6.8	18.0	20.6	1410	280.0	1300	3.1	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	144.1	142.2	1.2	3.3	3.7	260	60.3	332	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

55TH ST., NORTH OF BRADLEY RD. - SITE 2
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2009

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	51.10	21.95	0.0	4.7	5.0	3.2	1.0	29.8	0.1	0.2	0.0	0.0
Standard Error	4.53	2.16	0.0	0.4	1.2	0.5	0.7	3.2	0.1	0.2	0.0	0.0
Median	52.50	23.00	0.0	4.5	4.2	3.2	0.0	28.5	0.0	0.0	0.0	0.0
Mode	ND	28.00	0.0	ND	ND	3.2	0.0	28.0	0.0	0.0	0.0	0.0
Standard Deviation	14.32	6.84	0.0	1.2	3.6	1.5	2.3	10.1	0.4	0.7	0.0	0.0
Sample Variance	204.99	46.80	0.0	1.6	13.2	2.2	5.3	102.6	0.2	0.5	0.0	0.0
Kurtosis	-0.66	0.05	ND	0.6	1.9	2.3	6.7	1.2	10.0	10.0	ND	ND
Skewness	-0.49	-0.83	ND	-0.4	1.2	-0.7	2.6	0.8	3.2	3.2	ND	ND
Range	45.00	21.50	0.0	4.4	13.0	5.6	7.1	35.0	1.4	2.2	0.0	0.0
Minimum	25.00	8.50	0.0	2.2	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0
Maximum	70.00	30.00	0.0	6.6	13.0	5.6	7.1	51.0	1.4	2.2	0.0	0.0
Count	10	10	10	10	10	10	10	10	10	10	6	2
Confidence Level(95.0%)	10.24	4.89	0.0	0.9	2.6	1.1	1.6	7.2	0.3	0.5	0.0	0.0

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	219	142	1.9	7.8	38.2	33.3	4.8	4.6
Standard Error	20	12	0.6	0.8	2.9	2.9	0.3	0.3
Median	225	145	2.3	7.0	38.5	34.0	4.7	4.3
Mode	200	ND	0.0	6.4	40.0	36.0	5.4	4.3
Standard Deviation	62	39	2.0	2.5	9.2	9.2	0.8	0.8
Sample Variance	3886	1516	3.8	6.2	84.6	84.5	0.6	0.7
Kurtosis	0	0	1.2	4.6	0.0	0.2	-0.4	0.0
Skewness	-1	0	1.0	2.0	-0.3	-0.3	-0.1	-0.5
Range	192	130	6.1	8.4	31.0	32.0	2.7	2.6
Minimum	98	70	0.0	5.6	21.0	16.0	3.4	2.9
Maximum	290	200	6.1	14.0	52.0	48.0	6.1	5.5
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	45	28	1.4	1.8	6.6	6.6	0.6	0.6

ND = No Data

Provisional MMSD Water Quality Data

47TH ST., SOUTH OF CHURCHILL LN. - SITE 3
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2009

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	16.8	11.7	20.54	0.28	0.014	0.29	0.066	0.83	0.348	0.289	ND
Standard Error	0.1	2.1	1.0	5.96	0.08	0.003	0.08	0.029	0.12	0.052	0.052	ND
Median	8.4	19.5	10.9	15.00	0.22	0.012	0.23	0.030	0.87	0.355	0.290	ND
Mode	8.4	ND	ND	ND	0.10	0.012	0.11	0.000	1.00	0.170	ND	ND
Standard Deviation	0.4	6.5	2.9	18.85	0.24	0.009	0.25	0.091	0.38	0.165	0.164	ND
Sample Variance	0.2	42.7	8.5	355.17	0.06	0.000	0.06	0.008	0.14	0.027	0.027	ND
Kurtosis	1.3	1.5	4.1	3.63	0.33	3.404	0.39	4.197	-0.61	-1.280	-1.342	ND
Skewness	-0.3	-1.4	1.7	1.82	1.11	1.755	1.13	2.056	0.19	-0.027	-0.097	ND
Range	1.6	20.6	10.5	61.47	0.70	0.030	0.73	0.290	1.20	0.470	0.468	0.00
Minimum	7.6	2.4	8.0	4.83	0.06	0.005	0.07	0.000	0.30	0.110	0.062	0.00
Maximum	9.2	23.0	18.5	66.30	0.76	0.035	0.79	0.290	1.50	0.580	0.530	0.00
Count	10	10	9	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.3	4.7	2.2	13.48	0.17	0.006	0.18	0.065	0.27	0.118	0.117	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	504.0	481.3	3.2	7.6	5.9	960	192.2	1442	2.8	ND
Standard Error	ND	ND	77.2	84.1	0.7	2.5	2.0	126	33.7	480	0.2	ND
Median	ND	ND	570.0	533.6	2.8	6.4	3.5	1008	195.0	955	2.9	ND
Mode	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	244.0	252.3	2.0	7.6	6.2	398	106.6	1518	0.8	ND
Sample Variance	ND	ND	59560.0	63648.5	4.1	57.4	38.3	158337	11368.2	2303101	0.6	ND
Kurtosis	ND	ND	-0.9	-1.1	-1.3	5.1	8.7	-2	-1.4	0	-0.6	ND
Skewness	ND	ND	-0.3	-0.1	-0.2	2.1	2.9	0	0.0	1	-0.7	ND
Range	0.0	0.0	730.0	724.6	5.6	26.0	20.4	1098	309.0	4177	2.3	0
Minimum	0.0	0.0	140.0	140.0	0.0	0.0	2.7	362	41.0	23	1.4	0
Maximum	0.0	0.0	870.0	864.6	5.6	26.0	23.1	1460	350.0	4200	3.6	0
Count	0	0	10	9	9	9	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	174.6	193.9	1.6	5.8	4.4	285	76.3	1086	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

47TH ST., SOUTH OF CHURCHILL LN. - SITE 3
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2009

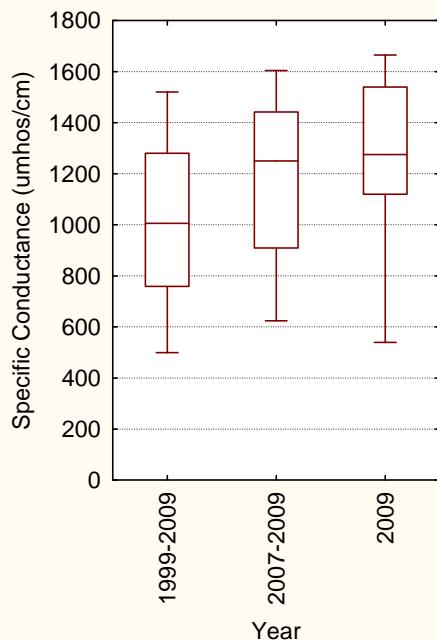
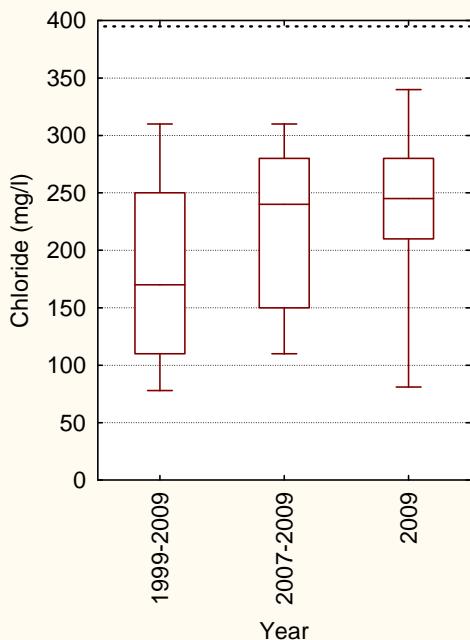
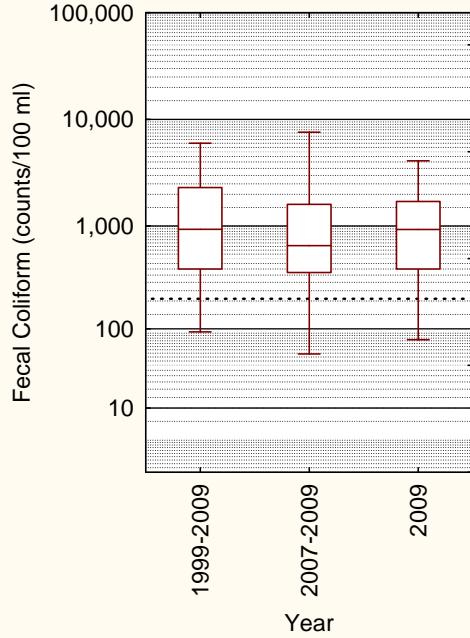
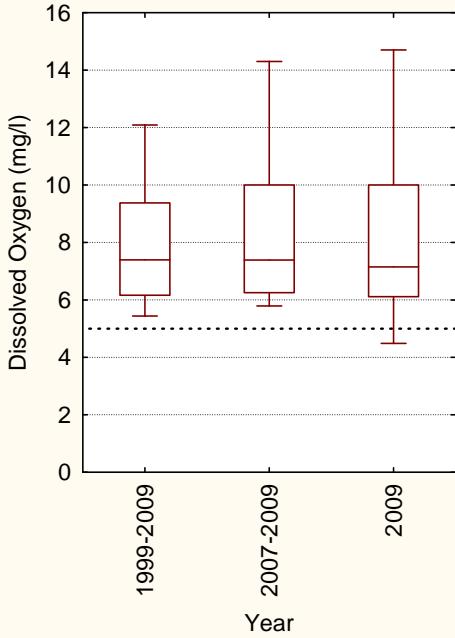
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	50.10	20.63	0.0	5.7	3.8	3.5	0.0	25.1	0.0	0.2	2.6	0.0
Standard Error	4.43	2.09	0.0	1.5	0.5	0.7	0.0	2.4	0.0	0.2	1.6	0.0
Median	52.00	21.00	0.0	4.3	4.5	3.1	0.0	23.0	0.0	0.0	0.0	0.0
Mode	ND	27.00	0.0	ND	4.5	3.1	0.0	18.0	0.0	0.0	0.0	0.0
Standard Deviation	14.01	6.61	0.0	4.8	1.7	2.3	0.0	7.6	0.0	0.7	4.0	0.0
Sample Variance	196.32	43.66	0.0	22.7	2.9	5.3	0.0	57.2	0.0	0.5	15.8	0.0
Kurtosis	-0.28	-0.40	ND	9.0	1.9	9.2	ND	-1.7	ND	10.0	-1.8	ND
Skewness	-0.50	-0.58	ND	3.0	-1.5	3.0	ND	0.5	ND	3.2	1.0	ND
Range	46.00	20.70	0.0	16.3	5.6	7.8	0.0	18.0	0.0	2.3	7.9	0.0
Minimum	24.00	8.30	0.0	2.7	0.0	2.2	0.0	18.0	0.0	0.0	0.0	0.0
Maximum	70.00	29.00	0.0	19.0	5.6	10.0	0.0	36.0	0.0	2.3	7.9	0.0
Count	10	10	10	10	10	10	10	10	10	10	6	2
Confidence Level(95.0%)	10.02	4.73	0.0	3.4	1.2	1.6	0.0	5.4	0.0	0.5	4.2	0.0

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	210	143	3.2	8.7	38.2	32.5	5.8	5.1
Standard Error	19	13	0.9	1.1	2.9	2.7	0.7	0.6
Median	215	140	2.8	8.3	37.5	31.0	4.8	4.5
Mode	250	140	2.6	ND	30.0	26.0	4.6	4.4
Standard Deviation	60	41	2.8	3.3	9.3	8.7	2.1	1.9
Sample Variance	3658	1674	7.7	11.2	86.4	75.2	4.6	3.4
Kurtosis	0	0	4.3	4.6	-0.7	0.1	3.7	6.5
Skewness	-1	0	1.6	1.8	0.0	0.2	1.9	2.4
Range	185	135	10.0	11.9	30.0	30.0	6.9	6.5
Minimum	95	75	0.0	5.1	23.0	18.0	4.1	3.5
Maximum	280	210	10.0	17.0	53.0	48.0	11.0	10.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	43	29	2.0	2.4	6.6	6.2	1.5	1.3

ND = No Data

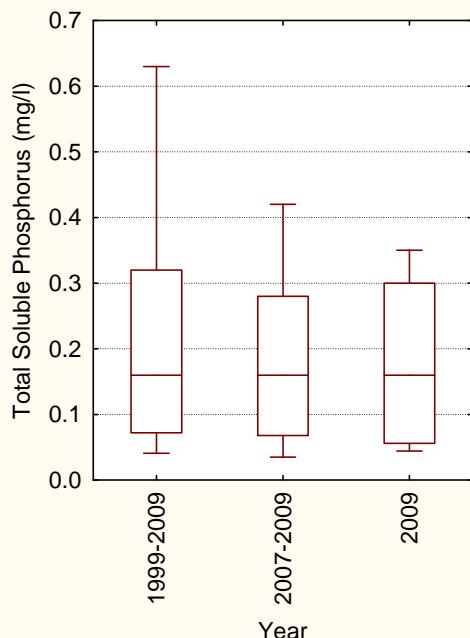
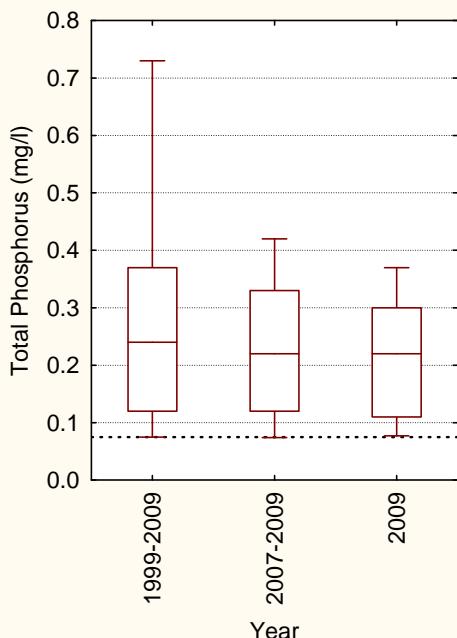
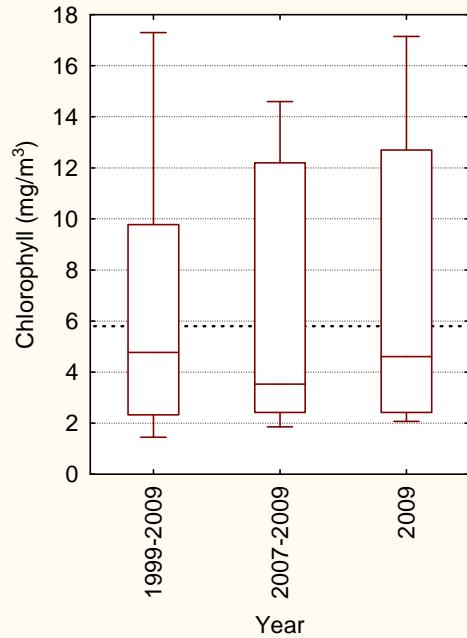
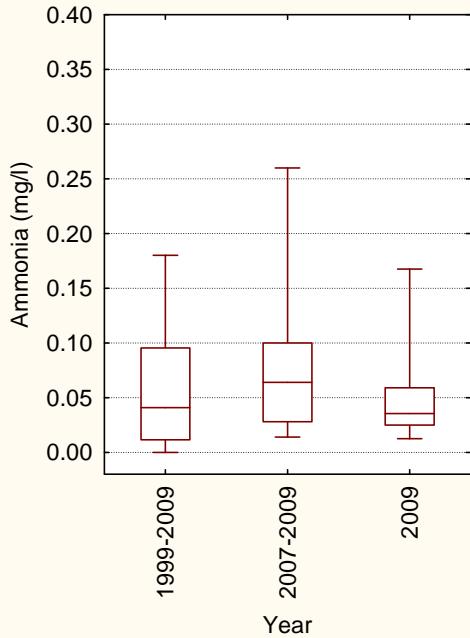
Provisional MMSD Water Quality Data

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



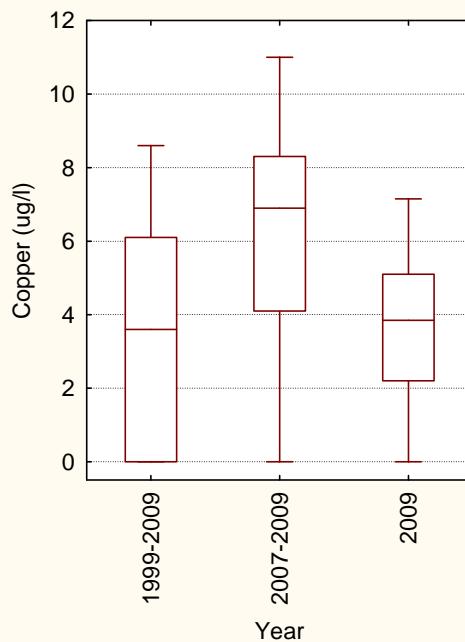
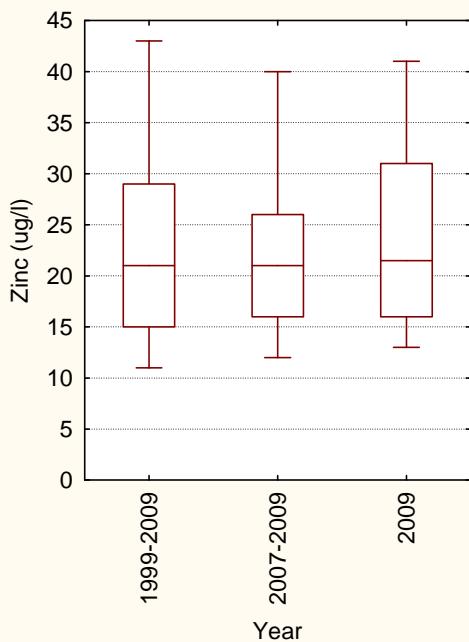
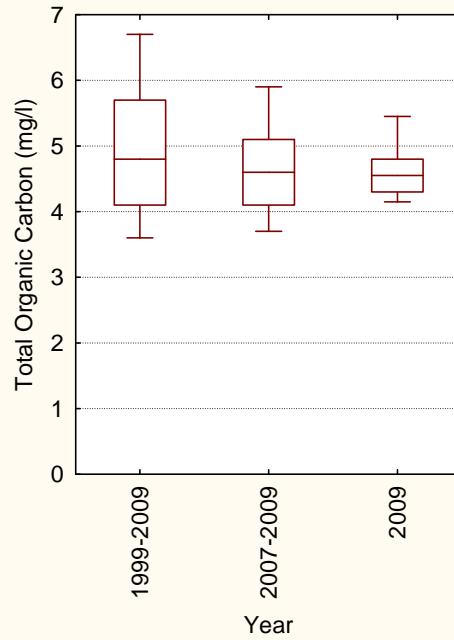
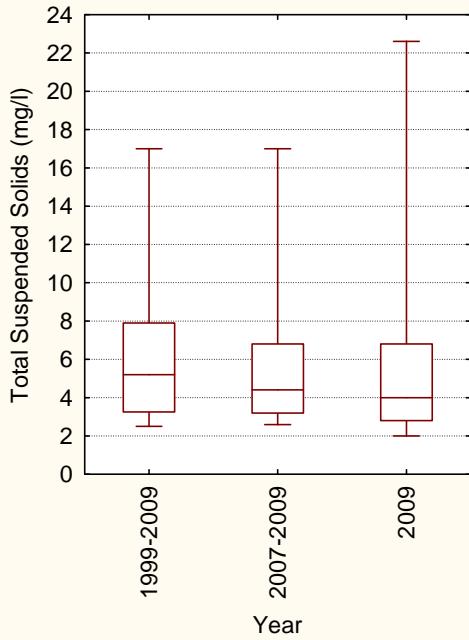
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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



— Median □ 25%-75% █ 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 - 2009

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	14.0	8.5	7.66	0.27	0.013	0.28	0.060	0.61	0.218	0.175	ND
Standard Error	0.1	1.8	1.1	2.07	0.06	0.003	0.06	0.023	0.09	0.037	0.039	ND
Median	7.7	15.4	7.2	4.61	0.19	0.010	0.20	0.036	0.55	0.220	0.160	ND
Mode	7.7	ND	ND	ND	0.15	0.010	0.13	0.025	ND	0.220	ND	ND
Standard Deviation	0.2	5.8	3.3	6.55	0.19	0.009	0.20	0.073	0.30	0.116	0.125	ND
Sample Variance	0.0	33.2	10.9	42.96	0.04	0.000	0.04	0.005	0.09	0.013	0.016	ND
Kurtosis	-0.3	0.7	-0.1	-0.29	2.18	5.977	2.47	7.828	-1.34	-1.192	-1.277	ND
Skewness	0.6	-1.0	0.8	0.89	1.59	2.305	1.64	2.685	0.38	0.182	0.466	ND
Range	0.5	19.1	10.2	18.74	0.59	0.030	0.62	0.260	0.84	0.342	0.345	0.00
Minimum	7.5	2.3	4.5	1.86	0.12	0.006	0.13	0.000	0.26	0.068	0.035	0.00
Maximum	8.0	21.4	14.7	20.60	0.71	0.036	0.75	0.260	1.10	0.410	0.380	0.00
Count	10	10	9	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.1	4.1	2.5	4.69	0.14	0.006	0.14	0.053	0.21	0.083	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	630.0	622.5	2.5	7.5	7.0	1233	230.2	1440	2.9	ND
Standard Error	ND	ND	73.2	72.9	0.7	3.4	3.0	131	29.0	479	0.2	ND
Median	ND	ND	670.0	654.4	2.0	4.0	4.5	1275	245.0	925	2.9	ND
Mode	ND	ND	680.0	ND	2.0	4.0	ND	ND	250.0	ND	ND	ND
Standard Deviation	ND	ND	231.6	230.7	2.3	10.9	9.6	414	91.8	1514	0.6	ND
Sample Variance	ND	ND	53622.2	53203.7	5.2	117.9	92.6	171016	8431.5	2292137	0.4	ND
Kurtosis	ND	ND	0.6	0.5	0.6	9.3	9.6	0	0.7	0	-0.6	ND
Skewness	ND	ND	-0.8	-0.7	1.0	3.0	3.1	-1	-0.7	1	-0.6	ND
Range	0.0	0.0	770.0	768.2	7.2	36.0	32.0	1327	318.0	4133	1.8	0
Minimum	0.0	0.0	210.0	208.0	0.0	2.0	2.2	423	52.0	67	1.8	0
Maximum	0.0	0.0	980.0	976.2	7.2	38.0	34.2	1750	370.0	4200	3.6	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	165.7	165.0	1.6	7.8	6.9	296	65.7	1083	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

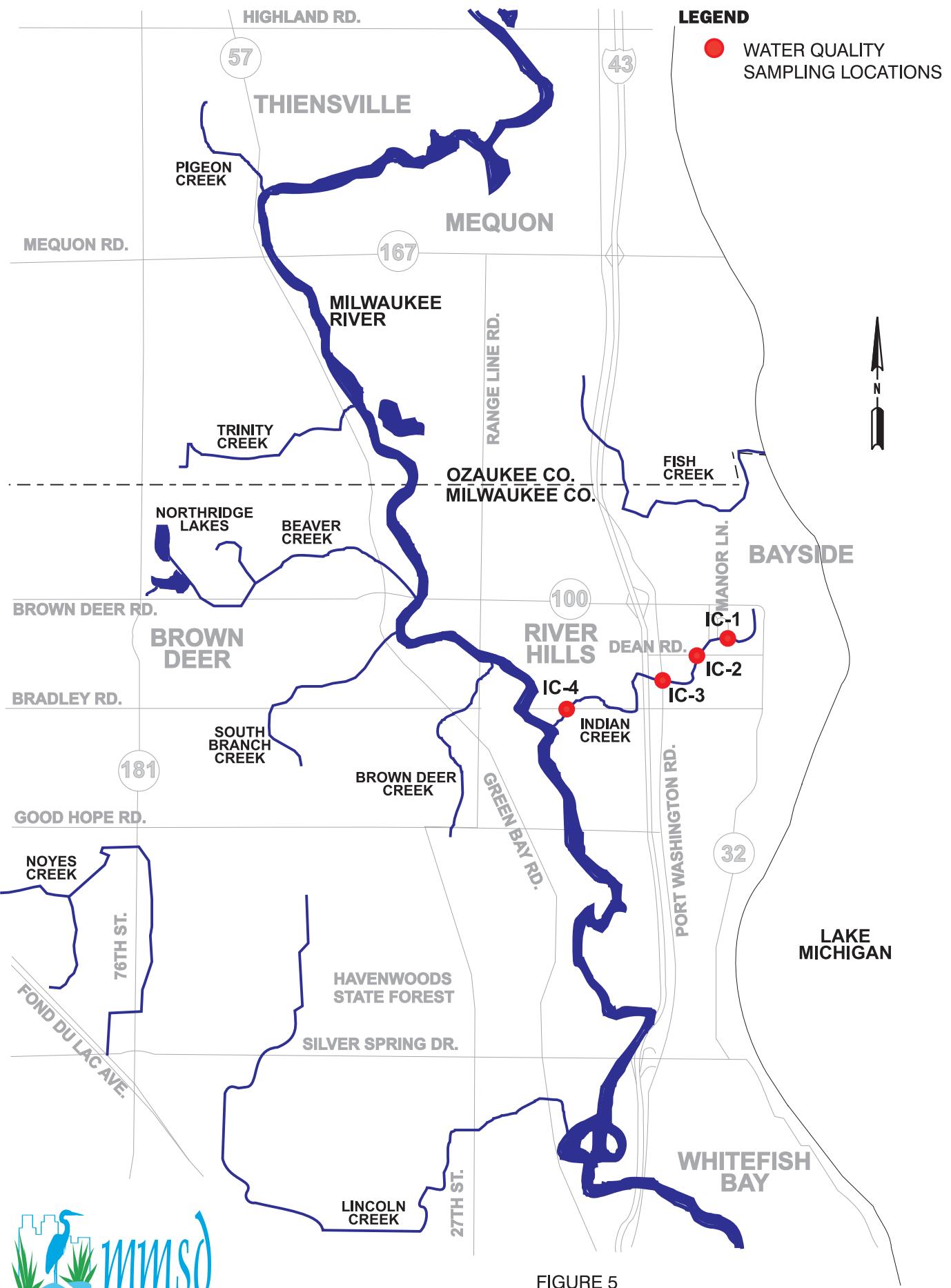
GREEN BAY CT., N. OF GREEN BAY RD. AND TEUTONIA AVE. - SITE 4
 SOUTHBRANCH CREEK
 WATER QUALITY DATA - 2009

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	63.40	25.90	0.0	4.5	3.7	3.3	0.0	23.7	0.0	0.0	2.4	0.0
Standard Error	5.42	2.57	0.0	0.4	0.8	0.3	0.0	3.5	0.0	0.0	1.5	0.0
Median	68.00	29.50	0.0	4.3	3.9	3.1	0.0	21.5	0.0	0.0	0.0	0.0
Mode	68.00	32.00	0.0	4.2	3.6	ND	0.0	22.0	0.0	0.0	0.0	0.0
Standard Deviation	17.15	8.13	0.0	1.4	2.5	0.9	0.0	11.2	0.0	0.0	3.7	0.0
Sample Variance	294.27	66.10	0.0	1.9	6.5	0.8	0.0	125.3	0.0	0.0	13.6	0.0
Kurtosis	-0.02	-0.13	ND	4.1	0.0	1.1	ND	2.0	ND	ND	-1.6	ND
Skewness	-0.99	-1.05	ND	1.2	0.0	0.6	ND	1.4	ND	ND	1.0	ND
Range	53.00	24.00	0.0	5.5	8.2	3.3	0.0	37.0	0.0	0.0	7.7	0.0
Minimum	30.00	10.00	0.0	2.3	0.0	1.8	0.0	12.0	0.0	0.0	0.0	0.0
Maximum	83.00	34.00	0.0	7.8	8.2	5.1	0.0	49.0	0.0	0.0	7.7	0.0
Count	10	10	10	10	10	10	10	10	10	10	6	2
Confidence Level(95.0%)	12.27	5.82	0.0	1.0	1.8	0.6	0.0	8.0	0.0	0.0	3.9	0.0

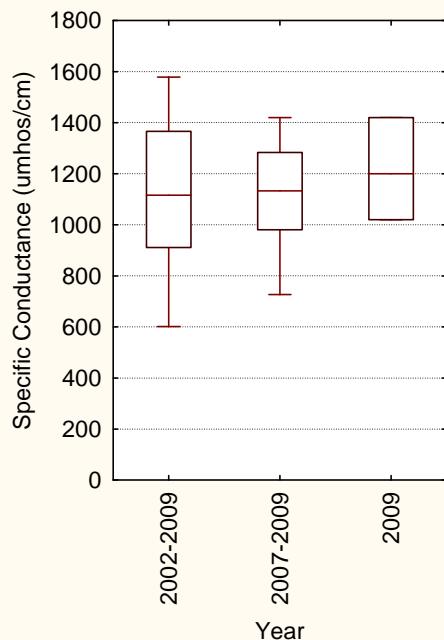
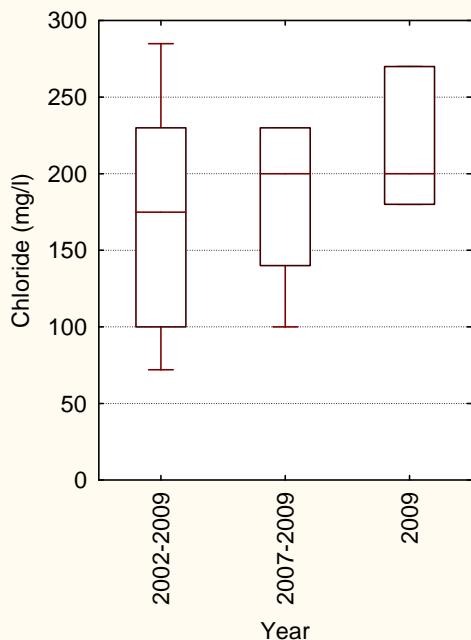
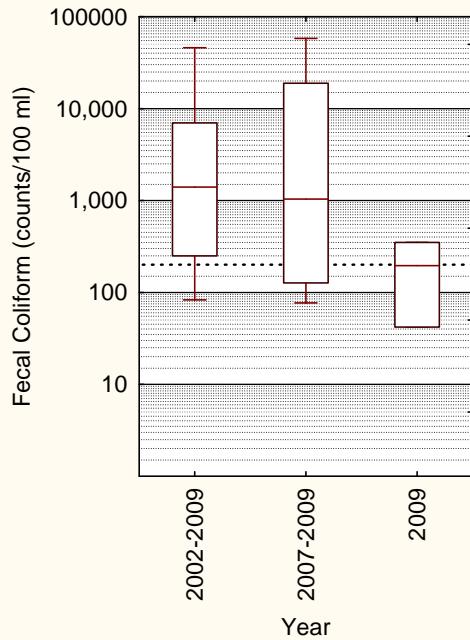
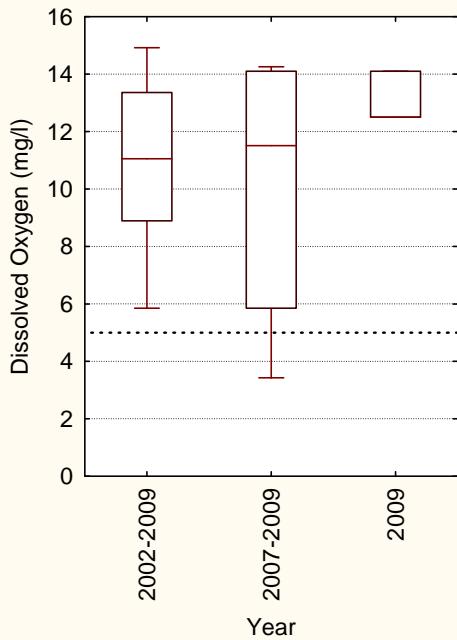
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	265	177	0.7	6.0	46.1	41.4	4.6	4.3
Standard Error	24	17	0.5	0.5	3.8	3.8	0.2	0.1
Median	290	195	0.0	5.9	50.5	45.5	4.6	4.2
Mode	280	210	0.0	4.7	ND	ND	4.6	4.0
Standard Deviation	75	53	1.4	1.7	11.9	12.1	0.5	0.5
Sample Variance	5650	2760	2.0	2.9	141.0	146.3	0.3	0.2
Kurtosis	0	-1	3.7	2.8	-1.0	-1.0	3.7	3.2
Skewness	-1	-1	2.1	1.5	-0.6	-0.6	1.7	1.6
Range	220	149	4.1	5.7	35.0	36.0	1.8	1.6
Minimum	120	91	0.0	4.3	26.0	21.0	4.1	3.8
Maximum	340	240	4.1	10.0	61.0	57.0	5.9	5.4
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	54	38	1.0	1.2	8.5	8.7	0.4	0.3

ND = No Data

Provisional MMSD Water Quality Data

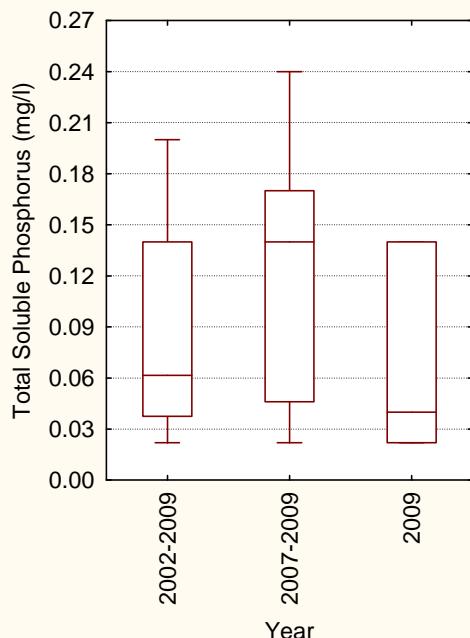
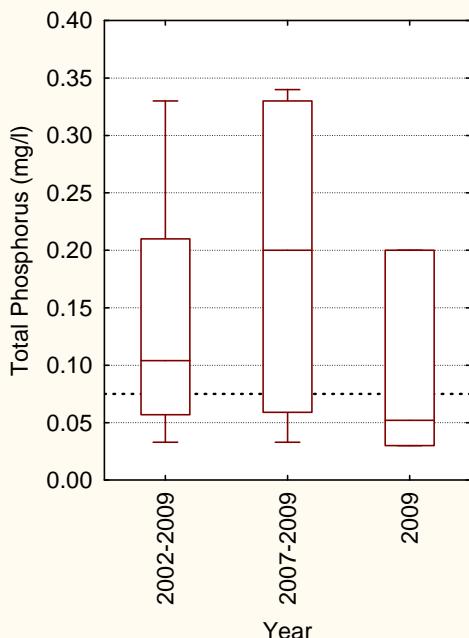
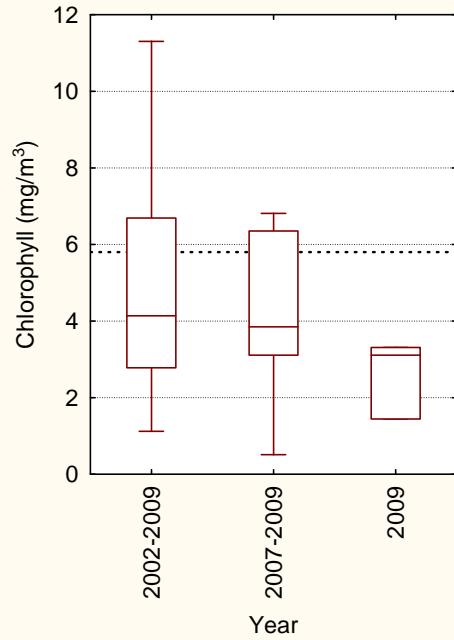
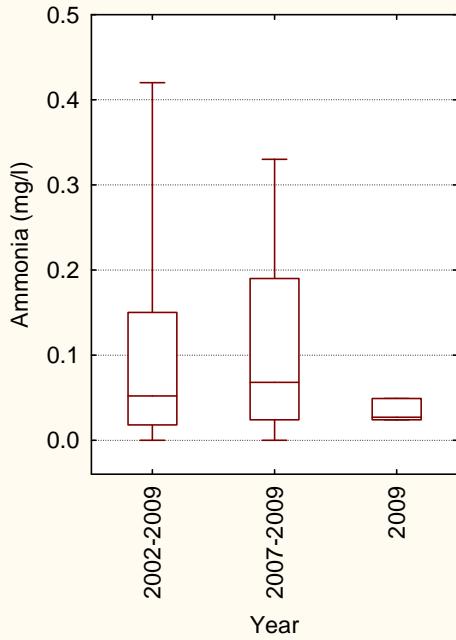


MMSD Water Quality Monitoring Program Data
 Indian Creek at Manor Ln., Site IC-01



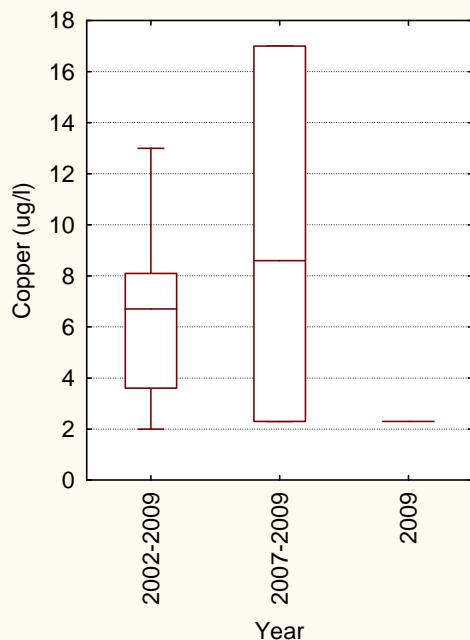
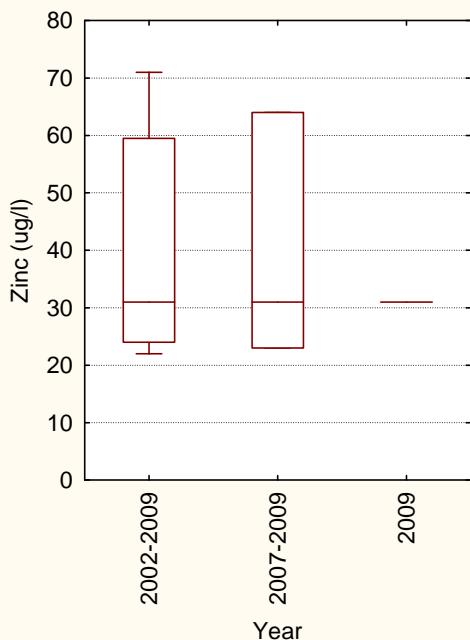
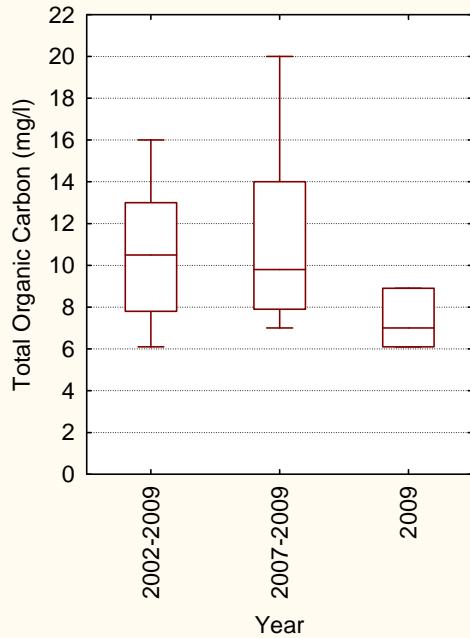
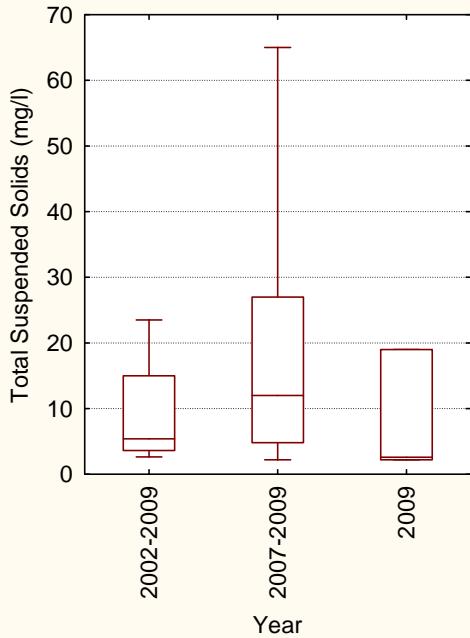
— Median □ 25%-75% □ 10%-90%
 ---- WQ Standard/Criterion

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 - 2009

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	6.4	13.0	2.62	0.65	0.011	0.66	0.033	0.70	0.094	0.067	ND
Standard Error	0.2	2.5	0.5	0.59	0.22	0.004	0.22	0.008	0.09	0.053	0.037	ND
Median	8.1	6.0	12.5	3.11	0.70	0.009	0.72	0.027	0.75	0.052	0.040	ND
Mode	ND	ND	12.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	0.3	4.3	0.9	1.03	0.38	0.007	0.37	0.014	0.15	0.092	0.064	ND
Sample Variance	0.1	18.5	0.9	1.05	0.14	0.000	0.14	0.000	0.02	0.009	0.004	ND
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	-1.5	0.4	1.7	-1.66	-0.59	0.935	-0.70	1.638	-1.32	1.622	1.577	ND
Range	0.6	8.6	1.6	1.87	0.75	0.015	0.74	0.025	0.29	0.170	0.118	0.00
Minimum	7.6	2.3	12.5	1.44	0.25	0.004	0.26	0.024	0.53	0.030	0.022	0.00
Maximum	8.2	10.9	14.1	3.31	1.00	0.019	1.00	0.049	0.82	0.200	0.140	0.00
Count	3	3	3	3	3	3	3	3	3	3	3	0
Confidence Level(95.0%)	0.8	10.7	2.3	2.55	0.94	0.019	0.93	0.034	0.38	0.230	0.158	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	640.0	632.1	1.2	7.9	8.3	1213	216.7	196	2.1	1414
Standard Error	ND	ND	100.2	105.7	0.8	5.5	6.0	116	27.3	154	0.5	1198
Median	ND	ND	730.0	727.8	1.0	2.6	2.5	1200	200.0	196	2.1	410
Mode	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	173.5	183.1	1.4	9.6	10.4	200	47.3	218	0.7	2075
Sample Variance	ND	ND	30100.0	33507.9	1.9	91.9	108.7	40133	2233.3	47432	0.4	4305468
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	ND	-1.7	-1.7	0.7	1.7	1.7	0	1.4	ND	ND	2
Range	0.0	0.0	310.0	326.4	2.7	16.8	18.3	400	90.0	308	0.9	3768
Minimum	0.0	0.0	440.0	421.0	0.0	2.2	2.0	1020	180.0	42	1.6	32
Maximum	0.0	0.0	750.0	747.4	2.7	19.0	20.3	1420	270.0	350	2.5	3800
Count	0	0	3	3	3	3	3	3	3	2	2	3
Confidence Level(95.0%)	ND	ND	431.0	454.7	3.4	23.8	25.9	498	117.4	1957	5.9	5154

ND=No Data

Provisional MMSD Water Quality Data

MANOR LANE - SITE 1
INDIAN CREEK
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	37.00	14.00	0.0	4.0	2.3	2.6	0.0	31.0	0.0	0.0	0.0	0.0
Standard Error	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Median	37.00	14.00	0.0	4.0	2.3	2.6	0.0	31.0	0.0	0.0	0.0	0.0
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	37.00	14.00	0.0	4.0	2.3	2.6	0.0	31.0	0.0	0.0	0.0	0.0
Maximum	37.00	14.00	0.0	4.0	2.3	2.6	0.0	31.0	0.0	0.0	0.0	0.0
Count	1	1	1	1	1	1	1	1	1	1	1	1
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	150	234	1.4	6.1	62.3	55.0	7.3	7.0
Standard Error	0	71	1.4	1.9	16.2	16.9	0.8	0.6
Median	150	290	0.0	5.0	71.0	65.0	7.0	6.7
Mode	ND	ND	0.0	ND	ND	ND	ND	ND
Standard Deviation	ND	123	2.4	3.3	28.0	29.3	1.4	1.0
Sample Variance	ND	15206	5.9	11.1	785.3	859.0	2.0	1.0
Kurtosis	ND	ND	ND	ND	ND	ND	ND	ND
Skewness	ND	-2	1.7	1.3	-1.3	-1.4	1.0	1.2
Range	0	227	4.2	6.4	54.0	56.0	2.8	1.9
Minimum	150	93	0.0	3.4	31.0	22.0	6.1	6.2
Maximum	150	320	4.2	9.8	85.0	78.0	8.9	8.1
Count	1	3	3	3	3	3	3	3
Confidence Level(95.0%)	ND	306	6.0	8.3	69.6	72.8	3.6	2.4

ND=No Data

Provisional MMSD Water Quality Data

DEAN ROAD - SITE 2
INDIAN CREEK
WATER QUALITY DATA - 2009

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	12.3	10.0	6.85	0.35	0.016	0.36	0.197	3.63	0.190	0.104	ND
Standard Error	0.1	2.8	1.3	2.33	0.12	0.005	0.12	0.131	1.59	0.036	0.021	ND
Median	7.6	11.1	9.8	3.97	0.24	0.013	0.26	0.043	1.70	0.210	0.110	ND
Mode	ND	ND	ND	ND	0.75	ND	0.76	0.020	ND	0.280	ND	ND
Standard Deviation	0.3	7.5	3.3	6.16	0.32	0.014	0.32	0.345	4.22	0.096	0.055	ND
Sample Variance	0.1	56.7	10.6	37.98	0.10	0.000	0.10	0.119	17.78	0.009	0.003	ND
Kurtosis	0.4	-0.9	-2.8	-1.15	-1.92	2.447	-1.86	5.819	2.25	-1.736	-1.146	ND
Skewness	0.7	-0.2	0.1	0.64	0.41	1.396	0.36	2.388	1.69	-0.524	-0.177	ND
Range	0.8	21.4	7.3	15.94	0.75	0.044	0.76	0.940	11.32	0.218	0.150	0.00
Minimum	7.3	0.9	6.5	0.66	0.00	0.000	0.00	0.020	0.68	0.062	0.030	0.00
Maximum	8.1	22.3	13.8	16.60	0.75	0.044	0.76	0.960	12.00	0.280	0.180	0.00
Count	7	7	6	7	7	7	7	7	7	7	7	0
Confidence Level(95.0%)	0.2	7.0	3.4	5.70	0.29	0.013	0.29	0.319	3.90	0.089	0.051	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	912.9	904.9	3.9	7.9	6.8	1606	334.3	7451	2.1	7568
Standard Error	ND	ND	111.2	110.9	1.4	1.6	1.1	191	41.0	7387	0.7	6190
Median	ND	ND	810.0	807.2	4.6	6.8	7.0	1350	300.0	80	1.9	75
Mode	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	294.1	293.4	3.6	4.1	2.8	507	108.6	16518	1.5	16377
Sample Variance	ND	ND	86523.8	86061.7	13.0	16.9	7.9	256629	11795.2	272853835	2.2	268190143
Kurtosis	ND	ND	-1.2	-1.2	-0.1	-1.2	0.9	-1	-1.3	5	2.3	6
Skewness	ND	ND	0.0	0.0	0.6	0.3	0.6	1	0.6	2	1.5	2
Range	0.0	0.0	820.0	817.2	10.0	11.2	8.8	1240	280.0	36993	3.7	43995
Minimum	0.0	0.0	480.0	473.2	0.0	2.8	2.9	1120	220.0	7	0.8	5
Maximum	0.0	0.0	1300.0	1290.4	10.0	14.0	11.7	2360	500.0	37000	4.6	44000
Count	0	0	7	7	7	7	7	7	7	5	5	7
Confidence Level(95.0%)	ND	ND	272.0	271.3	3.3	3.8	2.6	469	100.4	20510	1.9	15146

ND=No Data

Provisional MMSD Water Quality Data

DEAN ROAD - SITE 2
INDIAN CREEK
WATER QUALITY DATA - 2009

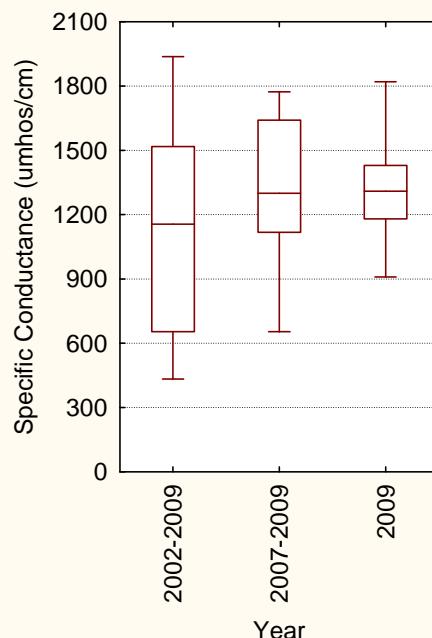
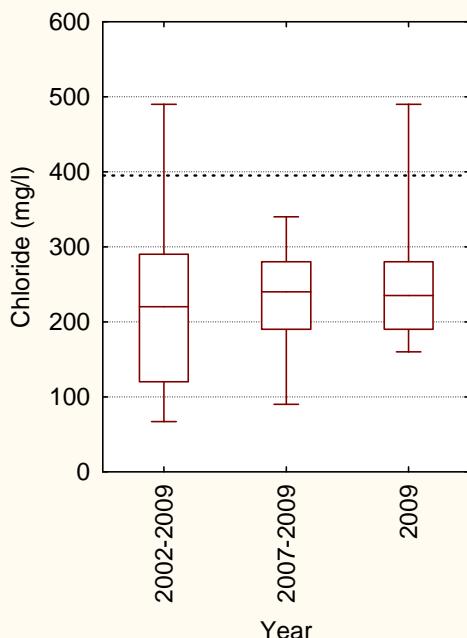
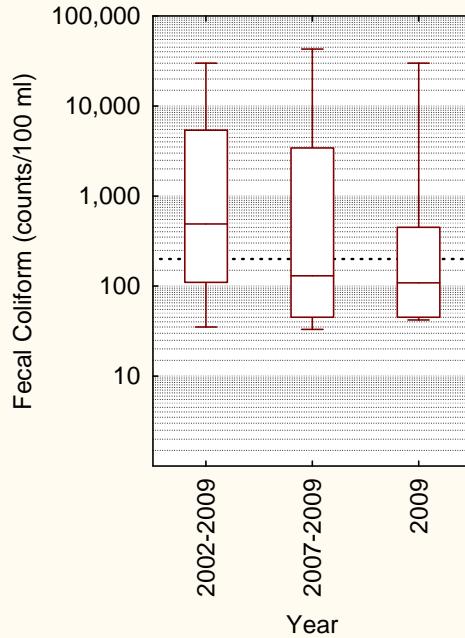
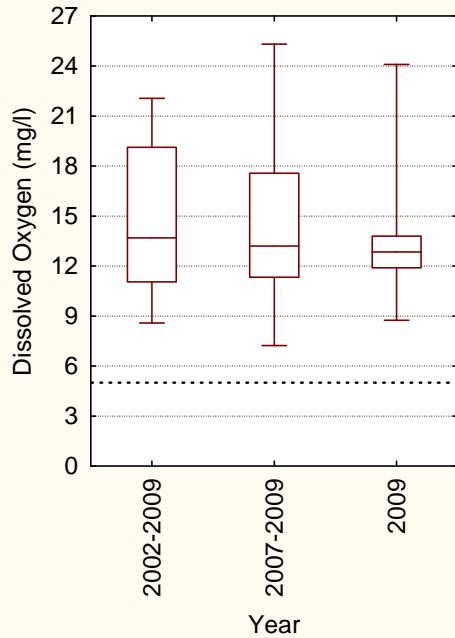
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	58.00	28.50	0.0	3.9	0.0	5.0	0.0	32.0	0.0	0.0	4.7	0.0
Standard Error	19.00	14.50	0.0	0.3	0.0	2.7	0.0	1.0	0.0	0.0	4.7	0.0
Median	58.00	28.50	0.0	3.9	0.0	5.0	0.0	32.0	0.0	0.0	4.7	0.0
Mode	ND	ND	0.0	ND	0.0	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	26.87	20.51	0.0	0.5	0.0	3.7	0.0	1.4	0.0	0.0	6.6	0.0
Sample Variance	722.00	420.50	0.0	0.2	0.0	14.0	0.0	2.0	0.0	0.0	43.2	0.0
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	38.00	29.00	0.0	0.7	0.0	5.3	0.0	2.0	0.0	0.0	9.3	0.0
Minimum	39.00	14.00	0.0	3.5	0.0	2.3	0.0	31.0	0.0	0.0	0.0	0.0
Maximum	77.00	43.00	0.0	4.2	0.0	7.6	0.0	33.0	0.0	0.0	9.3	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	241.42	184.24	0.0	4.4	0.0	33.7	0.0	12.7	0.0	0.0	59.1	0.0

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	236	3.0	10.3	66.0	54.9	11.3	10.4
Standard Error	105	31	1.0	1.7	7.8	7.4	1.2	1.1
Median	265	260	2.3	9.5	77.0	63.0	12.0	10.0
Mode	ND	290	0.0	5.5	ND	ND	ND	ND
Standard Deviation	148	81	2.6	4.6	20.7	19.7	3.3	3.0
Sample Variance	22050	6539	6.9	21.0	428.7	386.8	10.7	9.0
Kurtosis	ND	1	-1.0	-1.1	0.6	-0.1	-1.7	-1.4
Skewness	ND	-1	0.3	0.6	-1.3	-1.1	0.1	0.4
Range	210	225	7.0	11.5	55.0	53.0	8.6	8.0
Minimum	160	85	0.0	5.5	28.0	21.0	7.4	7.0
Maximum	370	310	7.0	17.0	83.0	74.0	16.0	15.0
Count	2	7	7	7	7	7	7	7
Confidence Level(95.0%)	1334	75	2.4	4.2	19.1	18.2	3.0	2.8

ND=No Data

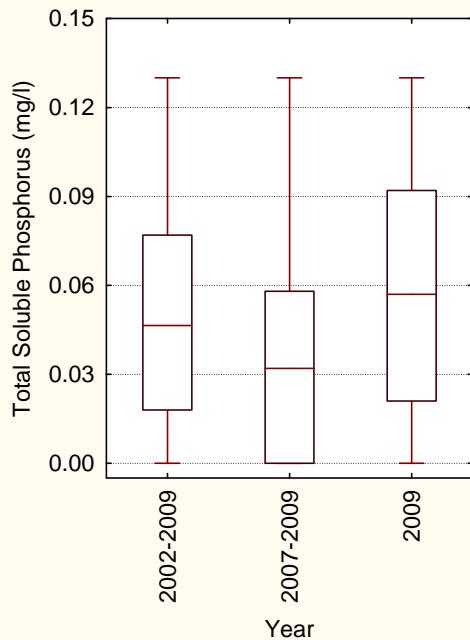
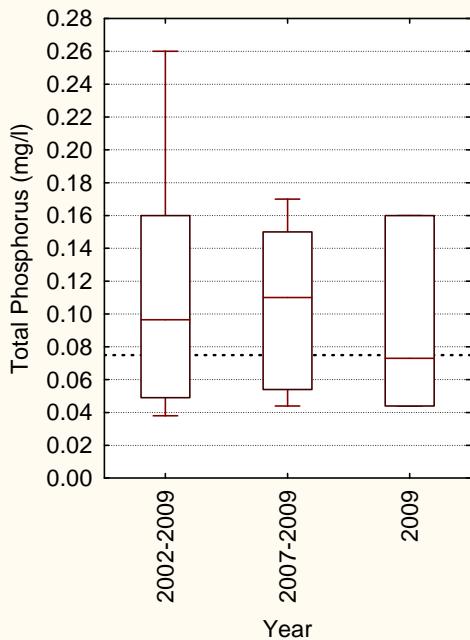
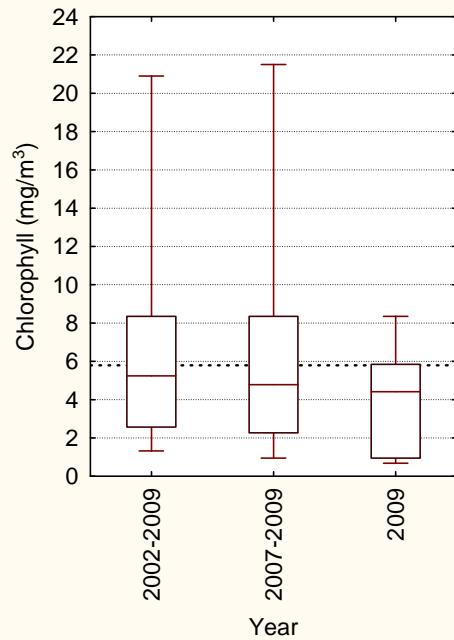
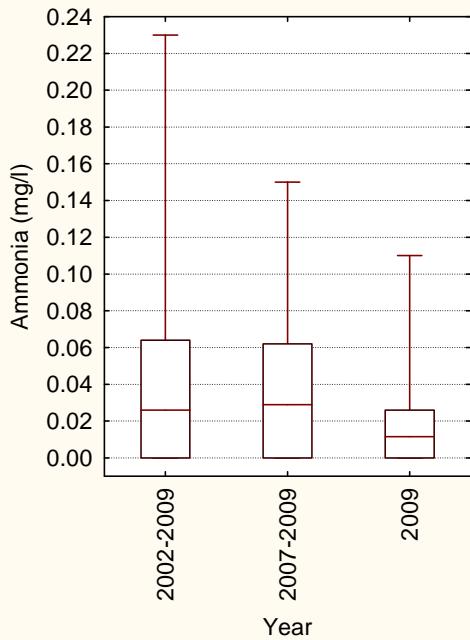
Provisional MMSD Water Quality Data

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



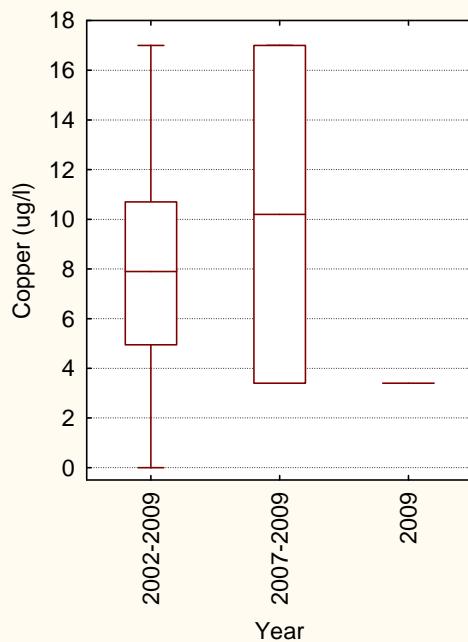
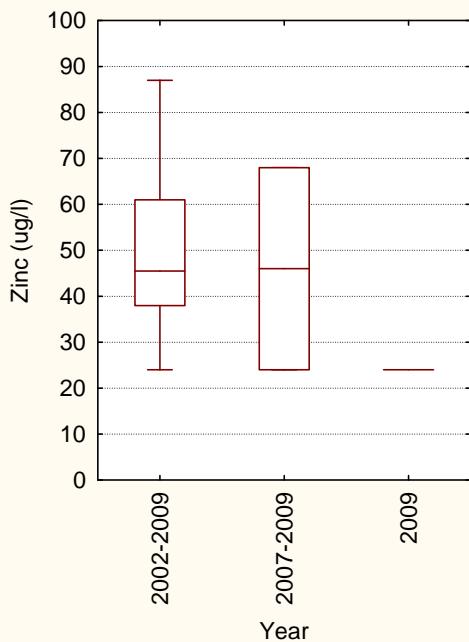
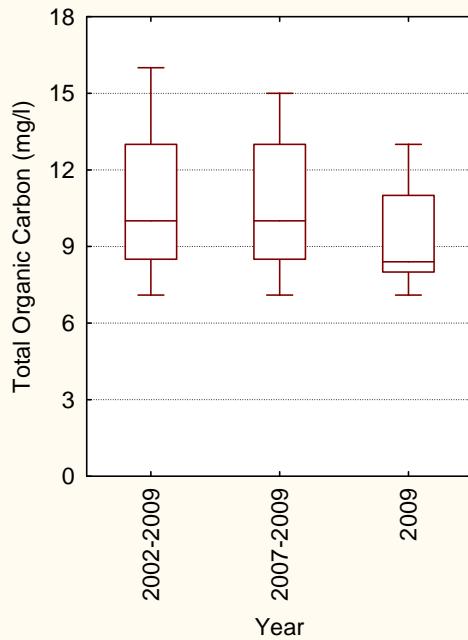
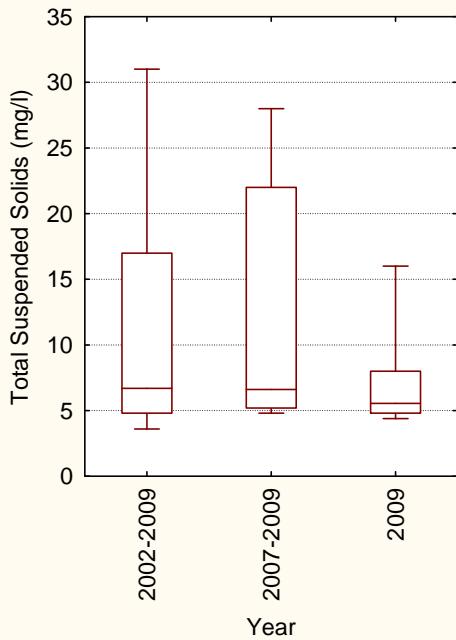
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.6	14.0	4.11	0.27	0.009	0.27	0.027	0.93	0.092	0.060	ND
Standard Error	0.2	4.1	2.1	1.20	0.11	0.003	0.11	0.017	0.13	0.023	0.019	ND
Median	7.9	11.1	12.9	4.42	0.20	0.010	0.21	0.012	0.89	0.073	0.057	ND
Mode	7.9	ND	ND	ND	ND	0.000	ND	0.000	1.00	0.044	ND	ND
Standard Deviation	0.5	10.1	5.2	2.94	0.26	0.007	0.26	0.043	0.32	0.056	0.047	ND
Sample Variance	0.3	101.1	27.4	8.64	0.07	0.000	0.07	0.002	0.10	0.003	0.002	ND
Kurtosis	0.6	-0.3	4.1	-0.90	-0.59	-0.933	-0.48	4.356	1.60	-2.237	-0.524	ND
Skewness	0.8	0.4	1.8	0.12	0.80	-0.039	0.82	2.036	1.21	0.546	0.332	ND
Range	1.4	28.1	15.4	7.67	0.67	0.019	0.69	0.110	0.90	0.116	0.130	0.00
Minimum	7.4	-0.3	8.8	0.68	0.00	0.000	0.00	0.000	0.60	0.044	0.000	0.00
Maximum	8.8	27.8	24.1	8.35	0.67	0.019	0.69	0.110	1.50	0.160	0.130	0.00
Count	6	6	6	6	6	6	6	6	6	6	6	0
Confidence Level(95.0%)	0.5	10.6	5.5	3.08	0.27	0.008	0.28	0.045	0.34	0.059	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	765.0	757.6	1.5	7.4	6.1	1327	265.0	5126	2.4	1509
Standard Error	ND	ND	76.9	76.0	0.6	1.8	1.4	123	48.5	4975	0.4	1359
Median	ND	ND	795.0	788.6	1.5	5.6	5.6	1310	235.0	109	2.0	107
Mode	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	188.3	186.1	1.4	4.4	3.4	300	118.8	12187	1.1	3330
Sample Variance	ND	ND	35470.0	34625.7	1.9	19.5	11.9	90154	14110.0	148519201	1.2	11089414
Kurtosis	ND	ND	0.5	0.5	-0.5	4.2	3.0	2	3.3	6	3.5	6
Skewness	ND	ND	-0.9	-0.9	0.5	2.0	1.5	1	1.7	2	1.9	2
Range	0.0	0.0	500.0	499.3	3.6	11.6	10.0	911	330.0	29958	2.9	8259
Minimum	0.0	0.0	450.0	445.6	0.0	4.4	2.5	909	160.0	42	1.6	41
Maximum	0.0	0.0	950.0	944.9	3.6	16.0	12.5	1820	490.0	30000	4.5	8300
Count	0	0	6	6	6	6	6	6	6	6	6	6
Confidence Level(95.0%)	ND	ND	197.6	195.3	1.5	4.6	3.6	315	124.7	12789	1.1	3495

ND=No Data

Provisional MMSD Water Quality Data

PORT WASHINGTON ROAD - SITE 3
INDIAN CREEK
WATER QUALITY DATA - 2009

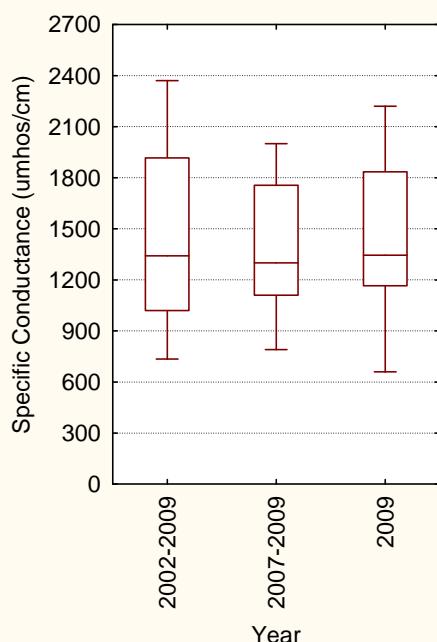
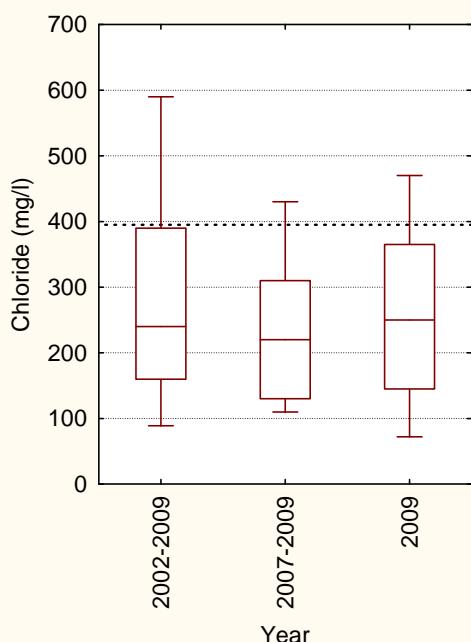
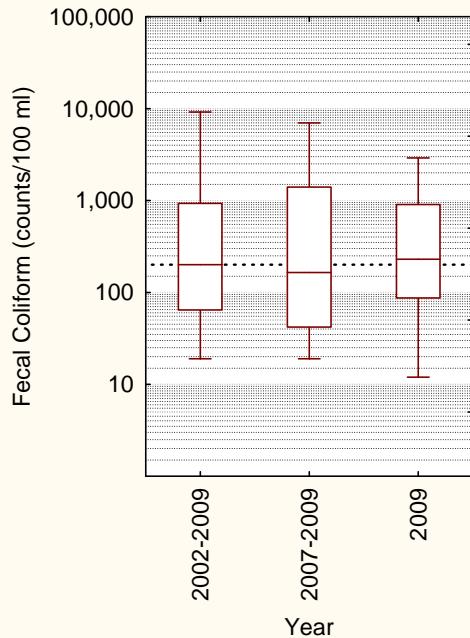
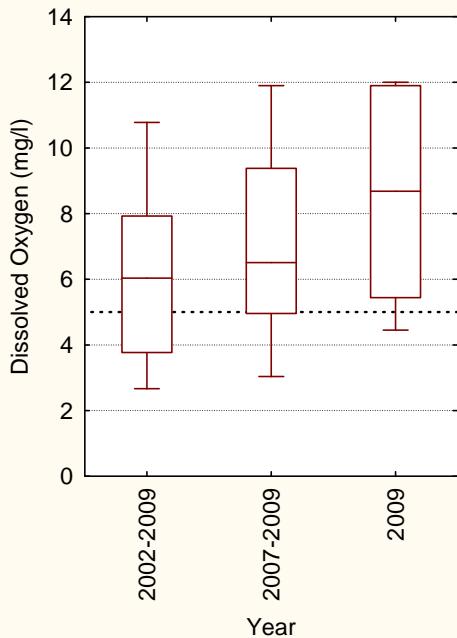
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	45.00	16.00	0.0	4.2	3.4	2.8	0.0	24.0	0.0	0.0	0.0	0.0
Standard Error	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Median	45.00	16.00	0.0	4.2	3.4	2.8	0.0	24.0	0.0	0.0	0.0	0.0
Mode	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sample Variance	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	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	45.00	16.00	0.0	4.2	3.4	2.8	0.0	24.0	0.0	0.0	0.0	0.0
Maximum	45.00	16.00	0.0	4.2	3.4	2.8	0.0	24.0	0.0	0.0	0.0	0.0
Count	1	1	1	1	1	1	1	1	1	1	1	1
Confidence Level(95.0%)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	180	216	1.1	6.7	59.5	50.3	9.3	8.7
Standard Error	0	35	0.7	0.7	8.0	8.2	0.9	0.8
Median	180	225	0.0	5.9	61.0	51.5	8.4	8.1
Mode	ND	ND	0.0	ND	ND	ND	ND	ND
Standard Deviation	ND	85	1.8	1.7	19.7	20.1	2.2	2.0
Sample Variance	ND	7310	3.1	2.9	388.3	405.5	4.9	3.9
Kurtosis	ND	-1	-0.3	-1.9	0.2	-0.9	0.1	0.5
Skewness	ND	-1	1.2	0.8	-0.6	-0.3	1.1	0.9
Range	0	227	4.0	3.8	56.0	55.0	5.9	5.6
Minimum	180	83	0.0	5.1	28.0	21.0	7.1	6.4
Maximum	180	310	4.0	8.9	84.0	76.0	13.0	12.0
Count	1	6	6	6	6	6	6	6
Confidence Level(95.0%)	ND	90	1.8	1.8	20.7	21.1	2.3	2.1

ND=No Data

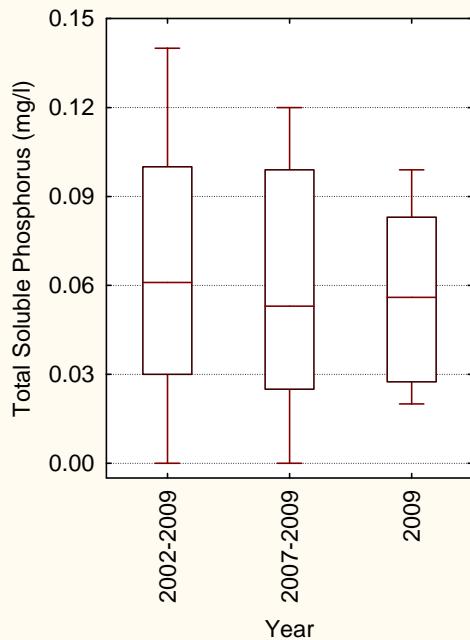
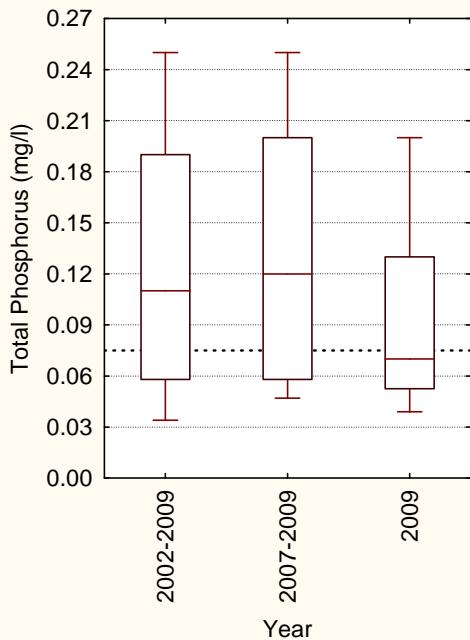
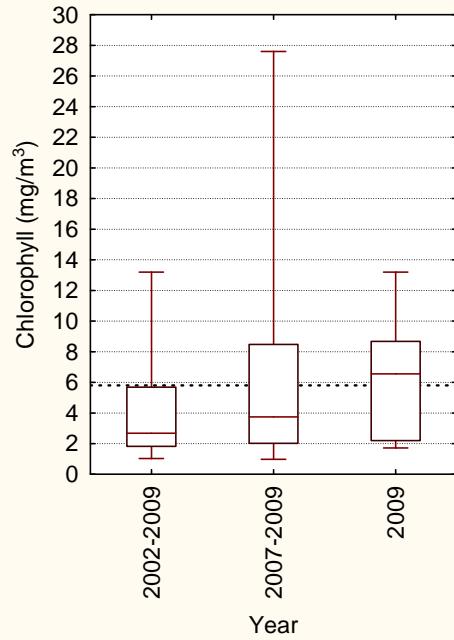
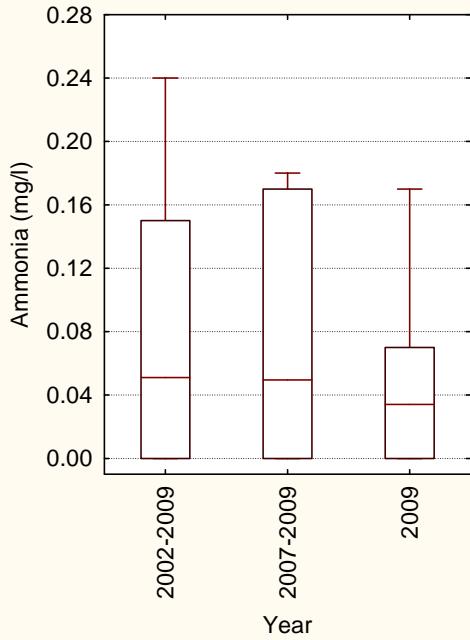
Provisional MMSD Water Quality Data

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



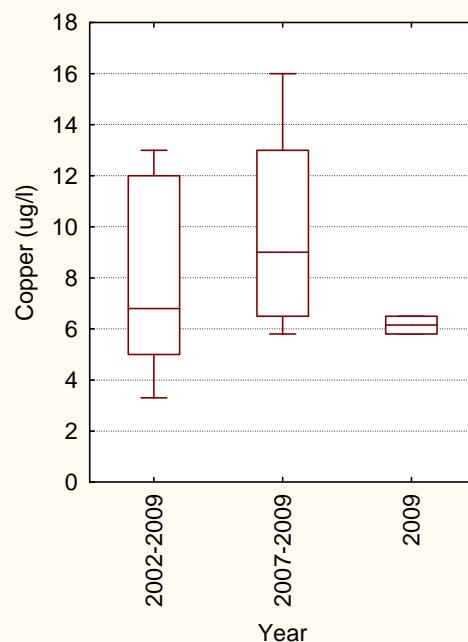
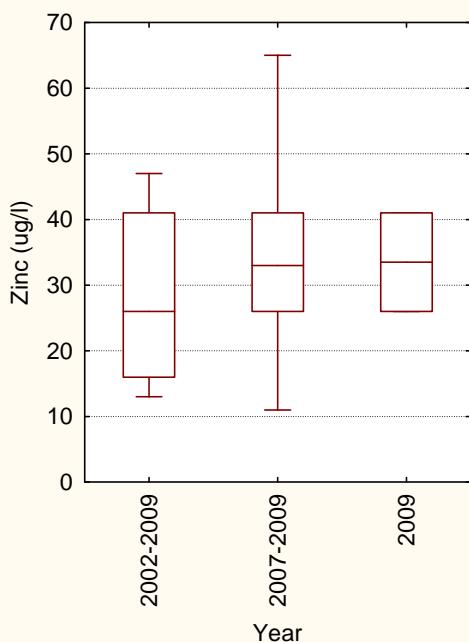
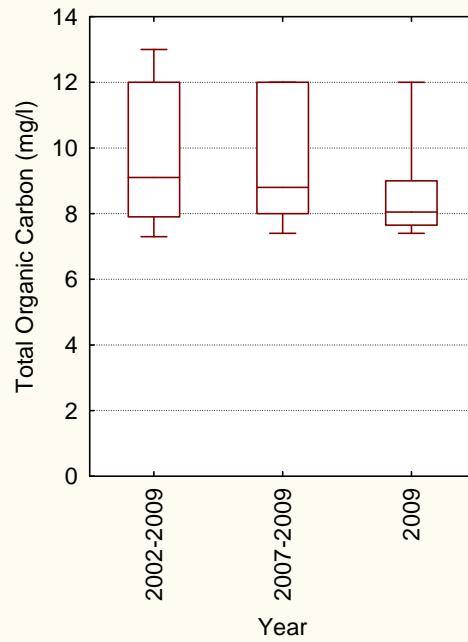
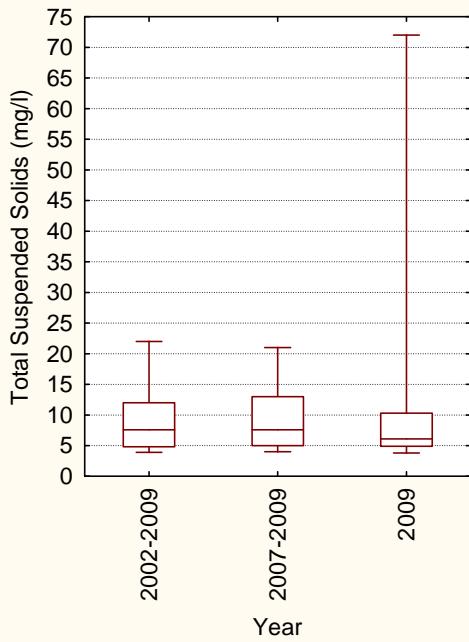
— Median □ 25%-75% ━ 10%-90%
 ----- WQ Standard/Criterion

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 - 2009

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	12.4	8.3	6.22	0.26	0.013	0.28	0.047	0.86	0.093	0.057	ND
Standard Error	0.1	2.2	1.1	1.44	0.06	0.002	0.07	0.021	0.11	0.020	0.011	ND
Median	7.8	14.9	8.7	6.55	0.22	0.012	0.23	0.034	0.92	0.070	0.056	ND
Mode	7.8	ND	ND	ND	ND	ND	ND	0.000	ND	0.130	ND	ND
Standard Deviation	0.2	6.2	3.0	4.07	0.18	0.007	0.19	0.059	0.30	0.056	0.031	ND
Sample Variance	0.1	39.1	9.1	16.54	0.03	0.000	0.04	0.003	0.09	0.003	0.001	ND
Kurtosis	-0.5	0.1	-1.7	-0.66	-0.38	-0.299	-0.39	2.232	-1.27	0.518	-1.484	ND
Skewness	-0.8	-1.1	0.1	0.42	1.02	0.709	1.01	1.497	0.15	1.113	0.275	ND
Range	0.6	17.1	7.6	11.48	0.48	0.020	0.49	0.170	0.82	0.161	0.079	0.00
Minimum	7.4	0.8	4.5	1.72	0.07	0.005	0.08	0.000	0.48	0.039	0.020	0.00
Maximum	8.0	17.8	12.0	13.20	0.55	0.024	0.57	0.170	1.30	0.200	0.099	0.00
Count	8	8	7	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	5.2	2.8	3.40	0.15	0.005	0.16	0.049	0.25	0.046	0.026	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	786.3	771.5	3.4	14.8	12.9	1446	257.8	670	2.3	762
Standard Error	ND	ND	105.7	104.0	1.0	8.2	5.7	178	50.1	356	0.3	431
Median	ND	ND	765.0	759.7	2.4	6.1	6.9	1345	250.0	230	2.3	285
Mode	ND	ND	ND	ND	1.6	ND	ND	ND	ND	87	1.9	ND
Standard Deviation	ND	ND	298.9	294.1	2.9	23.3	16.1	504	141.8	1007	0.8	1219
Sample Variance	ND	ND	89369.6	86504.5	8.7	542.3	257.8	254341	20114.8	1013934	0.6	1487001
Kurtosis	ND	ND	0.1	0.5	0.2	7.6	7.5	0	-1.0	4	-0.1	5
Skewness	ND	ND	0.2	0.3	1.0	2.7	2.7	0	0.3	2	-0.1	2
Range	0.0	0.0	950.0	949.0	8.8	68.2	47.9	1560	398.0	2888	2.4	3584
Minimum	0.0	0.0	350.0	343.4	0.0	3.8	4.3	660	72.0	12	1.1	16
Maximum	0.0	0.0	1300.0	1292.4	8.8	72.0	52.2	2220	470.0	2900	3.5	3600
Count	0	0	8	8	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	249.9	245.9	2.5	19.5	13.4	422	118.6	842	0.6	1019

ND=No Data

Provisional MMSD Water Quality Data

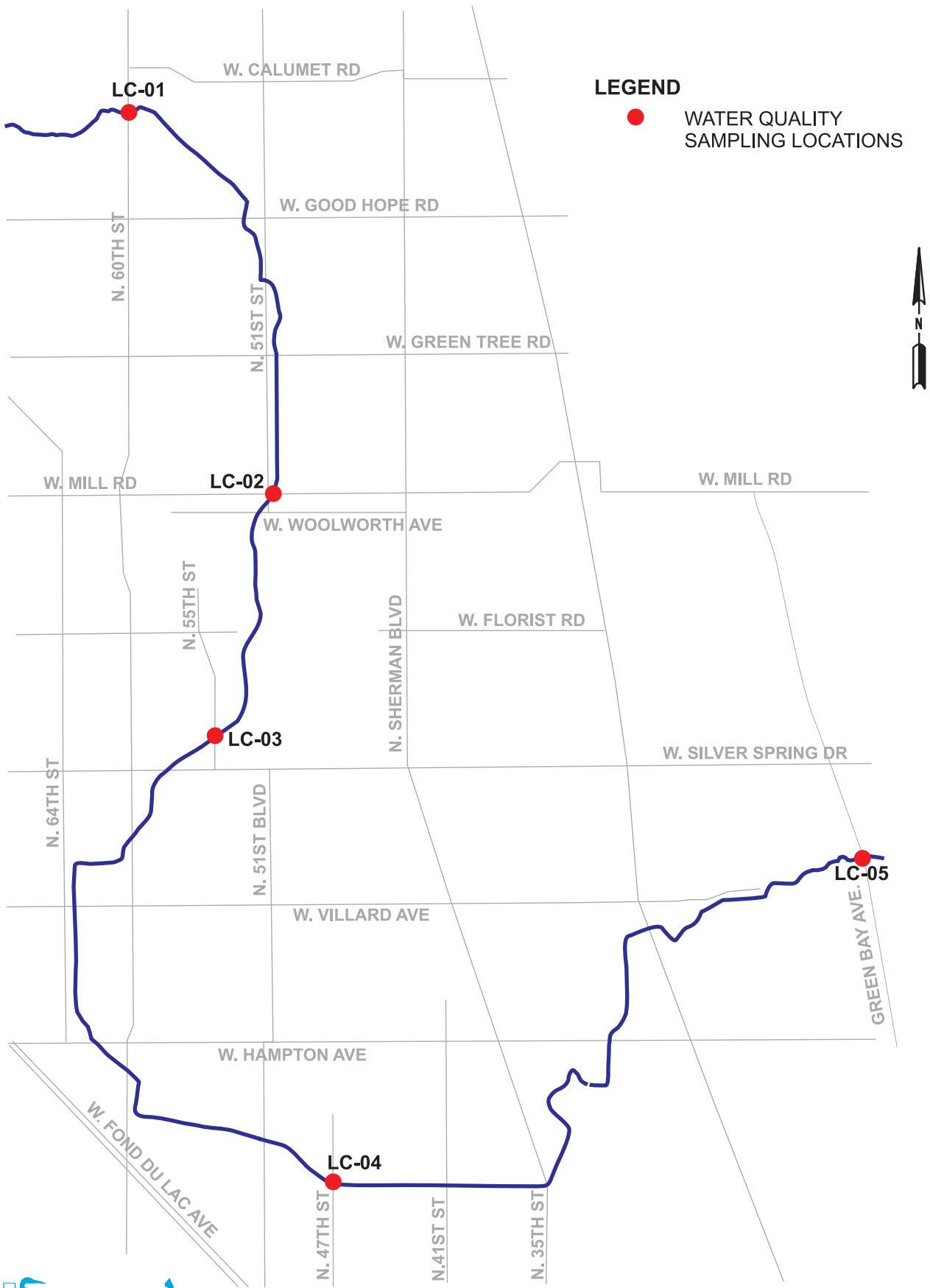
BRADLEY ROAD - SITE 4
INDIAN CREEK
WATER QUALITY DATA - 2009

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	63.50	36.50	0.0	5.4	6.2	4.0	0.0	33.5	0.0	0.0	0.0	0.0
Standard Error	17.50	17.50	0.0	1.2	0.3	0.2	0.0	7.5	0.0	0.0	0.0	0.0
Median	63.50	36.50	0.0	5.4	6.2	4.0	0.0	33.5	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	24.75	24.75	0.0	1.7	0.5	0.3	0.0	10.6	0.0	0.0	ND	0.0
Sample Variance	612.50	612.50	0.0	2.9	0.2	0.1	0.0	112.5	0.0	0.0	ND	0.0
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	35.00	35.00	0.0	2.4	0.7	0.4	0.0	15.0	0.0	0.0	0.0	0.0
Minimum	46.00	19.00	0.0	4.2	5.8	3.8	0.0	26.0	0.0	0.0	0.0	0.0
Maximum	81.00	54.00	0.0	6.6	6.5	4.2	0.0	41.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	1	2
Confidence Level(95.0%)	222.36	222.36	0.0	15.2	4.4	2.5	0.0	95.3	0.0	0.0	ND	0.0

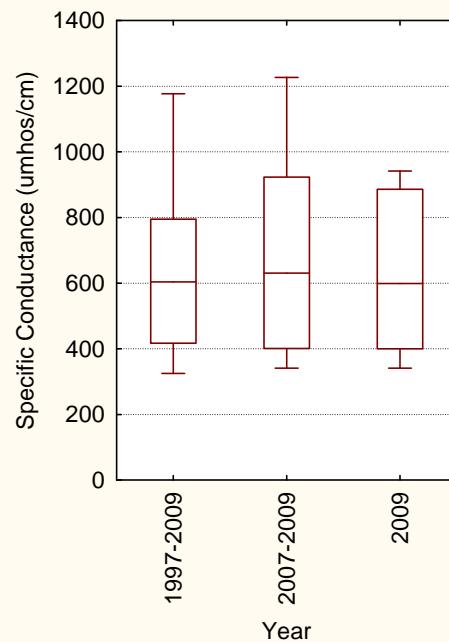
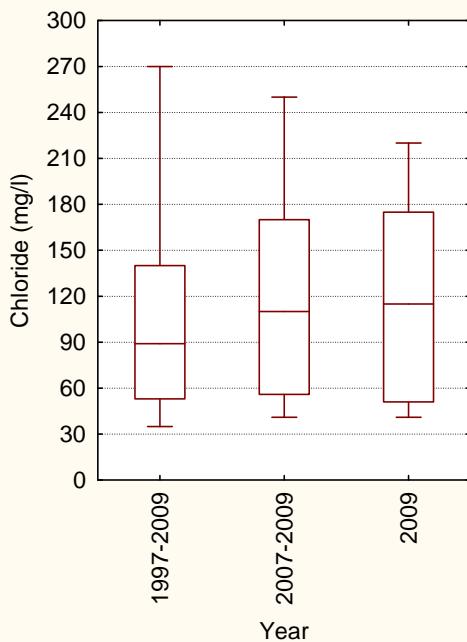
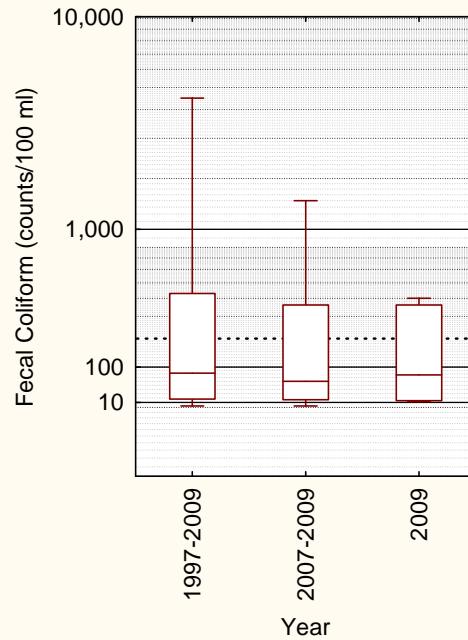
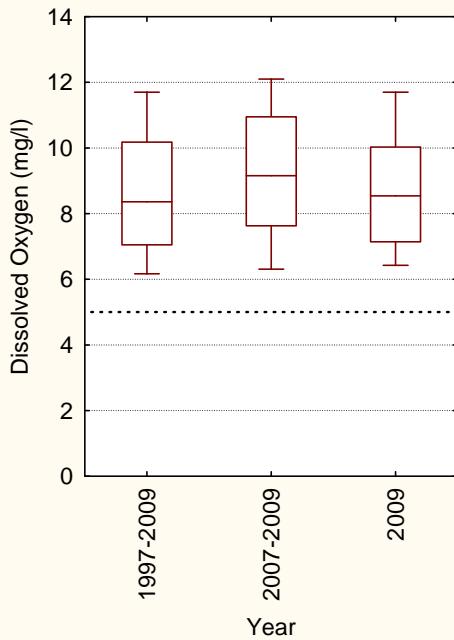
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	305	209	1.6	6.9	58.1	49.0	8.6	8.4
Standard Error	115	25	0.7	0.7	5.8	5.7	0.5	0.6
Median	305	235	1.0	6.2	63.5	55.0	8.1	8.0
Mode	ND	250	0.0	ND	ND	ND	7.4	ND
Standard Deviation	163	72	1.9	2.0	16.4	16.2	1.5	1.6
Sample Variance	26450	5184	3.6	4.1	269.0	260.9	2.3	2.7
Kurtosis	ND	-1	-0.4	1.4	-0.4	-0.4	3.8	3.2
Skewness	ND	-1	0.8	1.4	-0.9	-0.9	1.9	1.8
Range	230	190	5.0	5.8	46.0	45.0	4.6	4.9
Minimum	190	90	0.0	5.2	31.0	23.0	7.4	7.1
Maximum	420	280	5.0	11.0	77.0	68.0	12.0	12.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1461	60	1.6	1.7	13.7	13.5	1.3	1.4

ND=No Data

Provisional MMSD Water Quality Data

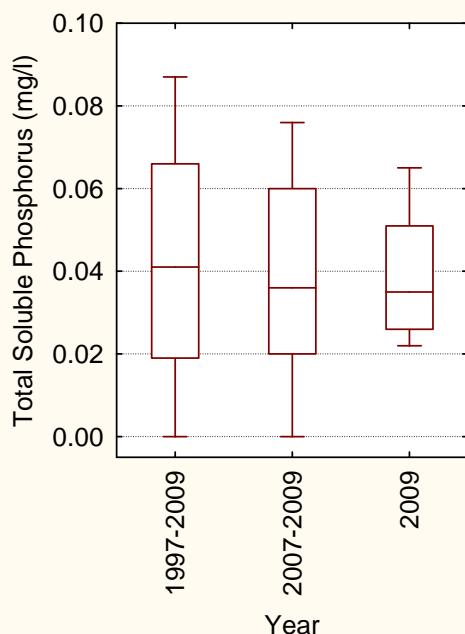
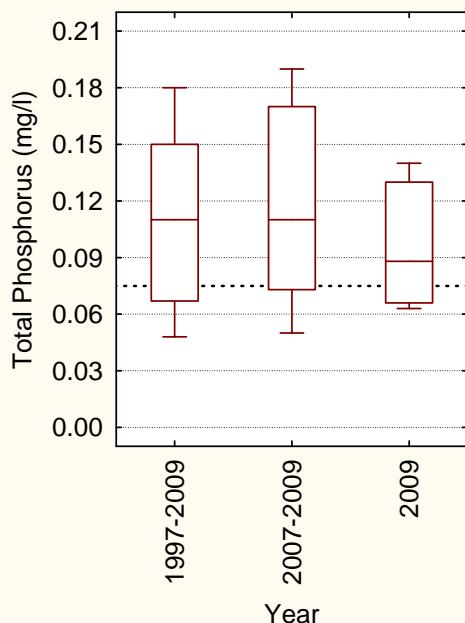
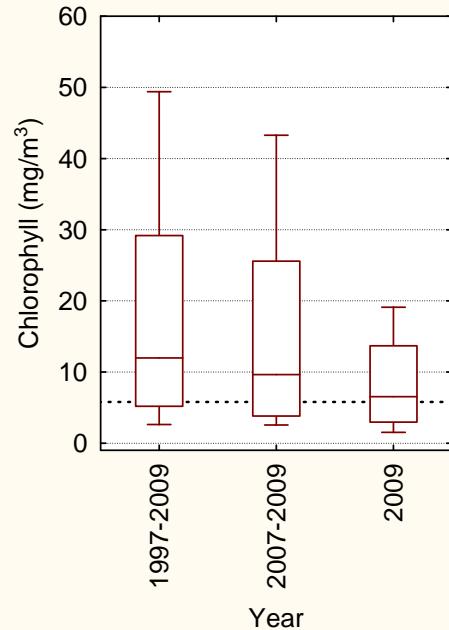
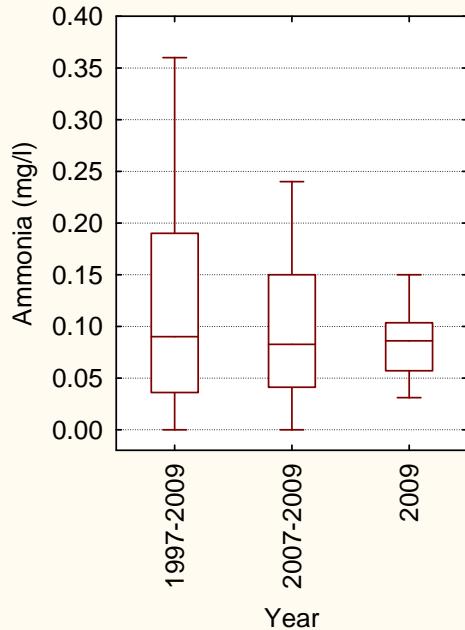


MMSD Water Quality Monitoring Program Data
Lincoln Creek at 60th St., Site LC-01



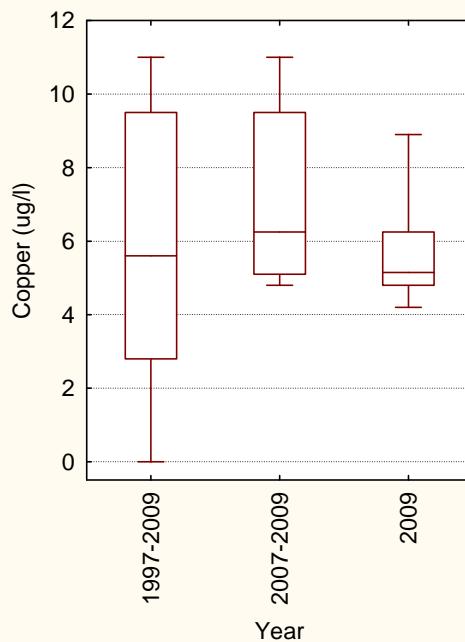
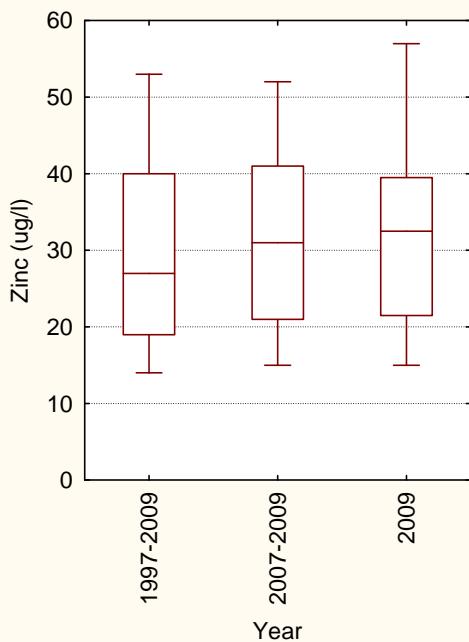
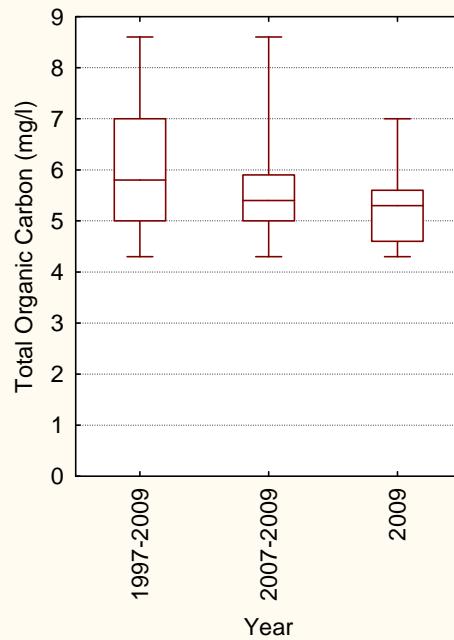
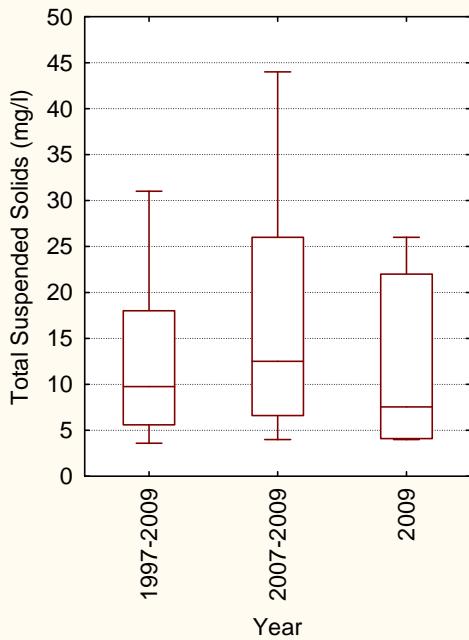
— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	15.9	8.7	8.94	0.40	0.022	0.42	0.103	0.77	0.099	0.041	ND
Standard Error	0.1	1.7	0.6	2.24	0.07	0.002	0.07	0.025	0.08	0.011	0.005	ND
Median	7.8	18.6	8.5	6.55	0.35	0.023	0.37	0.086	0.70	0.088	0.035	ND
Mode	7.8	20.7	11.7	ND	0.38	0.021	0.16	ND	1.00	0.130	0.022	ND
Standard Deviation	0.3	6.0	1.9	7.77	0.24	0.008	0.24	0.088	0.26	0.037	0.017	ND
Sample Variance	0.1	36.0	3.6	60.44	0.06	0.000	0.06	0.008	0.07	0.001	0.000	ND
Kurtosis	0.0	-0.1	-1.1	0.28	2.90	-0.363	2.58	7.802	-1.25	-0.719	-0.819	ND
Skewness	0.3	-0.9	0.3	1.02	1.62	-0.160	1.54	2.602	0.08	0.761	0.637	ND
Range	1.2	19.1	5.4	24.82	0.86	0.027	0.84	0.332	0.82	0.109	0.049	0.00
Minimum	7.2	3.5	6.3	0.78	0.14	0.009	0.16	0.028	0.38	0.061	0.022	0.00
Maximum	8.4	22.6	11.7	25.60	1.00	0.036	1.00	0.360	1.20	0.170	0.071	0.00
Count	12	12	12	12	12	12	12	12	12	11	11	0
Confidence Level(95.0%)	0.2	3.8	1.2	4.94	0.15	0.005	0.15	0.056	0.17	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	382.5	369.3	4.2	13.2	13.8	679	127.2	137	1.8	ND
Standard Error	ND	ND	51.2	50.2	1.0	3.7	4.2	104	27.5	64	0.2	ND
Median	ND	ND	345.0	338.6	2.8	7.6	7.5	599	115.0	77	1.9	ND
Mode	ND	ND	ND	ND	0.0	26.0	ND	400	120.0	ND	ND	ND
Standard Deviation	ND	ND	177.4	173.8	3.5	12.8	14.5	359	95.1	169	0.6	ND
Sample Variance	ND	ND	31475.0	30202.1	12.1	164.1	208.9	129068	9044.9	28543	0.4	ND
Kurtosis	ND	ND	1.9	1.0	-0.3	1.8	-0.3	3	2.2	-1	-1.9	ND
Skewness	ND	ND	1.2	1.0	0.8	1.5	1.2	1	1.4	1	0.3	ND
Range	0.0	0.0	610.0	584.0	11.0	40.4	38.5	1296	328.0	388	1.5	0
Minimum	0.0	0.0	200.0	182.0	0.0	3.6	2.4	274	32.0	12	1.1	0
Maximum	0.0	0.0	810.0	766.0	11.0	44.0	40.9	1570	360.0	400	2.6	0
Count	0	0	12	12	12	12	12	12	12	7	7	0
Confidence Level(95.0%)	ND	ND	112.7	110.4	2.2	8.1	9.2	228	60.4	156	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

60TH STREET, NORTH OF GOOD HOPE ROAD - SITE 1
 LINCOLN CREEK
 WATER QUALITY DATA - 2009

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	38.33	14.65	0.0	5.2	6.9	6.6	0.3	35.6	0.0	0.8	4.1	0.0
Standard Error	3.25	1.46	0.0	1.1	1.5	2.6	0.2	6.1	0.0	0.4	1.4	0.0
Median	38.50	16.00	0.0	4.1	5.2	3.5	0.0	32.5	0.0	0.0	2.6	0.0
Mode	41.00	17.00	0.0	5.4	5.0	3.0	0.0	ND	0.0	0.0	0.0	0.0
Standard Deviation	11.25	5.07	0.0	3.8	5.3	8.9	0.7	21.0	0.0	1.3	4.5	0.0
Sample Variance	126.61	25.72	0.0	14.8	27.7	78.5	0.5	440.1	0.0	1.7	20.2	0.0
Kurtosis	-0.67	-1.06	ND	10.1	9.9	8.5	3.1	3.7	ND	1.8	-2.3	ND
Skewness	-0.25	-0.25	ND	3.1	3.1	2.8	2.1	1.7	ND	1.6	0.2	ND
Range	35.00	15.40	0.0	14.0	19.7	33.0	2.0	76.0	0.0	4.0	9.7	0.0
Minimum	19.00	6.60	0.0	3.0	3.3	0.0	0.0	14.0	0.0	0.0	0.0	0.0
Maximum	54.00	22.00	0.0	17.0	23.0	33.0	2.0	90.0	0.0	4.0	9.7	0.0
Count	12	12	12	12	12	12	12	12	12	12	10	4
Confidence Level(95.0%)	7.15	3.22	0.0	2.4	3.3	5.6	0.4	13.3	0.0	0.8	3.2	0.0

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	156	112	2.1	11.4	33.0	27.5	5.3	5.1
Standard Error	14	11	0.6	1.5	2.4	2.4	0.3	0.3
Median	160	100	2.2	11.5	31.0	26.0	5.3	4.9
Mode	170	100	0.0	ND	31.0	26.0	5.3	4.8
Standard Deviation	48	38	2.2	5.1	8.3	8.3	1.2	1.0
Sample Variance	2344	1481	4.7	26.1	68.7	69.4	1.4	1.0
Kurtosis	-1	-1	-1.6	-0.6	-1.1	-0.9	1.0	2.0
Skewness	0	0	0.3	0.3	0.1	0.0	0.6	0.6
Range	144	117	5.4	16.7	25.0	25.0	4.5	4.1
Minimum	76	53	0.0	4.3	20.0	15.0	3.3	3.2
Maximum	220	170	5.4	21.0	45.0	40.0	7.8	7.3
Count	12	12	12	12	12	12	12	12
Confidence Level(95.0%)	31	24	1.4	3.2	5.3	5.3	0.8	0.6

ND = No Data

Provisional MMSD Water Quality Data

51ST STREET AND WOOLWORTH AVENUE - SITE 2
 LINCOLN CREEK
 WATER QUALITY DATA - 2009

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	14.1	8.1	6.80	0.31	0.012	0.32	0.045	0.66	0.075	0.043	ND
Standard Error	0.1	1.7	1.1	1.52	0.08	0.003	0.08	0.020	0.12	0.009	0.004	ND
Median	7.6	16.8	6.6	4.80	0.26	0.011	0.28	0.031	0.62	0.079	0.050	ND
Mode	7.8	11.6	9.2	ND	ND	ND	ND	0.000	0.49	0.033	0.052	ND
Standard Deviation	0.2	5.8	3.5	5.05	0.25	0.009	0.26	0.068	0.41	0.031	0.015	ND
Sample Variance	0.0	33.6	12.4	25.46	0.06	0.000	0.07	0.005	0.17	0.001	0.000	ND
Kurtosis	1.4	-0.2	0.4	-1.40	2.55	1.717	2.26	8.569	4.88	-1.141	-0.803	ND
Skewness	1.2	-0.7	0.8	0.58	1.53	1.131	1.48	2.808	1.48	-0.066	-0.358	ND
Range	0.6	18.8	12.3	13.99	0.87	0.033	0.88	0.240	1.70	0.087	0.046	0.00
Minimum	7.5	2.6	3.1	1.11	0.05	0.000	0.06	0.000	0.00	0.033	0.021	0.00
Maximum	8.1	21.4	15.4	15.10	0.92	0.033	0.94	0.240	1.70	0.120	0.067	0.00
Count	11	11	11	11	11	11	11	11	11	11	11	0
Confidence Level(95.0%)	0.1	3.9	2.4	3.39	0.17	0.006	0.18	0.046	0.27	0.021	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	522.7	516.6	2.0	6.2	7.7	944	176.8	5233	3.2	ND
Standard Error	ND	ND	65.9	65.5	0.7	2.4	3.1	129	34.9	3075	0.2	ND
Median	ND	ND	460.0	458.4	1.0	3.0	2.6	812	130.0	2000	3.3	ND
Mode	ND	ND	460.0	ND	0.0	ND	ND	ND	ND	2000	3.3	ND
Standard Deviation	ND	ND	218.6	217.2	2.4	7.8	10.2	428	115.7	10199	0.7	ND
Sample Variance	ND	ND	47781.8	47169.1	5.7	60.8	103.5	183547	13388.6	104015722	0.5	ND
Kurtosis	ND	ND	-1.5	-1.5	1.4	5.4	3.3	-1	0.2	9	-0.1	ND
Skewness	ND	ND	0.3	0.2	1.4	2.2	1.9	0	0.9	3	0.4	ND
Range	0.0	0.0	590.0	580.0	7.3	27.0	32.2	1379	374.0	34870	2.4	0
Minimum	0.0	0.0	250.0	239.0	0.0	0.0	0.9	361	46.0	130	2.1	0
Maximum	0.0	0.0	840.0	819.0	7.3	27.0	33.1	1740	420.0	35000	4.5	0
Count	0	0	11	11	11	11	11	11	11	11	11	0
Confidence Level(95.0%)	ND	ND	146.9	145.9	1.6	5.2	6.8	288	77.7	6852	0.5	ND

ND = No Data

Provisional MMSD Water Quality Data

51ST STREET AND WOOLWORTH AVENUE - SITE 2
 LINCOLN CREEK
 WATER QUALITY DATA - 2009

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	52.55	19.95	0.0	4.7	5.5	3.0	0.0	23.2	0.0	0.0	1.3	0.0
Standard Error	5.80	2.55	0.0	0.5	0.6	0.1	0.0	4.3	0.0	0.0	0.9	0.0
Median	50.00	20.00	0.0	4.2	6.1	3.0	0.0	20.0	0.0	0.0	0.0	0.0
Mode	30.00	ND	0.0	3.5	6.1	3.0	0.0	19.0	0.0	0.0	0.0	0.0
Standard Deviation	19.25	8.47	0.0	1.8	1.9	0.4	0.0	14.3	0.0	0.0	2.7	0.0
Sample Variance	370.67	71.77	0.0	3.2	3.7	0.1	0.0	203.1	0.0	0.0	7.1	0.0
Kurtosis	-0.13	-1.03	ND	8.1	-1.0	1.1	ND	8.4	ND	ND	1.5	ND
Skewness	0.35	0.09	ND	2.7	0.0	0.3	ND	2.7	ND	ND	1.7	ND
Range	63.00	25.80	0.0	6.3	6.2	1.4	0.0	54.9	0.0	0.0	6.8	0.0
Minimum	27.00	8.20	0.0	3.5	2.5	2.3	0.0	9.1	0.0	0.0	0.0	0.0
Maximum	90.00	34.00	0.0	9.8	8.7	3.7	0.0	64.0	0.0	0.0	6.8	0.0
Count	11	11	11	11	11	11	11	11	11	11	9	4
Confidence Level(95.0%)	12.93	5.69	0.0	1.2	1.3	0.2	0.0	9.6	0.0	0.0	2.0	0.0

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	151	1.5	5.9	41.5	35.9	5.4	5.2
Standard Error	25	19	0.5	1.3	4.3	4.4	0.4	0.4
Median	200	160	0.0	5.8	42.0	38.0	5.0	4.6
Mode	280	170	0.0	0.0	ND	38.0	4.6	7.5
Standard Deviation	82	63	1.8	4.5	14.1	14.5	1.4	1.4
Sample Variance	6727	3910	3.3	19.9	199.7	208.9	1.9	1.9
Kurtosis	0	0	-1.4	-1.2	0.3	0.0	-0.6	-0.4
Skewness	0	0	0.7	-0.2	0.1	0.2	0.6	0.7
Range	260	227	4.5	12.0	51.0	50.0	4.3	4.1
Minimum	110	43	0.0	0.0	17.0	13.0	3.5	3.4
Maximum	370	270	4.5	12.0	68.0	63.0	7.8	7.5
Count	11	11	11	11	11	11	11	11
Confidence Level(95.0%)	55	42	1.2	3.0	9.5	9.7	0.9	0.9

ND = No Data

Provisional MMSD Water Quality Data

55TH STREET AND THURSTON AVENUE - SITE 3
 LINCOLN CREEK
 WATER QUALITY DATA - 2009

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	13.9	8.5	5.61	0.28	0.013	0.30	0.092	0.62	0.055	0.026	ND
Standard Error	0.1	1.6	0.9	1.24	0.06	0.003	0.07	0.037	0.08	0.013	0.006	ND
Median	7.5	15.5	8.5	4.78	0.22	0.009	0.23	0.039	0.59	0.039	0.022	ND
Mode	7.3	15.5	ND	ND	0.15	0.000	0.16	ND	ND	0.000	0.022	ND
Standard Deviation	0.2	5.4	3.1	4.29	0.22	0.012	0.23	0.128	0.29	0.044	0.019	ND
Sample Variance	0.0	28.9	9.5	18.40	0.05	0.000	0.05	0.016	0.08	0.002	0.000	ND
Kurtosis	-1.3	1.2	1.4	-0.05	2.19	-0.268	2.03	4.250	2.04	-1.301	-0.948	ND
Skewness	0.3	-0.9	0.7	0.93	1.66	0.888	1.62	2.123	-0.10	0.372	0.167	ND
Range	0.6	19.5	12.0	13.56	0.74	0.036	0.77	0.430	1.20	0.120	0.055	0.00
Minimum	7.2	1.8	3.3	0.74	0.07	0.000	0.07	0.000	0.00	0.000	0.000	0.00
Maximum	7.8	21.3	15.3	14.30	0.81	0.036	0.84	0.430	1.20	0.120	0.055	0.00
Count	12	12	12	12	12	12	12	12	12	11	11	0
Confidence Level(95.0%)	0.1	3.4	2.0	2.73	0.14	0.007	0.15	0.081	0.18	0.029	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	721.7	714.9	2.4	6.8	9.0	1242	206.5	4372	2.9	ND
Standard Error	ND	ND	84.4	85.2	0.5	2.1	3.3	151	32.8	2497	0.4	ND
Median	ND	ND	800.0	785.6	2.1	3.0	4.0	1435	240.0	270	2.4	ND
Mode	ND	ND	950.0	ND	0.0	2.8	ND	1490	250.0	14000	4.1	ND
Standard Deviation	ND	ND	292.4	295.1	1.7	7.2	11.5	524	113.7	6608	0.9	ND
Sample Variance	ND	ND	85487.9	87068.8	2.8	52.1	131.7	274218	12925.7	43660214	0.9	ND
Kurtosis	ND	ND	-1.0	-1.0	-0.2	4.2	2.3	-1	0.6	-1	-1.7	ND
Skewness	ND	ND	-0.6	-0.6	0.4	2.0	1.7	-1	0.5	1	0.5	ND
Range	0.0	0.0	860.0	867.6	5.2	24.2	36.6	1526	409.0	13927	2.3	0
Minimum	0.0	0.0	240.0	230.0	0.0	1.8	0.6	354	41.0	73	1.9	0
Maximum	0.0	0.0	1100.0	1097.6	5.2	26.0	37.2	1880	450.0	14000	4.1	0
Count	0	0	12	12	12	12	12	12	12	7	7	0
Confidence Level(95.0%)	ND	ND	185.8	187.5	1.1	4.6	7.3	333	72.2	6111	0.9	ND

ND = No Data

Provisional MMSD Water Quality Data

55TH STREET AND THURSTON AVENUE - SITE 3
 LINCOLN CREEK
 WATER QUALITY DATA - 2009

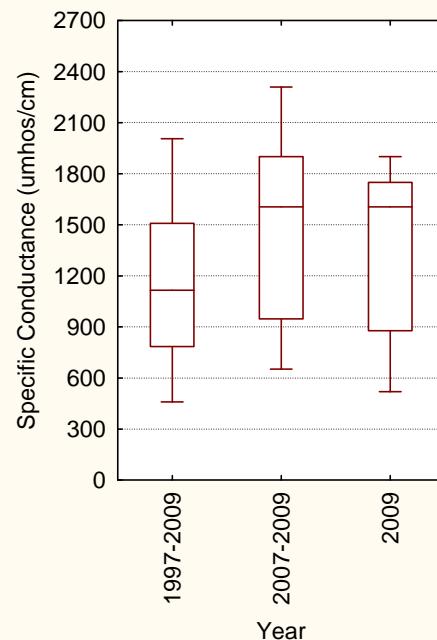
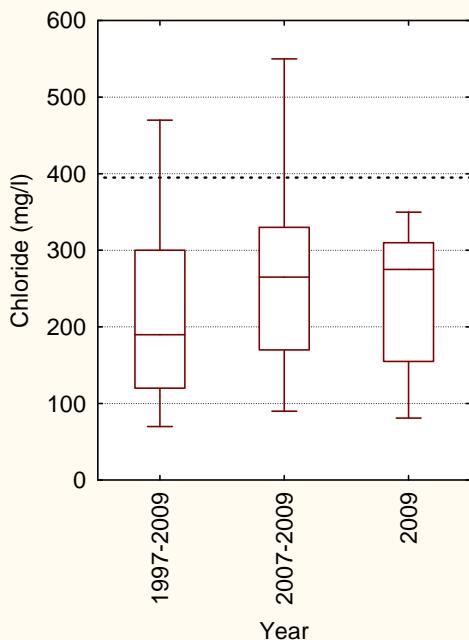
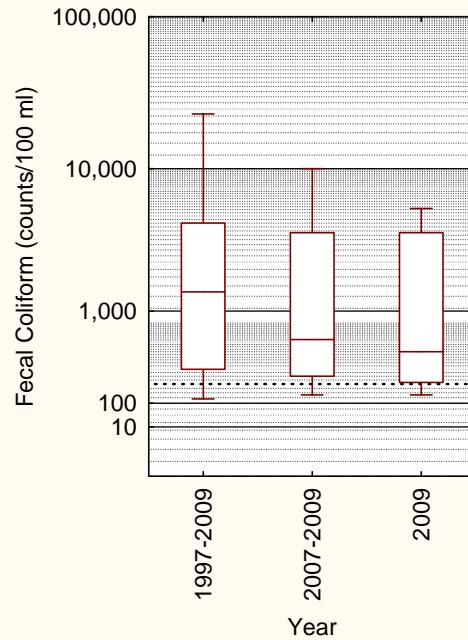
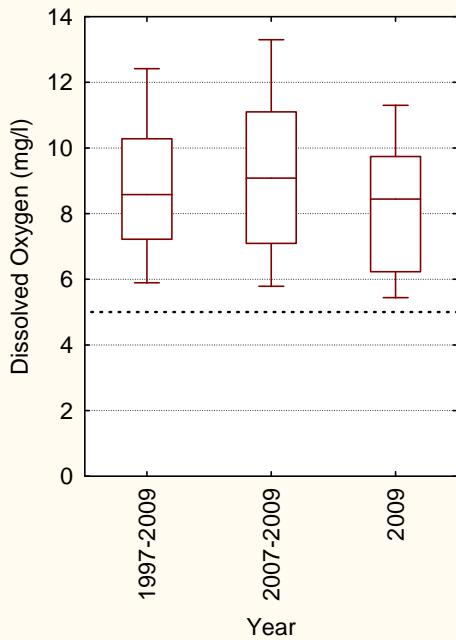
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	84.25	34.23	0.0	4.7	4.7	2.7	0.0	23.1	0.0	0.4	3.4	0.0
Standard Error	11.87	5.61	0.0	0.3	0.8	0.2	0.0	4.2	0.0	0.3	1.2	0.0
Median	85.00	33.50	0.0	4.6	5.2	2.8	0.0	21.0	0.0	0.0	0.0	0.0
Mode	110.00	56.00	0.0	5.2	0.0	2.8	0.0	21.0	0.0	0.0	0.0	0.0
Standard Deviation	41.11	19.45	0.2	1.2	2.8	0.7	0.0	14.7	0.0	0.9	4.3	0.0
Sample Variance	1689.66	378.28	0.0	1.4	8.1	0.5	0.0	216.7	0.0	0.8	18.5	0.0
Kurtosis	-1.45	-1.43	12.0	1.7	0.1	-0.7	ND	1.7	ND	3.9	-1.8	ND
Skewness	-0.19	-0.03	3.5	0.7	-0.3	0.1	ND	0.9	ND	2.2	0.6	ND
Range	115.00	54.70	0.5	4.6	9.6	2.4	0.0	57.0	0.0	2.6	9.8	0.0
Minimum	25.00	8.30	0.0	2.8	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140.00	63.00	0.5	7.4	9.6	4.0	0.0	57.0	0.0	2.6	9.8	0.0
Count	12	12	12	12	12	12	12	12	12	12	12	4
Confidence Level(95.0%)	26.12	12.36	0.1	0.8	1.8	0.5	0.0	9.4	0.0	0.6	2.7	0.0

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	351	228	1.2	6.7	58.0	53.5	4.5	4.2
Standard Error	53	34	0.5	1.7	7.8	8.0	0.3	0.3
Median	350	235	0.0	5.6	56.0	51.5	4.4	4.1
Mode	ND	310	0.0	0.0	ND	ND	ND	4.2
Standard Deviation	182	117	1.8	5.8	27.0	27.5	1.1	1.2
Sample Variance	33128	13784	3.3	34.1	728.7	758.6	1.3	1.4
Kurtosis	-1	-1	-0.5	-0.9	-1.4	-1.4	3.1	4.1
Skewness	0	0	1.1	0.5	0.0	-0.1	1.4	1.8
Range	523	345	4.7	16.0	80.0	80.0	4.4	4.3
Minimum	97	45	0.0	0.0	18.0	13.0	3.0	3.0
Maximum	620	390	4.7	16.0	98.0	93.0	7.4	7.3
Count	12	12	12	12	12	12	12	12
Confidence Level(95.0%)	116	75	1.1	3.7	17.2	17.5	0.7	0.7

ND = No Data

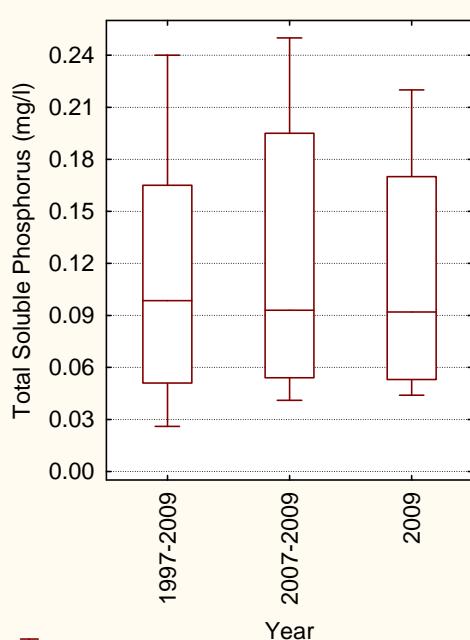
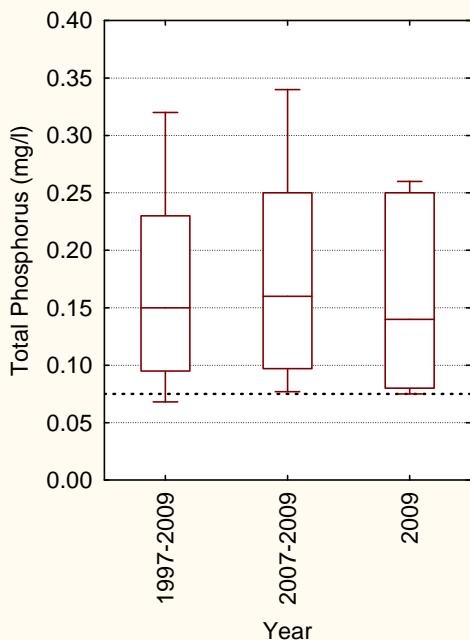
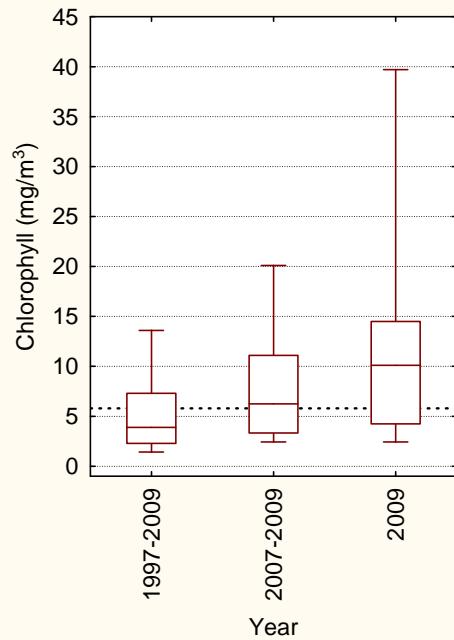
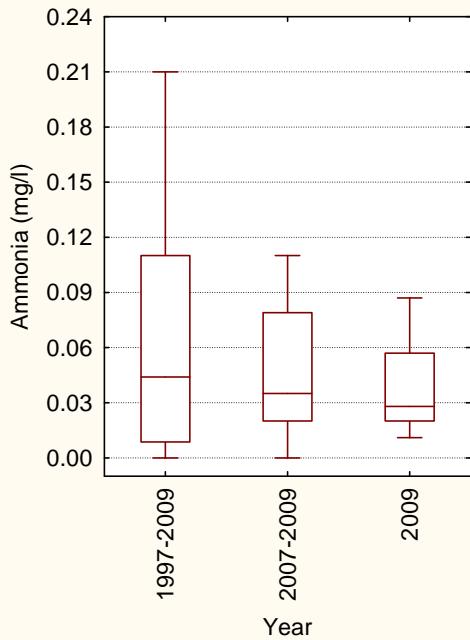
Provisional MMSD Water Quality Data

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



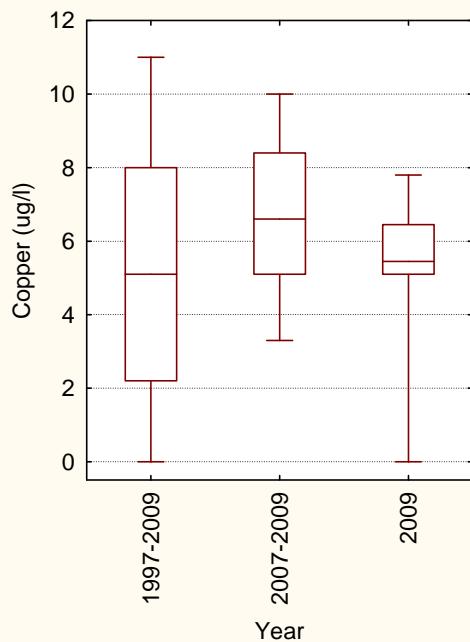
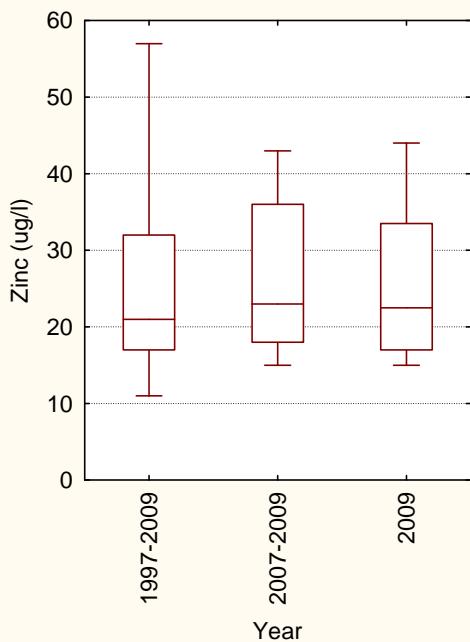
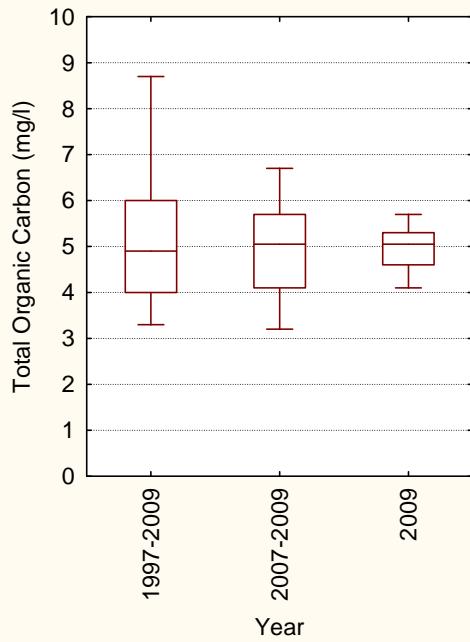
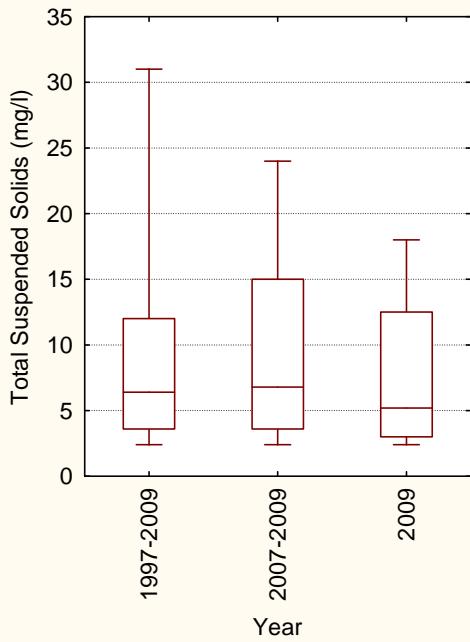
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	8.5	13.40	0.57	0.021	0.59	0.059	0.75	0.172	0.116	ND
Standard Error	0.1	1.6	0.9	3.87	0.13	0.004	0.13	0.026	0.13	0.027	0.023	ND
Median	7.9	18.7	8.4	10.10	0.43	0.021	0.45	0.028	0.79	0.140	0.092	ND
Mode	7.9	18.7	ND	ND	0.73	0.000	ND	0.028	ND	0.140	ND	ND
Standard Deviation	0.3	5.7	3.0	13.39	0.44	0.014	0.46	0.089	0.44	0.090	0.077	ND
Sample Variance	0.1	32.1	8.9	179.29	0.19	0.000	0.21	0.008	0.19	0.008	0.006	ND
Kurtosis	0.1	-0.2	2.0	1.56	1.58	1.791	1.91	9.833	0.49	-0.839	-0.621	ND
Skewness	0.0	-0.9	1.2	1.61	1.23	0.579	1.29	3.045	0.30	0.510	0.704	ND
Range	0.9	17.6	10.9	38.97	1.49	0.052	1.59	0.330	1.60	0.272	0.235	0.00
Minimum	7.4	3.4	4.9	2.43	0.11	0.000	0.11	0.000	0.00	0.068	0.025	0.00
Maximum	8.3	21.0	15.7	41.40	1.60	0.052	1.70	0.330	1.60	0.340	0.260	0.00
Count	12	12	12	12	12	12	12	12	11	11	11	0
Confidence Level(95.0%)	0.2	3.6	1.9	8.51	0.28	0.009	0.29	0.056	0.29	0.061	0.052	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	735.8	725.6	4.0	10.3	9.0	1377	253.7	2027	2.8	1914
Standard Error	ND	ND	86.1	85.5	1.2	3.7	3.7	172	38.9	952	0.2	782
Median	ND	ND	840.0	834.8	3.0	5.2	2.6	1605	275.0	450	2.7	390
Mode	ND	ND	840.0	ND	0.0	3.6	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	298.1	296.3	4.2	13.0	12.9	597	134.9	3157	0.7	2709
Sample Variance	ND	ND	88881.1	87804.4	17.5	168.1	165.9	356297	18186.2	9963922	0.4	7340499
Kurtosis	ND	ND	-0.8	-0.8	1.9	7.4	7.0	-1	1.2	4	-0.8	0
Skewness	ND	ND	-0.7	-0.8	1.4	2.6	2.5	0	0.5	2	0.6	1
Range	0.0	0.0	910.0	870.0	14.0	46.0	44.4	1968	507.0	9900	2.0	7353
Minimum	0.0	0.0	190.0	182.0	0.0	2.0	1.8	342	43.0	100	2.0	47
Maximum	0.0	0.0	1100.0	1052.0	14.0	48.0	46.2	2310	550.0	10000	4.0	7400
Count	0	0	12	12	12	12	12	12	12	11	11	12
Confidence Level(95.0%)	ND	ND	189.4	188.3	2.7	8.2	8.2	379	85.7	2121	0.4	1721

ND = No Data

Provisional MMSD Water Quality Data

47TH STREET AND CONGRESS STREET - SITE 4
 LINCOLN CREEK
 WATER QUALITY DATA - 2009

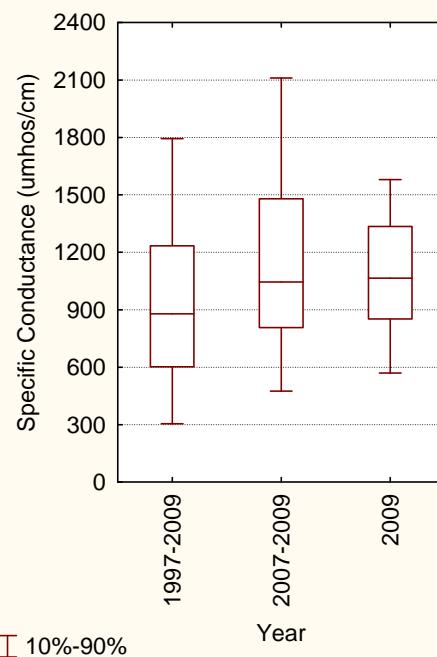
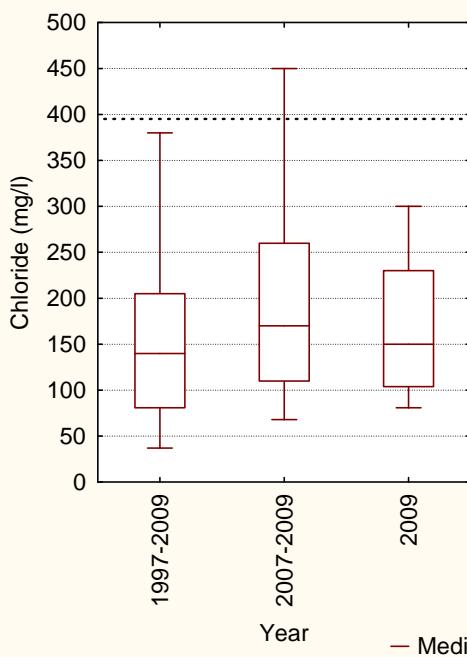
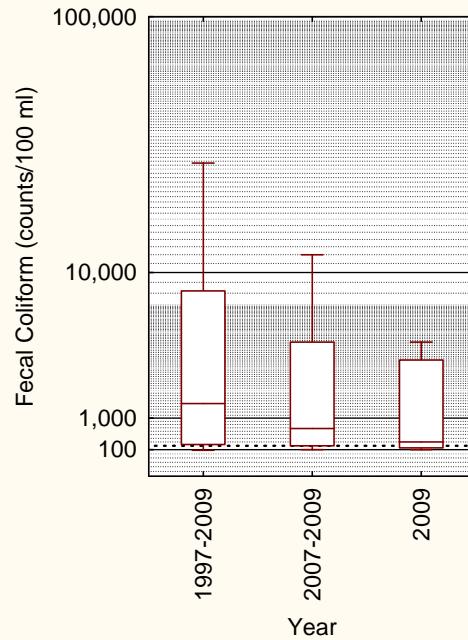
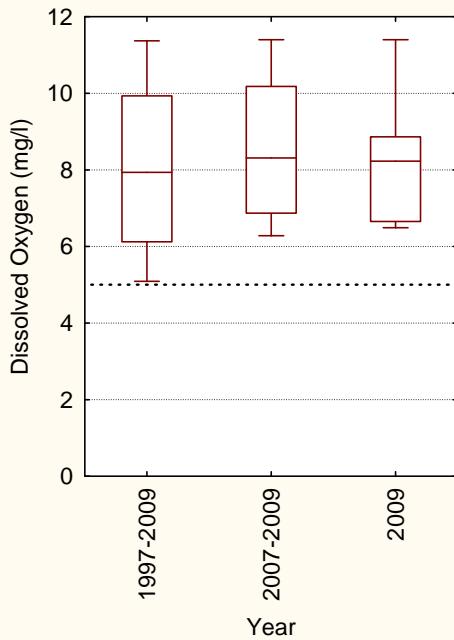
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	66.33	27.60	0.0	5.0	5.2	3.6	0.3	28.0	0.0	0.2	1.6	0.0
Standard Error	7.25	3.80	0.0	0.5	0.8	0.5	0.3	4.8	0.0	0.2	1.1	0.0
Median	77.50	32.00	0.0	4.5	5.5	3.1	0.0	22.5	0.0	0.0	0.0	0.0
Mode	84.00	36.00	0.0	5.6	5.1	2.5	0.0	21.0	0.0	0.0	0.0	0.0
Standard Deviation	25.11	13.18	0.0	1.8	2.8	1.8	1.2	16.7	0.0	0.5	3.4	0.0
Sample Variance	630.61	173.70	0.0	3.3	7.7	3.4	1.3	280.0	0.0	0.3	11.6	0.0
Kurtosis	-0.99	-1.30	ND	3.4	1.0	1.4	12.0	3.9	ND	12.0	2.3	ND
Skewness	-0.64	-0.44	ND	1.6	-0.9	1.3	3.5	1.9	ND	3.5	1.9	ND
Range	76.00	36.80	0.0	6.8	9.7	6.1	4.0	60.0	0.0	1.9	9.2	0.0
Minimum	24.00	7.20	0.0	2.9	0.0	1.8	0.0	12.0	0.0	0.0	0.0	0.0
Maximum	100.00	44.00	0.0	9.7	9.7	7.9	4.0	72.0	0.0	1.9	9.2	0.0
Count	12	12	12	12	12	12	12	12	12	12	10	4
Confidence Level(95.0%)	15.96	8.37	0.0	1.2	1.8	1.2	0.7	10.6	0.0	0.3	2.4	0.0

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	279	179	1.8	8.8	47.4	42.6	4.9	4.5
Standard Error	34	21	0.6	1.6	4.7	4.8	0.2	0.2
Median	335	210	1.3	8.8	52.5	49.0	5.1	4.6
Mode	350	210	0.0	0.0	ND	51.0	5.0	4.8
Standard Deviation	118	74	2.1	5.7	16.4	16.7	0.8	0.7
Sample Variance	13899	5442	4.5	32.7	268.3	278.4	0.6	0.5
Kurtosis	-1	0	0.3	0.4	-0.4	-0.5	1.3	-0.3
Skewness	-1	-1	1.0	0.1	-0.7	-0.8	-1.0	-0.4
Range	340	235	6.4	20.0	53.0	53.0	2.8	2.4
Minimum	90	35	0.0	0.0	16.0	11.0	3.2	3.1
Maximum	430	270	6.4	20.0	69.0	64.0	6.0	5.5
Count	12	12	12	12	12	12	12	12
Confidence Level(95.0%)	75	47	1.4	3.6	10.4	10.6	0.5	0.5

ND = No Data

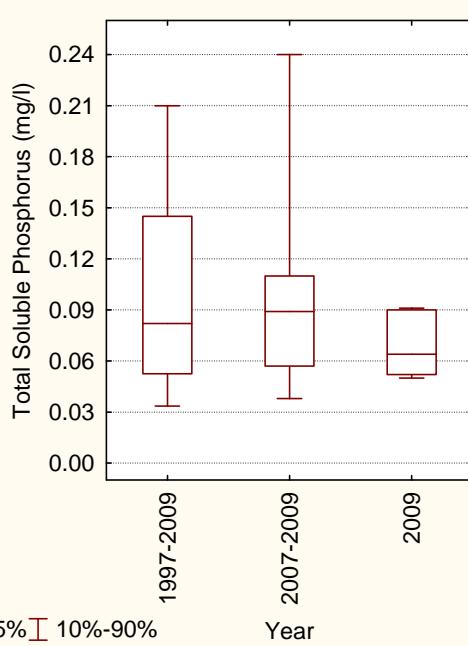
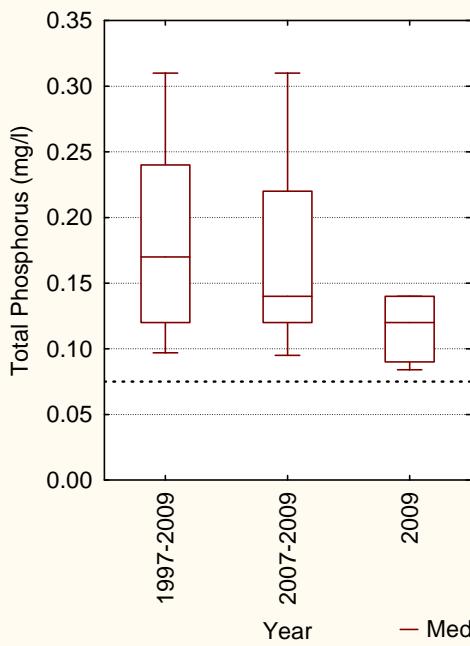
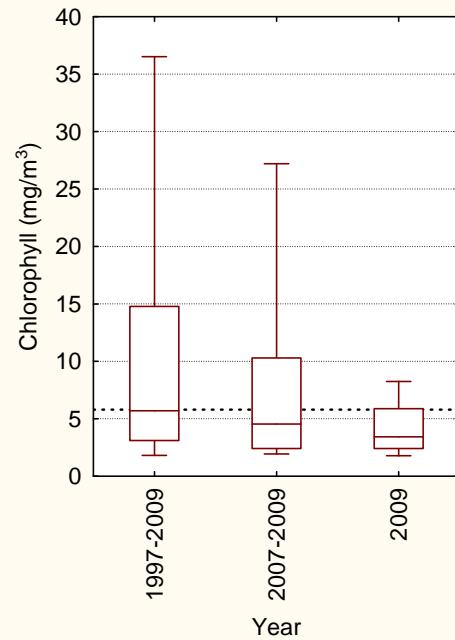
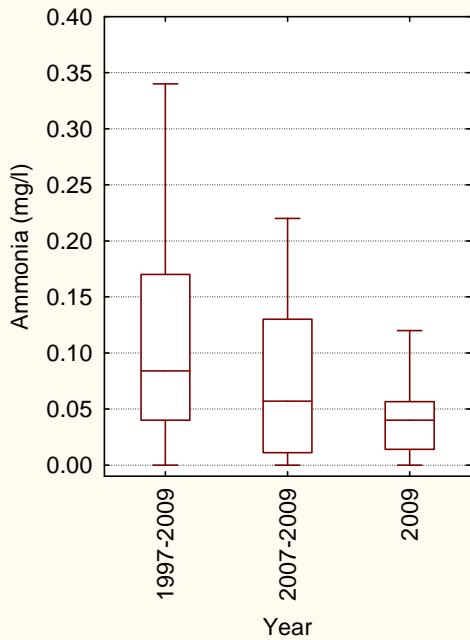
Provisional MMSD Water Quality Data

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



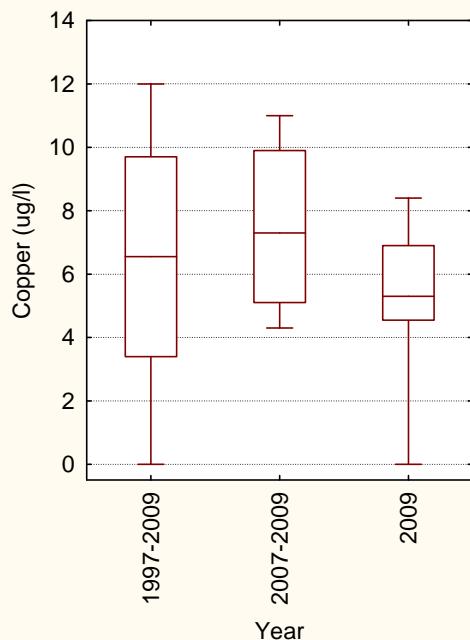
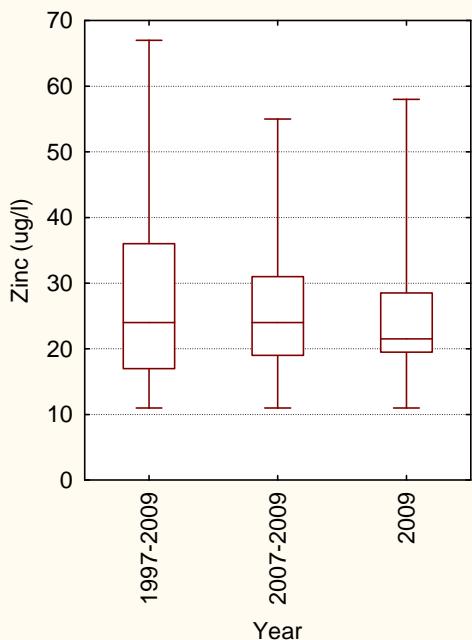
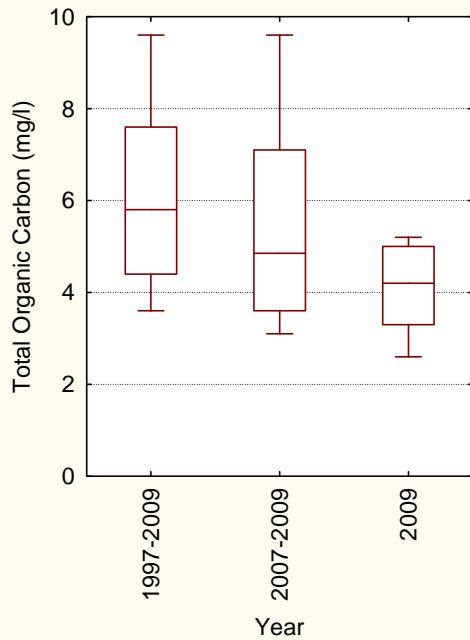
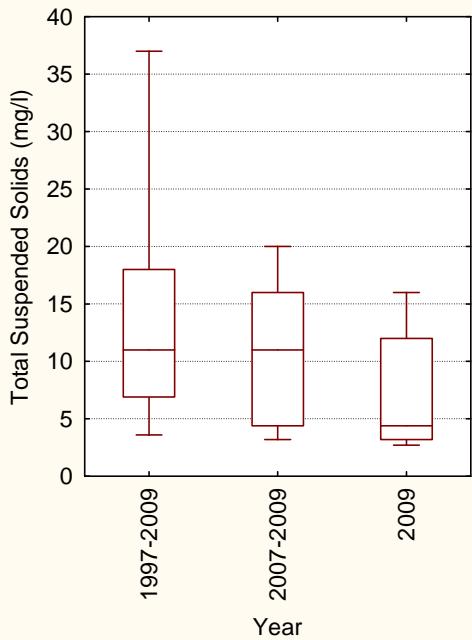
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.7	8.3	4.51	0.48	0.020	0.50	0.061	0.51	0.116	0.072	ND
Standard Error	0.1	1.3	0.6	0.91	0.12	0.003	0.12	0.025	0.11	0.010	0.007	ND
Median	7.8	14.8	8.2	3.43	0.31	0.018	0.33	0.040	0.42	0.120	0.064	ND
Mode	7.7	ND	ND	ND	0.20	ND	ND	0.000	0.00	0.140	ND	ND
Standard Deviation	0.2	4.6	2.0	3.17	0.42	0.011	0.43	0.088	0.37	0.035	0.022	ND
Sample Variance	0.0	21.1	3.9	10.04	0.18	0.000	0.18	0.008	0.14	0.001	0.000	ND
Kurtosis	4.5	1.0	0.6	1.63	1.75	0.379	1.35	7.987	-0.32	0.944	-1.022	ND
Skewness	1.6	-0.9	1.1	1.50	1.34	0.032	1.24	2.708	0.45	0.744	0.188	ND
Range	0.8	16.6	6.2	10.24	1.41	0.040	1.41	0.320	1.20	0.125	0.072	0.00
Minimum	7.5	3.5	6.3	1.76	0.09	0.000	0.09	0.000	0.00	0.065	0.038	0.00
Maximum	8.3	20.0	12.5	12.00	1.50	0.040	1.50	0.320	1.20	0.190	0.110	0.00
Count	12	12	12	12	12	12	12	12	12	11	11	0
Confidence Level(95.0%)	0.1	2.9	1.3	2.01	0.27	0.007	0.27	0.056	0.23	0.023	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	650.0	640.9	3.4	9.1	10.0	1094	177.8	2590	2.8	2007
Standard Error	ND	ND	59.8	60.2	1.0	3.2	4.0	124	32.9	1392	0.2	784
Median	ND	ND	700.0	696.7	2.1	4.4	3.4	1065	150.0	300	2.5	275
Mode	ND	ND	ND	ND	0.0	4.4	ND	ND	150.0	4400	3.6	120
Standard Deviation	ND	ND	207.2	208.5	3.5	11.0	14.0	428	113.9	4822	0.8	2715
Sample Variance	ND	ND	42927.3	43484.8	12.0	121.3	195.8	183478	12965.5	23256383	0.6	7368625
Kurtosis	ND	ND	0.1	0.2	2.5	7.1	5.3	0	1.9	9	-1.1	0
Skewness	ND	ND	-0.7	-0.7	1.5	2.6	2.3	0	1.3	3	0.6	1
Range	0.0	0.0	720.0	730.8	12.0	38.8	47.3	1562	416.0	16907	2.3	7044
Minimum	0.0	0.0	230.0	217.0	0.0	2.2	1.2	358	34.0	93	2.0	56
Maximum	0.0	0.0	950.0	947.8	12.0	41.0	48.5	1920	450.0	17000	4.2	7100
Count	0	0	12	12	12	12	12	12	12	12	12	12
Confidence Level(95.0%)	ND	ND	131.6	132.5	2.2	7.0	8.9	272	72.3	3064	0.5	1725

ND = No Data

Provisional MMSD Water Quality Data

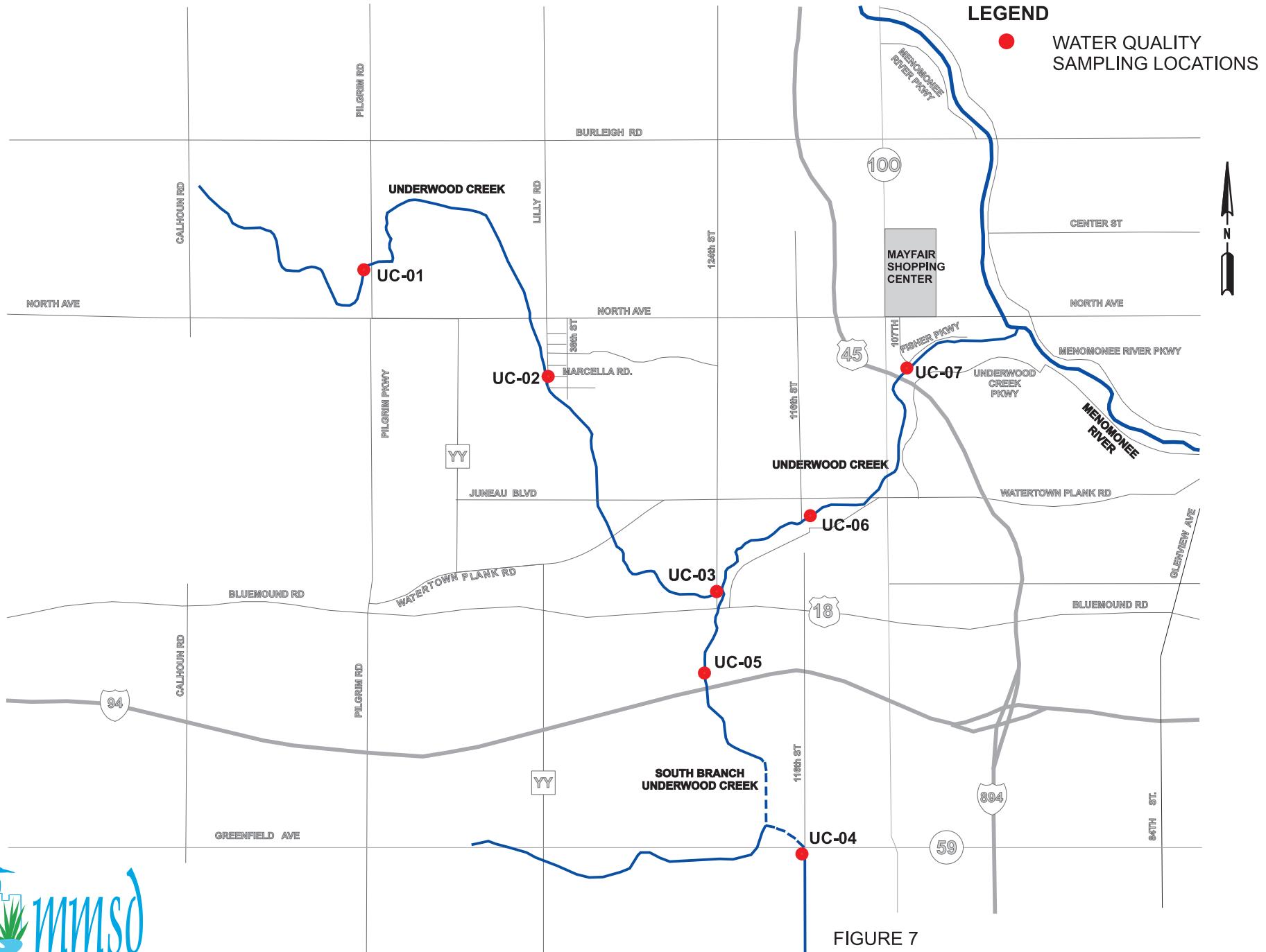
GREEN BAY AVENUE - SITE 5
LINCOLN CREEK
WATER QUALITY DATA - 2009

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	71.25	27.48	0.0	5.4	5.3	4.2	0.6	27.3	0.0	0.5	1.3	0.0
Standard Error	7.46	3.57	0.0	0.6	0.9	1.7	0.6	5.1	0.0	0.3	0.9	0.0
Median	80.00	29.00	0.0	4.7	5.3	2.6	0.0	21.5	0.0	0.0	0.0	0.0
Mode	ND	29.00	0.0	4.6	5.5	2.1	0.0	21.0	0.0	0.0	0.0	0.0
Standard Deviation	25.84	12.35	0.0	2.0	3.1	6.0	2.0	17.6	0.0	1.2	3.1	0.0
Sample Variance	667.84	152.53	0.0	3.8	9.8	36.1	3.9	311.3	0.0	1.4	9.9	0.0
Kurtosis	-1.16	-1.44	ND	2.5	0.5	11.0	12.0	1.8	ND	4.9	3.8	ND
Skewness	-0.66	-0.35	ND	1.8	-0.2	3.3	3.5	1.5	ND	2.4	2.2	ND
Range	70.00	32.80	0.0	6.7	11.0	23.0	6.8	59.6	0.0	3.7	9.3	0.0
Minimum	30.00	9.20	0.0	3.3	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0
Maximum	100.00	42.00	0.0	10.0	11.0	23.0	6.8	67.0	0.0	3.7	9.3	0.0
Count	12	12	12	12	12	12	12	12	12	12	12	4
Confidence Level(95.0%)	16.42	7.85	0.0	1.2	2.0	3.8	1.2	11.2	0.0	0.8	2.0	0.0

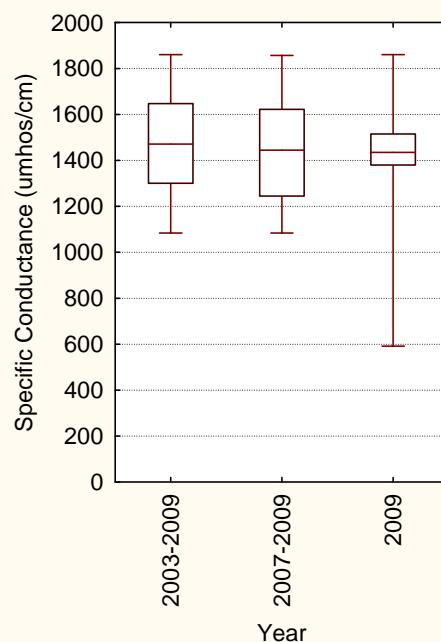
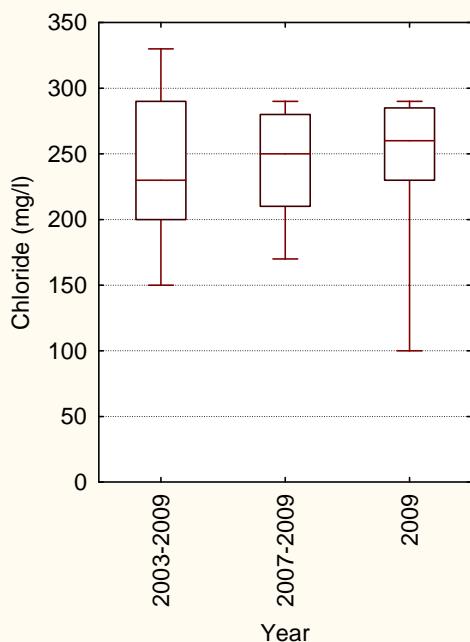
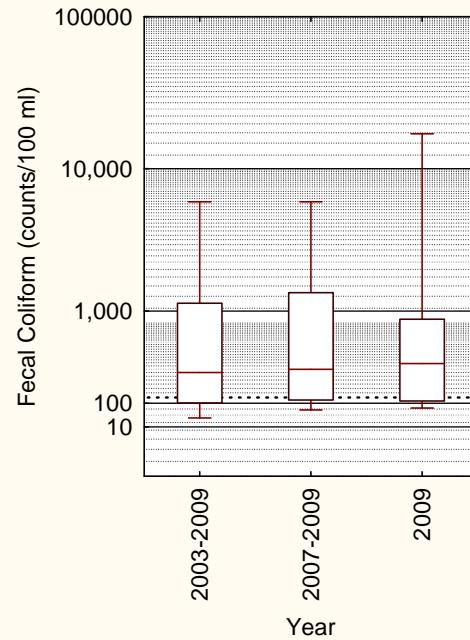
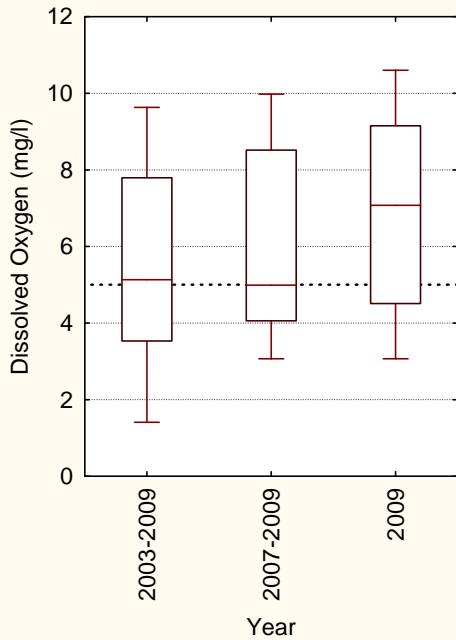
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	293	176	1.8	8.2	42.3	38.1	4.1	3.8
Standard Error	33	20	0.7	1.9	3.9	4.0	0.3	0.3
Median	305	185	0.0	8.2	42.5	38.0	4.2	3.9
Mode	380	230	0.0	0.0	59.0	ND	5.0	3.2
Standard Deviation	116	70	2.5	6.7	13.5	14.0	1.1	0.9
Sample Variance	13420	4952	6.2	44.5	182.4	195.2	1.2	0.8
Kurtosis	-1	-1	-0.9	-1.2	-0.8	-0.8	-0.9	-0.8
Skewness	-1	-1	0.9	0.2	-0.3	-0.3	0.0	0.1
Range	320	217	6.4	19.0	41.0	43.0	3.6	2.9
Minimum	110	43	0.0	0.0	18.0	13.0	2.4	2.4
Maximum	430	260	6.4	19.0	59.0	56.0	6.0	5.3
Count	12	12	12	12	12	12	12	12
Confidence Level(95.0%)	74	45	1.6	4.2	8.6	8.9	0.7	0.6

ND = No Data

Provisional MMSD Water Quality Data

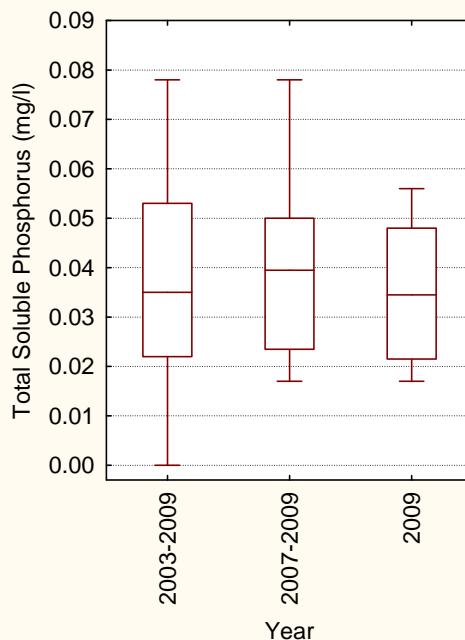
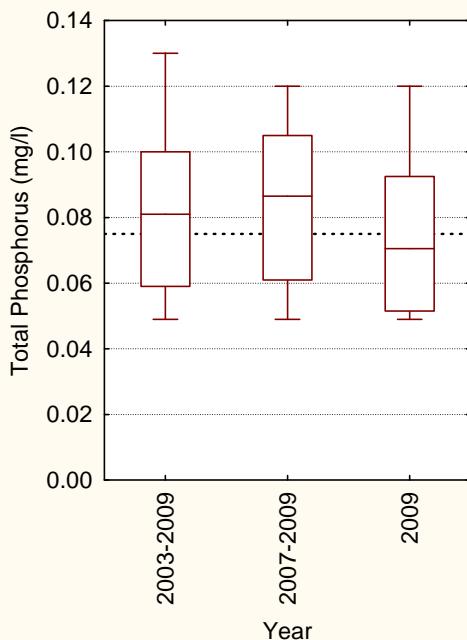
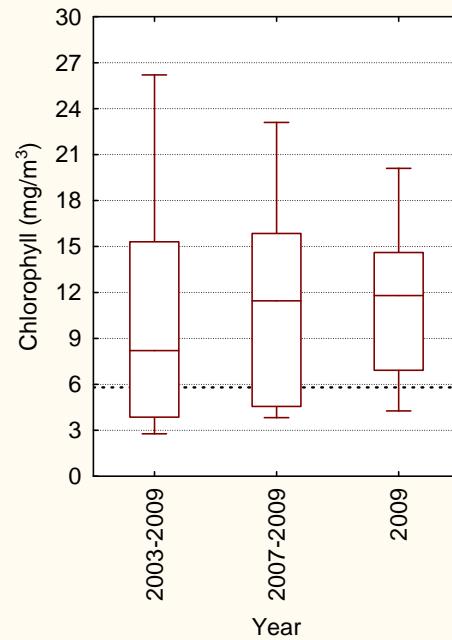
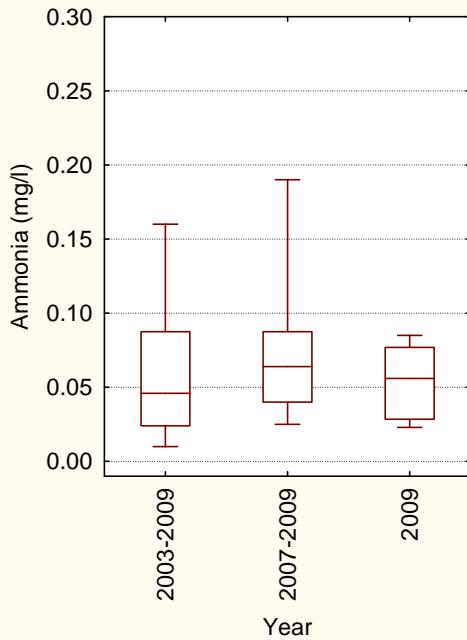


MMSD Water Quality Program Data
Underwood Creek at Wirth Park, Site UC-01



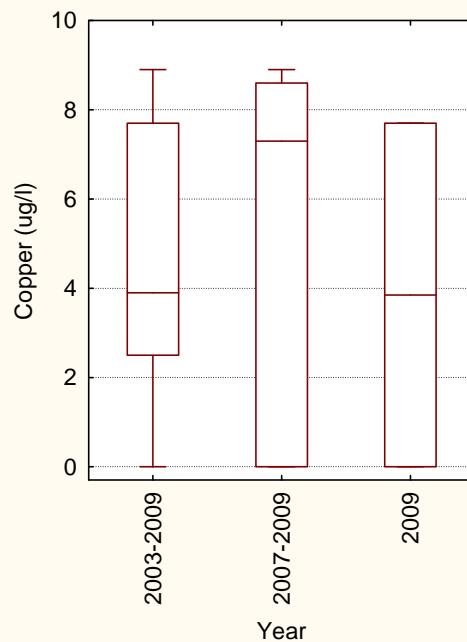
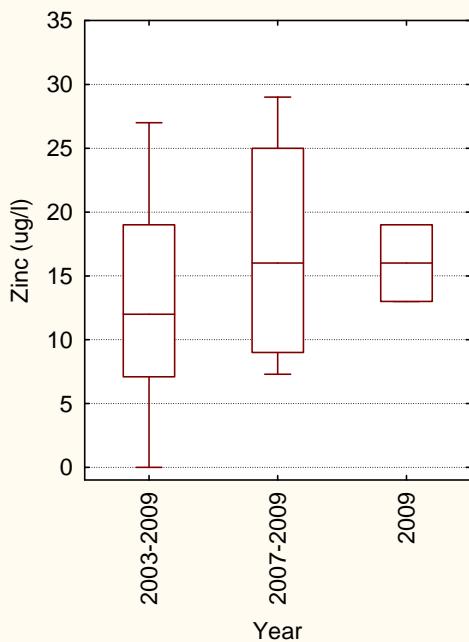
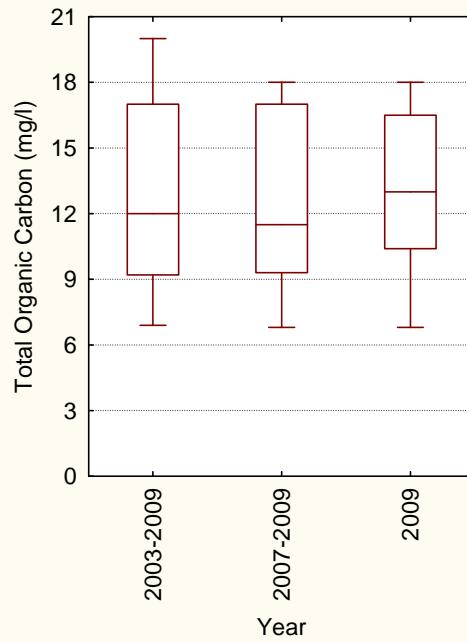
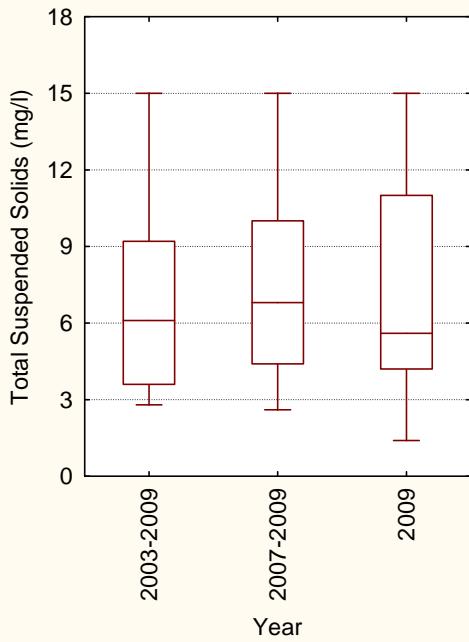
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.7	6.9	11.38	0.40	0.024	0.42	0.054	1.22	0.075	0.035	ND
Standard Error	0.0	1.7	1.0	1.90	0.14	0.005	0.14	0.009	0.17	0.009	0.005	ND
Median	7.4	16.0	7.1	11.80	0.30	0.023	0.32	0.056	1.20	0.071	0.035	ND
Mode	7.5	ND	ND	ND	ND	0.024	ND	0.077	1.30	ND	0.056	ND
Standard Deviation	0.1	4.8	2.8	5.38	0.40	0.013	0.40	0.027	0.48	0.026	0.015	ND
Sample Variance	0.0	22.8	7.6	28.97	0.16	0.000	0.16	0.001	0.23	0.001	0.000	ND
Kurtosis	1.1	-0.5	-1.7	-0.37	4.25	3.053	3.74	-2.462	1.65	-0.871	-1.397	ND
Skewness	-1.1	-1.1	-0.1	0.06	1.93	1.218	1.81	-0.050	1.21	0.656	0.383	ND
Range	0.4	12.3	7.5	15.83	1.25	0.045	1.24	0.062	1.44	0.071	0.039	0.00
Minimum	7.1	5.9	3.1	4.27	0.05	0.006	0.06	0.023	0.76	0.049	0.017	0.00
Maximum	7.5	18.2	10.6	20.10	1.30	0.051	1.30	0.085	2.20	0.120	0.056	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.1	4.0	2.3	4.50	0.34	0.011	0.33	0.022	0.40	0.022	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	845.0	823.0	2.9	7.0	4.9	1389	242.5	2464	2.6	2836
Standard Error	ND	ND	88.9	100.8	0.6	1.7	1.1	127	22.1	2080	0.3	2456
Median	ND	ND	935.0	925.6	3.6	5.6	4.0	1435	260.0	345	2.5	260
Mode	ND	ND	950.0	ND	4.4	ND	ND	ND	290.0	ND	ND	ND
Standard Deviation	ND	ND	251.4	266.8	1.7	4.6	3.0	358	62.5	5882	0.8	6946
Sample Variance	ND	ND	63200.0	71190.7	2.8	21.3	9.2	128442	3907.1	34602194	0.6	48242310
Kurtosis	ND	ND	1.7	1.3	-0.1	0.2	0.2	5	4.6	8	2.3	8
Skewness	ND	ND	-0.9	-0.8	-1.0	0.9	1.2	-2	-2.0	3	1.4	3
Range	0.0	0.0	850.0	846.0	4.4	13.6	8.5	1268	190.0	16921	2.3	19965
Minimum	0.0	0.0	350.0	339.0	0.0	1.4	2.0	592	100.0	79	1.9	35
Maximum	0.0	0.0	1200.0	1185.0	4.4	15.0	10.5	1860	290.0	17000	4.2	20000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	210.2	246.8	1.5	4.3	2.5	300	52.3	4918	0.6	5807

ND = No Data

Provisional MMSD Water Quality Data

WIRTH PARK - SITE 1
UNDERWOOD CREEK
WATER QUALITY DATA - 2009

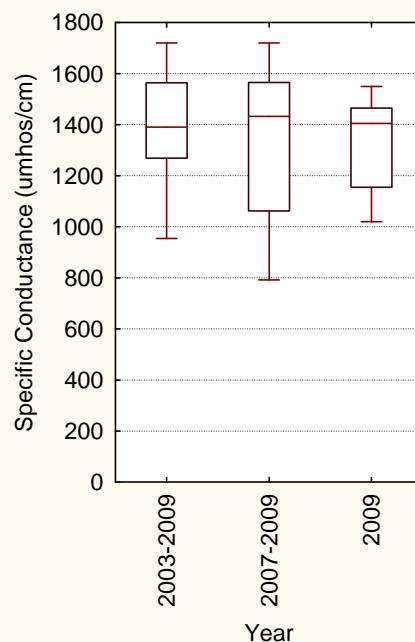
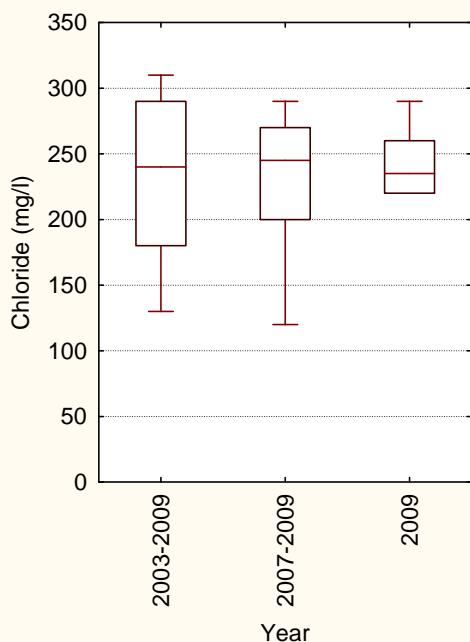
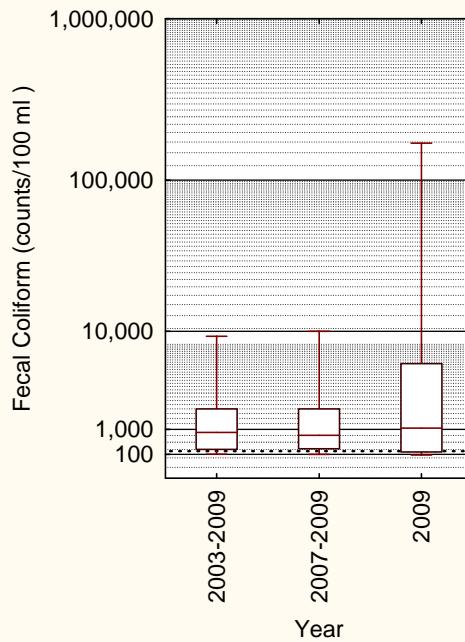
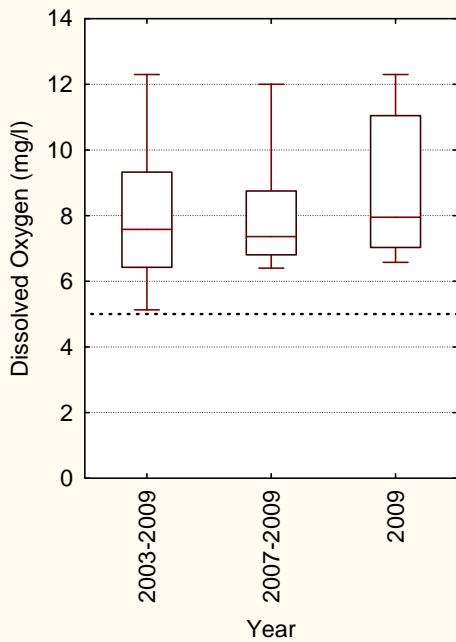
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	72.50	29.00	0.0	4.5	3.9	3.1	0.0	16.0	0.0	0.0	4.3	0.0
Standard Error	37.50	16.00	0.0	0.3	3.9	0.4	0.0	3.0	0.0	0.0	4.3	0.0
Median	72.50	29.00	0.0	4.5	3.9	3.1	0.0	16.0	0.0	0.0	4.3	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	53.03	22.63	0.0	0.4	5.4	0.6	0.0	4.2	0.0	0.0	6.0	0.0
Sample Variance	2812.50	512.00	0.0	0.2	29.6	0.3	0.0	18.0	0.0	0.0	36.1	0.0
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	75.00	32.00	0.0	0.6	7.7	0.8	0.0	6.0	0.0	0.0	8.5	0.0
Minimum	35.00	13.00	0.0	4.2	0.0	2.7	0.0	13.0	0.0	0.0	0.0	0.0
Maximum	110.00	45.00	0.0	4.8	7.7	3.5	0.0	19.0	0.0	0.0	8.5	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	476.48	203.30	0.0	3.8	48.9	5.1	0.0	38.1	0.0	0.0	54.0	0.0

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	231	1.5	12.7	66.6	53.4	13.1	12.6
Standard Error	160	28	1.2	2.7	6.1	6.7	1.4	1.4
Median	300	270	0.0	12.5	73.0	61.5	13.0	12.0
Mode	ND	270	0.0	13.0	55.0	63.0	18.0	11.0
Standard Deviation	226	80	3.5	7.8	17.2	19.1	3.9	3.9
Sample Variance	51200	6327	12.3	60.1	296.6	364.3	15.5	15.3
Kurtosis	ND	1	7.0	4.1	0.3	1.3	-0.8	-0.6
Skewness	ND	-1	2.6	1.8	-1.0	-1.3	-0.1	-0.1
Range	320	230	10.0	25.6	51.0	58.0	11.2	11.7
Minimum	140	70	0.0	4.4	34.0	15.0	6.8	6.3
Maximum	460	300	10.0	30.0	85.0	73.0	18.0	18.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	2033	66	2.9	6.5	14.4	16.0	3.3	3.3

ND = No Data

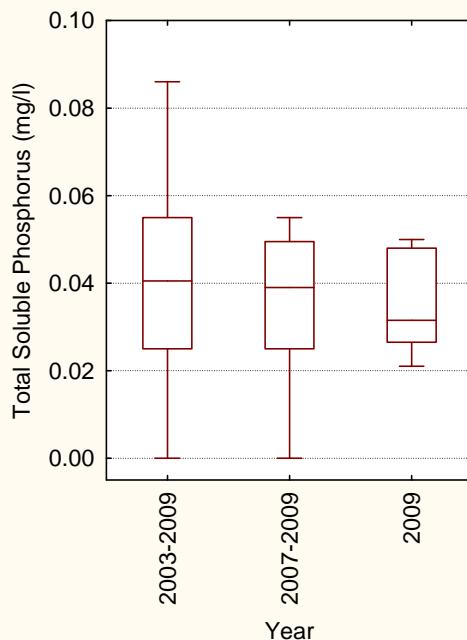
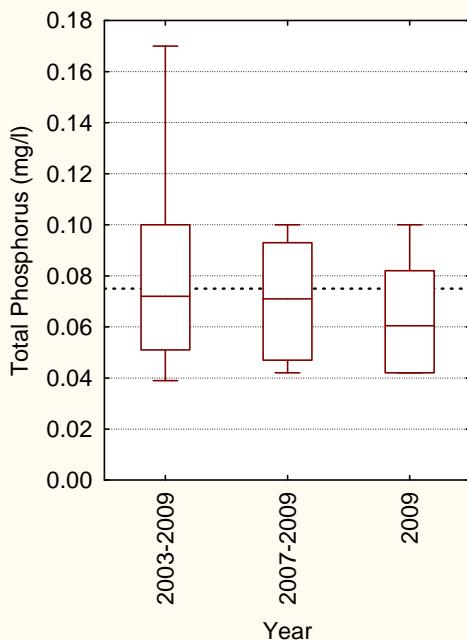
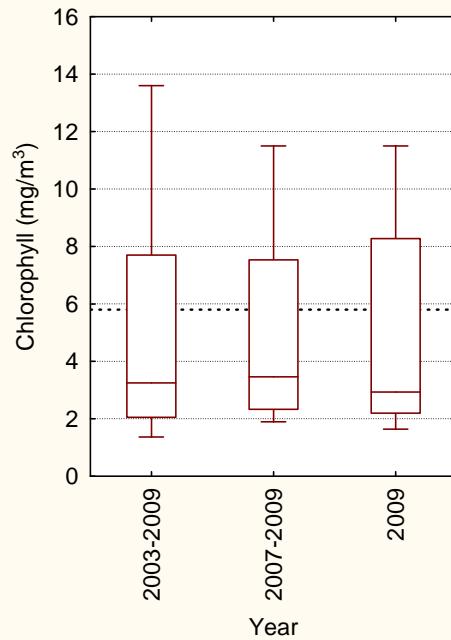
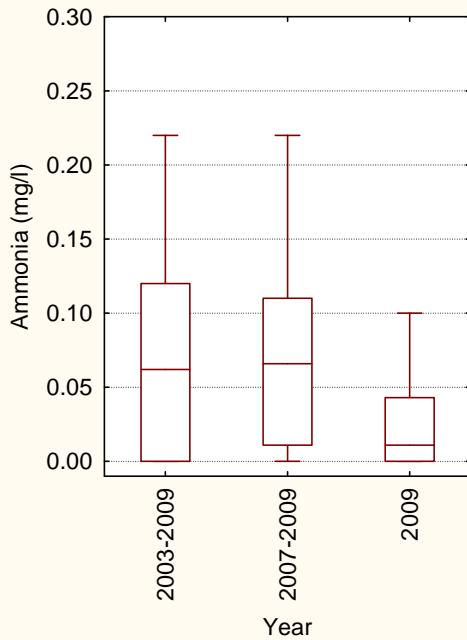
Provisional MMSD Water Quality Data

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



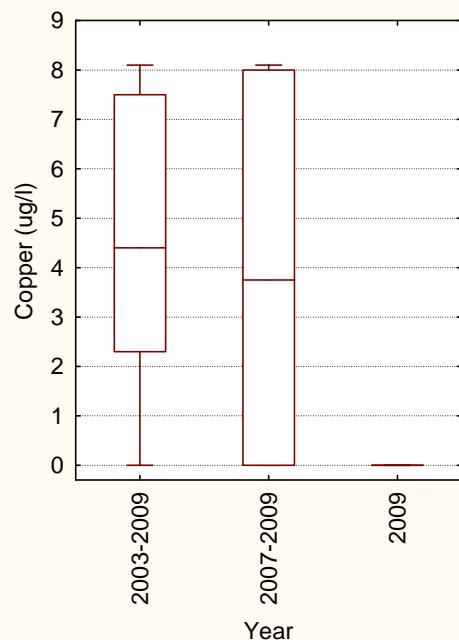
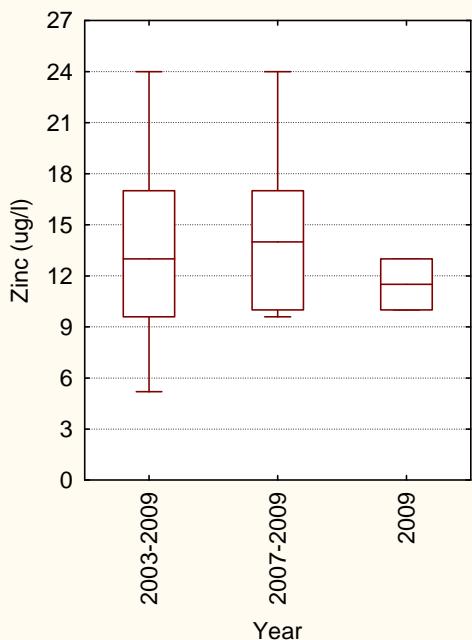
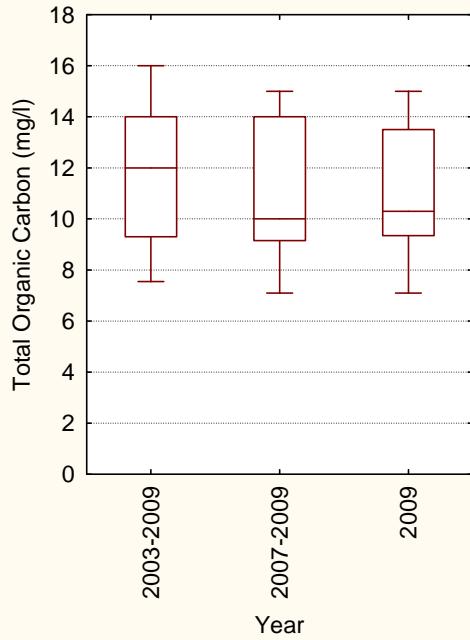
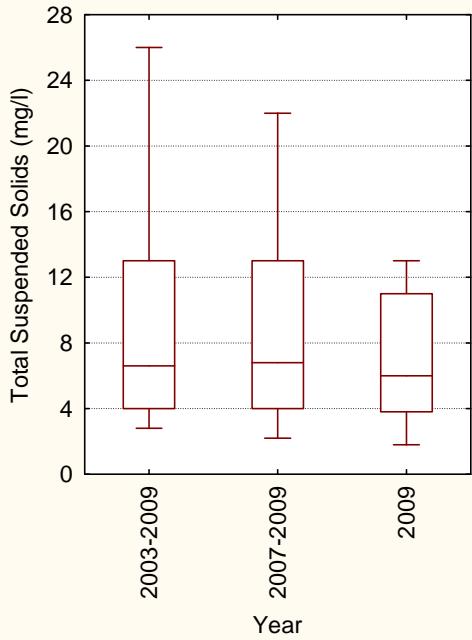
— Median □ 25%-75% □ 10%-90%
WQ Standard/Criterion

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 - 2009

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	13.5	8.9	4.99	0.42	0.013	0.43	0.026	0.91	0.064	0.035	ND
Standard Error	0.0	1.8	0.8	1.36	0.10	0.002	0.10	0.013	0.09	0.008	0.004	ND
Median	7.9	15.8	8.0	2.93	0.36	0.013	0.38	0.011	0.86	0.061	0.032	ND
Mode	7.8	ND	ND	ND	0.36	ND	ND	0.000	0.86	0.042	ND	ND
Standard Deviation	0.1	5.2	2.3	3.83	0.28	0.007	0.28	0.036	0.27	0.023	0.012	ND
Sample Variance	0.0	26.9	5.3	14.70	0.08	0.000	0.08	0.001	0.07	0.001	0.000	ND
Kurtosis	-1.0	-0.5	-1.3	-0.87	6.59	2.986	6.35	1.736	-1.61	-1.402	-1.909	ND
Skewness	0.5	-1.1	0.7	0.93	2.46	1.473	2.40	1.561	0.39	0.507	0.316	ND
Range	0.3	13.3	5.7	9.86	0.91	0.022	0.90	0.100	0.67	0.058	0.029	0.00
Minimum	7.8	4.7	6.6	1.64	0.19	0.006	0.20	0.000	0.63	0.042	0.021	0.00
Maximum	8.1	18.0	12.3	11.50	1.10	0.028	1.10	0.100	1.30	0.100	0.050	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.1	4.3	1.9	3.20	0.24	0.006	0.23	0.030	0.22	0.019	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	840.0	829.0	2.3	6.7	5.6	1328	242.5	22967	3.1	4966
Standard Error	ND	ND	43.5	50.3	0.6	1.5	1.1	70	9.2	21032	0.4	3323
Median	ND	ND	865.0	858.2	2.4	6.0	4.9	1405	235.0	1050	3.0	765
Mode	ND	ND	ND	ND	ND	ND	ND	ND	220.0	ND	ND	ND
Standard Deviation	ND	ND	123.1	133.1	1.5	4.1	3.0	197	26.0	59488	1.1	9399
Sample Variance	ND	ND	15142.9	17720.8	2.2	16.4	9.1	38964	678.6	3538773803	1.2	88344598
Kurtosis	ND	ND	1.0	0.3	-0.5	-0.9	-0.8	-1	-0.1	8	0.9	6
Skewness	ND	ND	-1.1	-1.0	-0.1	0.6	0.6	-1	1.0	3	1.0	2
Range	0.0	0.0	370.0	372.0	4.4	11.2	8.5	530	70.0	169913	3.3	26880
Minimum	0.0	0.0	600.0	594.0	0.0	1.8	2.0	1020	220.0	87	1.9	120
Maximum	0.0	0.0	970.0	966.0	4.4	13.0	10.5	1550	290.0	170000	5.2	27000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	102.9	123.1	1.4	3.7	2.5	165	21.8	49733	0.9	7858

ND = No Data

Provisional MMSD Water Quality Data

MARCELLA STREET - SITE 2
UNDERWOOD CREEK
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	97.00	40.50	0.0	4.4	0.0	3.0	0.0	11.5	0.0	0.0	0.0	0.0
Standard Error	13.00	3.50	0.0	0.0	0.0	0.5	0.0	1.5	0.0	0.0	0.0	0.0
Median	97.00	40.50	0.0	4.4	0.0	3.0	0.0	11.5	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	4.4	0.0	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	18.38	4.95	0.0	0.0	0.0	0.7	0.0	2.1	0.0	0.0	ND	0.0
Sample Variance	338.00	24.50	0.0	0.0	0.0	0.5	0.0	4.5	0.0	0.0	ND	0.0
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	7.00	0.0	0.0	0.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum	84.00	37.00	0.0	4.4	0.0	2.5	0.0	10.0	0.0	0.0	0.0	0.0
Maximum	110.00	44.00	0.0	4.4	0.0	3.5	0.0	13.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	1	2
Confidence Level(95.0%)	165.18	44.47	0.0	0.0	0.0	6.4	0.0	19.1	0.0	0.0	ND	0.0

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	405	259	0.7	8.4	70.4	59.4	11.1	10.6
Standard Error	45	17	0.7	1.9	4.6	4.3	1.0	0.9
Median	405	285	0.0	8.0	74.0	65.0	10.3	9.7
Mode	ND	290	0.0	ND	ND	65.0	9.6	14.0
Standard Deviation	64	49	1.9	5.5	12.9	12.2	2.7	2.5
Sample Variance	4050	2441	3.6	30.1	166.0	149.7	7.4	6.5
Kurtosis	ND	0	8.0	-0.5	-0.5	-0.8	-1.1	-0.9
Skewness	ND	-1	2.8	0.1	-0.6	-0.6	0.2	0.3
Range	90	140	5.4	17.0	38.0	36.0	7.9	7.2
Minimum	360	170	0.0	0.0	48.0	39.0	7.1	6.8
Maximum	450	310	5.4	17.0	86.0	75.0	15.0	14.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	572	41	1.6	4.6	10.8	10.2	2.3	2.1

ND = No Data

Provisional MMSD Water Quality Data

124TH STREET AND BLUEMOUND ROAD - SITE 3
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2009

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	13.5	10.5	5.41	0.35	0.015	0.37	0.032	0.74	0.044	0.020	ND
Standard Error	0.1	1.6	0.8	1.08	0.09	0.004	0.10	0.011	0.10	0.008	0.005	ND
Median	8.0	15.3	10.8	5.12	0.31	0.014	0.33	0.035	0.78	0.048	0.025	ND
Mode	8.0	ND	12.1	ND	0.31	ND	0.32	0.000	ND	ND	0.000	ND
Standard Deviation	0.2	4.6	2.3	3.05	0.27	0.011	0.27	0.032	0.29	0.023	0.013	ND
Sample Variance	0.0	21.4	5.1	9.30	0.07	0.000	0.07	0.001	0.09	0.001	0.000	ND
Kurtosis	-0.8	-0.6	-1.2	-1.19	2.55	0.743	2.36	-0.724	-0.87	0.760	-0.581	ND
Skewness	-0.5	-1.0	-0.1	0.52	1.36	0.715	1.28	0.446	0.08	-0.996	-1.029	ND
Range	0.6	11.6	6.6	7.91	0.84	0.035	0.85	0.086	0.87	0.068	0.032	0.00
Minimum	7.6	6.2	7.2	1.90	0.08	0.000	0.08	0.000	0.33	0.000	0.000	0.00
Maximum	8.2	17.7	13.7	9.81	0.91	0.035	0.93	0.086	1.20	0.068	0.032	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	3.9	1.9	2.55	0.22	0.009	0.23	0.026	0.24	0.019	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	962.5	956.3	1.9	5.2	4.7	1501	245.0	10408	3.0	11067
Standard Error	ND	ND	76.9	89.5	0.6	1.1	0.8	94	11.2	9437	0.4	10137
Median	ND	ND	960.0	949.0	1.8	4.8	4.9	1535	250.0	770	2.9	785
Mode	ND	ND	1100.0	ND	0.0	ND	ND	ND	250.0	ND	ND	ND
Standard Deviation	ND	ND	217.6	236.8	1.6	2.8	2.3	267	31.6	24969	1.0	28672
Sample Variance	ND	ND	47364.3	56097.9	2.6	7.8	5.1	71041	1000.0	623433699	1.0	822094335
Kurtosis	ND	ND	0.9	0.4	-0.7	-0.6	-0.2	1	0.3	7	2.2	8
Skewness	ND	ND	-0.4	-0.4	0.2	0.1	0.4	0	-0.6	3	0.6	3
Range	0.0	0.0	730.0	735.3	4.4	7.8	6.8	910	100.0	66965	3.3	81975
Minimum	0.0	0.0	570.0	561.2	0.0	1.0	1.9	1020	190.0	35	1.5	25
Maximum	0.0	0.0	1300.0	1296.5	4.4	8.8	8.7	1930	290.0	67000	4.8	82000
Count	0	0	8	7	7	7	8	8	8	7	7	8
Confidence Level(95.0%)	ND	ND	181.9	219.0	1.5	2.6	1.9	223	26.4	23092	0.9	23971

ND = No Data

Provisional MMSD Water Quality Data

124TH STREET AND BLUEMOUND ROAD - SITE 3
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2009

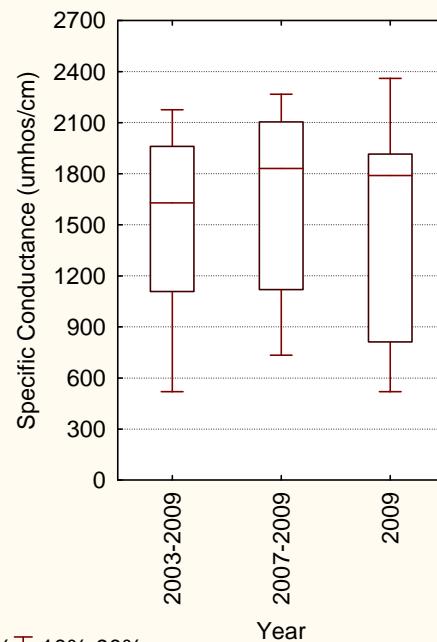
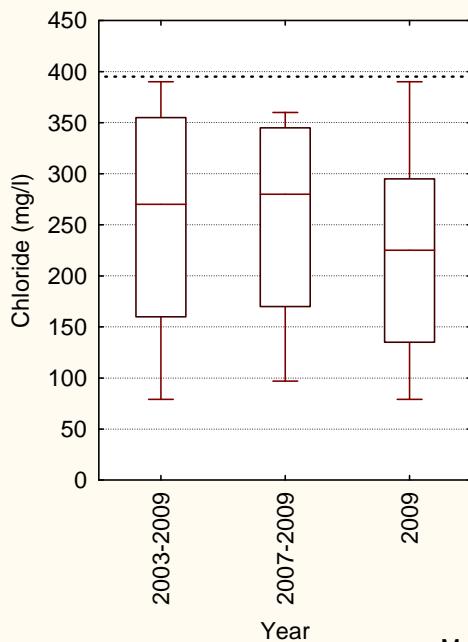
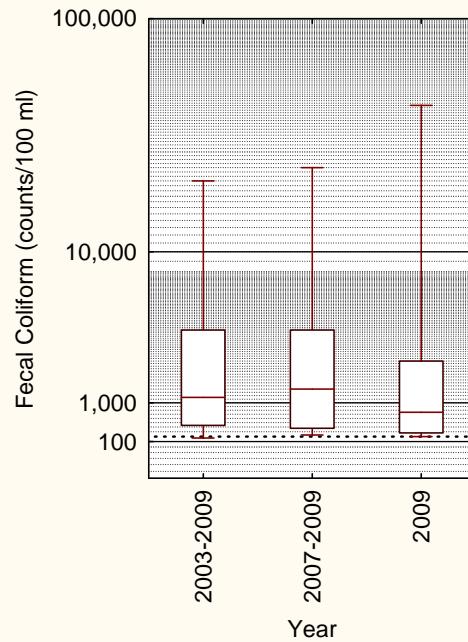
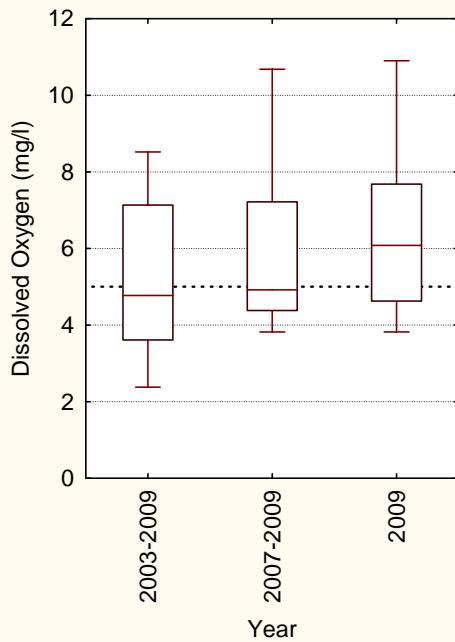
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	104.50	43.50	0.0	5.2	1.9	3.9	0.0	18.5	0.0	0.0	0.0	0.0
Standard Error	15.50	4.50	0.0	1.0	1.9	0.7	0.0	2.5	0.0	0.0	0.0	0.0
Median	104.50	43.50	0.0	5.2	1.9	3.9	0.0	18.5	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	21.92	6.36	0.0	1.4	2.7	0.9	0.0	3.5	0.0	0.0	ND	0.0
Sample Variance	480.50	40.50	0.0	2.0	7.2	0.8	0.0	12.5	0.0	0.0	ND	0.0
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	31.00	9.00	0.0	2.0	3.8	1.3	0.0	5.0	0.0	0.0	0.0	0.0
Minimum	89.00	39.00	0.0	4.2	0.0	3.2	0.0	16.0	0.0	0.0	0.0	0.0
Maximum	120.00	48.00	0.0	6.2	3.8	4.5	0.0	21.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	1	2
Confidence Level(95.0%)	196.95	57.18	0.0	12.7	24.1	8.3	0.0	31.8	0.0	0.0	ND	0.0

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	435	268	1.9	6.5	69.0	60.0	8.9	8.7
Standard Error	55	26	1.1	2.1	5.5	5.4	1.2	1.2
Median	435	300	0.0	4.7	75.5	66.0	9.5	8.9
Mode	ND	300	0.0	0.0	80.0	66.0	9.8	ND
Standard Deviation	78	73	3.1	6.0	15.5	15.2	3.3	3.4
Sample Variance	6050	5364	9.6	35.9	238.9	231.1	11.2	11.7
Kurtosis	ND	0	1.1	-0.2	0.1	-0.5	1.7	1.7
Skewness	ND	-1	1.5	0.8	-1.0	-0.9	-0.7	-0.5
Range	110	220	8.1	17.0	45.0	42.0	11.5	11.8
Minimum	380	140	0.0	0.0	40.0	33.0	2.5	2.2
Maximum	490	360	8.1	17.0	85.0	75.0	14.0	14.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	699	61	2.6	5.0	12.9	12.7	2.8	2.9

ND = No Data

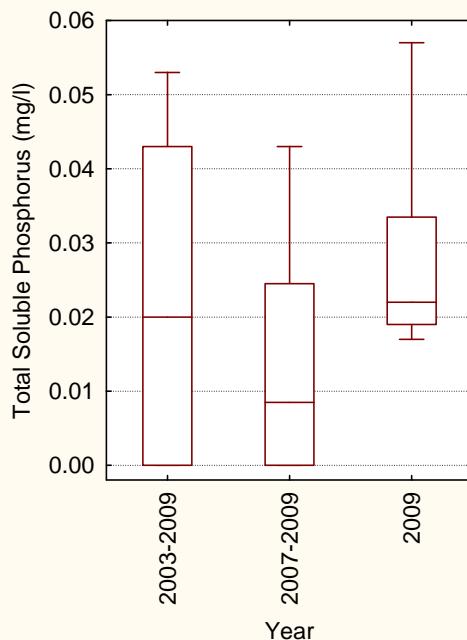
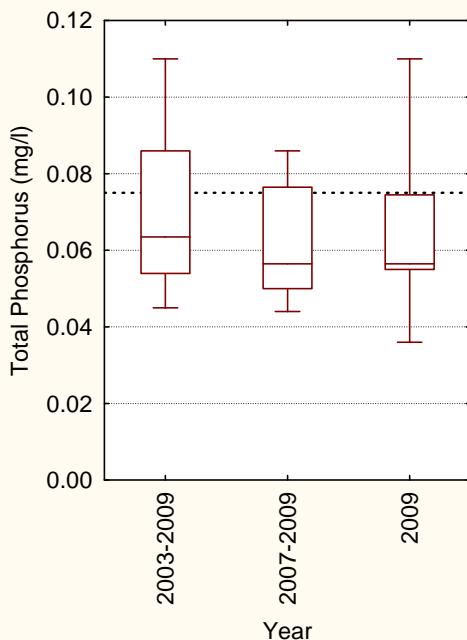
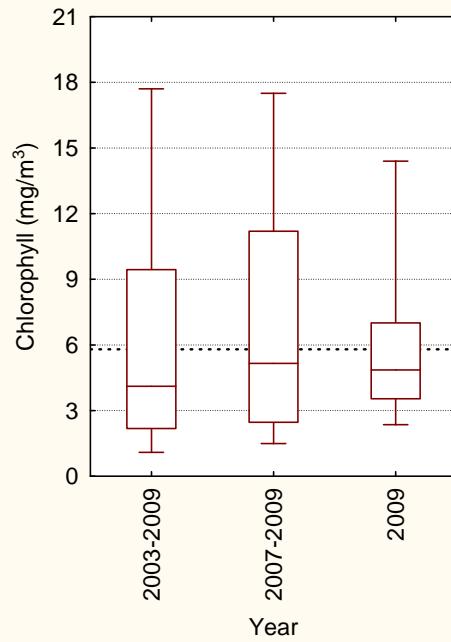
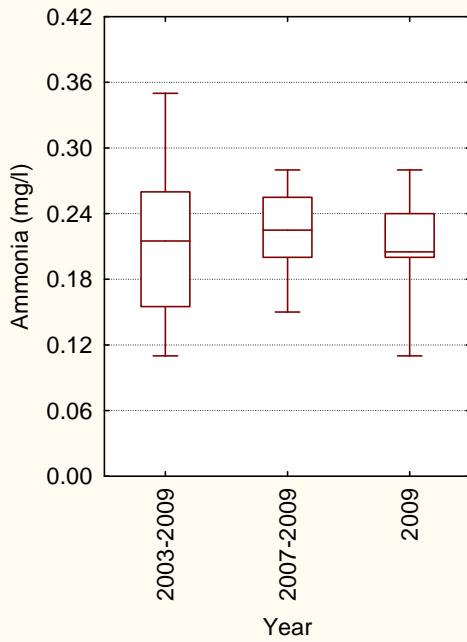
Provisional MMSD Water Quality Data

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



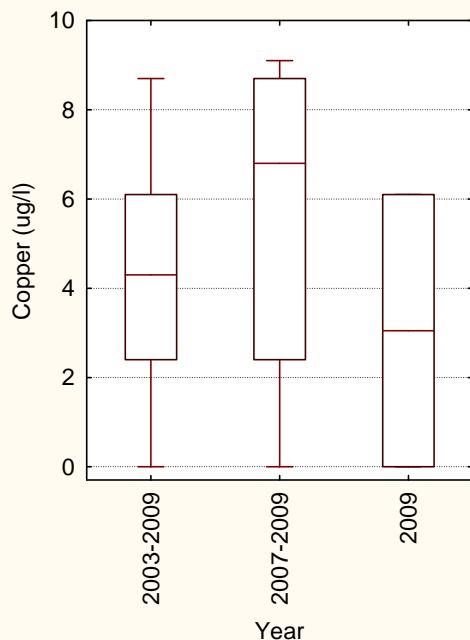
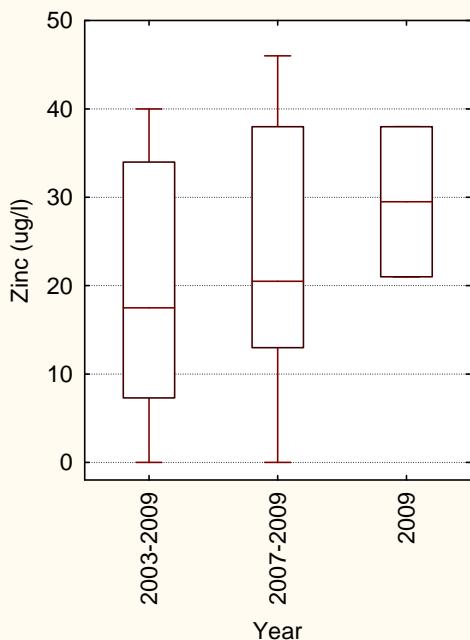
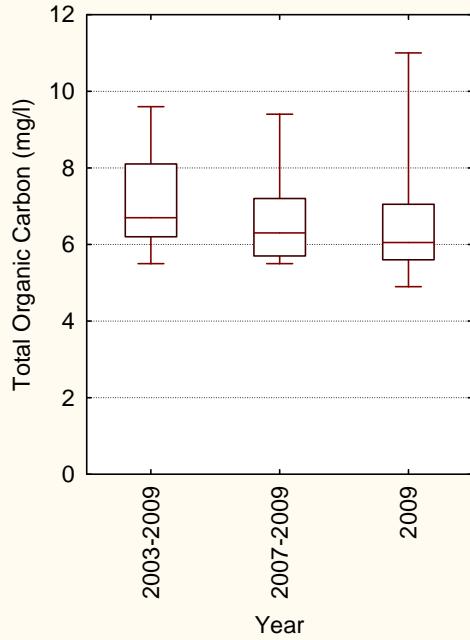
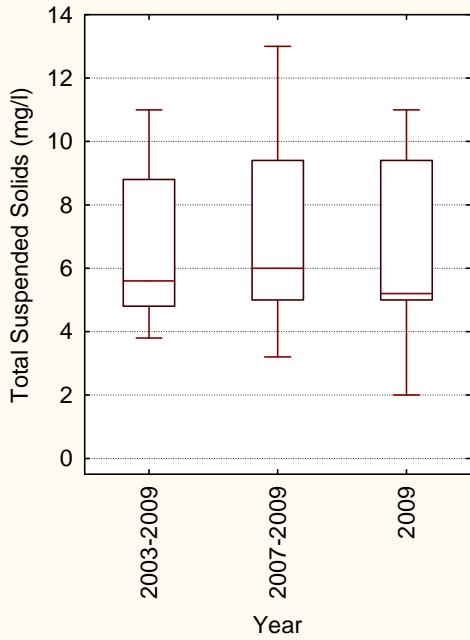
— Median □ 25%-75% █ 10%-90%
WQ Standard/Criterion

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 - 2009

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	13.5	6.4	5.95	0.44	0.044	0.48	0.210	0.83	0.065	0.028	ND
Standard Error	0.0	1.9	0.8	1.35	0.05	0.005	0.05	0.018	0.09	0.008	0.005	ND
Median	7.6	15.6	6.1	4.86	0.44	0.044	0.48	0.205	0.91	0.057	0.022	ND
Mode	7.6	ND	ND	ND	0.53	ND	ND	0.200	ND	0.055	0.024	ND
Standard Deviation	0.1	5.2	2.4	3.81	0.13	0.014	0.13	0.050	0.24	0.023	0.014	ND
Sample Variance	0.0	27.6	5.7	14.49	0.02	0.000	0.02	0.003	0.06	0.001	0.000	ND
Kurtosis	-0.7	-0.7	0.2	3.87	-1.33	-1.291	-0.53	2.009	0.20	1.632	1.548	ND
Skewness	-1.0	-0.9	0.9	1.81	0.29	-0.198	0.51	-0.793	-0.97	1.206	1.591	ND
Range	0.3	13.9	7.1	12.04	0.36	0.036	0.38	0.170	0.72	0.074	0.040	0.00
Minimum	7.3	4.7	3.8	2.36	0.29	0.025	0.33	0.110	0.38	0.036	0.017	0.00
Maximum	7.6	18.6	10.9	14.40	0.65	0.061	0.71	0.280	1.10	0.110	0.057	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.1	4.4	2.0	3.18	0.11	0.012	0.11	0.042	0.20	0.019	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	862.5	822.0	2.6	6.6	9.2	1489	222.4	6381	3.0	8584
Standard Error	ND	ND	138.6	156.3	0.6	1.2	0.8	238	37.7	5387	0.3	7510
Median	ND	ND	1100.0	1094.8	2.4	5.2	8.3	1790	225.0	750	2.9	530
Mode	ND	ND	1100.0	1094.8	3.6	5.2	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	392.0	413.5	1.7	3.1	2.3	672	106.5	15237	0.8	21241
Sample Variance	ND	ND	153650.0	170987.3	2.9	9.6	5.3	452147	11348.0	232156384	0.6	451160627
Kurtosis	ND	ND	-1.9	-2.3	-0.1	-0.8	-1.5	-2	-1.1	8	2.3	8
Skewness	ND	ND	-0.6	-0.3	0.0	0.1	0.4	0	0.2	3	1.5	3
Range	0.0	0.0	1000.0	1009.0	5.2	9.0	6.5	1840	311.0	43800	2.3	60850
Minimum	0.0	0.0	300.0	289.0	0.0	2.0	6.2	520	79.0	200	2.3	150
Maximum	0.0	0.0	1300.0	1298.0	5.2	11.0	12.6	2360	390.0	44000	4.6	61000
Count	0	0	8	7	7	7	8	562	89.1	12738	0.6	17758
Confidence Level(95.0%)	ND	ND	327.7	382.4	1.6	2.9	1.9					

ND = No Data

Provisional MMSD Water Quality Data

116TH STREET AND GREENFIELD AVENUE - SITE 4
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	84.50	32.50	0.0	4.4	3.1	3.0	0.0	29.5	0.0	0.0	ND	0.0
Standard Error	35.50	14.50	0.0	0.4	3.1	0.1	0.0	8.5	0.0	0.0	ND	0.0
Median	84.50	32.50	0.0	4.4	3.1	3.0	0.0	29.5	0.0	0.0	ND	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	50.20	20.51	0.0	0.6	4.3	0.2	0.0	12.0	0.0	0.0	ND	0.0
Sample Variance	2520.50	420.50	0.0	0.3	18.6	0.0	0.0	144.5	0.0	0.0	ND	0.0
Kurtosis	ND											
Skewness	ND											
Range	71.00	29.00	0.0	0.8	6.1	0.3	0.0	17.0	0.0	0.0	0.0	0.0
Minimum	49.00	18.00	0.0	4.0	0.0	2.8	0.0	21.0	0.0	0.0	0.0	0.0
Maximum	120.00	47.00	0.0	4.8	6.1	3.1	0.0	38.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	0	2
Confidence Level(95.0%)	451.07	184.24	0.0	5.1	38.8	1.9	0.0	108.0	0.0	0.0	ND	0.0

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	355	249	1.6	12.6	64.0	57.4	6.7	6.3
Standard Error	155	41	0.9	1.5	8.8	9.1	0.7	0.7
Median	355	305	0.0	13.0	77.0	70.5	6.1	5.7
Mode	ND	ND	0.0	13.0	85.0	ND	ND	ND
Standard Deviation	219	115	2.5	4.2	24.8	25.7	1.9	2.0
Sample Variance	48050	13229	6.2	18.0	616.3	662.8	3.6	4.1
Kurtosis	ND	-2	2.6	-0.3	-2.1	-2.1	4.6	5.3
Skewness	ND	-1	1.7	0.5	-0.6	-0.6	2.0	2.2
Range	310	281	6.9	12.6	55.0	58.0	6.1	6.6
Minimum	200	89	0.0	7.4	30.0	22.0	4.9	4.4
Maximum	510	370	6.9	20.0	85.0	80.0	11.0	11.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1969	96	2.1	3.5	20.8	21.5	1.6	1.7

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY IN KRUEGER PARK - SITE 5
UNDERWOOD CREEK
WATER QUALITY DATA - 2009

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	11.0	6.12	0.58	0.044	0.63	0.096	0.64	0.240	0.185	ND
Standard Error	0.1	1.4	0.6	0.70	0.04	0.006	0.04	0.018	0.06	0.019	0.022	ND
Median	7.9	15.2	11.4	6.23	0.57	0.042	0.61	0.100	0.65	0.220	0.185	ND
Mode	8.0	ND	ND	ND	ND	0.042	ND	0.100	ND	0.180	0.170	ND
Standard Deviation	0.2	4.1	1.8	1.99	0.10	0.016	0.11	0.050	0.18	0.055	0.062	ND
Sample Variance	0.0	16.7	3.2	3.97	0.01	0.000	0.01	0.002	0.03	0.003	0.004	ND
Kurtosis	-0.5	-0.9	-0.8	-0.53	-0.57	1.344	0.33	-0.661	-1.42	-1.860	-1.149	ND
Skewness	-0.8	-0.8	-0.5	0.50	0.41	0.983	0.85	-0.001	0.00	0.384	-0.371	ND
Range	0.4	10.7	5.1	5.64	0.31	0.054	0.33	0.148	0.49	0.130	0.168	0.00
Minimum	7.6	6.9	8.2	3.95	0.44	0.022	0.50	0.022	0.40	0.180	0.092	0.00
Maximum	8.0	17.6	13.3	9.59	0.75	0.076	0.83	0.170	0.89	0.310	0.260	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.1	3.4	1.5	1.67	0.09	0.014	0.09	0.042	0.15	0.046	0.052	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	787.5	733.9	4.0	8.9	9.9	1329	243.5	5275	2.8	5073
Standard Error	ND	ND	103.5	109.2	1.3	2.8	4.2	199	31.8	4945	0.4	3861
Median	ND	ND	800.0	746.9	3.0	4.6	4.2	1540	265.0	380	2.6	650
Mode	ND	ND	1100.0	ND	ND	14.0	ND	ND	290.0	ND	ND	ND
Standard Deviation	ND	ND	292.7	288.8	3.4	7.3	11.8	563	89.9	12114	0.9	10216
Sample Variance	ND	ND	85650.0	83422.2	11.8	53.8	140.1	316409	8080.9	146746110	0.8	104374990
Kurtosis	ND	ND	-0.2	0.0	-0.7	-1.1	1.5	-2	-0.6	6	4.2	7
Skewness	ND	ND	-0.7	-0.6	0.6	0.8	1.7	0	-0.6	2	1.9	3
Range	0.0	0.0	830.0	847.6	9.6	18.6	31.0	1430	262.0	29910	2.5	27800
Minimum	0.0	0.0	270.0	249.0	0.0	2.4	2.8	540	98.0	90	2.0	200
Maximum	0.0	0.0	1100.0	1096.6	9.6	21.0	33.8	1970	360.0	30000	4.5	28000
Count	0	0	8	7	7	8	8	8	6	6	7	
Confidence Level(95.0%)	ND	ND	244.7	267.1	3.2	6.8	9.9	470	75.2	12713	0.9	9449

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY IN KRUEGER PARK - SITE 5
UNDERWOOD CREEK
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	84.50	30.00	0.0	4.3	1.8	2.6	0.0	23.5	0.0	0.0	4.3	0.0
Standard Error	25.50	11.00	0.0	0.1	1.8	0.2	0.0	5.5	0.0	0.0	4.3	0.0
Median	84.50	30.00	0.0	4.3	1.8	2.6	0.0	23.5	0.0	0.0	4.3	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	36.06	15.56	0.0	0.1	2.5	0.3	0.0	7.8	0.0	0.0	6.1	0.0
Sample Variance	1300.50	242.00	0.0	0.0	6.5	0.1	0.0	60.5	0.0	0.0	37.0	0.0
Kurtosis	ND											
Skewness	ND											
Range	51.00	22.00	0.0	0.2	3.6	0.4	0.0	11.0	0.0	0.0	8.6	0.0
Minimum	59.00	19.00	0.0	4.2	0.0	2.4	0.0	18.0	0.0	0.0	0.0	0.0
Maximum	110.00	41.00	0.0	4.4	3.6	2.8	0.0	29.0	0.0	0.0	8.6	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	324.01	139.77	0.0	1.3	22.9	2.5	0.0	69.9	0.0	0.0	54.6	0.0

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	335	186	2.4	12.5	48.3	43.1	5.0	4.2
Standard Error	115	28	0.9	1.6	5.5	6.0	0.8	0.6
Median	335	210	1.7	13.0	53.0	49.0	4.6	3.5
Mode	ND	120	0.0	12.0	59.0	56.0	ND	ND
Standard Deviation	163	78	2.6	4.4	15.5	16.9	2.1	1.6
Sample Variance	26450	6108	6.9	19.6	241.6	284.7	4.5	2.7
Kurtosis	ND	-1	-2.2	0.1	-1.7	-1.4	2.1	3.1
Skewness	ND	-1	0.3	-0.4	-0.3	-0.5	1.4	1.7
Range	230	213	5.7	14.1	42.0	46.0	6.3	4.9
Minimum	220	57	0.0	4.9	26.0	16.0	3.1	2.8
Maximum	450	270	5.7	19.0	68.0	62.0	9.4	7.7
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1461	65	2.2	3.7	13.0	14.1	1.8	1.4

ND = No Data

Provisional MMSD Water Quality Data

115TH STREET, SOUTH OF WATERTOWN PLANK ROAD - SITE 6
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2009

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	15.2	18.8	23.92	0.28	0.022	0.30	0.020	0.77	0.087	0.042	ND
Standard Error	0.1	1.8	2.6	10.14	0.10	0.005	0.10	0.013	0.10	0.013	0.008	ND
Median	8.6	17.3	20.4	15.70	0.19	0.019	0.21	0.000	0.69	0.087	0.030	ND
Mode	8.6	ND	ND	ND	0.19	ND	0.54	0.000	ND	0.120	ND	ND
Standard Deviation	0.4	5.2	7.4	28.67	0.29	0.015	0.30	0.036	0.28	0.038	0.023	ND
Sample Variance	0.2	27.1	54.2	822.19	0.08	0.000	0.09	0.001	0.08	0.001	0.001	ND
Kurtosis	1.8	-0.4	-1.6	6.67	-0.50	-0.458	-0.83	3.770	-1.26	-1.421	-1.910	ND
Skewness	-1.4	-1.1	-0.4	2.50	0.82	0.787	0.72	1.986	0.50	-0.048	0.577	ND
Range	1.2	13.2	18.7	89.19	0.79	0.042	0.81	0.100	0.76	0.103	0.057	0.00
Minimum	7.6	7.0	8.8	3.61	0.00	0.008	0.00	0.000	0.44	0.037	0.017	0.00
Maximum	8.8	20.2	27.5	92.80	0.79	0.050	0.81	0.100	1.20	0.140	0.074	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.3	6.2	23.97	0.24	0.013	0.25	0.030	0.24	0.032	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	833.8	799.1	4.6	10.9	6.5	1390	253.8	10469	3.0	7013
Standard Error	ND	ND	110.8	127.0	1.4	3.5	2.3	125	23.1	8832	0.4	5638
Median	ND	ND	940.0	877.6	4.6	8.0	3.9	1475	290.0	360	2.6	540
Mode	ND	ND	1000.0	ND	ND	ND	ND	1310	290.0	ND	ND	ND
Standard Deviation	ND	ND	313.4	335.9	3.6	9.3	6.6	355	65.5	23368	0.9	15947
Sample Variance	ND	ND	98198.2	112827.5	12.9	85.9	43.4	125745	4283.9	546068348	0.9	254317021
Kurtosis	ND	ND	2.9	2.5	0.8	2.1	5.5	-1	-0.1	7	0.9	7
Skewness	ND	ND	-1.6	-1.5	0.7	1.4	2.3	-1	-1.3	3	1.5	3
Range	0.0	0.0	940.0	961.0	11.0	26.6	19.4	954	160.0	62740	2.4	45760
Minimum	0.0	0.0	160.0	131.0	0.0	2.4	2.5	786	140.0	260	2.4	240
Maximum	0.0	0.0	1100.0	1092.0	11.0	29.0	21.9	1740	300.0	63000	4.8	46000
Count	0	0	8	7	7	7	8	8	8	7	7	8
Confidence Level(95.0%)	ND	ND	262.0	310.7	3.3	8.6	5.5	296	54.7	21612	0.9	13332

ND = No Data

Provisional MMSD Water Quality Data

115TH STREET, SOUTH OF WATERTOWN PLANK ROAD - SITE 6
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2009

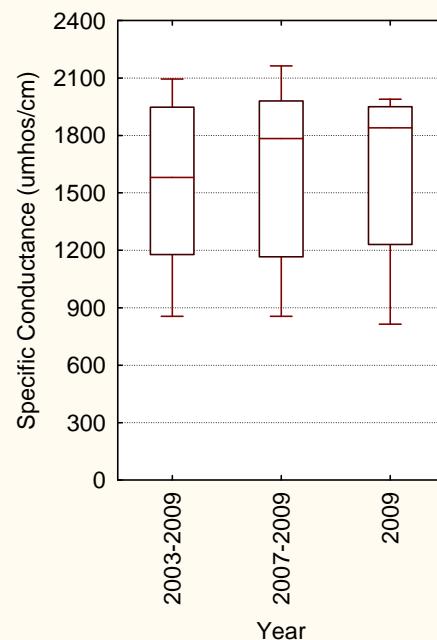
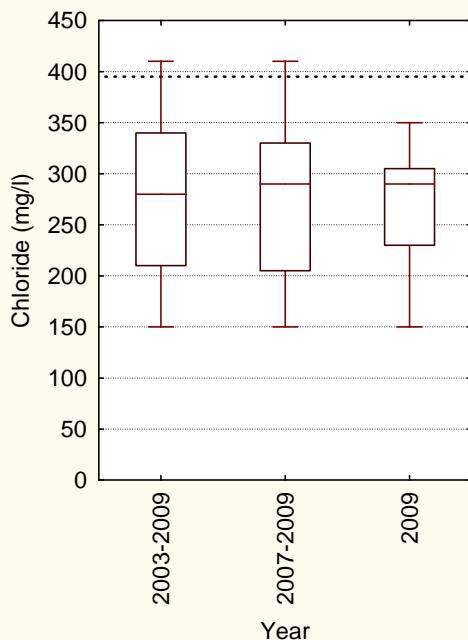
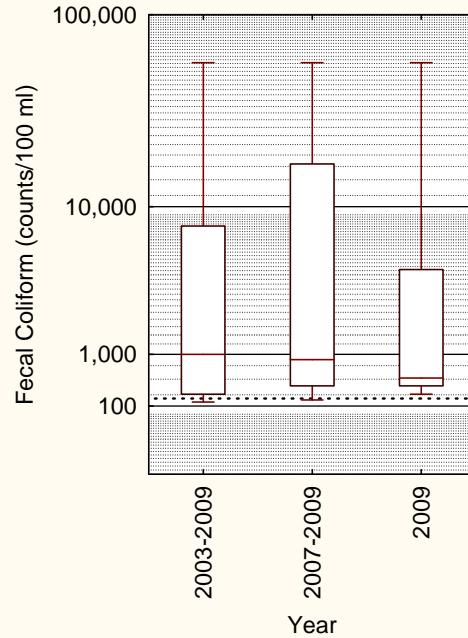
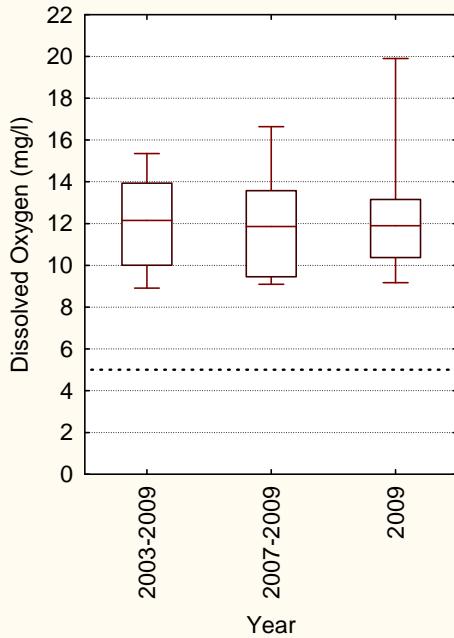
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	91.00	37.00	0.0	4.9	1.4	3.2	0.0	24.5	0.0	0.0	0.0	0.0
Standard Error	19.00	9.00	0.0	0.8	1.4	0.6	0.0	0.5	0.0	0.0	0.0	0.0
Median	91.00	37.00	0.0	4.9	1.4	3.2	0.0	24.5	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	26.87	12.73	0.0	1.1	1.9	0.8	0.0	0.7	0.0	0.0	ND	0.0
Sample Variance	722.00	162.00	0.0	1.1	3.6	0.7	0.0	0.5	0.0	0.0	ND	0.0
Kurtosis	ND											
Skewness	ND											
Range	38.00	18.00	0.0	1.5	2.7	1.2	0.0	1.0	0.0	0.0	0.0	0.0
Minimum	72.00	28.00	0.0	4.1	0.0	2.6	0.0	24.0	0.0	0.0	0.0	0.0
Maximum	110.00	46.00	0.0	5.6	2.7	3.8	0.0	25.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	1	2
Confidence Level(95.0%)	241.42	114.36	0.0	9.5	17.2	7.6	0.0	6.4	0.0	0.0	ND	0.0

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	230	2.8	11.3	57.9	50.5	7.7	7.3
Standard Error	85	23	0.8	1.6	4.9	5.1	0.8	0.8
Median	375	260	2.4	10.3	62.0	56.5	8.7	8.0
Mode	ND	180	0.0	ND	62.0	ND	ND	ND
Standard Deviation	120	65	2.2	4.5	13.8	14.5	2.1	2.1
Sample Variance	14450	4286	4.9	19.8	189.3	211.1	4.4	4.5
Kurtosis	ND	0	-0.9	-0.1	0.5	0.3	1.1	1.3
Skewness	ND	-1	0.2	0.5	-0.9	-1.0	-1.2	-0.9
Range	170	180	6.2	14.0	43.0	42.0	6.2	6.6
Minimum	290	110	0.0	5.0	32.0	23.0	3.8	3.4
Maximum	460	290	6.2	19.0	75.0	65.0	10.0	10.0
Count	2	8	8	8	8	8	7	7
Confidence Level(95.0%)	1080	55	1.9	3.7	11.5	12.1	1.9	2.0

ND = No Data

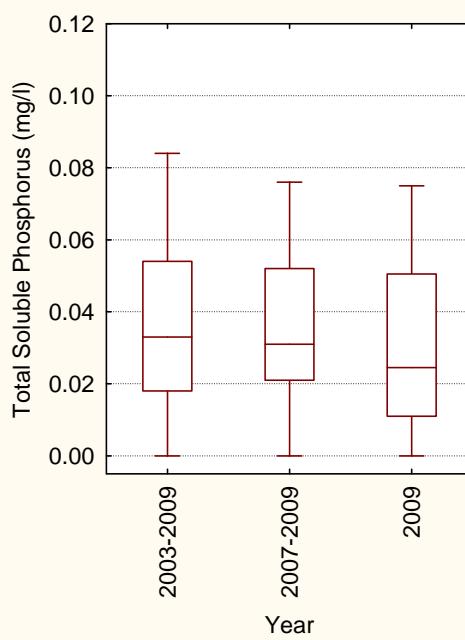
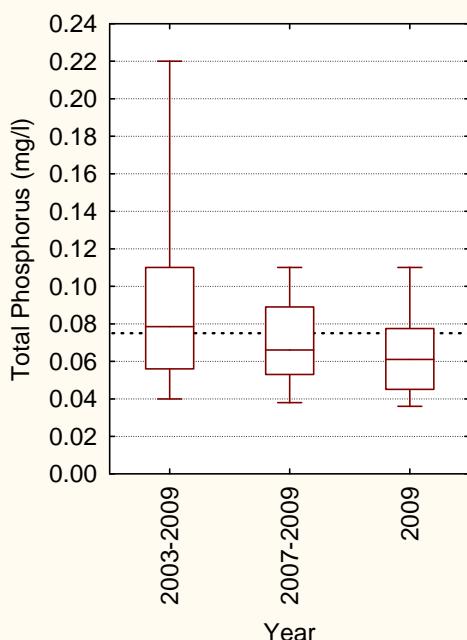
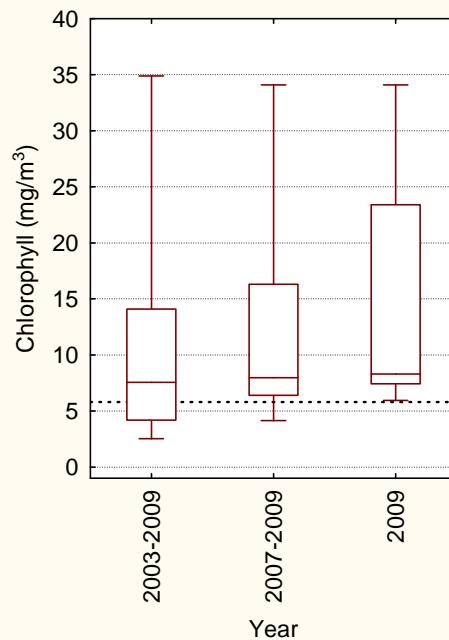
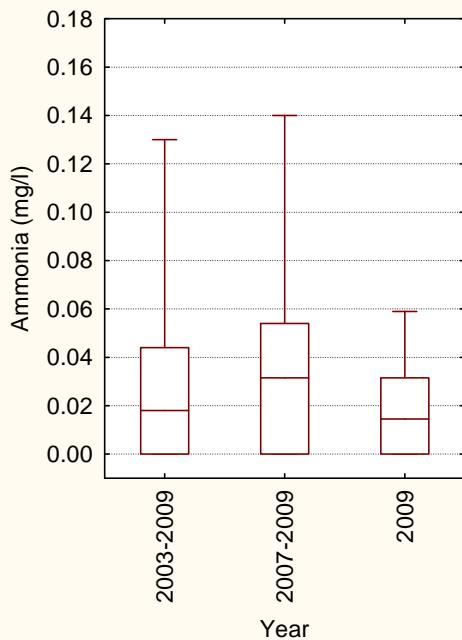
Provisional MMSD Water Quality Data

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



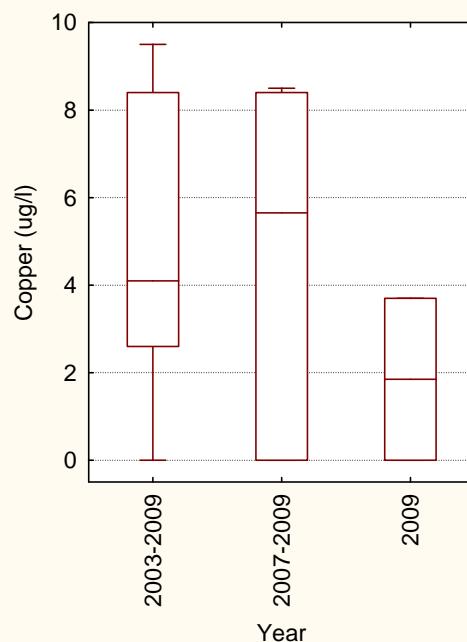
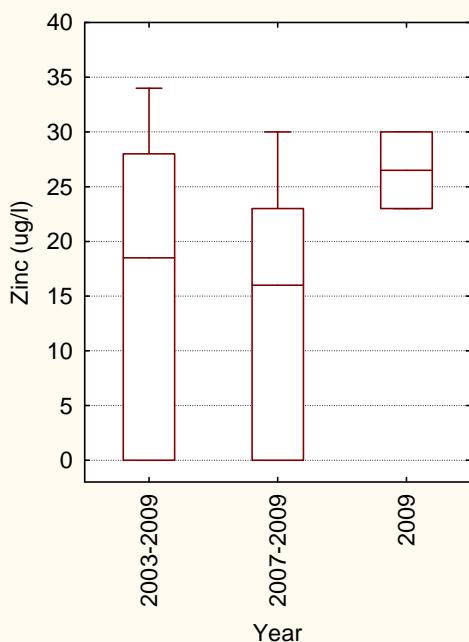
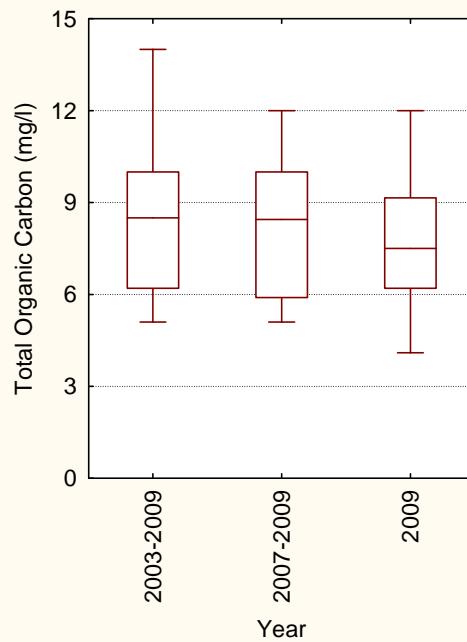
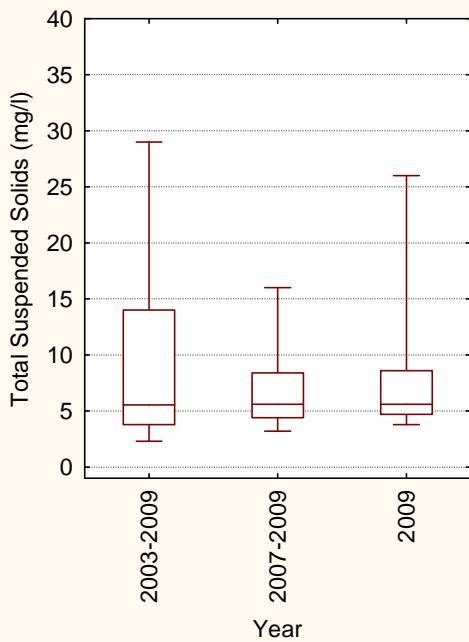
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	16.1	12.5	14.79	0.23	0.017	0.25	0.019	0.76	0.064	0.031	ND
Standard Error	0.1	2.0	1.2	4.10	0.09	0.005	0.09	0.007	0.09	0.009	0.009	ND
Median	8.4	17.8	11.9	8.30	0.10	0.013	0.11	0.015	0.70	0.061	0.025	ND
Mode	8.3	ND	ND	ND	ND	ND	ND	0.000	ND	ND	0.000	ND
Standard Deviation	0.3	5.7	3.4	11.59	0.26	0.014	0.27	0.021	0.24	0.025	0.026	ND
Sample Variance	0.1	32.8	11.4	134.34	0.07	0.000	0.07	0.000	0.06	0.001	0.001	ND
Kurtosis	0.4	-0.4	3.7	-0.29	-0.28	-1.136	-0.67	0.603	-1.73	0.305	-0.560	ND
Skewness	-0.6	-1.1	1.7	1.26	1.07	0.592	0.97	1.019	0.21	0.826	0.439	ND
Range	1.0	14.9	10.7	28.16	0.67	0.038	0.69	0.059	0.66	0.074	0.075	0.00
Minimum	7.8	7.0	9.2	5.94	0.03	0.000	0.03	0.000	0.44	0.036	0.000	0.00
Maximum	8.8	21.9	19.9	34.10	0.70	0.038	0.72	0.059	1.10	0.110	0.075	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.8	2.8	9.69	0.22	0.012	0.22	0.017	0.20	0.021	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	956.3	927.2	3.6	8.6	6.4	1606	268.8	8465	3.1	8381
Standard Error	ND	ND	121.5	140.7	0.8	3.0	1.6	163	22.9	6993	0.3	6714
Median	ND	ND	1100.0	1094.4	3.0	5.6	4.6	1840	290.0	520	2.7	840
Mode	ND	ND	1100.0	ND	ND	ND	ND	ND	290.0	390	2.6	ND
Standard Deviation	ND	ND	343.8	372.2	2.2	7.8	4.5	461	64.9	19778	0.8	18990
Sample Variance	ND	ND	118169.6	138548.2	4.8	61.5	20.5	212296	4212.5	391175486	0.7	360602870
Kurtosis	ND	ND	0.4	-0.1	5.9	6.1	1.3	-1	0.4	8	1.8	8
Skewness	ND	ND	-1.1	-1.0	2.3	2.4	1.5	-1	-0.9	3	1.6	3
Range	0.0	0.0	1000.0	1021.2	6.5	22.2	12.5	1175	200.0	56740	2.3	54720
Minimum	0.0	0.0	300.0	274.0	1.9	3.8	3.1	815	150.0	260	2.4	280
Maximum	0.0	0.0	1300.0	1295.2	8.4	26.0	15.5	1990	350.0	57000	4.8	55000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	287.4	344.2	2.0	7.3	3.8	385	54.3	16535	0.7	15876

ND = No Data

Provisional MMSD Water Quality Data

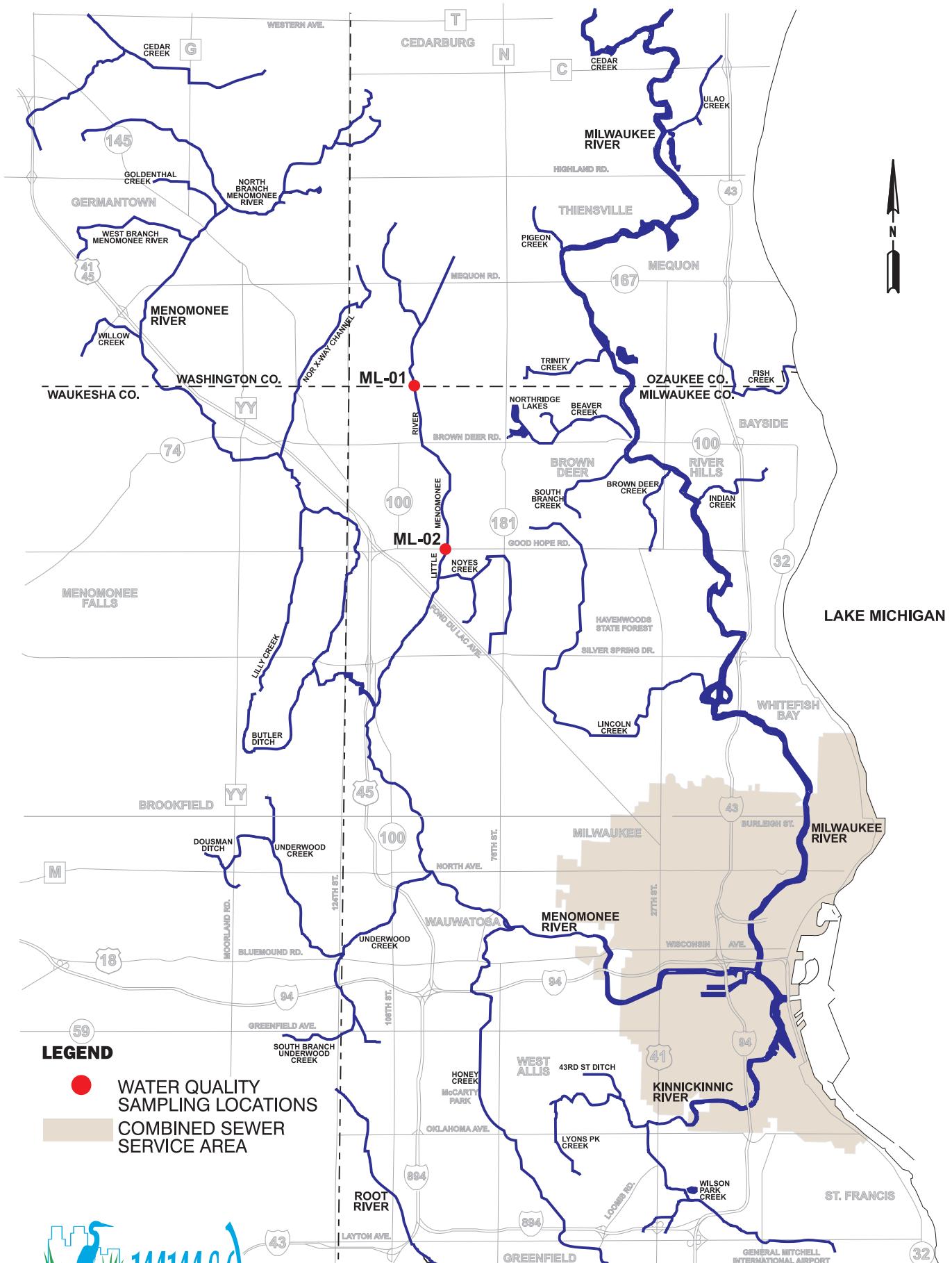
107TH STREET AND FISHER PARKWAY - SITE 7
 UNDERWOOD CREEK
 WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	85.50	37.50	0.0	4.2	1.9	3.0	0.0	26.5	0.0	0.0	0.0	0.0
Standard Error	24.50	13.50	0.0	0.0	1.9	0.1	0.0	3.5	0.0	0.0	0.0	0.0
Median	85.50	37.50	0.0	4.2	1.9	3.0	0.0	26.5	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	4.2	ND	ND	0.0	ND	0.0	0.0	0.0	0.0
Standard Deviation	34.65	19.09	0.0	0.0	2.6	0.2	0.0	4.9	0.0	0.0	0.0	0.0
Sample Variance	1200.50	364.50	0.0	0.0	6.8	0.0	0.0	24.5	0.0	0.0	0.0	0.0
Kurtosis	ND											
Skewness	ND											
Range	49.00	27.00	0.0	0.0	3.7	0.3	0.0	7.0	0.0	0.0	0.0	0.0
Minimum	61.00	24.00	0.0	4.2	0.0	2.8	0.0	23.0	0.0	0.0	0.0	0.0
Maximum	110.00	51.00	0.0	4.2	3.7	3.1	0.0	30.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	311.30	171.53	0.0	0.0	23.5	1.9	0.0	44.5	0.0	0.0	0.0	0.0

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	225	3.5	11.3	56.8	49.1	7.7	6.9
Standard Error	120	26	1.0	1.7	5.3	5.3	0.9	0.7
Median	370	265	3.4	9.9	60.5	55.5	7.5	7.0
Mode	ND	280	0.0	ND	70.0	64.0	ND	ND
Standard Deviation	170	73	2.8	4.8	14.9	15.1	2.5	2.0
Sample Variance	28800	5286	7.9	23.4	222.8	228.7	6.1	3.9
Kurtosis	ND	-1	0.4	-1.6	-0.8	-1.1	0.2	-0.4
Skewness	ND	-1	0.5	0.3	-0.7	-0.7	0.4	-0.2
Range	240	180	8.5	12.6	41.0	40.0	7.9	5.8
Minimum	250	110	0.0	5.4	31.0	24.0	4.1	3.6
Maximum	490	290	8.5	18.0	72.0	64.0	12.0	9.4
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	1525	61	2.3	4.0	12.5	12.6	2.1	1.6

ND = No Data

Provisional MMSD Water Quality Data



LEGEND

- WATER QUALITY SAMPLING LOCATIONS
- COMBINED SEWER SERVICE AREA

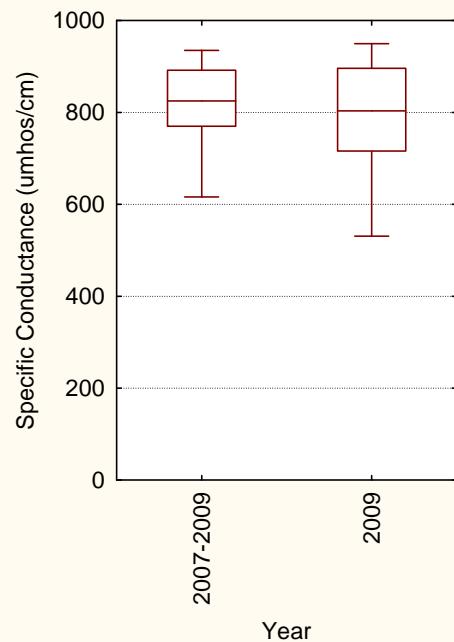
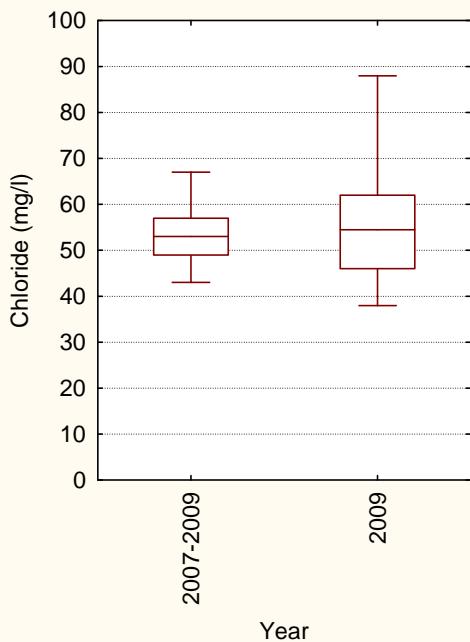
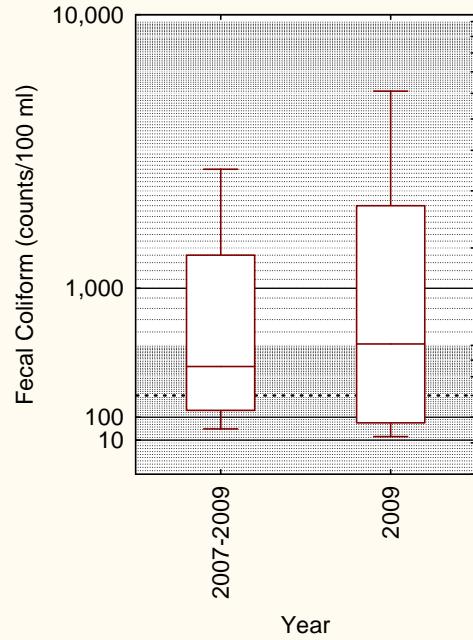
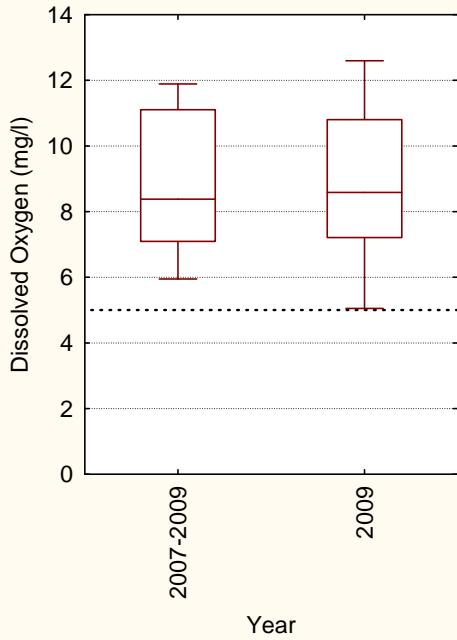


FIGURE 8
LITTLE MENOMONEE RIVER (ML) SURVEY
WATER QUALITY SAMPLING LOCATIONS

10/24/07

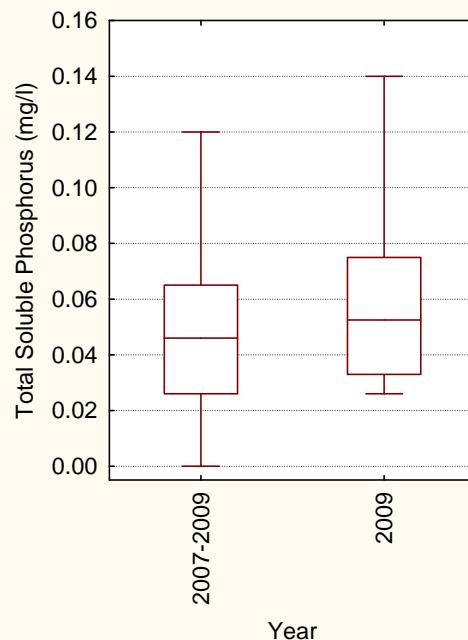
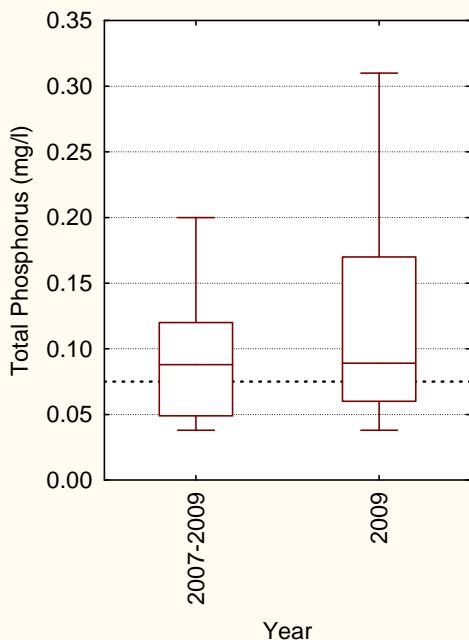
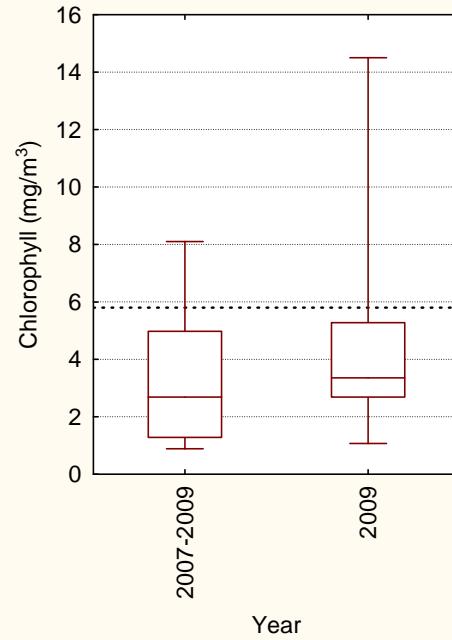
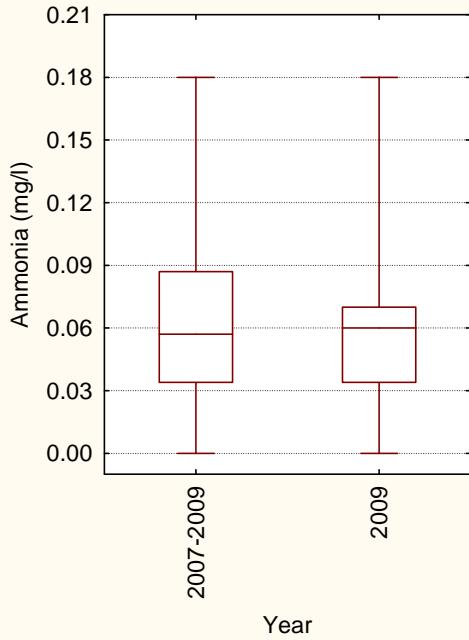
02-034(ML)REPORT

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



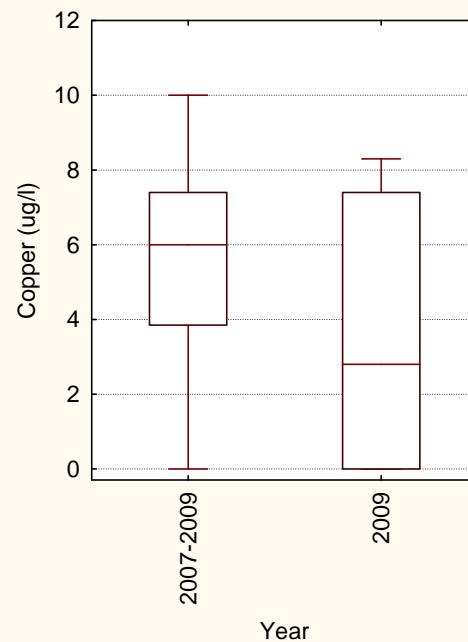
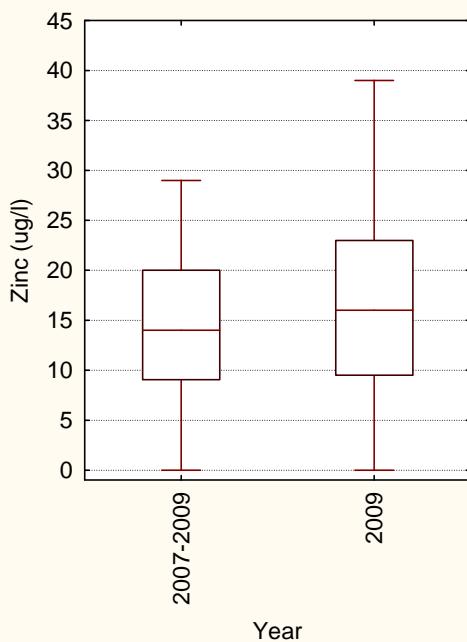
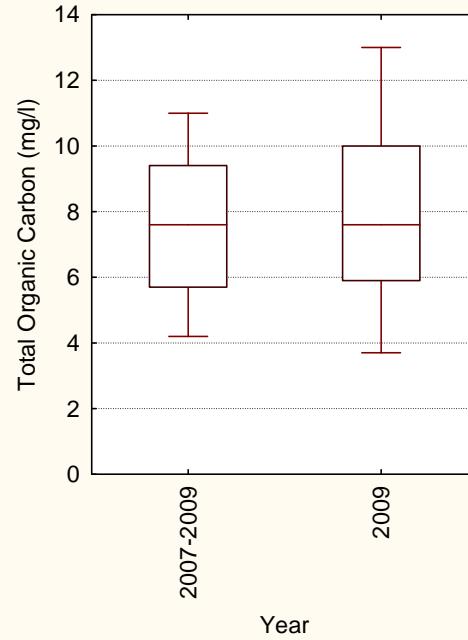
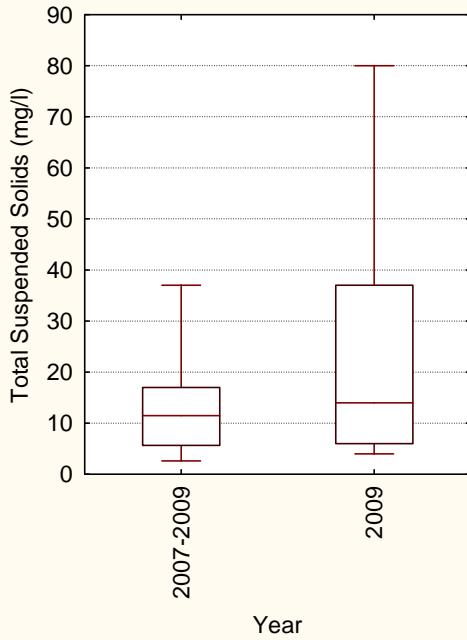
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Monitoring Program Data
Little Menomonee 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 - 2009

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	8.9	8.4	5.29	1.79	0.036	1.96	0.068	1.62	0.124	0.065	ND
Standard Error	0.0	1.4	0.7	1.38	0.15	0.007	0.14	0.014	0.57	0.023	0.010	ND
Median	7.7	7.7	8.6	3.36	1.70	0.032	1.95	0.060	0.93	0.089	0.053	ND
Mode	7.8	12.0	12.6	2.69	1.90	ND	2.10	0.034	1.40	0.100	0.140	ND
Standard Deviation	0.2	6.1	3.1	5.85	0.58	0.025	0.61	0.058	2.41	0.097	0.043	ND
Sample Variance	0.0	37.7	9.4	34.23	0.34	0.001	0.37	0.003	5.80	0.009	0.002	ND
Kurtosis	0.4	-0.9	1.9	7.57	3.42	1.686	1.08	3.274	15.71	0.981	1.130	ND
Skewness	-0.6	0.3	-1.0	2.64	1.50	1.389	0.93	1.704	3.87	1.380	1.416	ND
Range	0.8	19.4	12.5	24.02	2.40	0.088	2.40	0.230	10.58	0.336	0.147	0.00
Minimum	7.2	0.3	0.1	0.88	1.00	0.011	1.10	0.000	0.42	0.024	0.023	0.00
Maximum	8.0	19.7	12.6	24.90	3.40	0.099	3.50	0.230	11.00	0.360	0.170	0.00
Count	18	18	18	18	15	15	18	18	18	18	18	0
Confidence Level(95.0%)	0.1	3.1	1.5	2.91	0.32	0.014	0.30	0.029	1.20	0.048	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	522.4	495.0	6.4	27.9	25.2	782	55.5	2046	2.6	2218
Standard Error	ND	ND	20.7	20.8	1.6	7.8	7.2	33	3.6	947	0.2	793
Median	ND	ND	500.0	483.0	3.8	14.0	13.7	804	54.5	510	2.7	565
Mode	ND	ND	520.0	530.0	0.0	12.0	14.1	ND	88.0	77	1.9	3000
Standard Deviation	ND	ND	85.2	85.7	7.0	33.3	30.7	141	15.1	3903	0.9	3366
Sample Variance	ND	ND	7256.6	7339.7	48.4	1107.0	942.8	19890	227.3	15233078	0.9	11332306
Kurtosis	ND	ND	0.2	1.5	1.4	4.6	2.8	0	0.8	11	0.2	6
Skewness	ND	ND	0.8	0.5	1.5	2.1	1.9	-1	0.9	3	-0.5	2
Range	0.0	0.0	320.0	376.0	24.0	127.8	107.5	459	55.0	15997	3.7	12990
Minimum	0.0	0.0	380.0	318.0	0.0	2.2	2.5	498	33.0	3	0.5	10
Maximum	0.0	0.0	700.0	694.0	24.0	130.0	110.0	957	88.0	16000	4.2	13000
Count	0	0	17	17	18	18	18	18	18	17	17	18
Confidence Level(95.0%)	ND	ND	43.8	44.0	3.5	16.5	15.3	70	7.5	2007	0.5	1674

ND = No Data

Provisional MMSD Water Quality Data

COUNTY LINE ROAD - SITE 1
LITTLE MENOMONEE RIVER
WATER QUALITY DATA - 2009

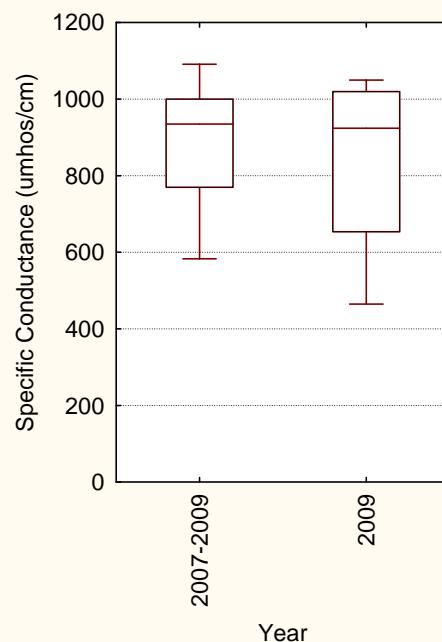
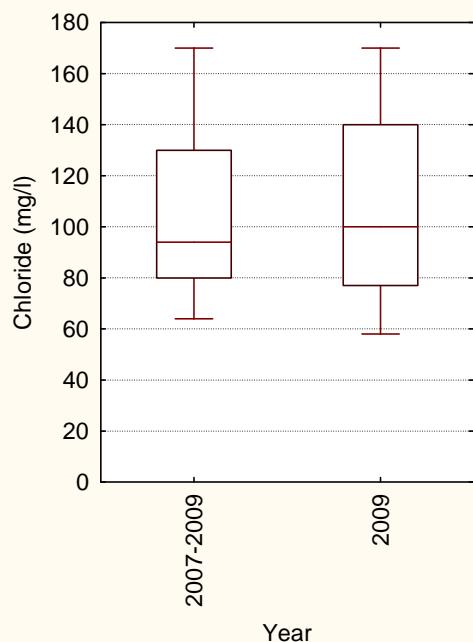
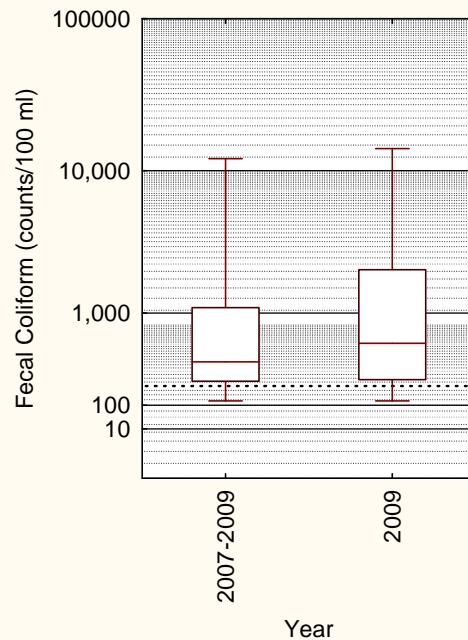
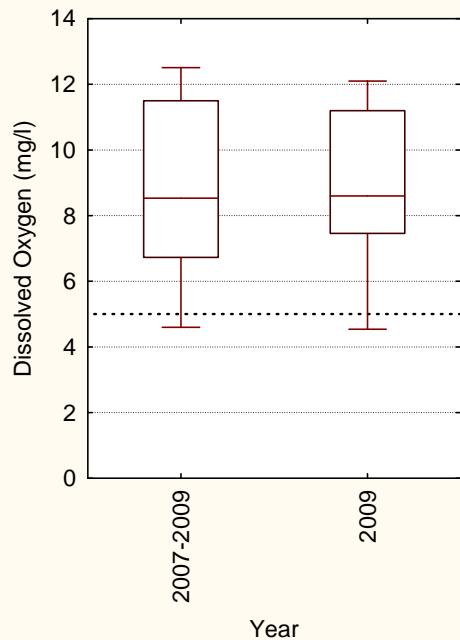
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	82.33	36.28	0.0	5.4	3.8	3.8	0.0	17.0	0.1	0.5	0.5	ND
Standard Error	4.80	2.07	0.0	0.4	1.1	0.3	0.0	2.8	0.1	0.2	0.5	ND
Median	82.50	39.00	0.0	4.8	2.8	3.7	0.0	16.0	0.0	0.0	0.0	ND
Mode	110.00	42.00	0.0	5.7	0.0	2.4	0.0	16.0	0.0	0.0	0.0	ND
Standard Deviation	20.37	8.76	0.0	1.5	4.5	1.5	0.0	12.0	0.3	1.0	2.1	ND
Sample Variance	414.82	76.80	0.0	2.2	20.1	2.1	0.0	143.0	0.1	1.1	4.5	ND
Kurtosis	-1.12	-0.56	ND	1.4	1.5	-0.8	ND	-0.1	18.0	1.6	16.0	ND
Skewness	-0.01	-0.83	ND	1.4	1.2	0.4	ND	0.7	4.2	1.7	4.0	ND
Range	61.00	27.00	0.0	5.2	16.0	4.9	0.0	40.0	1.1	3.2	8.5	0.0
Minimum	49.00	19.00	0.0	4.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	110.00	46.00	0.0	9.2	16.0	6.6	0.0	40.0	1.1	3.2	8.5	0.0
Count	18	18	18	18	18	18	18	18	18	18	16	0
Confidence Level(95.0%)	10.13	4.36	0.0	0.7	2.2	0.7	0.0	5.9	0.1	0.5	1.1	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	355	249	1.2	5.8	65.8	57.7	8.1	7.9
Standard Error	20	13	0.6	0.6	2.3	2.5	0.8	0.8
Median	370	265	0.0	5.1	68.5	62.5	7.6	7.0
Mode	380	300	0.0	4.4	75.0	64.0	10.0	12.0
Standard Deviation	85	57	2.3	2.3	9.6	10.7	3.4	3.3
Sample Variance	7215	3210	5.3	5.3	92.5	114.7	11.2	11.2
Kurtosis	-1	0	1.8	6.4	-0.1	-0.2	-0.5	-0.5
Skewness	0	-1	1.8	2.3	-0.9	-1.0	0.3	0.5
Range	260	180	6.5	9.4	31.0	35.0	11.6	11.6
Minimum	200	120	0.0	3.6	45.0	36.0	3.4	3.4
Maximum	460	300	6.5	13.0	76.0	71.0	15.0	15.0
Count	18	18	17	16	18	18	17	17
Confidence Level(95.0%)	42	28	1.2	1.2	4.8	5.3	1.7	1.7

ND = No Data

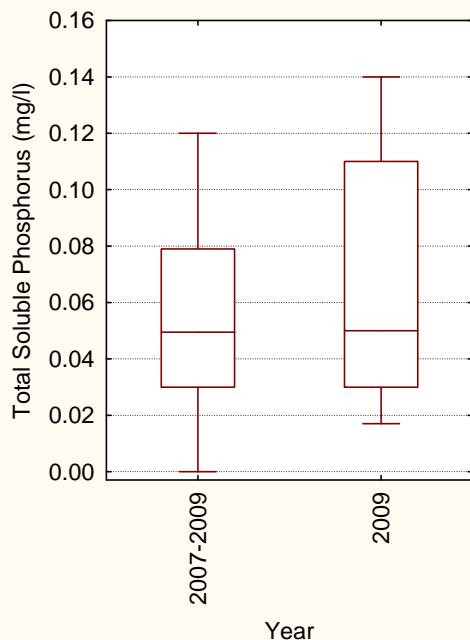
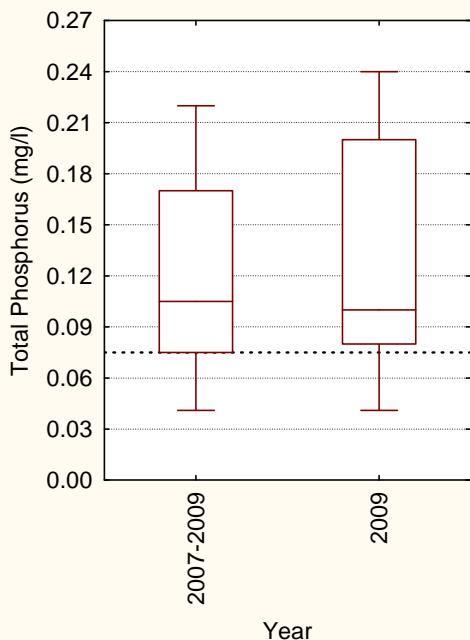
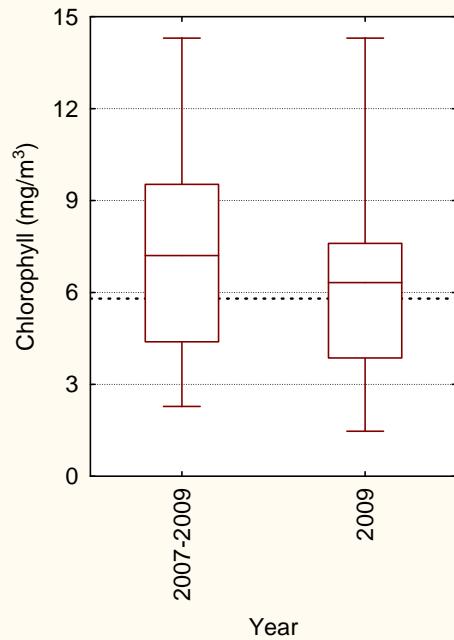
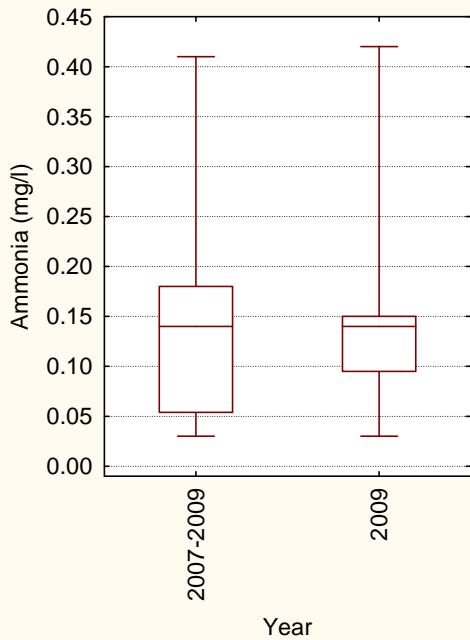
Provisional MMSD Water Quality Data

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



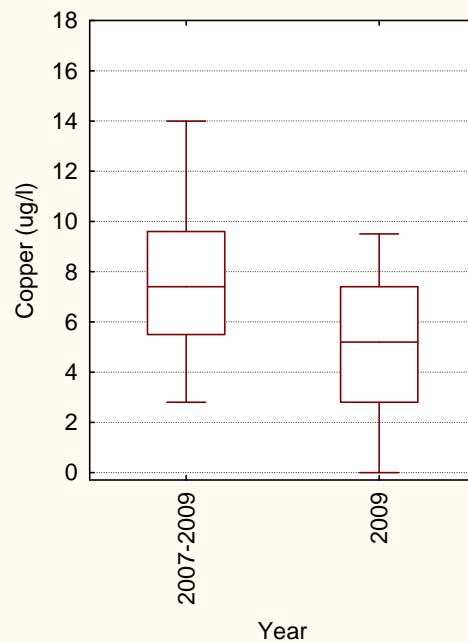
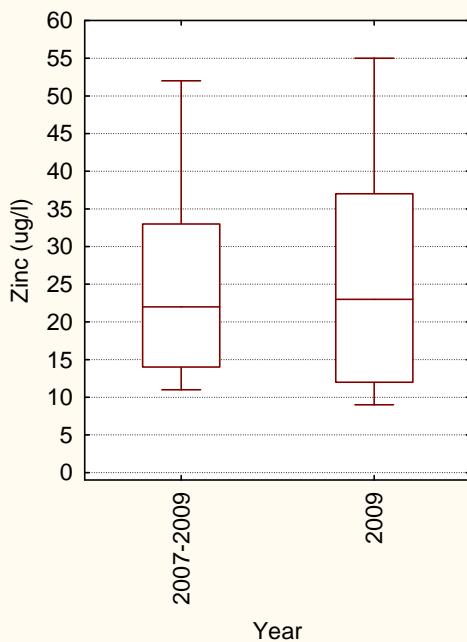
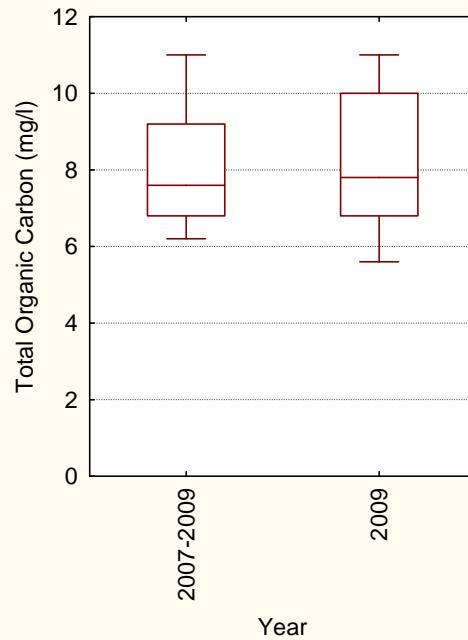
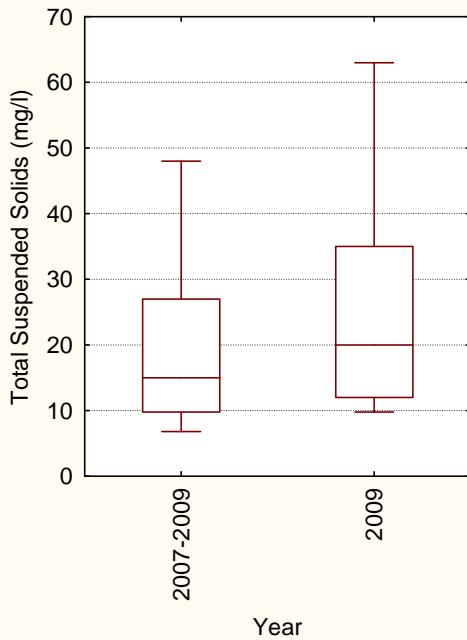
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 Menominee 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 - 2009

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	10.4	8.9	7.08	0.68	0.039	0.88	0.158	1.42	0.136	0.065	ND
Standard Error	0.1	1.7	0.7	1.42	0.13	0.006	0.14	0.030	0.44	0.020	0.011	ND
Median	7.8	8.7	8.6	6.32	0.65	0.036	0.82	0.140	1.00	0.100	0.050	ND
Mode	7.8	ND	ND	ND	1.30	ND	1.70	0.150	1.30	ND	0.140	ND
Standard Deviation	0.2	6.9	2.9	5.84	0.50	0.021	0.59	0.124	1.82	0.083	0.047	ND
Sample Variance	0.0	47.8	8.4	34.05	0.25	0.000	0.35	0.015	3.31	0.007	0.002	ND
Kurtosis	-0.3	-1.1	-0.8	5.31	-0.42	0.150	-1.45	1.172	16.07	0.060	-1.237	ND
Skewness	-0.8	0.2	-0.3	2.04	0.67	0.864	0.23	1.273	3.96	0.872	0.524	ND
Range	0.8	21.5	9.9	23.81	1.61	0.068	1.70	0.440	7.97	0.295	0.140	0.00
Minimum	7.2	0.2	3.8	1.39	0.09	0.012	0.10	0.000	0.43	0.035	0.000	0.00
Maximum	8.0	21.7	13.6	25.20	1.70	0.080	1.80	0.440	8.40	0.330	0.140	0.00
Count	17	17	17	17	14	14	17	17	17	17	17	0
Confidence Level(95.0%)	0.1	3.6	1.5	3.00	0.29	0.012	0.31	0.064	0.94	0.043	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	498.2	471.9	6.0	26.2	27.5	859	115.2	4020	2.9	2522
Standard Error	ND	ND	28.2	31.3	1.0	4.6	6.2	59	14.1	2484	0.2	1097
Median	ND	ND	500.0	490.1	5.0	20.0	20.0	924	100.0	560	2.7	730
Mode	ND	ND	500.0	ND	6.4	12.0	ND	1040	140.0	560	2.7	1300
Standard Deviation	ND	ND	116.5	125.2	4.2	18.5	25.8	243	58.1	9937	0.7	4522
Sample Variance	ND	ND	13565.4	15680.6	17.6	343.4	663.4	59009	3373.3	98753560	0.5	20448900
Kurtosis	ND	ND	0.8	-0.1	0.6	0.3	6.1	0	6.0	12	0.9	5
Skewness	ND	ND	-0.7	-0.6	0.9	1.1	2.4	0	2.1	3	1.2	2
Range	0.0	0.0	460.0	436.0	16.0	59.0	103.1	931	243.0	38890	2.5	15929
Minimum	0.0	0.0	220.0	208.0	0.0	6.0	4.9	429	57.0	110	2.0	71
Maximum	0.0	0.0	680.0	644.0	16.0	65.0	108.0	1360	300.0	39000	4.6	16000
Count	0	0	17	16	17	16	17	17	17	16	16	17
Confidence Level(95.0%)	ND	ND	59.9	66.7	2.2	9.9	13.2	125	29.9	5295	0.4	2325

ND = No Data

Provisional MMSD Water Quality Data

GRANVILLE ROAD - SITE 2
LITTLE MENOMONEE RIVER
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	68.35	30.92	0.0	5.5	5.1	4.3	0.3	27.6	0.1	0.4	0.5	ND
Standard Error	6.33	2.72	0.0	0.3	0.8	0.4	0.2	4.4	0.1	0.3	0.5	ND
Median	64.00	32.00	0.0	5.0	5.2	4.2	0.0	23.0	0.0	0.0	0.0	ND
Mode	110.00	24.00	0.0	5.0	0.0	4.2	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	26.11	11.20	0.0	1.4	3.5	1.6	0.9	18.0	0.3	1.2	1.8	ND
Sample Variance	681.99	125.37	0.0	2.1	11.9	2.7	0.9	324.5	0.1	1.5	3.1	ND
Kurtosis	-0.58	-0.70	ND	3.1	-1.0	0.1	6.7	-0.2	17.0	11.0	15.0	ND
Skewness	0.25	-0.25	ND	1.5	-0.1	1.0	2.8	0.8	4.1	3.3	3.9	ND
Range	84.00	39.40	0.0	6.2	11.0	5.0	3.2	60.2	1.4	4.8	6.8	0.0
Minimum	26.00	9.60	0.0	3.3	0.0	2.5	0.0	7.8	0.0	0.0	0.0	0.0
Maximum	110.00	49.00	0.0	9.5	11.0	7.5	3.2	68.0	1.4	4.8	6.8	0.0
Count	17	17	17	17	17	17	17	17	17	17	15	0
Confidence Level(95.0%)	13.43	5.76	0.0	0.7	1.8	0.8	0.5	9.3	0.2	0.6	1.0	ND

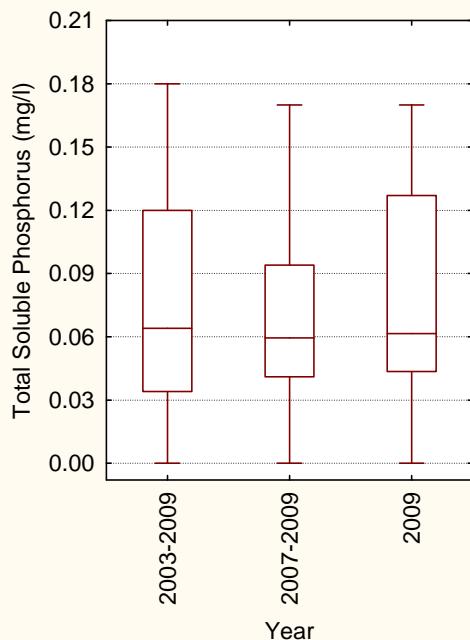
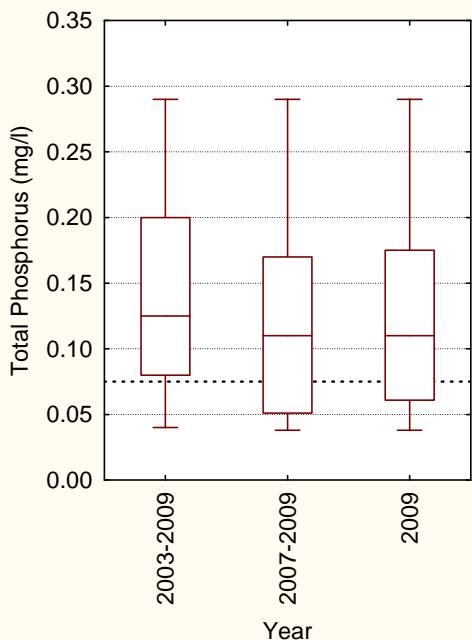
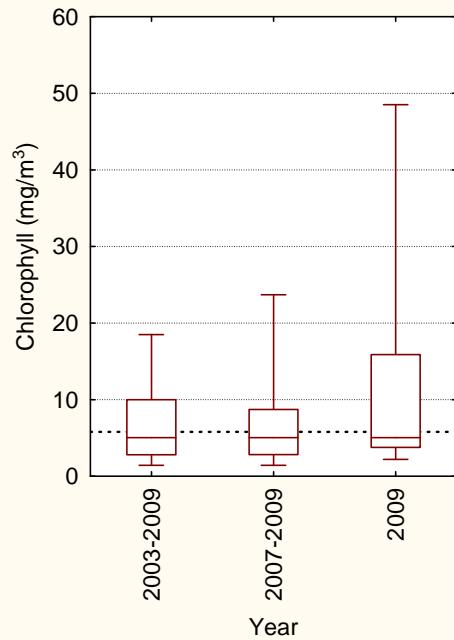
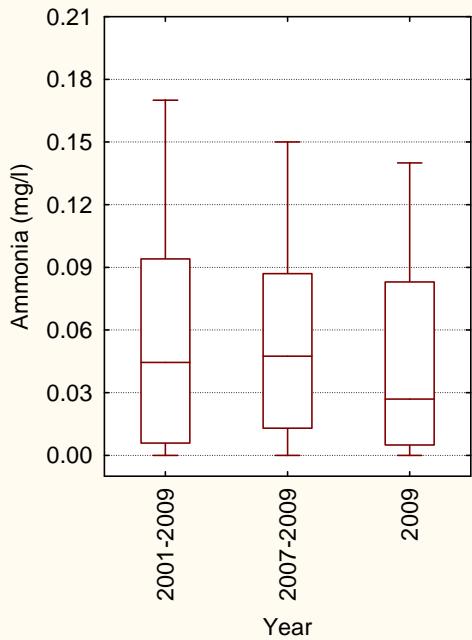
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	296	203	1.7	8.2	55.9	47.6	8.2	7.8
Standard Error	26	18	0.5	0.9	3.7	3.7	0.5	0.4
Median	280	200	1.1	7.1	55.0	47.0	7.8	7.0
Mode	280	200	0.0	5.6	51.0	43.0	6.8	6.9
Standard Deviation	108	76	2.1	3.6	15.4	15.3	1.9	1.8
Sample Variance	11663	5734	4.2	13.1	237.2	234.7	3.7	3.3
Kurtosis	-1	-1	0.8	2.6	-0.1	-0.2	-0.6	-0.9
Skewness	0	0	1.1	1.8	-0.5	-0.6	0.6	0.7
Range	370	253	6.8	12.0	54.0	52.0	6.4	5.4
Minimum	100	67	0.0	5.0	24.0	18.0	5.6	5.6
Maximum	470	320	6.8	17.0	78.0	70.0	12.0	11.0
Count	17	17	16	15	17	17	17	17
Confidence Level(95.0%)	56	39	1.1	2.0	7.9	7.9	1.0	0.9

ND = No Data

Provisional MMSD Water Quality Data

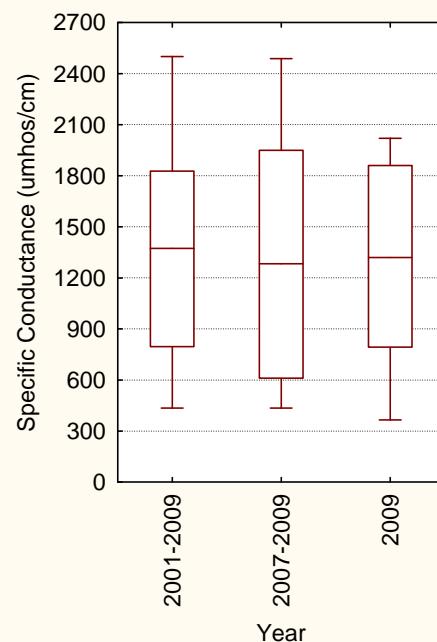
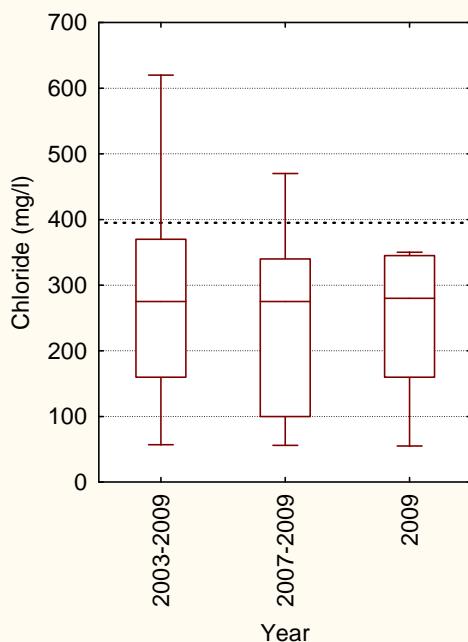
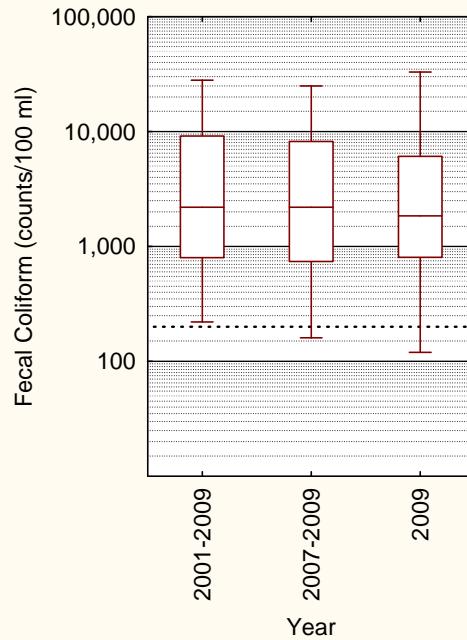
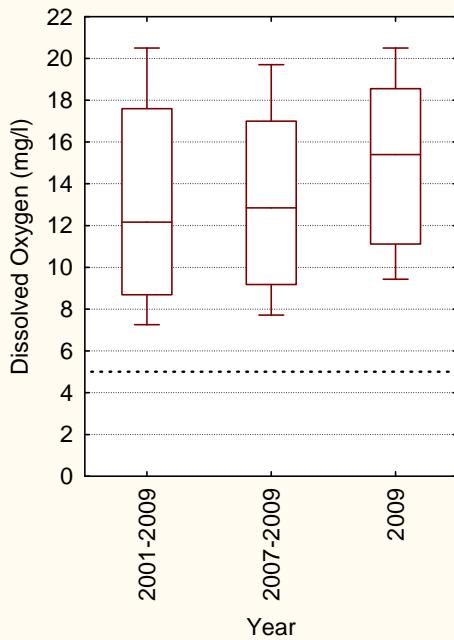


MMSD Water Quality Monitoring Program Data
 Honey Creek at Arthur Ave., Site HC-01



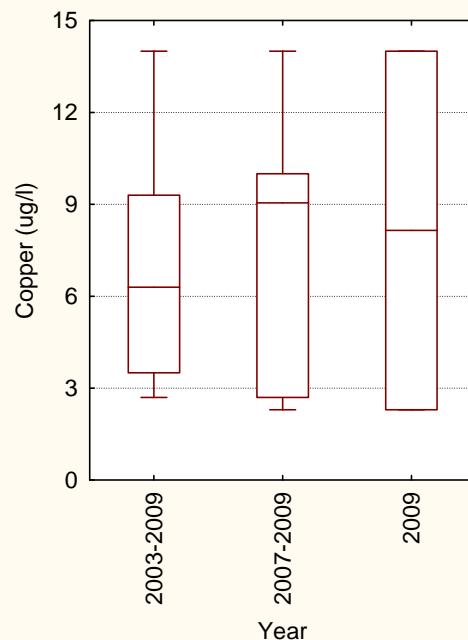
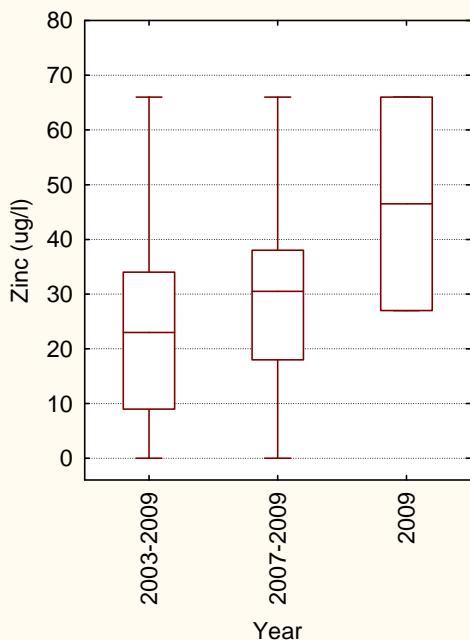
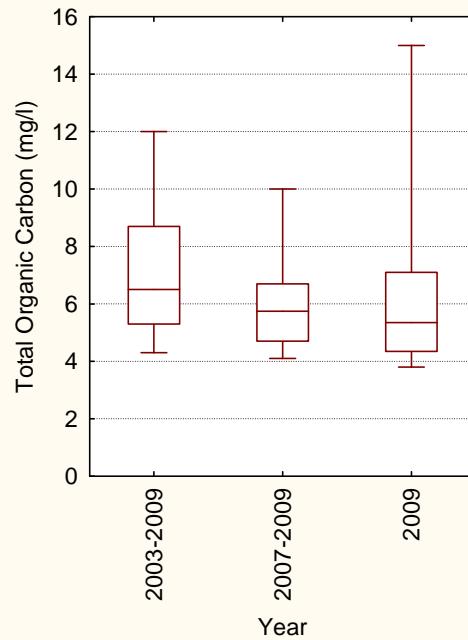
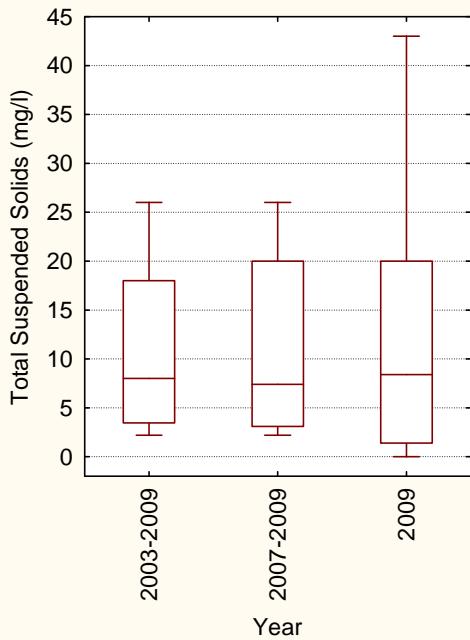
— Median □ 25%-75% ─ 10%-90%
 ----- WQ Standard/Criterion

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 - 2009

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	13.5	15.0	12.52	0.34	0.020	0.36	0.046	0.73	0.128	0.079	ND
Standard Error	0.1	2.0	1.5	5.69	0.10	0.005	0.10	0.019	0.11	0.030	0.021	ND
Median	8.4	14.8	15.4	5.05	0.35	0.016	0.37	0.027	0.76	0.110	0.062	ND
Mode	ND	ND	ND	ND	0.49	0.016	ND	0.000	1.10	ND	ND	ND
Standard Deviation	0.3	5.6	4.3	16.09	0.28	0.015	0.29	0.055	0.30	0.085	0.059	ND
Sample Variance	0.1	31.2	18.4	258.79	0.08	0.000	0.08	0.003	0.09	0.007	0.004	ND
Kurtosis	0.9	-1.3	-1.6	3.91	-1.20	0.162	-1.33	-0.298	-0.97	0.555	-0.608	ND
Skewness	-0.9	-0.6	-0.1	2.04	0.36	0.923	0.30	1.118	-0.15	0.970	0.618	ND
Range	1.0	14.2	11.1	46.29	0.76	0.043	0.79	0.140	0.83	0.252	0.170	0.00
Minimum	7.7	4.9	9.4	2.21	0.03	0.005	0.04	0.000	0.27	0.038	0.000	0.00
Maximum	8.7	19.1	20.5	48.50	0.79	0.048	0.82	0.140	1.10	0.290	0.170	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	4.7	3.6	13.45	0.23	0.013	0.24	0.046	0.25	0.071	0.049	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	732.5	653.1	5.7	12.6	11.6	1292	246.9	6329	3.3	3190
Standard Error	ND	ND	120.1	119.6	2.1	5.7	6.1	217	40.4	3919	0.3	1172
Median	ND	ND	700.0	686.7	3.6	8.4	3.2	1320	280.0	1850	3.3	2150
Mode	ND	ND	ND	ND	ND	ND	ND	ND	350.0	ND	ND	1500
Standard Deviation	ND	ND	339.7	316.4	5.6	15.1	17.3	612	114.3	11086	0.7	3315
Sample Variance	ND	ND	115364.3	100126.6	31.0	227.9	299.8	375106	13063.8	122898841	0.5	10990514
Kurtosis	ND	ND	-1.3	-1.0	-0.5	2.7	5.1	-1	-0.6	7	0.5	6
Skewness	ND	ND	0.0	0.0	0.9	1.6	2.2	0	-0.9	3	0.0	2
Range	0.0	0.0	950.0	884.6	15.0	43.0	50.6	1655	295.0	32880	2.4	10180
Minimum	0.0	0.0	250.0	207.0	0.0	0.0	1.1	365	55.0	120	2.1	820
Maximum	0.0	0.0	1200.0	1091.6	15.0	43.0	51.7	2020	350.0	33000	4.5	11000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	284.0	292.6	5.1	14.0	14.5	512	95.6	9268	0.6	2772

ND = No Data

Provisional MMSD Water Quality Data

81ST STREET AND ARTHUR AVENUE (MCCARTY PARK) - SITE 1
 HONEY CREEK
 WATER QUALITY DATA - 2009

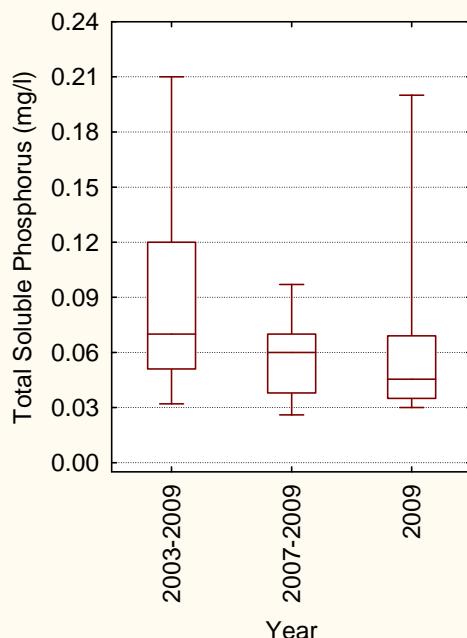
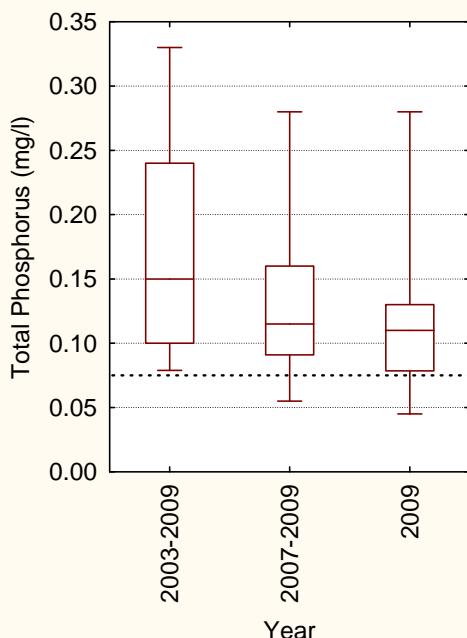
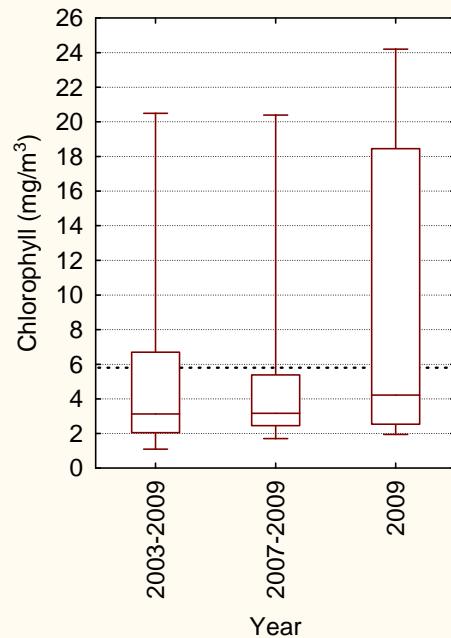
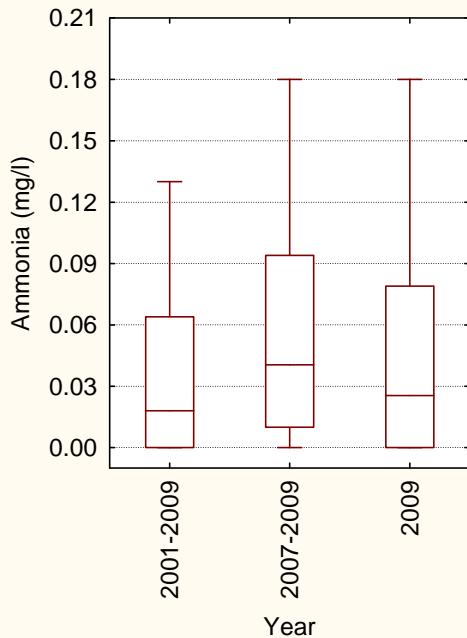
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	54.00	29.50	0.0	6.2	8.2	3.6	1.2	46.5	0.0	0.0	0.0	0.0
Standard Error	32.00	21.50	0.0	1.5	5.9	0.8	1.2	19.5	0.0	0.0	0.0	0.0
Median	54.00	29.50	0.0	6.2	8.2	3.6	1.2	46.5	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	ND	ND	ND	ND	ND	0.0	0.0	ND	0.0
Standard Deviation	45.25	30.41	0.0	2.1	8.3	1.1	1.7	27.6	0.0	0.0	ND	0.0
Sample Variance	2048.00	924.50	0.0	4.2	68.4	1.1	2.9	760.5	0.0	0.0	ND	0.0
Kurtosis	ND											
Skewness	ND											
Range	64.00	43.00	0.0	2.9	11.7	1.5	2.4	39.0	0.0	0.0	0.0	0.0
Minimum	22.00	8.00	0.0	4.7	2.3	2.8	0.0	27.0	0.0	0.0	0.0	0.0
Maximum	86.00	51.00	0.0	7.6	14.0	4.3	2.4	66.0	0.0	0.0	0.0	0.0
Count	2	2	2	2	2	2	2	2	2	2	1	2
Confidence Level(95.0%)	406.60	273.18	0.0	18.4	74.3	9.5	15.2	247.8	0.0	0.0	ND	0.0

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	260	176	3.9	12.7	47.0	40.3	6.6	6.1
Standard Error	171	30	1.9	4.0	5.6	6.5	1.3	1.2
Median	260	195	2.3	8.7	49.0	44.5	5.4	5.0
Mode	ND	220	0.0	ND	53.0	49.0	5.5	ND
Standard Deviation	241	85	5.5	11.3	15.7	18.4	3.7	3.5
Sample Variance	58141	7173	30.4	128.7	247.1	338.5	13.9	12.5
Kurtosis	ND	0	6.2	3.9	0.0	-0.2	4.4	4.0
Skewness	ND	0	2.4	2.0	0.5	-0.2	2.1	2.0
Range	341	264	17.0	33.4	48.0	58.0	11.2	10.7
Minimum	89	46	0.0	4.6	27.0	11.0	3.8	3.3
Maximum	430	310	17.0	38.0	75.0	69.0	15.0	14.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	2166	71	4.6	9.5	13.1	15.4	3.1	3.0

ND = No Data

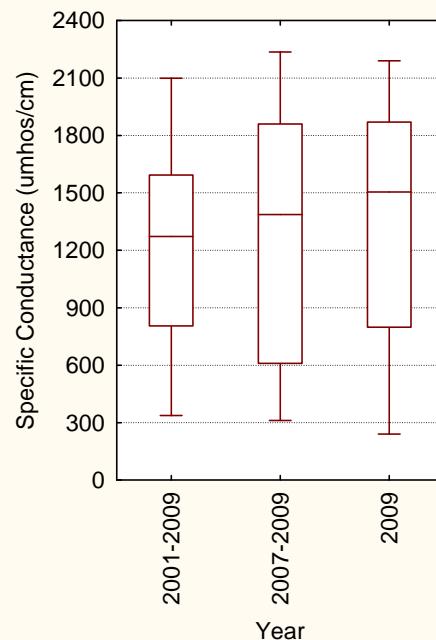
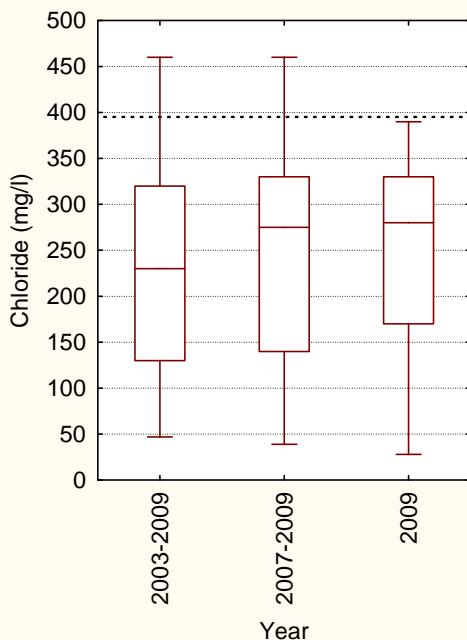
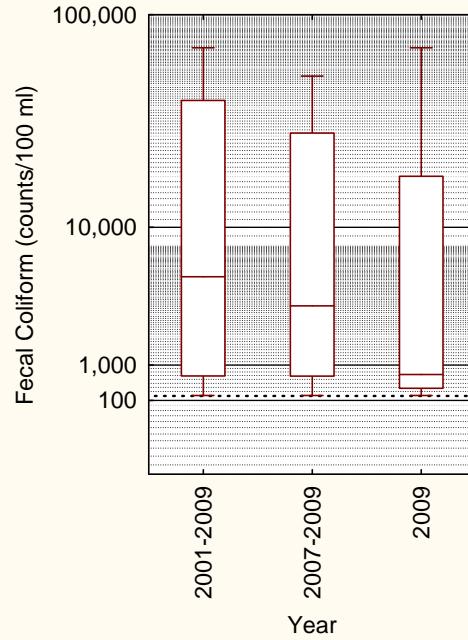
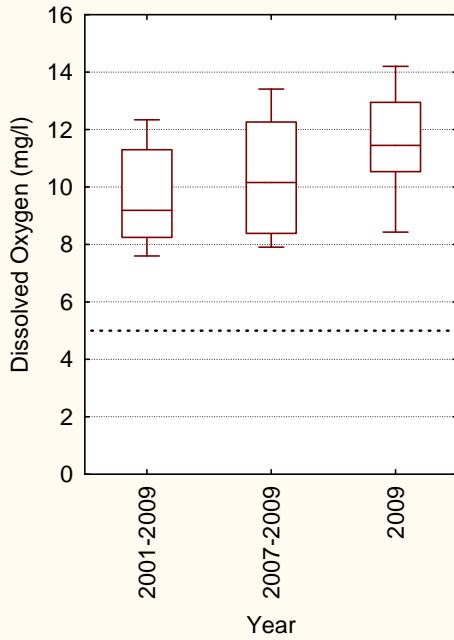
Provisional MMSD Water Quality Data

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



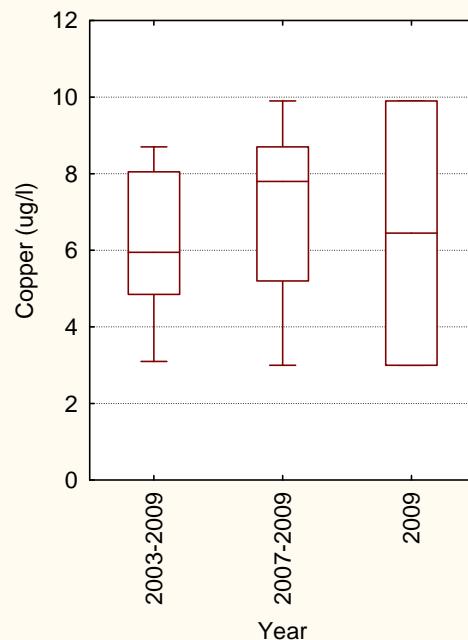
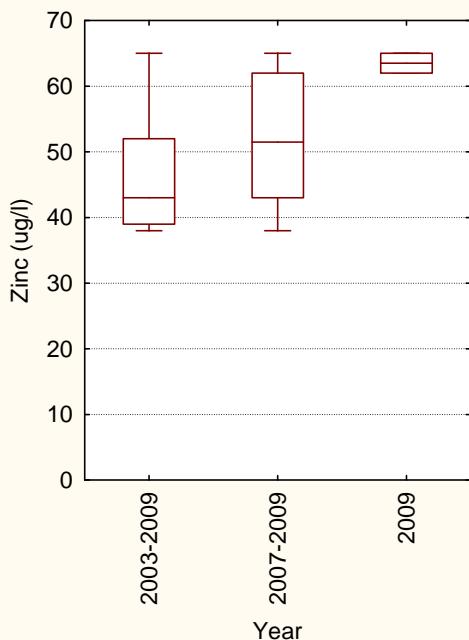
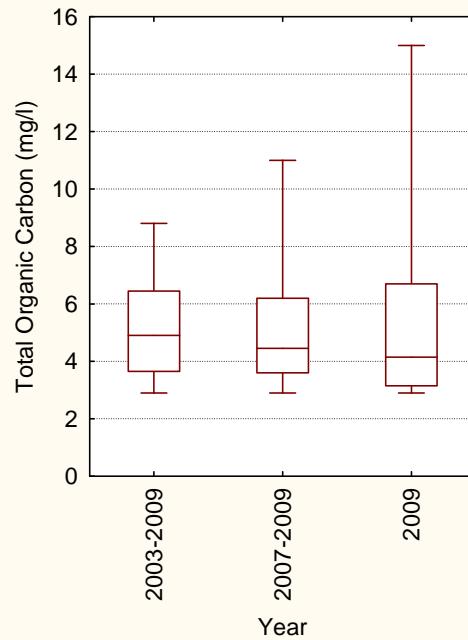
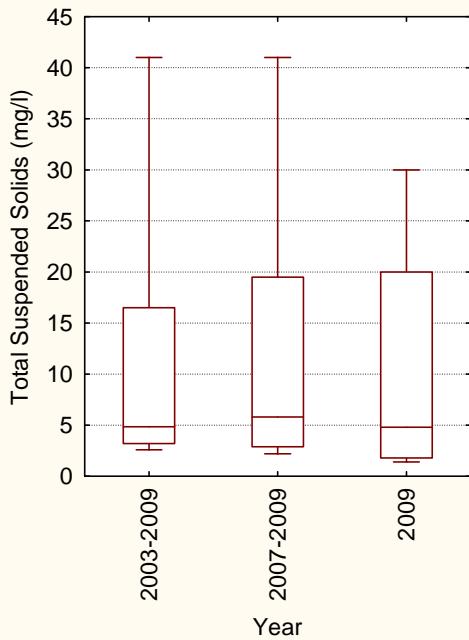
— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.5	11.6	9.57	0.68	0.020	0.70	0.049	0.63	0.120	0.066	ND
Standard Error	0.1	1.4	0.7	3.26	0.09	0.005	0.09	0.022	0.07	0.025	0.020	ND
Median	8.1	13.1	11.5	4.22	0.66	0.017	0.67	0.026	0.61	0.110	0.046	ND
Mode	8.1	ND	11.3	ND	ND	ND	ND	0.000	ND	0.130	ND	ND
Standard Deviation	0.4	4.1	1.9	9.21	0.25	0.015	0.25	0.063	0.20	0.071	0.056	ND
Sample Variance	0.1	16.7	3.5	84.83	0.06	0.000	0.06	0.004	0.04	0.005	0.003	ND
Kurtosis	-0.3	-0.4	-0.2	-1.48	1.88	-1.605	1.79	2.039	2.77	4.295	6.336	ND
Skewness	-0.6	-0.3	-0.3	0.80	1.20	0.503	1.13	1.510	0.29	1.818	2.448	ND
Range	1.1	12.5	5.8	22.25	0.80	0.037	0.80	0.180	0.72	0.235	0.170	0.00
Minimum	7.4	6.5	8.4	1.95	0.40	0.005	0.40	0.000	0.28	0.045	0.030	0.00
Maximum	8.5	19.0	14.2	24.20	1.20	0.042	1.20	0.180	1.00	0.280	0.200	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.3	3.4	1.6	7.70	0.21	0.012	0.21	0.053	0.17	0.060	0.047	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	751.3	676.8	4.5	10.4	9.3	1347	247.3	13689	3.2	8791
Standard Error	ND	ND	140.0	147.4	1.6	4.1	3.4	240	43.5	9229	0.3	5497
Median	ND	ND	835.0	808.6	3.6	4.8	3.0	1505	280.0	725	2.9	955
Mode	ND	ND	1100.0	ND	ND	ND	ND	300.0	ND	ND	ND	ND
Standard Deviation	ND	ND	395.9	390.0	4.3	10.9	9.6	678	123.1	26103	1.0	15548
Sample Variance	ND	ND	156755.4	152137.5	18.6	118.2	93.1	459299	15146.2	681369098	0.9	241738555
Kurtosis	ND	ND	-1.5	-1.7	-1.0	0.3	-1.8	-1	0.0	3	-0.1	2
Skewness	ND	ND	-0.5	-0.3	0.8	1.2	0.8	-1	-0.9	2	1.2	2
Range	0.0	0.0	1030.0	958.2	11.0	28.6	22.0	1949	362.0	70790	2.5	40820
Minimum	0.0	0.0	170.0	140.0	0.0	1.4	1.7	241	28.0	210	2.3	180
Maximum	0.0	0.0	1200.0	1098.2	11.0	30.0	23.7	2190	390.0	71000	4.9	41000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	331.0	360.7	4.0	10.1	8.1	567	102.9	21823	0.8	12998

ND = No Data

Provisional MMSD Water Quality Data

84TH STREET AND O'CONNER STREET - SITE 2
HONEY CREEK
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	53.00	28.20	0.0	4.4	6.5	2.8	0.0	63.5	0.0	0.0	6.2	0.0
Standard Error	35.00	21.80	0.0	0.1	3.5	0.1	0.0	1.5	0.0	0.0	0.9	0.0
Median	53.00	28.20	0.0	4.4	6.5	2.8	0.0	63.5	0.0	0.0	6.2	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	49.50	30.83	0.0	0.1	4.9	0.1	0.0	2.1	0.0	0.0	1.3	0.0
Sample Variance	2450.00	950.48	0.0	0.0	23.8	0.0	0.0	4.5	0.0	0.0	1.8	0.0
Kurtosis	ND											
Skewness	ND											
Range	70.00	43.60	0.0	0.2	6.9	0.2	0.0	3.0	0.0	0.0	1.9	0.0
Minimum	18.00	6.40	0.0	4.3	3.0	2.7	0.0	62.0	0.0	0.0	5.2	0.0
Maximum	88.00	50.00	0.0	4.5	9.9	2.9	0.0	65.0	0.0	0.0	7.1	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	444.72	277.00	0.0	1.3	43.8	1.3	0.0	19.1	0.0	0.0	12.1	0.0

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	246	191	3.6	10.7	49.3	43.5	5.7	5.4
Standard Error	175	35	1.6	4.5	6.7	7.8	1.5	1.4
Median	246	230	1.4	4.9	55.0	52.0	4.2	4.0
Mode	ND	250	0.0	0.0	ND	ND	2.9	ND
Standard Deviation	247	100	4.5	12.8	18.8	22.0	4.2	3.8
Sample Variance	60901	10023	19.9	162.7	355.1	483.9	17.3	14.8
Kurtosis	ND	-1	-1.2	1.9	-0.9	-0.6	3.8	3.8
Skewness	ND	0	0.8	1.5	-0.1	-0.5	2.0	2.0
Range	349	293	11.0	37.0	56.0	66.8	12.1	11.3
Minimum	71	37	0.0	0.0	22.0	7.2	2.9	2.7
Maximum	420	330	11.0	37.0	78.0	74.0	15.0	14.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	2217	84	3.7	10.7	15.8	18.4	3.5	3.2

ND = No Data

Provisional MMSD Water Quality Data

80TH STREET AND WISCONSIN AVENUE - SITE 3
 HONEY CREEK
 WATER QUALITY DATA - 2009

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	13.6	13.8	6.36	0.46	0.019	0.48	0.050	0.70	0.102	0.049	ND
Standard Error	0.1	1.8	1.5	1.50	0.10	0.005	0.10	0.022	0.17	0.034	0.023	ND
Median	8.3	13.8	13.2	4.37	0.43	0.014	0.46	0.027	0.70	0.071	0.031	ND
Mode	8.4	ND	ND	ND	ND	ND	ND	0.000	ND	ND	0.000	ND
Standard Deviation	0.4	5.0	4.3	4.24	0.28	0.015	0.29	0.061	0.47	0.089	0.065	ND
Sample Variance	0.2	25.1	18.4	17.99	0.08	0.000	0.08	0.004	0.22	0.008	0.004	ND
Kurtosis	1.3	-1.3	2.4	-0.50	-0.74	-1.398	-0.85	0.722	1.53	4.326	5.266	ND
Skewness	-0.8	-0.2	1.4	1.08	0.02	0.474	-0.05	1.186	0.64	1.996	2.204	ND
Range	1.4	13.4	13.6	10.84	0.81	0.040	0.83	0.170	1.60	0.266	0.200	0.00
Minimum	7.4	6.7	9.2	2.76	0.03	0.000	0.03	0.000	0.00	0.024	0.000	0.00
Maximum	8.8	20.1	22.8	13.60	0.84	0.040	0.86	0.170	1.60	0.290	0.200	0.00
Count	8	8	8	8	8	8	8	8	8	7	8	0
Confidence Level(95.0%)	0.3	4.2	3.6	3.55	0.23	0.012	0.24	0.051	0.39	0.082	0.055	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	762.5	676.3	4.5	9.5	8.6	1401	248.5	16518	3.2	11939
Standard Error	ND	ND	139.8	138.7	1.8	4.2	3.2	239	41.4	13526	0.3	9439
Median	ND	ND	835.0	750.0	3.2	5.6	2.5	1705	265.0	960	3.0	950
Mode	ND	ND	ND	ND	11.0	0.0	ND	ND	ND	200	2.3	220
Standard Deviation	ND	ND	395.4	366.9	4.8	11.1	9.2	676	117.1	38258	1.0	26697
Sample Variance	ND	ND	156307.1	134598.7	22.7	122.7	83.9	457197	13709.4	1463666907	0.9	712740927
Kurtosis	ND	ND	-0.9	-1.2	-1.3	0.9	-1.2	-1	0.6	7	0.5	7
Skewness	ND	ND	-0.4	-0.6	0.7	1.2	0.9	-1	-1.0	3	1.2	3
Range	0.0	0.0	1140.0	967.4	11.0	30.0	22.5	1912	352.0	109800	2.7	76780
Minimum	0.0	0.0	160.0	130.0	0.0	0.0	1.5	228	28.0	200	2.3	220
Maximum	0.0	0.0	1300.0	1097.4	11.0	30.0	24.0	2140	380.0	110000	5.0	77000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	330.5	339.3	4.4	10.2	7.7	565	97.9	31984	0.8	22319

ND = No Data

Provisional MMSD Water Quality Data

80TH STREET AND WISCONSIN AVENUE - SITE 3
 HONEY CREEK
 WATER QUALITY DATA - 2009

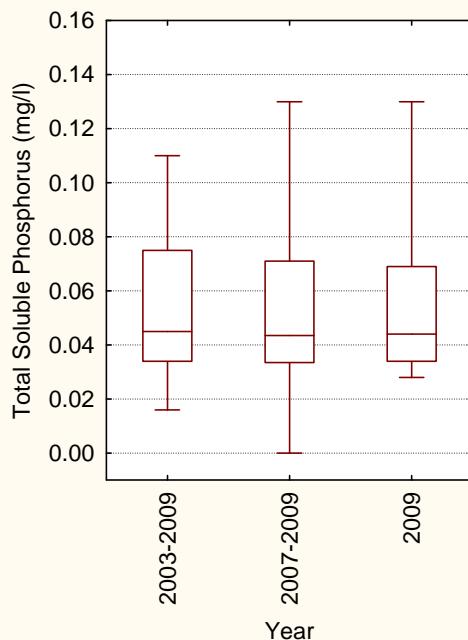
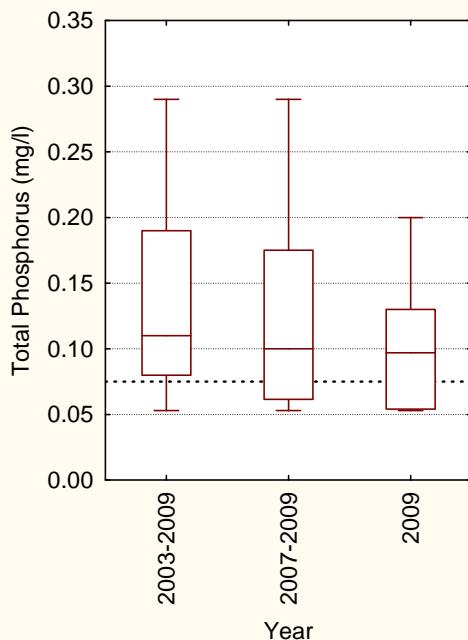
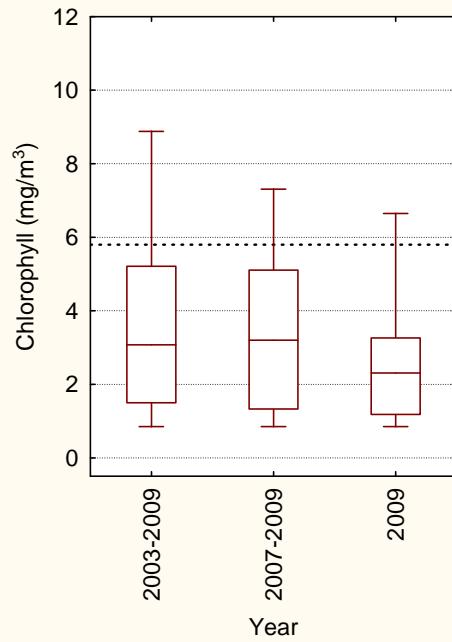
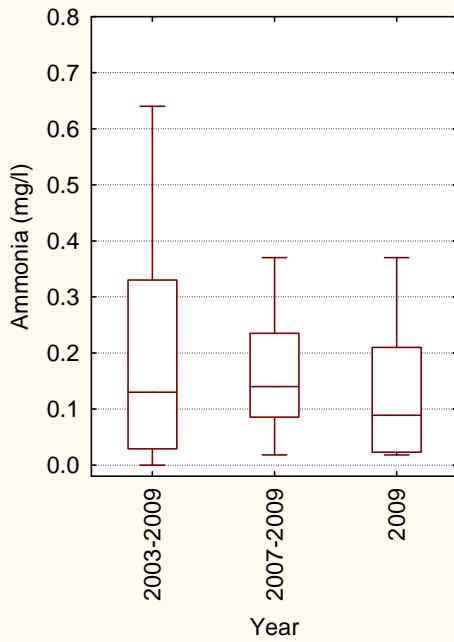
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units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	32.00	15.85	0.0	4.3	6.7	2.8	0.0	43.0	0.0	0.0	8.8	0.0
Standard Error	15.00	10.15	0.0	0.3	2.7	0.3	0.0	32.0	0.0	0.0	0.0	0.0
Median	32.00	15.85	0.0	4.3	6.7	2.8	0.0	43.0	0.0	0.0	8.8	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	21.21	14.35	0.0	0.4	3.8	0.4	0.0	45.3	0.0	0.0	ND	0.0
Sample Variance	450.00	206.05	0.0	0.2	14.6	0.1	0.0	2048.0	0.0	0.0	ND	0.0
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	30.00	20.30	0.0	0.6	5.4	0.5	0.0	64.0	0.0	0.0	0.0	0.0
Minimum	17.00	5.70	0.0	4.0	4.0	2.5	0.0	11.0	0.0	0.0	8.8	0.0
Maximum	47.00	26.00	0.0	4.6	9.4	3.0	0.0	75.0	0.0	0.0	8.8	0.0
Count	2	2	2	2	2	2	2	2	2	2	1	2
Confidence Level(95.0%)	190.59	128.97	0.0	3.8	34.3	3.2	0.0	406.6	0.0	0.0	ND	0.0

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	187	3.1	10.4	48.3	41.6	6.4	5.9
Standard Error	77	33	2.1	4.6	5.9	7.2	1.5	1.4
Median	143	215	0.0	7.3	53.5	49.0	5.0	4.5
Mode	ND	240	0.0	0.0	ND	ND	ND	4.5
Standard Deviation	109	94	5.9	12.9	16.8	20.5	4.3	4.0
Sample Variance	11858	8770	35.0	167.1	282.8	420.3	18.6	16.3
Kurtosis	ND	-1	5.7	2.7	-1.1	-0.5	3.7	4.4
Skewness	ND	0	2.3	1.6	-0.4	-0.7	1.9	2.1
Range	154	276	17.0	38.0	49.0	60.2	13.0	12.1
Minimum	66	34	0.0	0.0	22.0	5.8	3.0	2.9
Maximum	220	310	17.0	38.0	71.0	66.0	16.0	15.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	978	78	4.9	10.8	14.1	17.1	3.6	3.4

ND = No Data

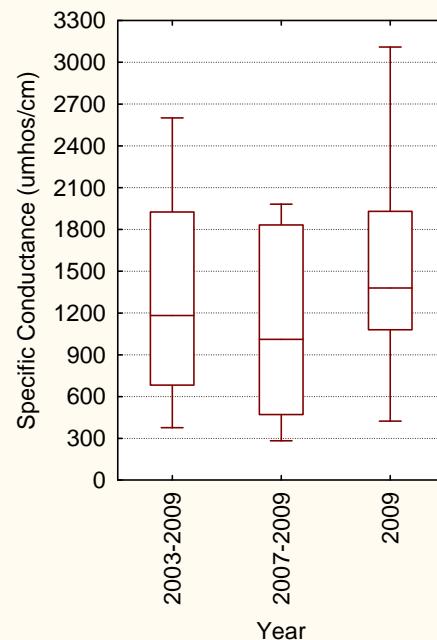
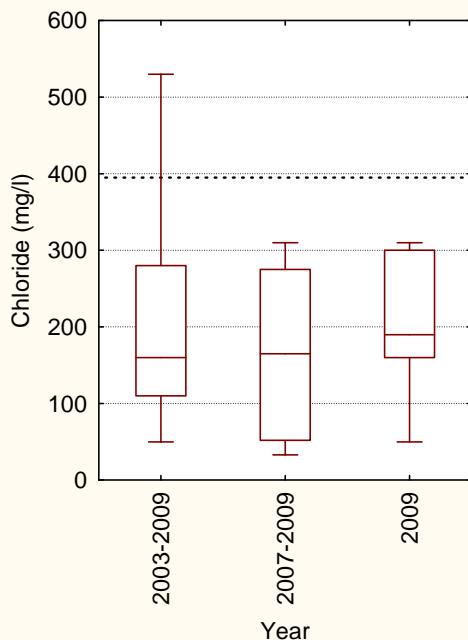
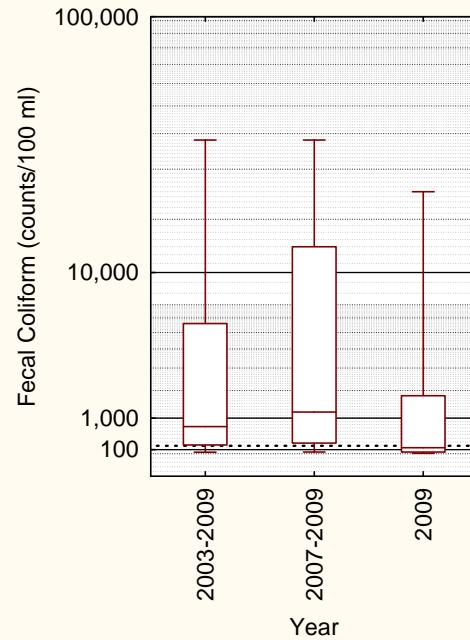
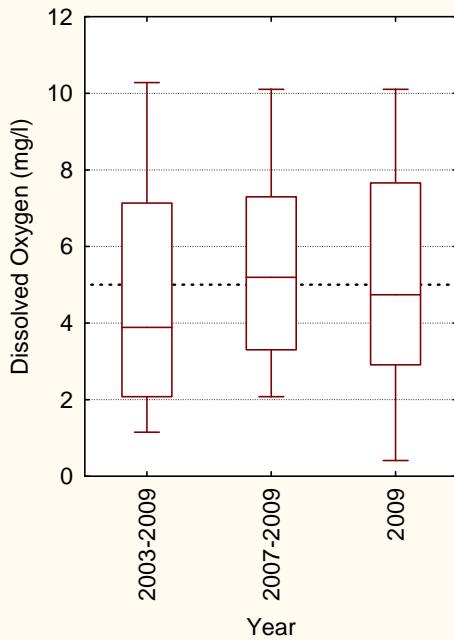
Provisional MMSD Water Quality Data

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



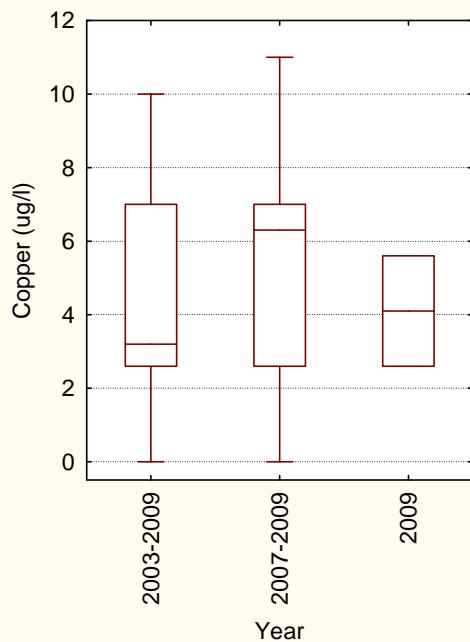
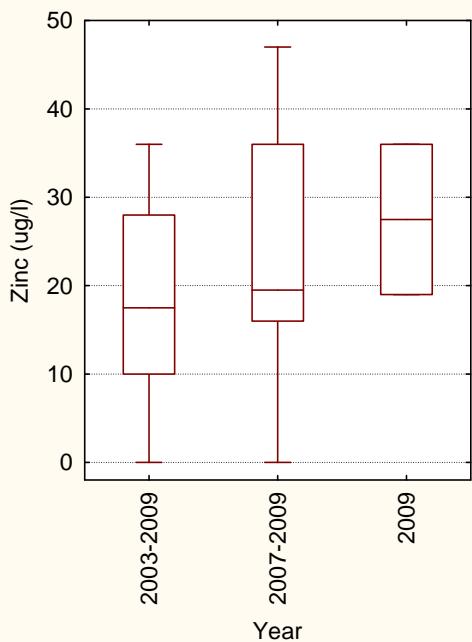
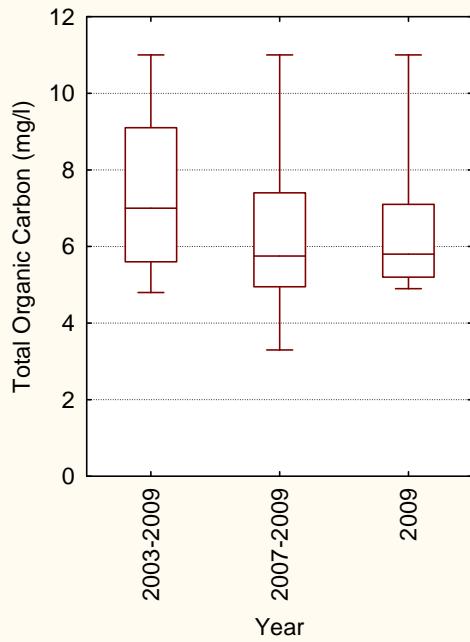
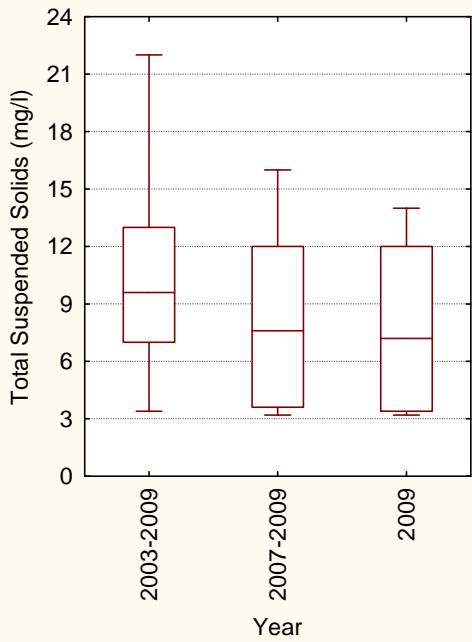
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.6	5.1	2.80	0.50	0.022	0.53	0.124	0.82	0.100	0.057	ND
Standard Error	0.1	1.8	1.2	0.73	0.20	0.004	0.20	0.049	0.13	0.020	0.013	ND
Median	7.4	11.4	4.7	2.31	0.25	0.024	0.27	0.089	0.80	0.097	0.044	ND
Mode	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	0.2	4.7	3.2	1.92	0.53	0.010	0.54	0.129	0.34	0.053	0.035	ND
Sample Variance	0.1	22.6	10.1	3.69	0.28	0.000	0.29	0.017	0.12	0.003	0.001	ND
Kurtosis	1.3	-1.5	0.0	2.85	-0.28	0.747	-0.68	1.384	-0.21	1.512	3.351	ND
Skewness	0.0	0.1	0.2	1.49	1.21	-0.085	1.13	1.341	0.82	1.277	1.771	ND
Range	0.8	12.5	9.7	5.80	1.33	0.031	1.33	0.352	0.92	0.147	0.102	0.00
Minimum	7.0	6.4	0.4	0.85	0.07	0.007	0.07	0.018	0.48	0.053	0.028	0.00
Maximum	7.8	18.9	10.1	6.65	1.40	0.038	1.40	0.370	1.40	0.200	0.130	0.00
Count	7	7	7	7	7	7	7	7	7	7	7	0
Confidence Level(95.0%)	0.2	4.4	2.9	1.78	0.49	0.009	0.50	0.120	0.31	0.049	0.033	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	686.4	659.7	3.2	7.8	9.3	1582	210.0	3499	2.4	4005
Standard Error	ND	ND	133.3	156.8	0.8	1.9	2.5	317	35.3	3093	0.4	3668
Median	ND	ND	800.0	746.1	2.9	7.2	7.3	1380	190.0	150	2.2	190
Mode	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	352.7	384.0	1.9	4.8	6.5	839	93.5	8183	1.1	9704
Sample Variance	ND	ND	124372.6	147426.7	3.5	22.6	42.8	703687	8733.3	66956409	1.2	94170915
Kurtosis	ND	ND	-0.4	-1.1	-2.6	-2.5	1.4	2	-0.2	7	0.4	7
Skewness	ND	ND	-0.7	-0.5	0.1	0.3	1.4	1	-0.6	3	0.7	3
Range	0.0	0.0	1005.0	1003.0	4.2	10.8	18.2	2687	260.0	21990	3.3	25987
Minimum	0.0	0.0	95.0	85.0	1.0	3.2	3.6	423	50.0	10	1.0	13
Maximum	0.0	0.0	1100.0	1088.0	5.2	14.0	21.8	3110	310.0	22000	4.3	26000
Count	0	0	7	6	6	6	7	7	7	7	7	7
Confidence Level(95.0%)	ND	ND	326.2	402.9	2.0	5.0	6.1	776	86.4	7568	1.0	8975

ND = No Data

Provisional MMSD Water Quality Data

45TH STREET AND LOOMIS ROAD - SITE 4
HONEY CREEK
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	58.00	30.00	0.0	5.4	4.1	3.6	0.0	27.5	0.0	0.0	4.6	0.0
Standard Error	28.00	17.00	0.0	0.1	1.5	0.6	0.0	8.5	0.0	0.0	4.6	0.0
Median	58.00	30.00	0.0	5.4	4.1	3.6	0.0	27.5	0.0	0.0	4.6	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	39.60	24.04	0.0	0.1	2.1	0.8	0.0	12.0	0.0	0.0	6.5	0.0
Sample Variance	1568.00	578.00	0.0	0.0	4.5	0.6	0.0	144.5	0.0	0.0	42.3	0.0
Kurtosis	ND											
Skewness	ND											
Range	56.00	34.00	0.0	0.1	3.0	1.1	0.0	17.0	0.0	0.0	9.2	0.0
Minimum	30.00	13.00	0.0	5.3	2.6	3.0	0.0	19.0	0.0	0.0	0.0	0.0
Maximum	86.00	47.00	0.0	5.4	5.6	4.1	0.0	36.0	0.0	0.0	9.2	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	355.77	216.01	0.0	0.6	19.1	7.0	0.0	108.0	0.0	0.0	58.4	0.0

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	270	239	3.3	11.3	62.0	55.3	6.6	6.3
Standard Error	140	43	1.9	2.8	9.4	9.8	0.8	0.7
Median	270	250	0.0	8.5	65.0	58.0	5.8	5.7
Mode	ND	ND	0.0	ND	ND	ND	ND	ND
Standard Deviation	198	113	4.9	7.5	25.0	25.8	2.1	1.7
Sample Variance	39200	12657	24.3	55.7	624.0	665.6	4.4	3.0
Kurtosis	ND	-1	0.1	4.2	-1.1	-1.3	3.9	4.0
Skewness	ND	-1	1.3	1.9	-0.6	-0.5	1.9	1.9
Range	280	281	12.0	22.9	66.0	66.0	6.1	5.2
Minimum	130	79	0.0	4.1	25.0	20.0	4.9	4.8
Maximum	410	360	12.0	27.0	91.0	86.0	11.0	10.0
Count	2	7	7	7	7	7	7	7
Confidence Level(95.0%)	1779	104	4.6	6.9	23.1	23.9	1.9	1.6

ND = No Data

Provisional MMSD Water Quality Data

MARCY LANE AND 61ST STREET - SITE 5
HONEY CREEK
WATER QUALITY DATA - 2009

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	12.5	9.9	6.44	0.40	0.021	0.42	0.069	0.70	0.124	0.082	ND
Standard Error	0.1	1.7	0.9	1.51	0.09	0.004	0.09	0.025	0.08	0.035	0.028	ND
Median	8.0	12.8	9.2	5.72	0.45	0.016	0.48	0.035	0.66	0.105	0.069	ND
Mode	7.8	ND	ND	ND	ND	0.014	0.10	ND	ND	ND	ND	ND
Standard Deviation	0.2	4.9	2.6	4.28	0.25	0.013	0.26	0.072	0.23	0.100	0.079	ND
Sample Variance	0.0	24.1	6.8	18.28	0.06	0.000	0.07	0.005	0.05	0.010	0.006	ND
Kurtosis	-0.5	-1.6	-0.2	-0.45	-1.42	2.577	-1.45	-1.060	-2.14	4.498	4.404	ND
Skewness	-0.2	-0.4	0.5	0.94	0.02	1.583	-0.05	0.870	0.24	1.936	1.964	ND
Range	0.6	11.9	7.9	11.60	0.65	0.038	0.66	0.180	0.54	0.315	0.241	0.00
Minimum	7.6	5.8	6.5	1.90	0.09	0.010	0.10	0.000	0.46	0.035	0.019	0.00
Maximum	8.2	17.7	14.4	13.50	0.74	0.048	0.76	0.180	1.00	0.350	0.260	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	4.1	2.2	3.57	0.21	0.011	0.22	0.060	0.19	0.084	0.066	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	597.5	532.8	4.0	12.9	13.9	1090	201.3	12444	2.9	3616
Standard Error	ND	ND	68.4	55.5	1.3	4.5	6.2	123	23.6	10813	0.5	1756
Median	ND	ND	625.0	593.8	3.6	8.8	7.9	1125	225.0	1385	3.0	1885
Mode	ND	ND	ND	ND	3.6	ND	ND	ND	240.0	ND	ND	ND
Standard Deviation	ND	ND	193.6	146.9	3.3	12.0	17.6	349	66.6	30584	1.3	4968
Sample Variance	ND	ND	37478.6	21573.2	11.0	143.5	310.3	121817	4441.1	935404276	1.7	24680884
Kurtosis	ND	ND	0.6	-1.8	-0.1	1.6	5.7	-1	-1.3	8	1.7	5
Skewness	ND	ND	0.6	-0.5	0.8	1.5	2.3	0	-0.4	3	-0.6	2
Range	0.0	0.0	600.0	356.0	9.6	33.2	53.3	1044	190.0	87997	4.5	14890
Minimum	0.0	0.0	360.0	324.0	0.0	2.8	1.9	586	100.0	3	0.5	110
Maximum	0.0	0.0	960.0	680.0	9.6	36.0	55.2	1630	290.0	88000	4.9	15000
Count	0	0	8	7	7	7	8	8	8	8	8	8
Confidence Level(95.0%)	ND	ND	161.8	135.8	3.1	11.1	14.7	292	55.7	25569	1.1	4153

ND = No Data

Provisional MMSD Water Quality Data

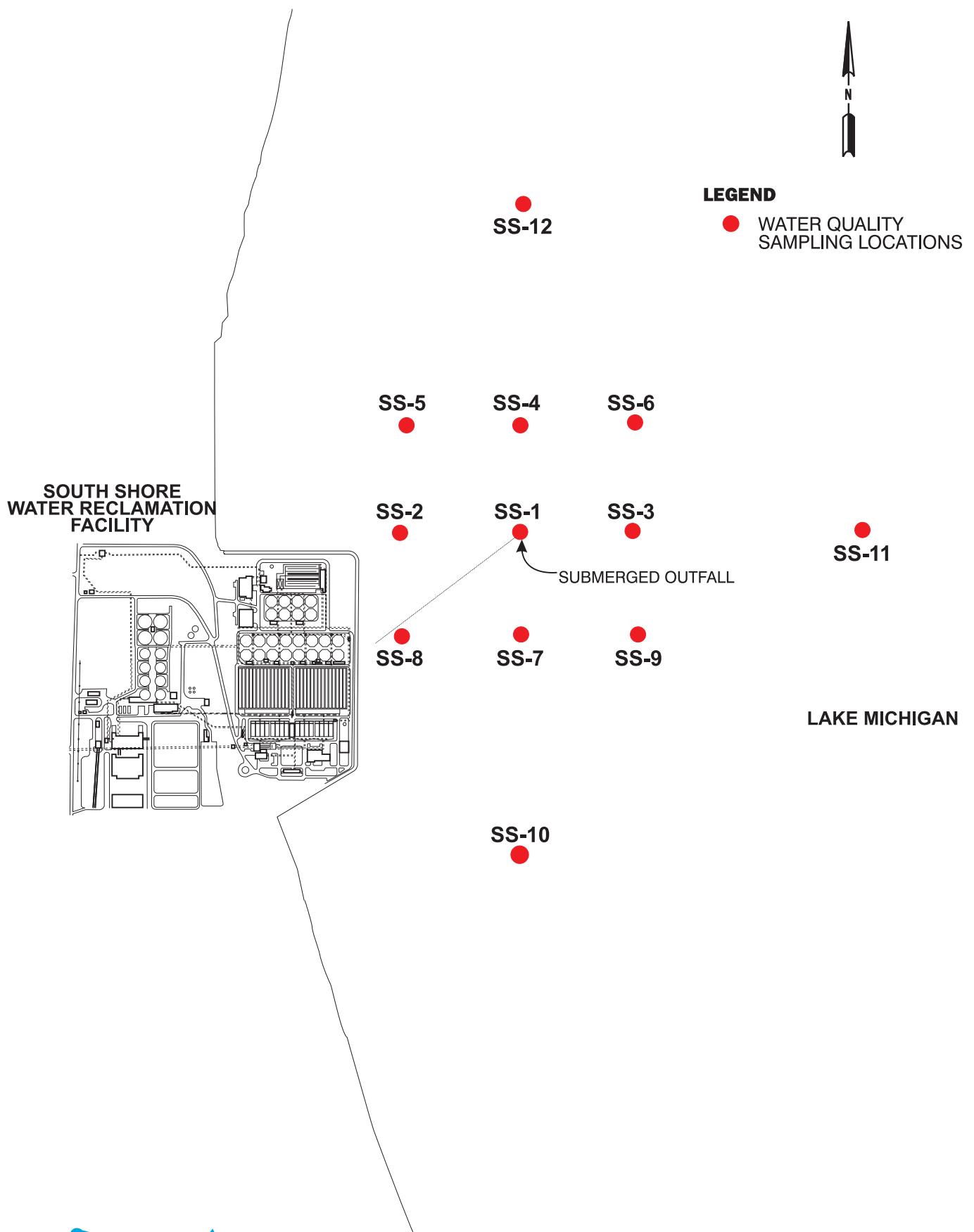
MARCY LANE AND 61ST STREET - SITE 5
HONEY CREEK
WATER QUALITY DATA - 2009

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	41.50	21.50	0.0	5.7	6.7	3.9	0.0	40.0	0.0	0.0	2.8	0.0
Standard Error	8.50	7.50	0.0	0.5	2.8	0.1	0.0	16.0	0.0	0.0	2.8	0.0
Median	41.50	21.50	0.0	5.7	6.7	3.9	0.0	40.0	0.0	0.0	2.8	0.0
Mode	ND	ND	0.0	ND	ND	ND	0.0	ND	0.0	0.0	ND	0.0
Standard Deviation	12.02	10.61	0.0	0.7	4.0	0.1	0.0	22.6	0.0	0.0	4.0	0.0
Sample Variance	144.50	112.50	0.0	0.5	15.7	0.0	0.0	512.0	0.0	0.0	15.7	0.0
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	17.00	15.00	0.0	1.0	5.6	0.2	0.0	32.0	0.0	0.0	5.6	0.0
Minimum	33.00	14.00	0.0	5.2	3.9	3.8	0.0	24.0	0.0	0.0	0.0	0.0
Maximum	50.00	29.00	0.0	6.2	9.5	4.0	0.0	56.0	0.0	0.0	5.6	0.0
Count	2	2	2	2	2	2	2	2	2	2	2	2
Confidence Level(95.0%)	108.00	95.30	0.0	6.4	35.6	1.3	0.0	203.3	0.0	0.0	35.6	0.0

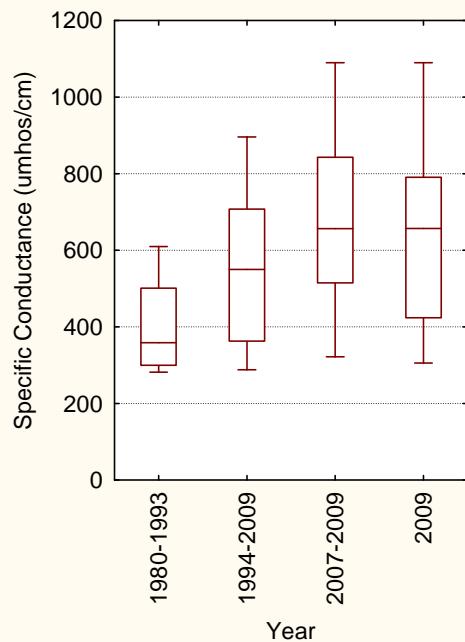
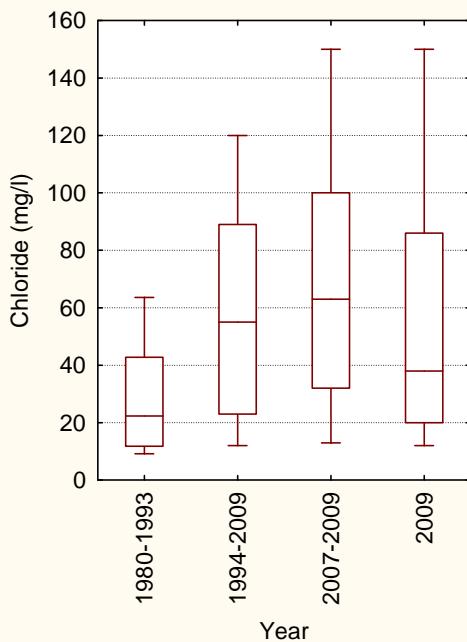
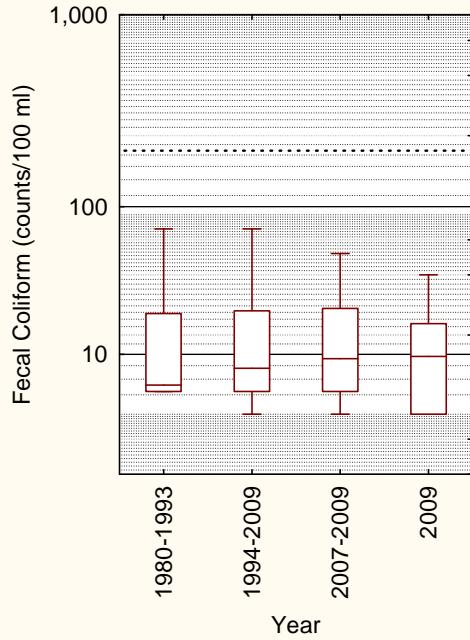
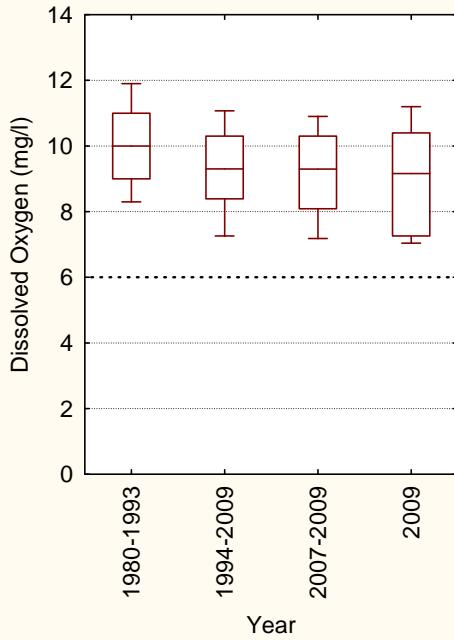
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	190	191	2.2	11.0	50.3	44.1	6.2	5.9
Standard Error	50	27	1.2	2.6	5.6	6.0	0.8	0.7
Median	190	170	1.2	8.3	46.5	41.0	6.0	5.8
Mode	ND	170	0.0	ND	ND	ND	ND	ND
Standard Deviation	71	77	3.4	7.2	16.0	16.8	2.3	2.0
Sample Variance	5000	5870	11.3	52.2	255.1	283.3	5.1	4.2
Kurtosis	ND	0	5.0	3.6	0.8	0.5	3.2	2.3
Skewness	ND	1	2.1	1.8	1.2	0.9	1.3	1.0
Range	100	230	9.9	22.4	48.0	53.0	7.8	7.0
Minimum	140	90	0.0	4.6	33.0	22.0	3.2	3.0
Maximum	240	320	9.9	27.0	81.0	75.0	11.0	10.0
Count	2	8	8	8	8	8	8	8
Confidence Level(95.0%)	635	64	2.8	6.0	13.4	14.1	1.9	1.7

ND = No Data

Provisional MMSD Water Quality Data

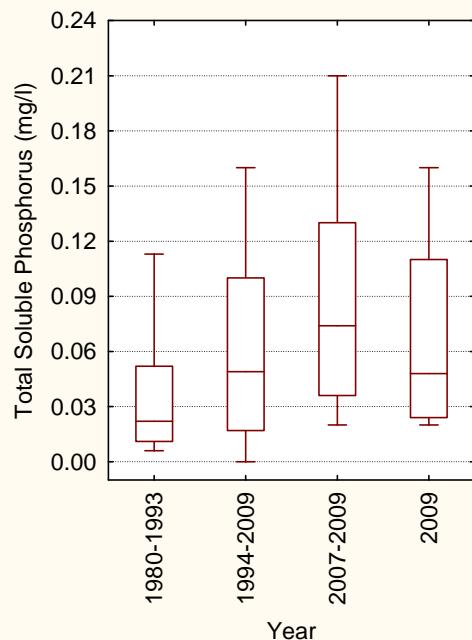
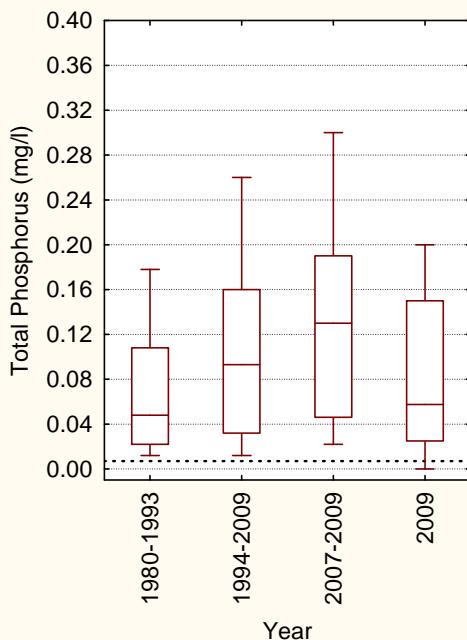
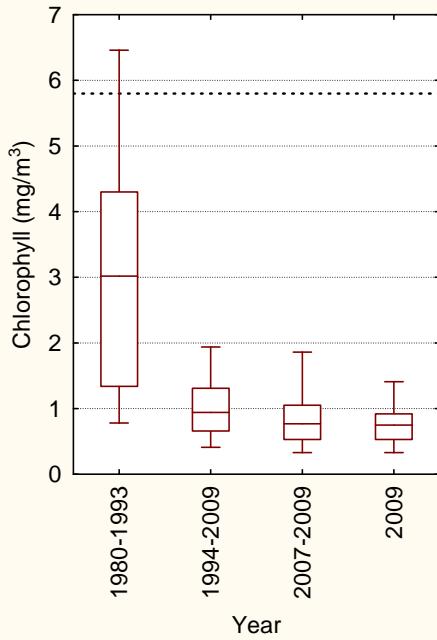
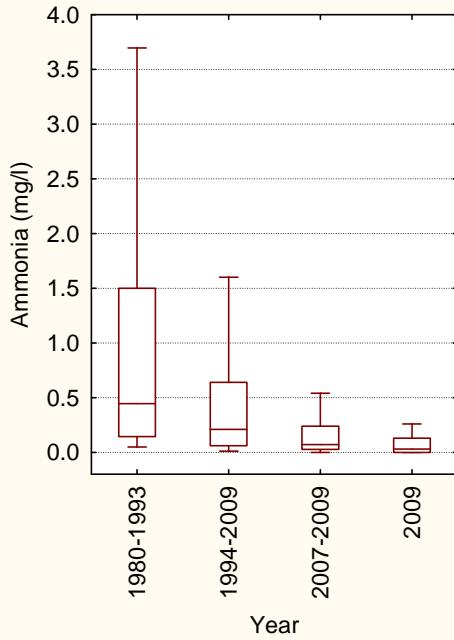


MMSD Water Quality Monitoring Program Data
South Shore, Site SS-01



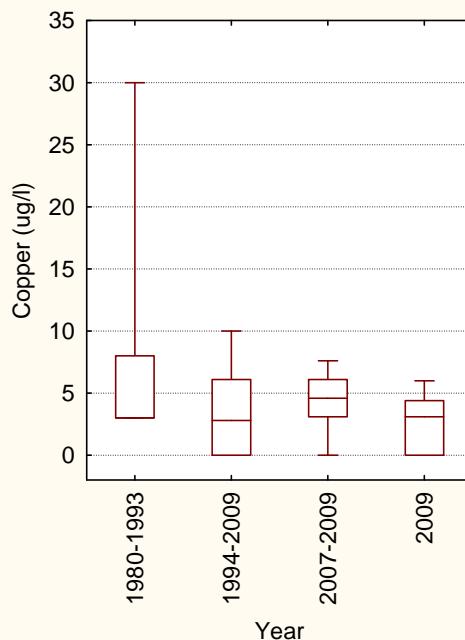
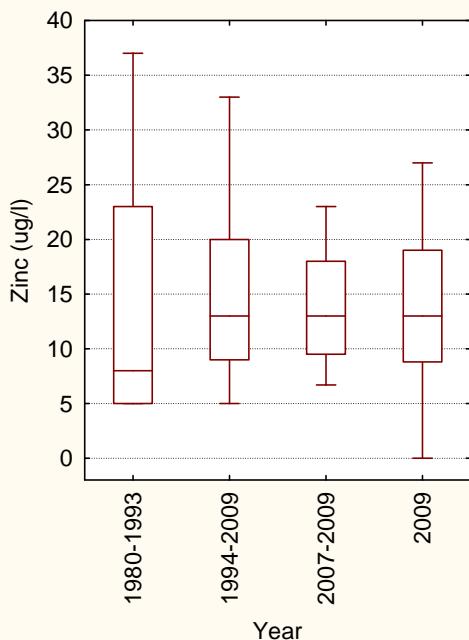
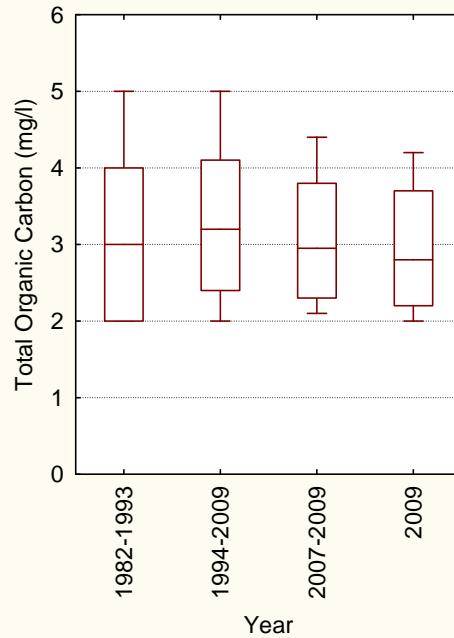
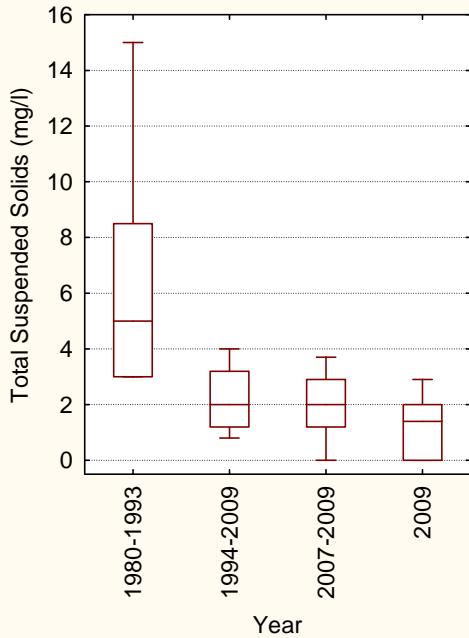
— Median □ 25%-75% I 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	13.2	9.1	0.85	2.63	0.039	2.67	0.076	0.50	0.088	0.074	2.59
Standard Error	0.1	0.6	0.3	0.09	0.45	0.012	0.44	0.017	0.08	0.013	0.011	0.20
Median	7.4	12.4	9.2	0.75	1.80	0.014	1.80	0.030	0.36	0.058	0.048	2.50
Mode	7.4	10.4	10.4	0.70	2.30	0.007	2.50	0.000	0.00	0.000	0.160	2.20
Standard Deviation	0.4	4.0	1.6	0.56	2.78	0.076	2.77	0.109	0.49	0.078	0.069	1.25
Sample Variance	0.2	15.8	2.5	0.32	7.75	0.006	7.69	0.012	0.24	0.006	0.005	1.56
Kurtosis	1.0	-0.7	-1.3	6.61	6.18	8.453	6.20	3.823	1.58	-0.302	6.839	0.25
Skewness	1.2	-0.1	-0.2	2.29	2.14	2.997	2.13	1.976	1.15	0.733	2.109	0.52
Range	1.8	15.1	5.3	2.90	13.70	0.336	13.68	0.470	2.10	0.300	0.360	5.65
Minimum	7.0	4.9	6.4	0.16	0.30	0.004	0.32	0.000	0.00	0.000	0.000	0.55
Maximum	8.8	20.0	11.6	3.06	14.00	0.340	14.00	0.470	2.10	0.300	0.360	6.20
Count	39	39	39	39	39	39	39	39	39	38	38	39
Confidence Level(95.0%)	0.1	1.3	0.5	0.18	0.90	0.025	0.90	0.035	0.16	0.026	0.023	0.40

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	3.9	12.0	272.3	270.8	0.5	1.5	1.4	673	61.9	14	0.8	ND
Standard Error	0.5	0.5	28.0	27.9	0.2	0.4	0.1	46	9.0	5	0.2	ND
Median	2.9	12.5	230.0	225.3	0.0	1.4	1.1	657	38.0	10	1.0	ND
Mode	2.5	13.0	180.0	ND	0.0	0.0	2.2	601	12.0	0	0.0	ND
Standard Deviation	1.9	1.6	100.8	100.6	0.7	1.4	0.7	284	56.0	17	0.7	ND
Sample Variance	3.5	2.7	10169.2	10114.2	0.5	2.0	0.5	80773	3135.8	299	0.4	ND
Kurtosis	-1.1	7.1	0.1	0.2	0.0	0.8	-0.8	1	2.8	2	-1.6	ND
Skewness	0.6	-2.5	0.7	0.8	1.0	0.9	0.7	1	1.6	1	-0.1	ND
Range	5.5	5.7	360.0	360.0	2.1	4.7	2.5	1121	248.0	54	1.7	0
Minimum	2.0	7.3	130.0	130.0	0.0	0.0	0.5	289	12.0	0	0.0	0
Maximum	7.5	13.0	490.0	490.0	2.1	4.7	3.0	1410	260.0	54	1.7	0
Count	13	12	13	13	12	13	39	39	39	12	12	0
Confidence Level(95.0%)	1.1	1.0	60.9	60.8	0.5	0.8	0.2	92	18.2	11	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 1
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	41.13	15.46	0.0	3.6	3.0	1.8	0.0	13.9	0.1	0.4	1.5	ND
Standard Error	1.24	0.65	0.0	0.1	0.3	0.3	0.0	1.5	0.0	0.2	0.6	ND
Median	39.00	14.00	0.0	3.5	3.1	2.0	0.0	13.0	0.0	0.0	0.0	ND
Mode	36.00	13.00	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	7.76	4.08	0.0	0.7	2.1	1.7	0.0	9.6	0.3	0.9	2.9	ND
Sample Variance	60.22	16.62	0.0	0.5	4.4	2.9	0.0	92.9	0.1	0.9	8.7	ND
Kurtosis	0.32	0.48	ND	11.6	-1.1	0.5	ND	2.1	17.4	1.8	1.1	ND
Skewness	0.98	1.04	ND	2.6	-0.2	0.8	ND	1.1	4.3	1.9	1.7	ND
Range	28.00	15.00	0.0	4.5	6.4	6.3	0.0	42.0	1.3	2.8	8.8	0.0
Minimum	32.00	11.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	60.00	26.00	0.0	7.0	6.4	6.3	0.0	42.0	1.3	2.8	8.8	0.0
Count	39	39	39	39	39	39	39	39	39	39	28	0
Confidence Level(95.0%)	2.52	1.32	0.0	0.2	0.7	0.6	0.0	3.1	0.1	0.3	1.1	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	167	118	1.0	3.9	31.1	28.1	3.0	ND
Standard Error	6	2	0.4	0.3	0.8	0.7	0.2	ND
Median	160	120	0.0	4.0	30.0	27.0	2.8	ND
Mode	180	110	0.0	3.7	26.0	24.0	2.2	ND
Standard Deviation	37	16	1.5	1.0	5.1	4.5	1.1	ND
Sample Variance	1339	241	2.1	1.0	25.9	20.5	1.2	ND
Kurtosis	0	0	-0.7	-1.1	0.2	0.6	3.9	ND
Skewness	1	1	1.1	0.0	1.0	0.8	1.7	ND
Range	140	60	3.7	3.1	20.0	22.0	5.1	0.0
Minimum	120	100	0.0	2.5	25.0	19.0	1.9	0.0
Maximum	260	160	3.7	5.6	45.0	41.0	7.0	0.0
Count	39	39	12	12	39	39	39	0
Confidence Level(95.0%)	12	5	0.9	0.7	1.6	1.5	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 2
WATER QUALITY DATA - 2009

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	10.4	0.90	0.66	0.011	0.67	0.028	0.13	0.020	0.021	1.64
Standard Error	0.0	0.6	0.3	0.14	0.08	0.002	0.08	0.007	0.03	0.003	0.002	0.11
Median	8.1	11.3	11.0	0.82	0.50	0.008	0.50	0.015	0.00	0.024	0.021	1.60
Mode	8.2	20.0	11.0	ND	1.30	0.000	0.50	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.3	4.0	1.6	0.52	0.50	0.010	0.51	0.046	0.21	0.019	0.015	0.68
Sample Variance	0.1	16.15	ND762483	2.7	0.27	0.25	0.000	0.26	0.002	0.04	0.000	0.46
Kurtosis	0.7	-0.2	0.0	0.33	17.46	2.720	18.43	11.434	-0.15	1.470	-0.658	-0.87
Skewness	-0.3	0.1	-0.9	0.92	3.72	1.813	3.83	3.087	1.18	0.861	-0.110	0.38
Range	1.3	15.5	6.1	1.77	2.91	0.040	3.00	0.240	0.64	0.082	0.055	2.38
Minimum	7.4	4.5	6.6	0.25	0.29	0.000	0.30	0.000	0.00	0.000	0.000	0.62
Maximum	8.7	20.0	12.7	2.02	3.20	0.040	3.30	0.240	0.64	0.082	0.055	3.00
Count	39	39	39	13	39	39	39	39	39	39	39	39
Confidence Level(95.0%)	0.1	1.3	0.5	0.31	0.16	0.003	0.17	0.015	0.07	0.006	0.005	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	4.5	10.2	185.4	184.1	0.5	1.3	1.7	351	20.5	14	0.6	ND
Standard Error	0.8	0.3	12.6	12.8	0.3	0.4	0.2	10	1.9	8	0.2	ND
Median	4.2	10.0	190.0	190.0	0.0	1.3	1.2	325	16.0	3	0.5	ND
Mode	5.0	10.0	190.0	190.0	0.0	0.0	ND	290	12.0	0	0.0	ND
Standard Deviation	2.7	1.0	45.6	46.1	0.9	1.6	1.2	63	11.8	28	0.7	ND
Sample Variance	7.3	1.0	2076.9	2128.0	0.8	2.4	1.3	3981	138.9	765	0.5	ND
Kurtosis	0.6	6.9	1.9	1.8	-0.3	0.2	-1.0	0	9.4	7	-0.5	ND
Skewness	1.1	2.5	0.5	0.6	1.3	1.0	0.7	1	2.6	3	0.9	ND
Range	8.4	3.6	190.0	191.8	2.0	4.7	3.5	230	62.0	97	2.0	0
Minimum	1.6	9.4	100.0	98.2	0.0	0.0	0.5	287	11.0	0	0.0	0
Maximum	10.0	13.0	290.0	290.0	2.0	4.7	4.1	517	73.0	97	2.0	0
Count	13	12	13	13	12	13	39	39	39	13	13	0
Confidence Level(95.0%)	1.6	0.6	27.5	27.9	0.6	0.9	0.4	20	3.8	17	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 2
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.38	12.54	0.0	3.2	2.5	0.9	0.0	13.3	0.0	0.2	2.8	ND
Standard Error	0.70	0.33	0.0	0.1	0.6	0.3	0.0	4.3	0.0	0.2	1.2	ND
Median	35.00	12.00	0.0	3.2	3.3	0.0	0.0	8.1	0.0	0.0	0.0	ND
Mode	34.00	12.00	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	2.53	1.20	0.0	0.5	2.3	1.0	0.0	15.4	0.0	0.8	3.7	ND
Sample Variance	6.42	1.44	0.0	0.2	5.2	1.0	0.0	235.9	0.0	0.7	13.4	ND
Kurtosis	0.42	-0.07	ND	0.6	-1.5	-2.1	ND	-0.4	ND	13.0	-2.0	ND
Skewness	0.87	0.75	ND	0.6	0.0	0.3	ND	0.9	ND	3.6	0.6	ND
Range	9.00	4.00	0.0	1.7	6.0	2.2	0.0	44.0	0.0	3.0	7.9	0.0
Minimum	32.00	11.00	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	41.00	15.00	0.0	4.1	6.0	2.2	0.0	44.0	0.0	3.0	7.9	0.0
Count	13	13	13	13	13	13	13	13	13	13	10	0
Confidence Level(95.0%)	1.53	0.72	0.0	0.3	1.4	0.6	0.0	9.3	0.0	0.5	2.6	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	138	109	ND	ND	27.8	25.5	2.3	ND
Standard Error	3	1	ND	ND	0.4	0.3	0.1	ND
Median	140	110	ND	ND	28.0	25.0	2.2	ND
Mode	130	100	ND	ND	27.0	25.0	2.2	ND
Standard Deviation	11	8	ND	ND	2.2	2.0	0.3	ND
Sample Variance	131	64	ND	ND	4.9	4.0	0.1	ND
Kurtosis	-1	-1	ND	ND	-0.3	-0.3	0.0	ND
Skewness	0	0	ND	ND	-0.3	-0.4	0.7	ND
Range	40	20	0.0	0.0	9.0	8.0	1.3	0.0
Minimum	120	100	0.0	0.0	23.0	21.0	1.8	0.0
Maximum	160	120	0.0	0.0	32.0	29.0	3.1	0.0
Count	13	39	0	0	39	39	39	0
Confidence Level(95.0%)	7	3	ND	ND	0.7	0.6	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 3
WATER QUALITY DATA - 2009

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	12.0	10.7	0.67	0.41	0.008	0.42	0.010	0.11	0.010	0.017	1.63
Standard Error	0.0	0.7	0.2	0.10	0.03	0.001	0.03	0.003	0.03	0.002	0.002	0.11
Median	8.2	10.9	11.0	0.61	0.35	0.006	0.35	0.000	0.00	0.000	0.020	1.50
Mode	8.2	20.0	11.7	ND	0.35	0.000	0.39	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.2	4.2	1.5	0.36	0.16	0.008	0.16	0.016	0.16	0.014	0.014	0.70
Sample Variance	0.1	17.7	2.4	0.13	0.03	0.000	0.03	0.000	0.02	0.000	0.000	0.48
Kurtosis	-0.6	-0.2	0.1	1.09	2.62	10.726	2.28	0.931	-0.86	0.452	-1.069	-0.88
Skewness	0.4	0.2	-0.7	1.04	1.42	2.865	1.35	1.477	0.92	1.163	0.043	0.25
Range	0.9	16.5	5.8	1.32	0.78	0.043	0.77	0.056	0.48	0.049	0.042	2.62
Minimum	7.8	3.5	7.3	0.18	0.22	0.000	0.23	0.000	0.00	0.000	0.000	0.58
Maximum	8.7	20.0	13.1	1.50	1.00	0.043	1.00	0.056	0.48	0.049	0.042	3.20
Count	39	39	39	13	39	39	39	39	39	39	39	39
Confidence Level(95.0%)	0.1	1.4	0.5	0.22	0.05	0.003	0.05	0.005	0.05	0.005	0.005	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	5.9	11.1	189.2	188.6	0.3	0.5	1.1	315	14.6	9	0.2	ND
Standard Error	0.9	0.6	12.0	12.0	0.2	0.2	0.1	7	1.1	8	0.2	ND
Median	5.1	12.0	185.0	183.0	0.0	0.0	0.7	299	13.0	0	0.0	ND
Mode	12.0	12.0	200.0	200.0	0.0	0.0	ND	292	11.0	0	0.0	ND
Standard Deviation	3.1	1.9	41.4	41.6	0.6	0.9	0.7	41	6.8	28	0.6	ND
Sample Variance	9.7	3.8	1717.4	1729.4	0.4	0.8	0.5	1710	45.6	765	0.4	ND
Kurtosis	0.5	2.8	1.4	1.3	0.1	-0.2	-0.6	11	15.8	13	6.4	ND
Skewness	1.2	-2.0	0.7	0.7	1.4	1.3	0.9	3	3.6	4	2.6	ND
Range	9.1	5.7	160.0	160.0	1.6	2.3	2.2	215	38.0	100	2.0	0
Minimum	2.9	6.5	120.0	120.0	0.0	0.0	0.4	287	10.0	0	0.0	0
Maximum	12.0	12.2	280.0	280.0	1.6	2.3	2.7	502	48.0	100	2.0	0
Count	13	12	12	12	12	13	39	39	39	13	13	0
Confidence Level(95.0%)	1.9	1.2	26.3	26.4	0.4	0.5	0.2	13	2.2	17	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 3
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.08	11.77	0.0	3.6	3.2	0.9	0.0	7.9	0.1	0.4	2.8	ND
Standard Error	0.40	0.23	0.0	0.4	0.6	0.3	0.0	2.2	0.1	0.3	1.2	ND
Median	34.00	12.00	0.0	3.2	3.9	0.0	0.0	8.3	0.0	0.0	0.0	ND
Mode	35.00	12.00	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.44	0.83	0.0	1.3	2.0	1.2	0.0	8.0	0.3	1.0	4.2	ND
Sample Variance	2.08	0.69	0.0	1.6	4.1	1.5	0.0	64.7	0.1	1.0	17.7	ND
Kurtosis	-0.16	3.71	ND	2.2	-0.7	-1.2	ND	-0.1	13.0	3.9	-1.1	ND
Skewness	0.24	1.52	ND	1.7	-0.7	0.8	ND	0.8	3.6	2.3	1.0	ND
Range	5.00	3.00	0.0	4.1	5.7	2.9	0.0	24.0	1.1	3.0	10.0	0.0
Minimum	32.00	11.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	37.00	14.00	0.0	6.6	5.7	2.9	0.0	24.0	1.1	3.0	10.0	0.0
Count	13	13	13	13	13	13	13	13	13	13	12	0
Confidence Level(95.0%)	0.87	0.50	0.0	0.8	1.2	0.7	0.0	4.9	0.2	0.6	2.7	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	135	105	ND	ND	27.2	25.0	2.2	ND
Standard Error	2	1	ND	ND	0.3	0.2	0.0	ND
Median	130	100	ND	ND	27.0	25.0	2.2	ND
Mode	130	100	ND	ND	26.0	24.0	2.0	ND
Standard Deviation	8	7	ND	ND	1.6	1.4	0.2	ND
Sample Variance	60	52	ND	ND	2.6	1.9	0.1	ND
Kurtosis	0	3	ND	ND	3.3	3.2	0.0	ND
Skewness	0	2	ND	ND	1.4	1.4	0.5	ND
Range	30	30	0.0	0.0	8.0	7.0	1.0	0.0
Minimum	120	100	0.0	0.0	25.0	23.0	1.8	0.0
Maximum	150	130	0.0	0.0	33.0	30.0	2.8	0.0
Count	13	39	0	0	39	39	39	0
Confidence Level(95.0%)	5	2	ND	ND	0.5	0.4	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 4
WATER QUALITY DATA - 2009

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	12.2	10.6	0.73	0.75	0.009	0.76	0.015	0.12	0.023	0.021	1.64
Standard Error	0.0	0.7	0.3	0.10	0.09	0.002	0.09	0.003	0.03	0.003	0.003	0.13
Median	8.1	11.0	11.1	0.65	0.56	0.006	0.58	0.009	0.00	0.024	0.023	1.50
Mode	8.2	15.3	11.8	ND	1.60	0.000	1.60	0.000	0.00	0.000	0.000	2.30
Standard Deviation	0.3	4.1	1.6	0.37	0.54	0.012	0.53	0.018	0.19	0.019	0.017	0.79
Sample Variance	0.1	16.6	2.5	0.14	0.29	0.000	0.29	0.000	0.04	0.000	0.000	0.62
Kurtosis	0.0	0.0	-0.1	-0.29	0.47	28.751	0.45	0.299	-0.10	-0.983	-1.253	-0.81
Skewness	0.3	0.1	-0.8	0.54	1.28	5.018	1.26	1.141	1.17	0.201	-0.101	0.12
Range	1.2	16.2	6.2	1.28	1.89	0.076	1.88	0.066	0.62	0.058	0.054	3.20
Minimum	7.6	3.8	6.8	0.13	0.21	0.000	0.22	0.000	0.00	0.000	0.000	0.00
Maximum	8.8	20.0	12.9	1.41	2.10	0.076	2.10	0.066	0.62	0.058	0.054	3.20
Count	39	39	39	13	39	39	39	39	39	39	39	39
Confidence Level(95.0%)	0.1	1.3	0.5	0.22	0.17	0.004	0.17	0.006	0.06	0.006	0.005	0.26

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	10.4	210.8	209.6	0.5	1.1	1.4	349	19.7	6	0.5	ND
Standard Error	1.0	0.7	13.1	13.0	0.2	0.4	0.2	9	1.3	3	0.2	ND
Median	4.4	11.8	200.0	200.0	0.0	1.0	1.0	319	16.0	0	0.0	ND
Mode	12.0	12.0	200.0	ND	0.0	0.0	ND	308	12.0	0	0.0	ND
Standard Deviation	3.7	2.6	47.2	47.0	0.7	1.4	1.0	59	8.2	9	0.6	ND
Sample Variance	13.4	6.6	2224.4	2213.7	0.6	2.1	0.9	3440	67.5	87	0.3	ND
Kurtosis	-0.6	0.1	1.5	1.5	-1.1	0.8	0.2	1	-1.2	0	-1.4	ND
Skewness	1.0	-1.4	0.7	0.7	1.0	1.3	1.1	1	0.6	1	0.7	ND
Range	10.1	6.8	190.0	188.5	1.7	4.4	3.3	252	24.0	24	1.4	0
Minimum	1.9	5.2	130.0	130.0	0.0	0.0	0.5	289	11.0	0	0.0	0
Maximum	12.0	12.0	320.0	318.5	1.7	4.4	3.7	541	35.0	24	1.4	0
Count	13	12	13	13	12	13	39	39	39	13	13	0
Confidence Level(95.0%)	2.2	1.6	28.5	28.4	0.5	0.9	0.3	19	2.7	6	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 4
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.62	12.46	0.0	3.2	3.8	0.6	0.0	9.4	0.0	0.4	2.5	ND
Standard Error	0.58	0.33	0.0	0.1	1.1	0.3	0.0	2.3	0.0	0.2	1.3	ND
Median	36.00	13.00	0.0	3.3	3.9	0.0	0.0	13.0	0.0	0.0	0.0	ND
Mode	36.00	13.00	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	2.10	1.20	0.0	0.4	4.1	1.0	0.0	8.2	0.0	0.9	4.1	ND
Sample Variance	4.42	1.44	0.0	0.2	16.7	0.9	0.0	67.9	0.0	0.8	16.5	ND
Kurtosis	-0.78	-1.55	ND	-1.0	4.3	-1.2	ND	-1.7	ND	4.1	-1.2	ND
Skewness	-0.29	-0.07	ND	0.3	1.8	1.0	ND	-0.1	ND	2.3	1.0	ND
Range	7.00	3.00	0.0	1.4	15.0	2.1	0.0	22.0	0.0	2.7	8.6	0.0
Minimum	32.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	39.00	14.00	0.0	4.0	15.0	2.1	0.0	22.0	0.0	2.7	8.6	0.0
Count	13	13	13	13	13	13	13	13	13	13	10	0
Confidence Level(95.0%)	1.27	0.72	0.0	0.3	2.5	0.6	0.0	5.0	0.0	0.5	2.9	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	107	ND	ND	27.6	25.1	2.5	ND
Standard Error	3	1	ND	ND	0.2	0.2	0.1	ND
Median	140	110	ND	ND	27.0	25.0	2.3	ND
Mode	140	110	ND	ND	27.0	24.0	2.4	ND
Standard Deviation	10	7	ND	ND	1.3	1.5	0.9	ND
Sample Variance	97	51	ND	ND	1.8	2.3	0.7	ND
Kurtosis	-1	-1	ND	ND	-0.8	1.9	34.5	ND
Skewness	0	0	ND	ND	0.2	-0.8	5.7	ND
Range	30	20	0.0	0.0	5.0	7.0	5.6	0.0
Minimum	130	100	0.0	0.0	25.0	20.0	1.9	0.0
Maximum	160	120	0.0	0.0	30.0	27.0	7.5	0.0
Count	13	39	0	0	39	39	39	0
Confidence Level(95.0%)	6	2	ND	ND	0.4	0.5	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 5
WATER QUALITY DATA - 2009

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	12.3	10.5	ND	0.64	0.010	0.64	0.019	0.13	0.020	0.019	1.61
Standard Error	0.0	0.6	0.3	ND	0.05	0.002	0.05	0.003	0.03	0.002	0.002	0.11
Median	8.1	11.2	10.8	ND	0.56	0.007	0.57	0.016	0.00	0.025	0.021	1.50
Mode	8.3	11.2	11.8	ND	0.40	0.000	0.42	0.000	0.00	0.000	0.000	2.50
Standard Deviation	0.2	4.0	1.6	ND	0.31	0.010	0.31	0.020	0.19	0.015	0.014	0.71
Sample Variance	0.1	16.1	2.5	ND	0.09	0.000	0.09	0.000	0.03	0.000	0.000	0.51
Kurtosis	-0.4	-0.2	0.2	ND	1.26	13.568	1.24	-0.986	-0.46	-1.003	-1.025	-0.93
Skewness	0.2	0.2	-1.0	ND	1.33	3.366	1.31	0.703	0.95	-0.214	-0.164	-0.10
Range	1.0	15.5	5.8	0.00	1.21	0.056	1.21	0.056	0.63	0.052	0.042	2.70
Minimum	7.7	4.6	6.9	0.00	0.29	0.000	0.29	0.000	0.00	0.000	0.000	0.00
Maximum	8.7	20.0	12.7	0.00	1.50	0.056	1.50	0.056	0.63	0.052	0.042	2.70
Count	39	39	39	0	39	39	39	39	39	38	38	39
Confidence Level(95.0%)	0.1	1.3	0.5	ND	0.10	0.003	0.10	0.006	0.06	0.005	0.005	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	5.5	9.8	184.2	182.8	0.6	1.5	1.6	339	18.6	11	0.5	ND
Standard Error	0.8	0.1	11.5	11.6	0.3	0.4	0.2	7	1.1	6	0.2	ND
Median	4.5	9.5	190.0	186.7	0.0	1.5	1.1	327	16.0	3	0.5	ND
Mode	9.5	9.5	220.0	220.0	0.0	0.0	1.1	315	15.0	0	0.0	ND
Standard Deviation	3.0	0.4	41.4	41.9	0.9	1.5	1.1	43	6.7	21	0.7	ND
Sample Variance	8.8	0.2	1716.0	1758.2	0.9	2.3	1.2	1868	45.3	426	0.5	ND
Kurtosis	-1.4	5.4	0.3	0.2	-0.5	0.1	0.3	0	1.1	4	-0.5	ND
Skewness	0.6	2.2	-0.5	-0.5	1.1	0.8	1.1	1	1.3	2	1.0	ND
Range	7.8	1.5	145.0	146.9	2.4	4.7	3.7	153	27.0	66	1.8	0
Minimum	2.2	9.5	95.0	93.1	0.0	0.0	0.5	290	11.0	0	0.0	0
Maximum	10.0	11.0	240.0	240.0	2.4	4.7	4.2	443	38.0	66	1.8	0
Count	13	12	13	13	12	13	39	39	38	13	13	0
Confidence Level(95.0%)	1.8	0.3	25.0	25.3	0.6	0.9	0.4	14	2.2	12	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 5
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.15	12.54	0.0	3.2	3.7	0.5	0.0	10.6	0.0	0.5	2.0	ND
Standard Error	0.58	0.31	0.0	0.1	0.9	0.3	0.0	3.1	0.0	0.3	1.0	ND
Median	35.00	12.00	0.0	3.1	3.6	0.0	0.0	9.8	0.0	0.0	0.0	ND
Mode	36.00	12.00	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	2.08	1.13	0.0	0.4	3.4	1.0	0.0	11.3	0.0	1.2	3.5	ND
Sample Variance	4.31	1.27	0.0	0.2	11.6	0.9	0.0	128.4	0.0	1.3	12.0	ND
Kurtosis	1.35	0.62	ND	0.1	4.4	0.2	ND	1.5	ND	3.8	-0.5	ND
Skewness	0.75	0.71	ND	0.7	1.7	1.5	ND	1.1	ND	2.3	1.2	ND
Range	8.00	4.00	0.0	1.4	13.0	2.4	0.0	38.0	0.0	3.4	8.3	0.0
Minimum	32.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	40.00	15.00	0.0	4.0	13.0	2.4	0.0	38.0	0.0	3.4	8.3	0.0
Count	13	13	13	13	13	13	13	13	13	13	11	0
Confidence Level(95.0%)	1.25	0.68	0.0	0.3	2.1	0.6	0.0	6.8	0.0	0.7	2.3	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	138	108	ND	ND	27.8	25.5	2.3	ND
Standard Error	3	1	ND	ND	0.3	0.2	0.0	ND
Median	140	110	ND	ND	28.0	25.0	2.3	ND
Mode	140	110	ND	ND	30.0	25.0	2.2	ND
Standard Deviation	11	7	ND	ND	1.7	1.6	0.3	ND
Sample Variance	114	55	ND	ND	2.9	2.4	0.1	ND
Kurtosis	0	-1	ND	ND	-0.9	-0.6	0.6	ND
Skewness	0	0	ND	ND	-0.1	0.0	0.7	ND
Range	40	20	0.0	0.0	6.0	6.0	1.1	0.0
Minimum	120	100	0.0	0.0	24.0	22.0	1.9	0.0
Maximum	160	120	0.0	0.0	30.0	28.0	3.0	0.0
Count	13	39	0	0	39	39	39	0
Confidence Level(95.0%)	6	2	ND	ND	0.6	0.5	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 6
WATER QUALITY DATA - 2009

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	11.9	10.8	ND	0.38	0.007	0.38	0.010	0.12	0.006	0.016	1.61
Standard Error	0.0	0.7	0.3	ND	0.02	0.001	0.02	0.002	0.04	0.002	0.002	0.10
Median	8.2	10.8	11.0	ND	0.35	0.006	0.35	0.000	0.00	0.000	0.020	1.60
Mode	7.9	15.4	11.7	ND	0.38	0.000	0.35	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.2	4.2	1.6	ND	0.13	0.006	0.13	0.015	0.26	0.010	0.014	0.62
Sample Variance	0.1	17.9	2.5	ND	0.02	0.000	0.02	0.000	0.07	0.000	0.000	0.39
Kurtosis	-0.5	-0.2	0.2	ND	3.30	7.915	3.14	-0.288	15.94	-0.189	-0.714	-1.30
Skewness	0.4	0.2	-0.7	ND	1.57	2.147	1.54	1.180	3.52	1.275	0.199	-0.04
Range	1.0	16.5	6.3	0.00	0.64	0.031	0.64	0.039	1.40	0.030	0.050	1.97
Minimum	7.8	3.5	7.3	0.00	0.21	0.000	0.22	0.000	0.00	0.000	0.000	0.63
Maximum	8.8	20.0	13.6	0.00	0.85	0.031	0.86	0.039	1.40	0.030	0.050	2.60
Count	39	39	39	0	39	39	39	39	39	39	39	39
Confidence Level(95.0%)	0.1	1.4	0.5	ND	0.04	0.002	0.04	0.005	0.08	0.003	0.005	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	7.1	11.5	193.8	193.2	0.5	0.6	1.1	309	13.7	5	0.3	ND
Standard Error	0.9	0.6	12.4	12.5	0.2	0.2	0.1	6	0.9	3	0.1	ND
Median	6.2	12.0	180.0	180.0	0.0	0.0	0.7	297	12.0	0	0.0	ND
Mode	12.0	12.0	180.0	180.0	0.0	0.0	ND	292	11.0	0	0.0	ND
Standard Deviation	3.1	2.0	44.8	45.0	0.8	0.9	0.8	40	5.5	12	0.5	ND
Sample Variance	9.8	3.9	2009.0	2028.2	0.6	0.8	0.6	1605	29.9	153	0.3	ND
Kurtosis	-0.7	2.2	3.1	3.1	-0.9	-0.3	3.7	15	12.4	11	2.5	ND
Skewness	0.7	-1.8	1.6	1.6	1.0	1.1	1.8	4	3.3	3	1.7	ND
Range	8.6	5.8	170.0	170.0	1.9	2.4	3.5	213	29.0	45	1.7	0
Minimum	3.4	7.2	140.0	140.0	0.0	0.0	0.4	289	10.0	0	0.0	0
Maximum	12.0	13.0	310.0	310.0	1.9	2.4	3.9	502	39.0	45	1.7	0
Count	13	12	13	13	12	13	39	39	39	13	13	0
Confidence Level(95.0%)	1.9	1.3	27.1	27.2	0.5	0.5	0.3	13	1.8	7	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 6
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.31	12.00	0.0	3.3	2.9	0.3	0.0	9.2	0.0	0.5	1.6	ND
Standard Error	0.43	0.28	0.0	0.1	0.6	0.2	0.0	2.5	0.0	0.3	1.1	ND
Median	34.00	12.00	0.0	3.3	2.9	0.0	0.0	8.2	0.0	0.0	0.0	ND
Mode	35.00	11.00	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.55	1.00	0.0	0.4	2.1	0.6	0.0	8.9	0.0	1.2	3.6	ND
Sample Variance	2.40	1.00	0.0	0.2	4.2	0.4	0.0	78.9	0.0	1.4	12.6	ND
Kurtosis	-0.76	-0.62	ND	-1.3	-0.3	3.2	ND	-1.6	ND	6.8	2.3	ND
Skewness	0.03	0.59	ND	-0.2	0.0	2.2	ND	0.3	ND	2.7	2.0	ND
Range	5.00	3.00	0.0	1.2	6.7	1.7	0.0	22.0	0.0	3.9	9.4	0.0
Minimum	32.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	37.00	14.00	0.0	3.8	6.7	1.7	0.0	22.0	0.0	3.9	9.4	0.0
Count	13	13	13	13	13	13	13	13	13	13	11	0
Confidence Level(95.0%)	0.94	0.60	0.0	0.3	1.2	0.4	0.0	5.4	0.0	0.7	2.4	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	135	104	ND	ND	26.9	24.7	2.2	ND
Standard Error	2	1	ND	ND	0.3	0.3	0.0	ND
Median	130	100	ND	ND	27.0	25.0	2.2	ND
Mode	130	100	ND	ND	27.0	25.0	2.3	ND
Standard Deviation	8	6	ND	ND	1.6	1.6	0.3	ND
Sample Variance	60	36	ND	ND	2.7	2.5	0.1	ND
Kurtosis	0	0	ND	ND	1.3	0.1	1.5	ND
Skewness	0	1	ND	ND	0.8	0.4	0.9	ND
Range	30	20	0.0	0.0	8.0	7.0	1.2	0.0
Minimum	120	100	0.0	0.0	24.0	22.0	1.8	0.0
Maximum	150	120	0.0	0.0	32.0	29.0	3.0	0.0
Count	13	39	0	0	39	39	39	0
Confidence Level(95.0%)	5	2	ND	ND	0.5	0.5	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 7
WATER QUALITY DATA - 2009

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	12.6	10.7	0.93	0.59	0.011	0.60	0.029	0.16	0.018	0.021	1.73
Standard Error	0.0	0.5	0.2	0.12	0.05	0.001	0.06	0.006	0.03	0.003	0.002	0.10
Median	8.2	11.4	10.9	0.70	0.42	0.009	0.44	0.000	0.00	0.018	0.020	1.60
Mode	8.2	15.5	11.7	0.30	0.38	0.000	0.31	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.3	4.1	1.4	0.73	0.42	0.011	0.43	0.049	0.22	0.021	0.018	0.76
Sample Variance	0.1	16.6	2.1	0.53	0.18	0.000	0.19	0.002	0.05	0.000	0.000	0.58
Kurtosis	-0.5	-0.5	0.1	1.73	7.33	5.194	7.72	3.896	-0.38	2.460	-0.017	0.00
Skewness	0.0	0.2	-0.6	1.51	2.42	1.963	2.46	2.110	1.02	1.420	0.522	0.77
Range	1.4	16.1	6.3	2.91	2.30	0.058	2.40	0.190	0.75	0.093	0.076	3.18
Minimum	7.4	3.9	7.1	0.12	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.62
Maximum	8.8	20.0	13.4	3.03	2.50	0.058	2.60	0.190	0.75	0.093	0.076	3.80
Count	63	63	63	37	60	63	60	63	63	63	63	63
Confidence Level(95.0%)	0.1	1.0	0.4	0.24	0.11	0.003	0.11	0.012	0.06	0.005	0.004	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	6.0	10.5	190.0	188.7	0.4	1.3	1.4	347	19.3	10	0.4	ND
Standard Error	0.7	0.4	12.0	11.9	0.2	0.4	0.2	9	1.3	8	0.1	ND
Median	5.0	11.0	180.0	177.2	0.0	1.4	0.9	309	13.0	2	0.3	ND
Mode	2.9	11.0	170.0	ND	0.0	0.0	0.6	290	11.0	0	0.0	ND
Standard Deviation	3.3	1.7	43.4	43.1	0.7	1.4	1.2	70	10.7	35	0.6	ND
Sample Variance	10.7	2.8	1883.3	1853.7	0.5	1.9	1.5	4863	114.1	1191	0.3	ND
Kurtosis	-0.9	6.3	-1.0	-1.0	1.2	0.3	5.3	2	3.0	20	4.3	ND
Skewness	0.6	-2.6	-0.2	-0.2	1.6	0.9	2.3	1	1.6	5	1.8	ND
Range	10.5	6.7	140.0	138.6	2.0	4.3	5.8	292	51.0	160	2.2	0
Minimum	1.5	5.3	110.0	108.6	0.0	0.0	0.3	283	11.0	0	0.0	0
Maximum	12.0	12.0	250.0	247.2	2.0	4.3	6.1	575	62.0	160	2.2	0
Count	21	20	13	13	12	13	63	63	63	21	21	0
Confidence Level(95.0%)	1.5	0.8	26.2	26.0	0.5	0.8	0.3	18	2.7	16	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 7
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.05	12.33	0.0	3.4	3.5	0.6	0.0	11.9	0.1	0.5	2.8	ND
Standard Error	0.47	0.25	0.0	0.1	1.0	0.2	0.0	2.1	0.1	0.2	0.9	ND
Median	35.00	12.00	0.0	3.4	3.1	0.0	0.0	11.0	0.0	0.0	0.0	ND
Mode	33.00	12.00	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	2.16	1.15	0.1	0.6	4.7	0.9	0.0	9.7	0.3	1.1	3.8	ND
Sample Variance	4.65	1.33	0.0	0.3	22.2	0.8	0.0	93.4	0.1	1.2	14.2	ND
Kurtosis	-0.83	-1.30	21.0	1.8	12.8	-1.5	ND	-0.6	21.0	2.7	-1.7	ND
Skewness	0.43	0.34	4.6	0.7	3.2	0.8	ND	0.5	4.6	2.0	0.6	ND
Range	7.00	3.00	0.5	2.5	22.0	2.0	0.0	30.0	1.4	3.5	8.5	0.0
Minimum	32.00	11.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	39.00	14.00	0.5	5.0	22.0	2.0	0.0	30.0	1.4	3.5	8.5	0.0
Count	21	21	21	21	21	21	21	21	21	21	16	0
Confidence Level(95.0%)	0.98	0.53	0.1	0.3	2.1	0.4	0.0	4.4	0.1	0.5	2.0	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	108	ND	ND	27.6	25.2	2.3	ND
Standard Error	2	1	ND	ND	0.3	0.3	0.1	ND
Median	140	110	ND	ND	27.0	25.0	2.2	ND
Mode	130	100	ND	ND	26.0	24.0	2.4	ND
Standard Deviation	9	8	ND	ND	1.8	1.7	0.3	ND
Sample Variance	89	68	ND	ND	3.4	2.9	0.1	ND
Kurtosis	-1	0	ND	ND	-0.8	-0.7	-0.5	ND
Skewness	1	1	ND	ND	0.2	0.3	0.5	ND
Range	30	30	0.0	0.0	7.0	7.0	1.3	0.0
Minimum	130	100	0.0	0.0	24.0	22.0	1.8	0.0
Maximum	160	130	0.0	0.0	31.0	29.0	3.1	0.0
Count	21	39	0	0	39	39	39	0
Confidence Level(95.0%)	4	3	ND	ND	0.6	0.6	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 8
WATER QUALITY DATA - 2009

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	10.5	ND	0.56	0.012	0.57	0.041	0.15	0.020	0.020	1.65
Standard Error	0.0	0.6	0.3	ND	0.05	0.003	0.05	0.016	0.04	0.003	0.003	0.12
Median	8.2	11.5	11.0	ND	0.60	0.007	0.61	0.010	0.00	0.022	0.022	1.70
Mode	8.2	10.3	11.6	ND	0.33	0.000	0.61	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.3	4.0	1.6	ND	0.29	0.016	0.29	0.101	0.23	0.017	0.016	0.72
Sample Variance	0.1	15.8	2.6	ND	0.08	0.000	0.08	0.010	0.05	0.000	0.000	0.52
Kurtosis	0.6	-0.2	0.1	ND	7.53	18.174	7.04	19.084	2.08	1.759	-1.156	-0.56
Skewness	0.1	0.1	-0.9	ND	2.12	3.883	2.06	4.139	1.53	0.737	0.041	0.05
Range	1.3	15.4	5.9	0.00	1.54	0.095	1.54	0.560	0.91	0.075	0.052	2.90
Minimum	7.4	4.6	6.8	0.00	0.26	0.000	0.26	0.000	0.00	0.000	0.000	0.00
Maximum	8.7	20.0	12.6	0.00	1.80	0.095	1.80	0.560	0.91	0.075	0.052	2.90
Count	39	39	39	0	39	39	39	39	38	38	38	39
Confidence Level(95.0%)	0.1	1.3	0.5	ND	0.09	0.005	0.09	0.033	0.07	0.005	0.005	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	4.9	9.6	200.0	198.0	0.7	2.0	1.8	342	19.2	9	0.4	ND
Standard Error	0.8	0.4	12.2	12.0	0.2	0.6	0.2	9	1.7	5	0.2	ND
Median	4.3	9.6	200.0	197.2	0.6	1.4	1.2	321	15.0	0	0.0	ND
Mode	4.3	9.5	220.0	220.0	0.0	0.0	1.1	290	11.0	0	0.0	ND
Standard Deviation	3.0	1.4	44.0	43.1	0.7	2.0	1.4	55	10.7	18	0.6	ND
Sample Variance	8.8	2.0	1933.3	1859.2	0.5	4.0	1.9	3025	115.0	325	0.4	ND
Kurtosis	-0.5	7.3	0.6	0.2	-2.2	1.0	0.1	2	8.5	9	0.4	ND
Skewness	0.9	-2.4	0.8	0.7	0.1	1.2	1.1	1	2.5	3	1.3	ND
Range	8.6	5.5	150.0	144.8	1.6	6.7	4.5	241	55.0	64	1.8	0
Minimum	1.4	5.5	150.0	148.5	0.0	0.0	0.5	287	11.0	0	0.0	0
Maximum	10.0	11.0	300.0	293.3	1.6	6.7	5.0	528	66.0	64	1.8	0
Count	13	12	13	13	12	13	39	39	39	13	13	0
Confidence Level(95.0%)	1.8	0.9	26.6	26.1	0.5	1.2	0.4	18	3.5	11	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 8
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.38	12.38	0.0	3.2	3.1	0.6	0.0	10.3	0.0	0.2	2.9	ND
Standard Error	0.57	0.33	0.0	0.1	0.6	0.3	0.0	3.0	0.0	0.2	1.2	ND
Median	35.00	12.00	0.0	3.3	3.3	0.0	0.0	10.0	0.0	0.0	0.0	ND
Mode	37.00	11.00	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	2.06	1.19	0.0	0.3	2.3	0.9	0.0	10.9	0.0	0.8	4.3	ND
Sample Variance	4.26	1.42	0.0	0.1	5.2	0.8	0.0	118.1	0.0	0.6	18.4	ND
Kurtosis	-1.46	-1.50	ND	-0.6	0.7	-1.0	ND	0.2	ND	13.0	-1.4	ND
Skewness	-0.21	0.15	ND	-0.6	0.4	1.0	ND	0.9	ND	3.6	0.9	ND
Range	6.00	3.00	0.0	1.1	8.1	2.2	0.0	34.0	0.0	2.8	9.8	0.0
Minimum	32.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	3.7	8.1	2.2	0.0	34.0	0.0	2.8	9.8	0.0
Count	13	13	13	13	13	13	13	13	13	13	12	0
Confidence Level(95.0%)	1.25	0.72	0.0	0.2	1.4	0.6	0.0	6.6	0.0	0.5	2.7	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	109	ND	ND	27.9	25.5	2.3	ND
Standard Error	3	1	ND	ND	0.4	0.3	0.1	ND
Median	140	110	ND	ND	28.0	25.0	2.3	ND
Mode	150	110	ND	ND	26.0	25.0	2.3	ND
Standard Deviation	10	8	ND	ND	2.5	2.1	0.4	ND
Sample Variance	91	62	ND	ND	6.0	4.5	0.1	ND
Kurtosis	-2	-1	ND	ND	0.9	0.4	5.5	ND
Skewness	0	0	ND	ND	0.5	0.2	1.8	ND
Range	20	20	0.0	0.0	12.0	10.0	1.8	0.0
Minimum	130	100	0.0	0.0	23.0	21.0	1.9	0.0
Maximum	150	120	0.0	0.0	35.0	31.0	3.7	0.0
Count	13	39	0	0	39	39	39	0
Confidence Level(95.0%)	6	3	ND	ND	0.8	0.7	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 9
WATER QUALITY DATA - 2009

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	12.0	10.7	ND	0.41	0.007	0.42	0.011	0.10	0.007	0.014	1.64
Standard Error	0.0	0.7	0.3	ND	0.03	0.001	0.03	0.003	0.02	0.002	0.002	0.11
Median	8.2	10.9	10.9	ND	0.36	0.005	0.36	0.000	0.00	0.000	0.020	1.80
Mode	8.2	20.0	10.3	ND	0.36	0.000	0.36	0.000	0.00	0.000	0.000	2.20
Standard Deviation	0.3	4.2	1.6	ND	0.16	0.007	0.17	0.018	0.15	0.012	0.013	0.69
Sample Variance	0.1	17.6	2.4	ND	0.03	0.000	0.03	0.000	0.02	0.000	0.000	0.47
Kurtosis	-0.2	-0.3	0.0	ND	3.83	3.962	3.49	3.630	-0.99	0.204	-1.506	-1.35
Skewness	-0.3	0.2	-0.7	ND	1.81	1.873	1.76	1.916	0.93	1.315	0.084	-0.08
Range	1.2	16.4	6.0	0.00	0.77	0.032	0.77	0.078	0.44	0.039	0.040	2.07
Minimum	7.5	3.6	7.2	0.00	0.23	0.000	0.23	0.000	0.00	0.000	0.000	0.63
Maximum	8.7	20.0	13.1	0.00	1.00	0.032	1.00	0.078	0.44	0.039	0.040	2.70
Count	39	39	39	0	39	39	39	39	38	39	39	39
Confidence Level(95.0%)	0.1	1.4	0.5	ND	0.05	0.002	0.05	0.006	0.05	0.004	0.004	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	5.9	11.7	176.3	175.1	0.7	1.2	1.3	326	14.5	4	0.3	ND
Standard Error	0.9	0.5	14.0	14.0	0.3	0.3	0.2	12	1.0	2	0.1	ND
Median	5.7	12.0	170.0	168.8	0.0	1.2	0.8	299	12.0	0	0.0	ND
Mode	ND	12.0	170.0	168.8	0.0	0.0	2.0	292	12.0	0	0.0	ND
Standard Deviation	3.2	1.8	50.4	50.3	1.0	1.3	1.0	73	6.2	8	0.5	ND
Sample Variance	10.2	3.4	2543.9	2533.2	0.9	1.6	1.1	5347	38.7	67	0.3	ND
Kurtosis	0.1	10.6	1.8	1.7	0.3	-0.5	3.6	20	13.3	7	0.7	ND
Skewness	0.9	-3.2	0.6	0.5	1.1	0.7	1.9	4	3.3	3	1.5	ND
Range	9.7	7.0	208.0	206.3	2.8	3.7	4.6	417	34.0	28	1.4	0
Minimum	2.3	6.0	82.0	80.9	0.0	0.0	0.4	288	10.0	0	0.0	0
Maximum	12.0	13.0	290.0	287.2	2.8	3.7	4.9	705	44.0	28	1.4	0
Count	13	12	13	13	12	13	39	39	39	13	13	0
Confidence Level(95.0%)	1.9	1.2	30.5	30.4	0.6	0.8	0.3	24	2.0	5	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 9
WATER QUALITY DATA - 2009

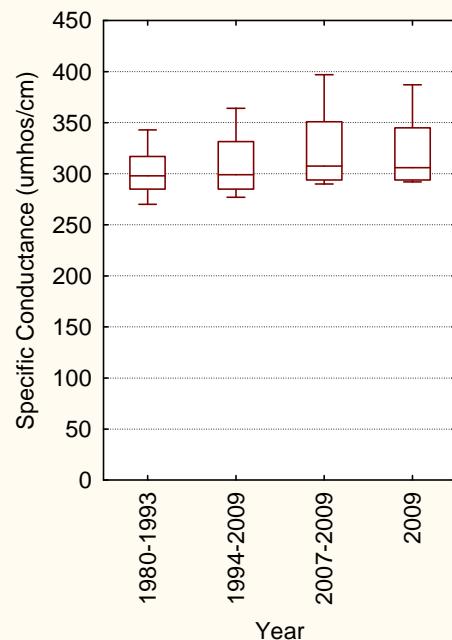
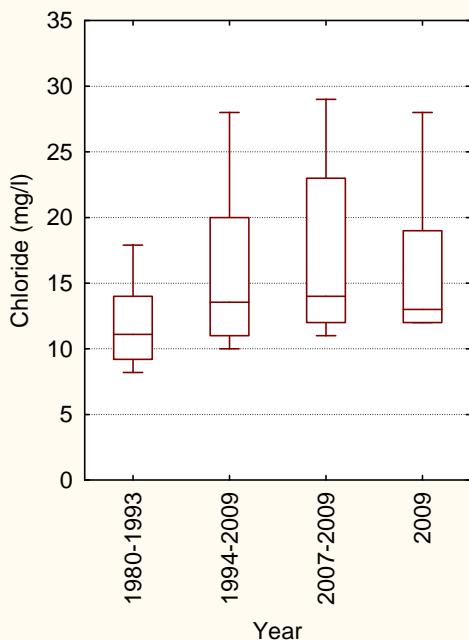
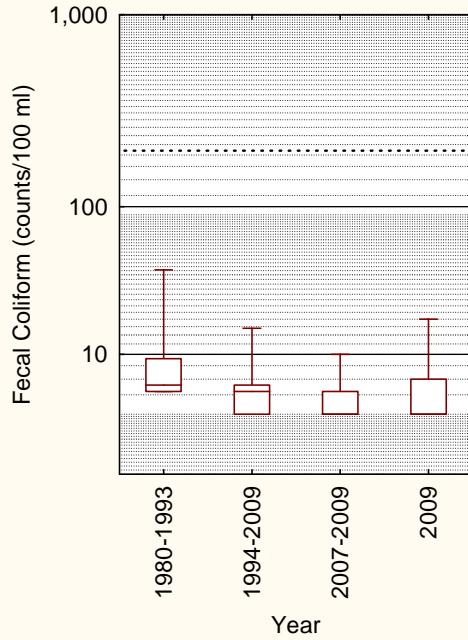
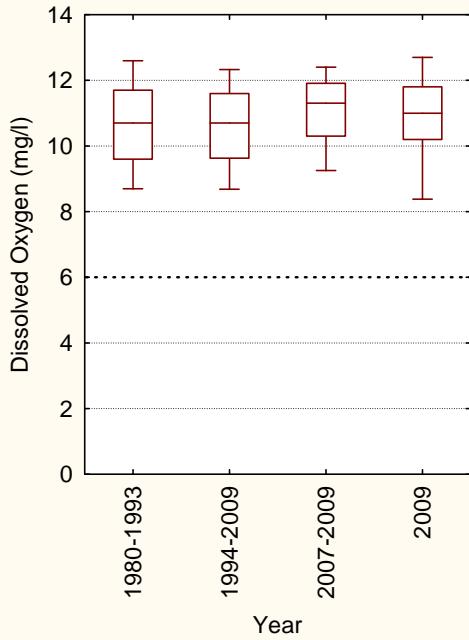
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.38	11.85	0.0	3.3	3.1	0.8	0.0	10.7	0.0	0.5	2.6	ND
Standard Error	0.49	0.27	0.0	0.1	0.6	0.3	0.0	2.1	0.0	0.3	1.3	ND
Median	34.00	12.00	0.0	3.2	3.2	0.0	0.0	11.0	0.0	0.0	0.0	ND
Mode	33.00	11.00	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.76	0.99	0.0	0.5	2.1	1.1	0.0	7.6	0.0	1.0	4.2	ND
Sample Variance	3.09	0.97	0.0	0.2	4.2	1.2	0.0	58.3	0.0	1.1	17.8	ND
Kurtosis	0.00	0.16	ND	-1.1	-0.9	-1.9	ND	-0.6	ND	2.4	-0.8	ND
Skewness	0.82	0.97	ND	-0.1	-0.5	0.6	ND	0.0	ND	1.8	1.1	ND
Range	6.00	3.00	0.0	1.5	6.0	2.4	0.0	24.0	0.0	3.1	9.5	0.0
Minimum	32.00	11.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	4.0	6.0	2.4	0.0	24.0	0.0	3.1	9.5	0.0
Count	13	13	13	13	13	13	13	13	13	13	10	0
Confidence Level(95.0%)	1.06	0.60	0.0	0.3	1.2	0.7	0.0	4.6	0.0	0.6	3.0	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	135	105	ND	ND	27.0	24.8	2.2	ND
Standard Error	2	1	ND	ND	0.3	0.2	0.0	ND
Median	130	100	ND	ND	27.0	25.0	2.1	ND
Mode	130	100	ND	ND	28.0	25.0	2.1	ND
Standard Deviation	9	8	ND	ND	1.6	1.6	0.2	ND
Sample Variance	77	57	ND	ND	2.7	2.4	0.0	ND
Kurtosis	0	2	ND	ND	1.2	2.2	-0.5	ND
Skewness	1	2	ND	ND	0.4	0.7	0.3	ND
Range	30	30	0.0	0.0	8.0	8.0	0.9	0.0
Minimum	120	100	0.0	0.0	24.0	22.0	1.8	0.0
Maximum	150	130	0.0	0.0	32.0	30.0	2.7	0.0
Count	13	39	0	0	39	39	39	0
Confidence Level(95.0%)	5	2	ND	ND	0.5	0.5	0.1	ND

ND = No Data

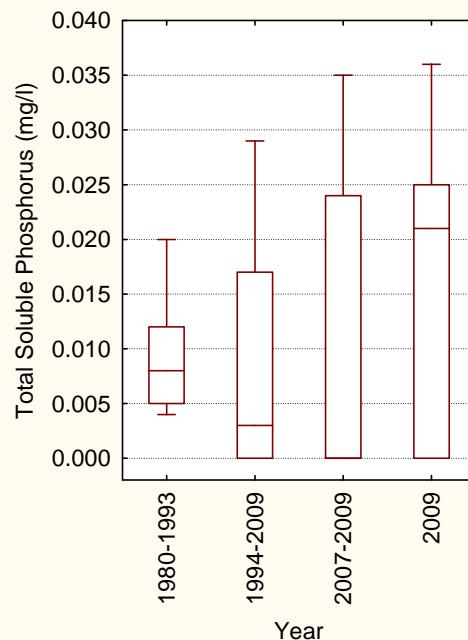
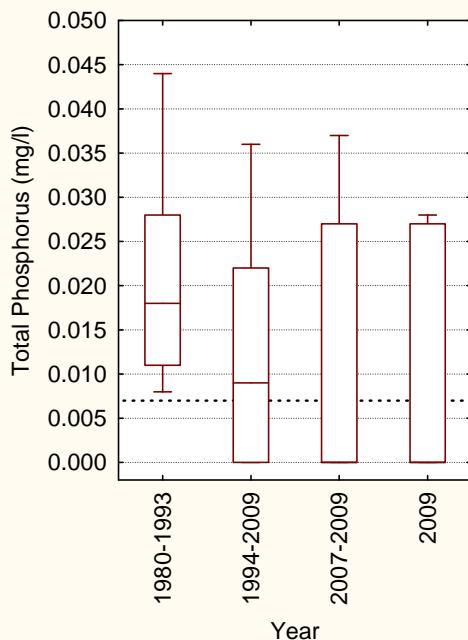
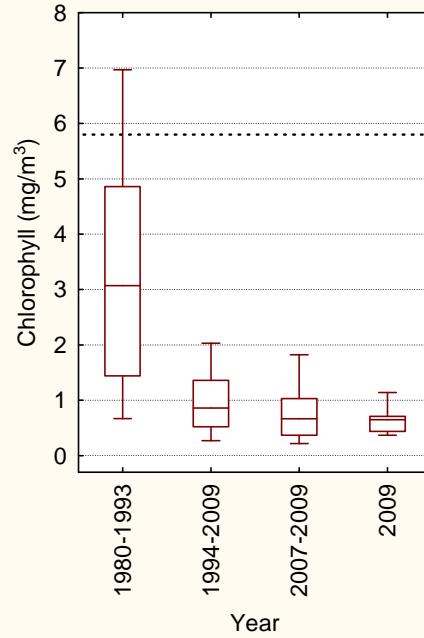
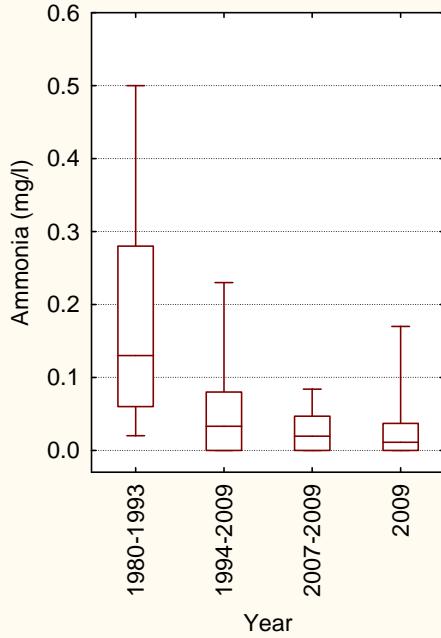
Provisional MMSD Water Quality Data

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



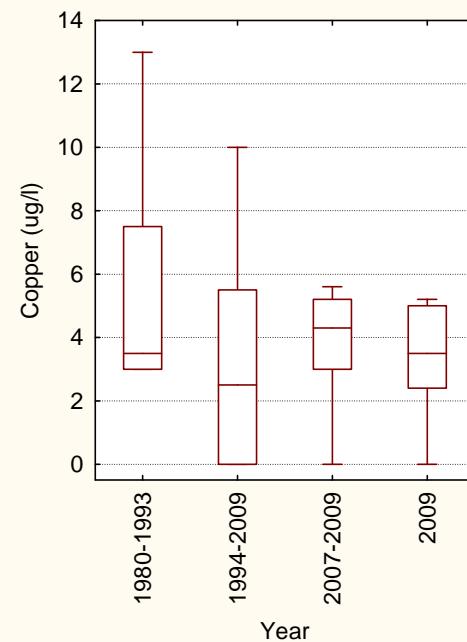
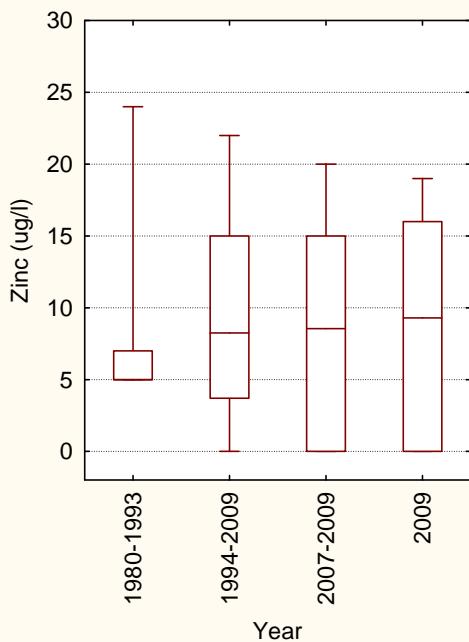
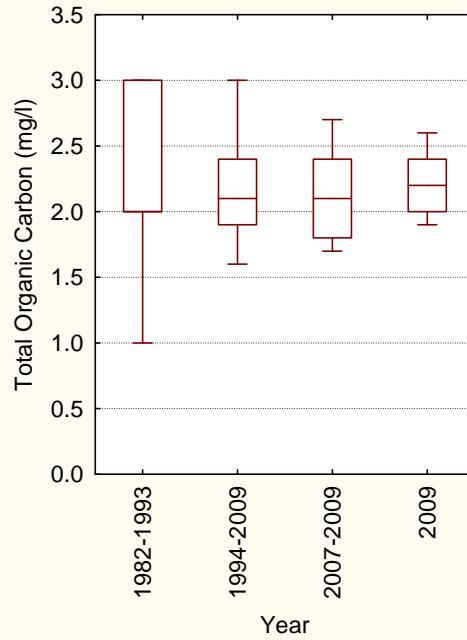
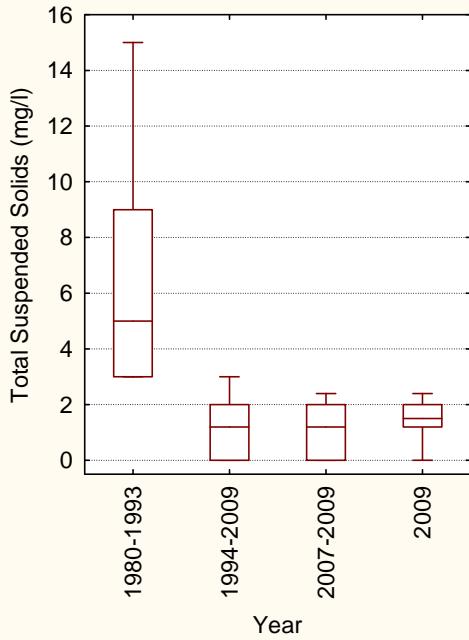
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 2009

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	12.2	10.7	0.68	0.47	0.012	0.48	0.046	0.18	0.013	0.017	1.69
Standard Error	0.0	0.7	0.2	0.11	0.03	0.003	0.03	0.020	0.04	0.003	0.002	0.12
Median	8.1	11.1	11.0	0.65	0.39	0.006	0.40	0.011	0.00	0.000	0.021	1.70
Mode	8.2	20.0	11.0	0.65	0.39	0.000	0.36	0.000	0.00	0.000	0.000	2.20
Standard Deviation	0.3	4.1	1.6	0.41	0.16	0.018	0.17	0.126	0.27	0.016	0.014	0.74
Sample Variance	0.1	17.2	2.4	0.16	0.03	0.000	0.03	0.016	0.07	0.000	0.000	0.55
Kurtosis	0.3	-0.3	-0.1	3.62	-1.40	24.825	-1.35	25.526	0.07	0.626	-1.299	-0.63
Skewness	0.9	0.1	-0.7	1.64	0.33	4.611	0.41	4.781	1.19	0.982	-0.127	0.31
Range	1.0	16.1	5.9	1.61	0.51	0.110	0.52	0.740	0.86	0.062	0.041	2.84
Minimum	7.8	3.9	7.3	0.14	0.25	0.000	0.25	0.000	0.00	0.000	0.000	0.56
Maximum	8.8	20.0	13.2	1.75	0.76	0.110	0.77	0.740	0.86	0.062	0.041	3.40
Count	39	39	39	13	39	39	39	39	39	39	39	39
Confidence Level(95.0%)	0.1	1.3	0.5	0.25	0.05	0.006	0.05	0.041	0.09	0.005	0.004	0.24

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	201.5	200.2	0.7	1.4	1.4	327	16.4	11	0.4	ND
Standard Error	1.1	0.4	12.9	13.0	0.3	0.3	0.2	8	1.0	8	0.2	ND
Median	4.5	11.0	180.0	177.2	0.0	1.5	1.1	306	13.0	0	0.0	ND
Mode	12.0	12.0	160.0	168.8	0.0	1.2	ND	292	12.0	0	0.0	ND
Standard Deviation	4.0	1.6	46.5	46.8	0.9	0.9	1.1	50	5.9	28	0.7	ND
Sample Variance	15.7	2.4	2164.1	2190.8	0.8	0.8	1.1	2518	35.4	761	0.5	ND
Kurtosis	-1.3	5.8	-1.4	-1.4	1.3	-0.6	3.3	10	-0.1	11	1.4	ND
Skewness	0.7	-2.2	0.6	0.6	1.3	-0.4	1.9	3	1.2	3	1.5	ND
Range	10.2	5.5	130.0	130.8	2.8	2.8	4.2	264	18.0	100	2.0	0
Minimum	1.8	6.5	150.0	147.6	0.0	0.0	0.5	290	11.0	0	0.0	0
Maximum	12.0	12.0	280.0	278.4	2.8	2.8	4.7	554	29.0	100	2.0	0
Count	13	12	13	13	12	13	39	39	39	13	13	0
Confidence Level(95.0%)	2.4	1.0	28.1	28.3	0.6	0.5	0.3	16	1.9	17	0.4	ND

ND = No Data

Provisional MMSD Water Quality data

SOUTH SHORE - SITE 10
WATER QUALITY DATA 2009

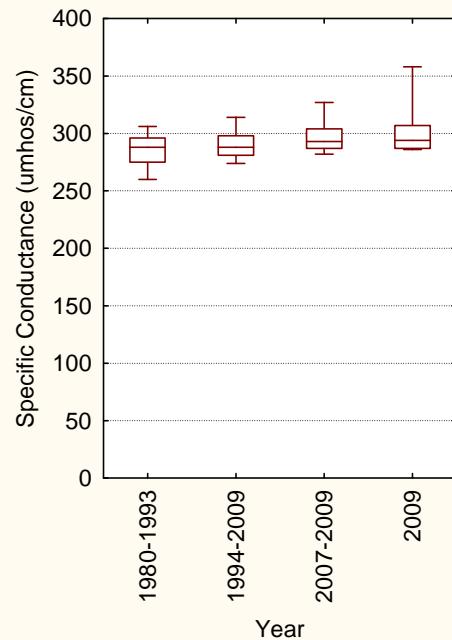
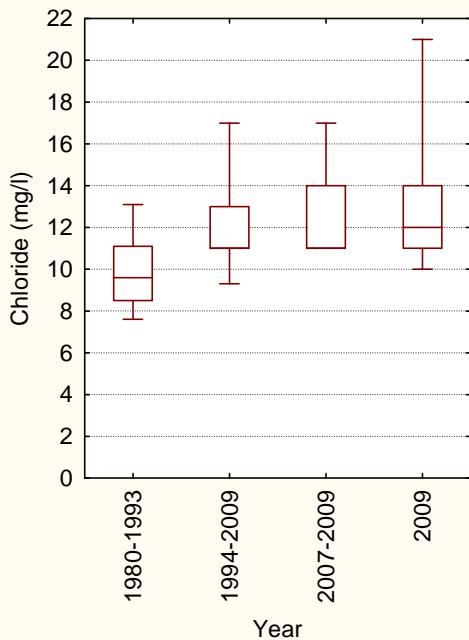
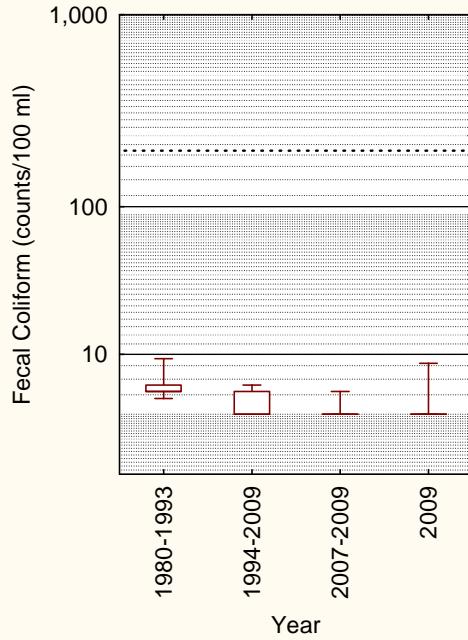
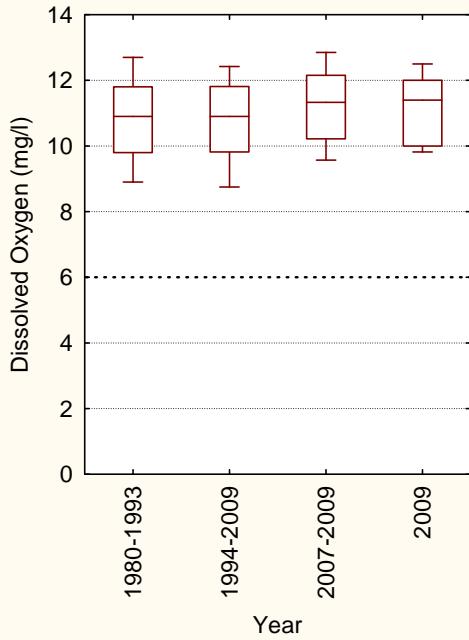
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.00	12.15	0.0	3.3	3.4	0.9	0.0	11.1	0.0	0.4	1.6	ND
Standard Error	0.42	0.27	0.0	0.1	0.5	0.5	0.0	3.9	0.0	0.3	1.0	ND
Median	35.00	12.00	0.0	3.4	3.5	0.0	0.0	9.3	0.0	0.0	0.0	ND
Mode	34.00	12.00	0.0	3.1	5.2	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.53	0.99	0.0	0.4	1.9	1.7	0.0	14.0	0.0	1.1	3.1	ND
Sample Variance	2.33	0.97	0.0	0.1	3.5	2.8	0.0	195.5	0.0	1.2	9.8	ND
Kurtosis	-0.48	-0.91	ND	0.7	-0.4	3.9	ND	5.5	ND	3.7	0.9	ND
Skewness	0.50	0.26	ND	-0.3	-0.7	2.0	ND	2.1	ND	2.2	1.6	ND
Range	5.00	3.00	0.0	1.5	5.6	5.4	0.0	51.0	0.0	3.2	7.5	0.0
Minimum	33.00	11.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	4.0	5.6	5.4	0.0	51.0	0.0	3.2	7.5	0.0
Count	13	13	13	13	13	13	13	13	13	13	9	0
Confidence Level(95.0%)	0.92	0.60	0.0	0.2	1.1	1.0	0.0	8.4	0.0	0.7	2.4	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	106	0.3	2.9	27.3	25.1	2.2	ND
Standard Error	2	1	0.3	0.1	0.3	0.3	0.0	ND
Median	140	100	0.0	2.9	27.0	25.0	2.2	ND
Mode	130	100	0.0	2.5	27.0	25.0	2.1	ND
Standard Deviation	8	6	1.0	0.3	1.8	1.7	0.3	ND
Sample Variance	56	41	1.0	0.1	3.4	2.8	0.1	ND
Kurtosis	-1	0	12.0	-1.4	-0.9	-0.8	-0.3	ND
Skewness	1	1	3.5	0.2	-0.2	0.0	0.4	ND
Range	20	20	3.4	1.0	6.0	6.0	1.1	0.0
Minimum	130	100	0.0	2.4	24.0	22.0	1.8	0.0
Maximum	150	120	3.4	3.4	30.0	28.0	2.9	0.0
Count	13	39	12	12	39	39	39	0
Confidence Level(95.0%)	5	2	0.6	0.2	0.6	0.5	0.1	ND

ND = No Data

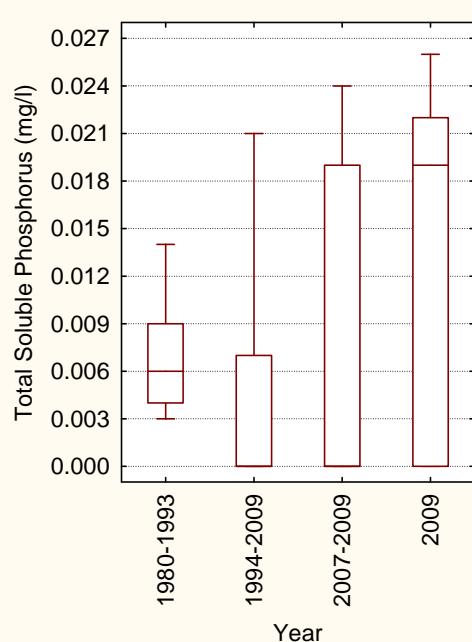
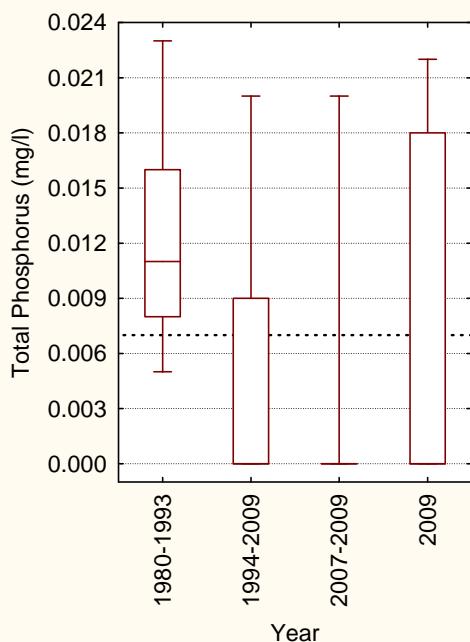
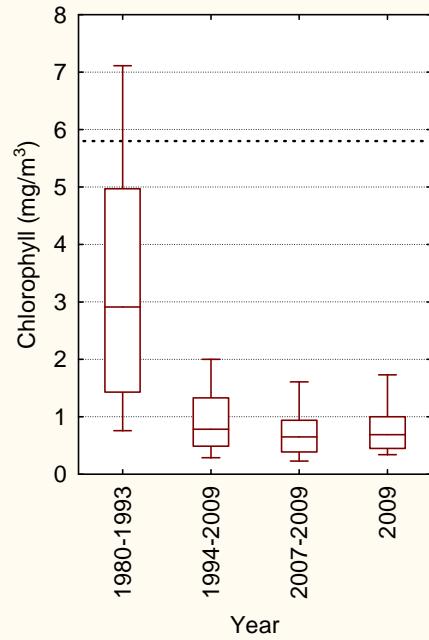
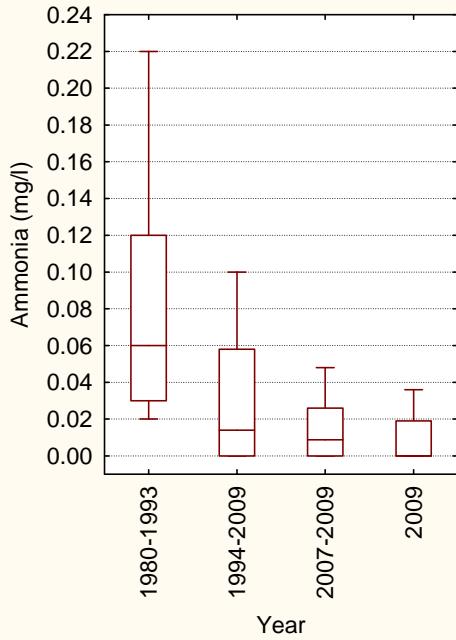
Provisional MMSD Water Quality data

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



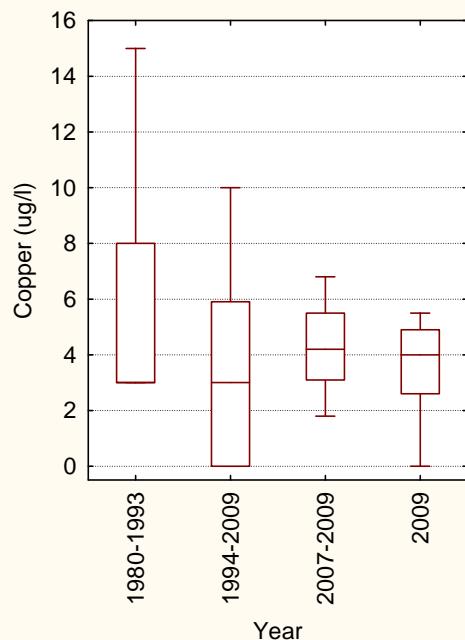
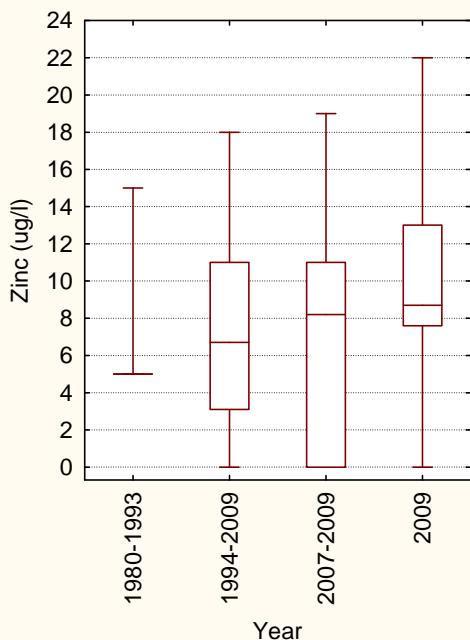
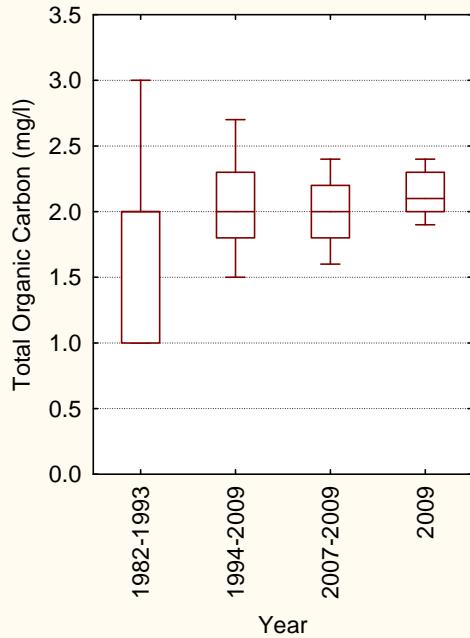
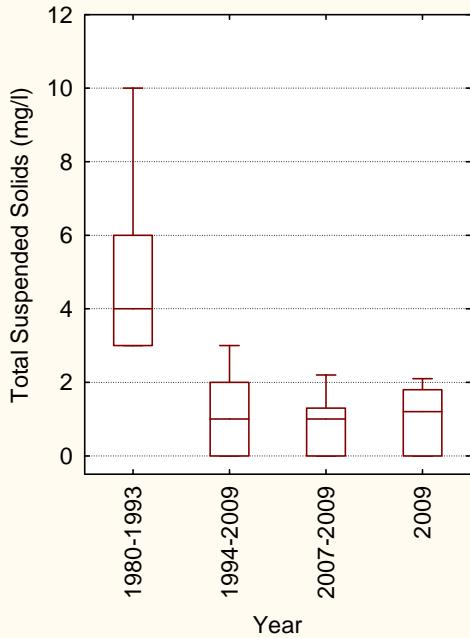
— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.1	11.0	0.86	0.38	0.007	0.38	0.012	0.11	0.007	0.013	1.67
Standard Error	0.0	0.5	0.2	0.10	0.02	0.001	0.02	0.002	0.02	0.002	0.002	0.07
Median	8.2	10.8	11.4	0.69	0.34	0.006	0.34	0.000	0.00	0.000	0.019	1.70
Mode	8.2	10.8	11.8	0.36	0.24	0.000	0.26	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.3	4.2	1.4	0.63	0.14	0.010	0.15	0.019	0.17	0.012	0.013	0.60
Sample Variance	0.1	17.6	2.0	0.40	0.02	0.000	0.02	0.000	0.03	0.000	0.000	0.35
Kurtosis	-1.1	-0.4	0.1	1.90	1.81	14.607	1.96	3.619	0.62	4.628	-1.288	-0.97
Skewness	0.2	0.3	-0.4	1.45	1.31	3.571	1.33	1.940	1.31	1.986	0.179	0.10
Range	0.9	16.6	6.3	2.81	0.67	0.058	0.68	0.081	0.63	0.058	0.041	2.20
Minimum	7.9	3.4	7.6	0.00	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.60
Maximum	8.8	20.0	13.9	2.81	0.87	0.058	0.88	0.081	0.63	0.058	0.041	2.80
Count	63	63	63	37	60	63	60	63	62	62	62	63
Confidence Level(95.0%)	0.1	1.1	0.4	0.21	0.04	0.003	0.04	0.005	0.04	0.003	0.003	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	6.5	12.7	183.1	182.1	0.5	1.0	1.1	307	13.5	1	0.1	ND
Standard Error	0.8	0.4	6.9	6.8	0.2	0.3	0.1	4	0.6	1	0.1	ND
Median	6.5	13.0	180.0	180.0	0.0	1.2	0.6	294	12.0	0	0.0	ND
Mode	6.5	13.0	160.0	150.0	0.0	0.0	ND	287	11.0	0	0.0	ND
Standard Deviation	3.6	1.8	25.0	24.6	0.7	0.9	0.9	35	4.6	3	0.3	ND
Sample Variance	12.7	3.2	623.1	606.7	0.5	0.8	0.9	1243	21.6	10	0.1	ND
Kurtosis	-0.2	10.9	-0.7	-0.7	-0.4	-1.6	2.6	10	2.9	3	2.8	ND
Skewness	0.6	-3.0	0.3	0.3	0.9	0.1	1.8	3	1.9	2	2.1	ND
Range	12.5	8.1	80.0	78.8	2.0	2.4	3.8	200	18.7	10	1.0	0
Minimum	1.5	6.0	150.0	150.0	0.0	0.0	0.3	282	9.3	0	0.0	0
Maximum	14.0	14.1	230.0	228.8	2.0	2.4	4.1	482	28.0	10	1.0	0
Count	21	20	13	13	12	13	63	63	63	21	21	0
Confidence Level(95.0%)	1.6	0.8	15.1	14.9	0.4	0.5	0.2	9	1.2	1	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 11
WATER QUALITY DATA - 2009

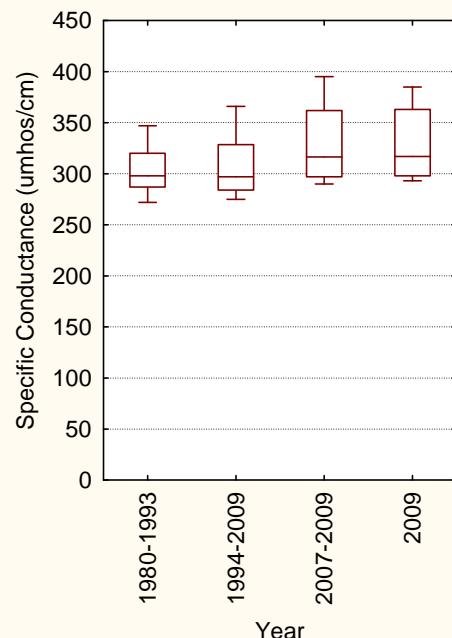
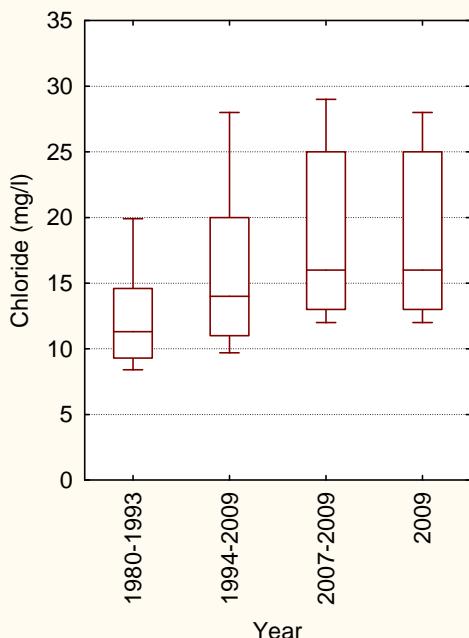
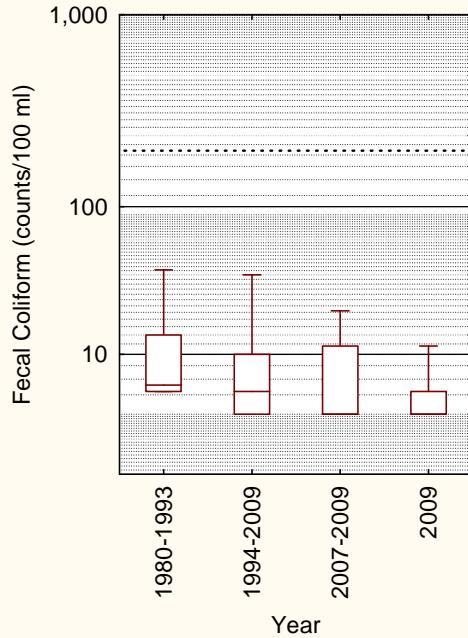
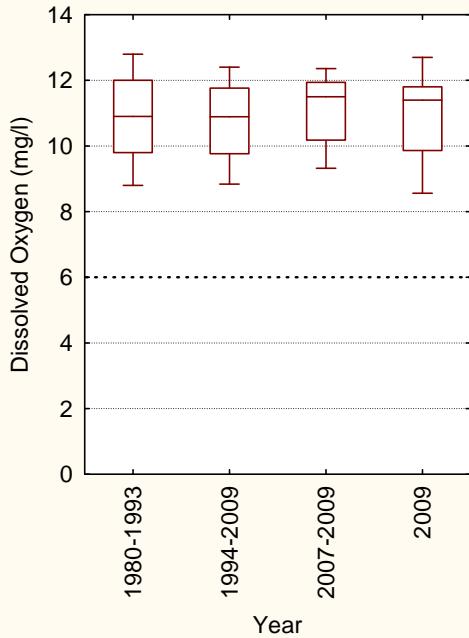
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.24	11.71	0.0	3.5	3.7	0.4	0.0	10.4	0.0	0.2	2.6	ND
Standard Error	0.36	0.21	0.0	0.1	0.6	0.2	0.0	1.8	0.0	0.1	0.9	ND
Median	34.00	11.00	0.0	3.3	4.0	0.0	0.0	8.7	0.0	0.0	0.0	ND
Mode	34.00	11.00	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.67	0.96	0.0	0.7	2.7	0.8	0.0	8.2	0.0	0.7	3.5	ND
Sample Variance	2.79	0.91	0.0	0.5	7.2	0.6	0.0	66.7	0.0	0.4	12.1	ND
Kurtosis	0.36	1.36	ND	0.0	3.8	-0.2	ND	-0.2	ND	9.0	-1.6	ND
Skewness	0.29	1.40	ND	0.7	1.1	1.3	ND	0.5	ND	3.1	0.7	ND
Range	7.00	3.00	0.0	2.5	12.0	2.0	0.0	27.0	0.0	2.5	8.2	0.0
Minimum	31.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	5.1	12.0	2.0	0.0	27.0	0.0	2.5	8.2	0.0
Count	21	21	21	21	21	21	21	21	21	21	16	0
Confidence Level(95.0%)	0.76	0.44	0.0	0.3	1.2	0.4	0.0	3.7	0.0	0.3	1.9	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	102	0.2	2.7	26.5	24.3	2.1	ND
Standard Error	2	1	0.2	0.1	0.2	0.2	0.0	ND
Median	130	100	0.0	2.7	27.0	24.0	2.1	ND
Mode	130	100	0.0	2.9	27.0	24.0	2.0	ND
Standard Deviation	8	5	0.8	0.4	1.6	1.5	0.2	ND
Sample Variance	65	30	0.7	0.1	2.4	2.3	0.0	ND
Kurtosis	0	4	12.0	-0.6	0.7	0.8	0.0	ND
Skewness	0	2	3.5	0.3	-0.4	-0.3	0.5	ND
Range	30	23	2.8	1.2	7.0	7.0	0.9	0.0
Minimum	120	97	0.0	2.2	23.0	21.0	1.8	0.0
Maximum	150	120	2.8	3.4	30.0	28.0	2.7	0.0
Count	21	39	12	12	39	39	39	0
Confidence Level(95.0%)	4	2	0.5	0.2	0.5	0.5	0.1	ND

ND = No Data

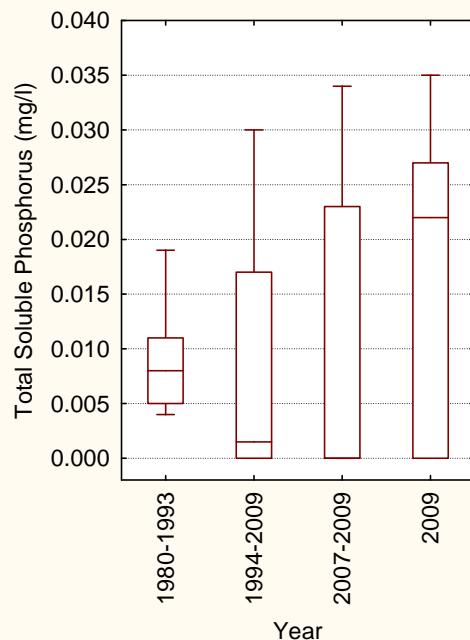
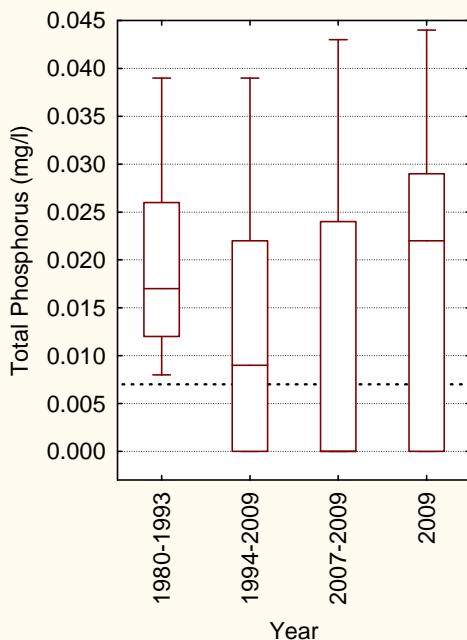
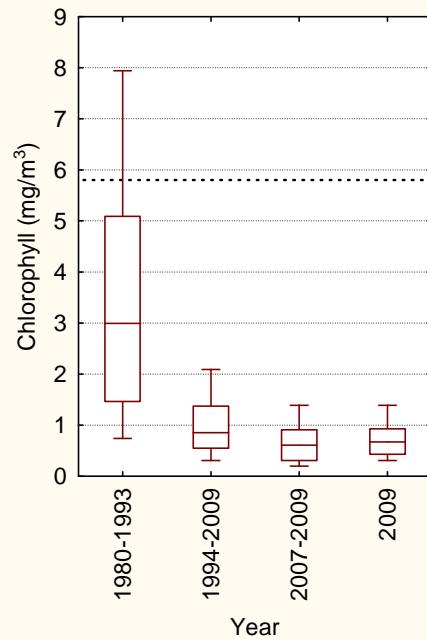
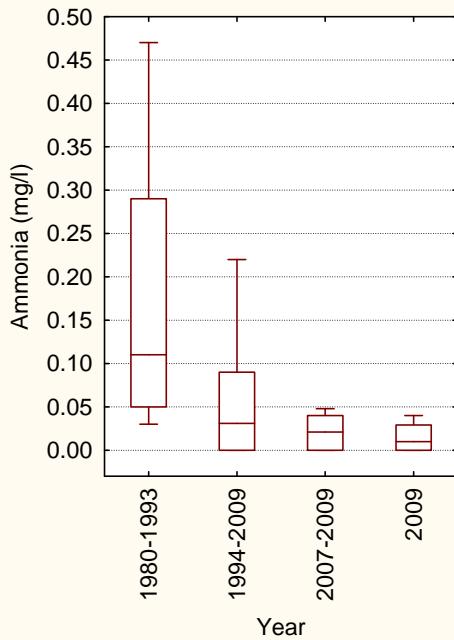
Provisional MMSD Water Quality Data

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



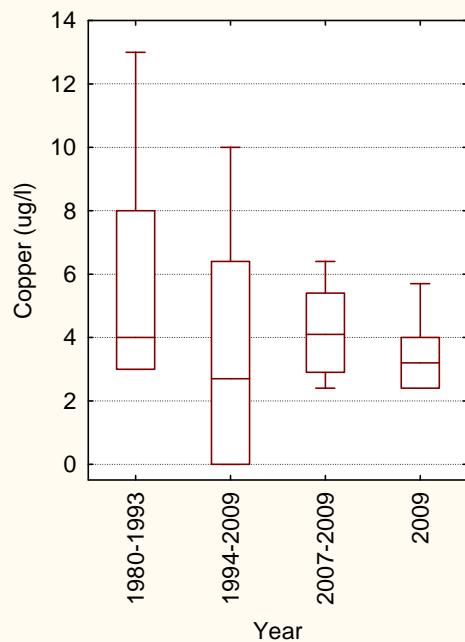
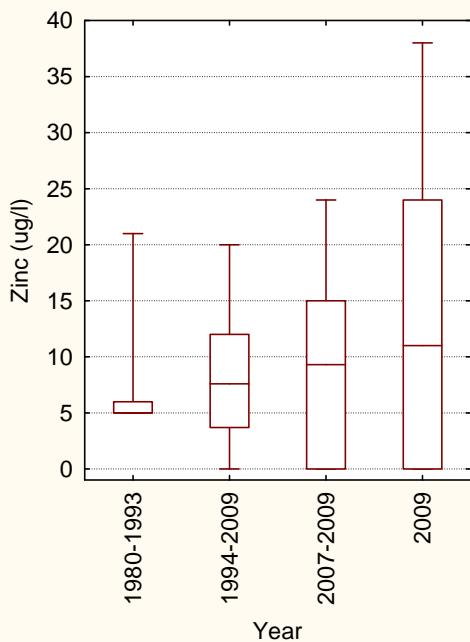
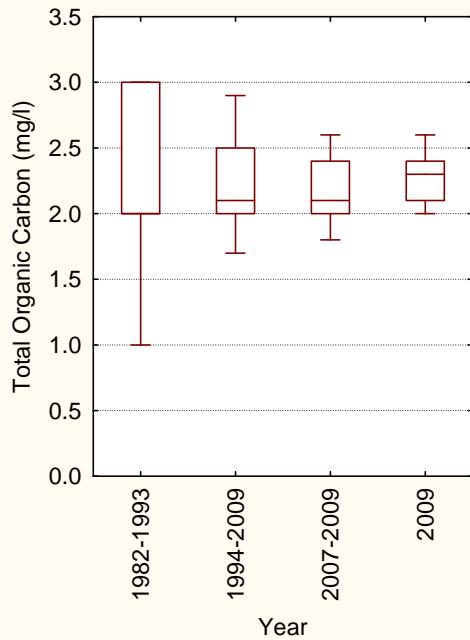
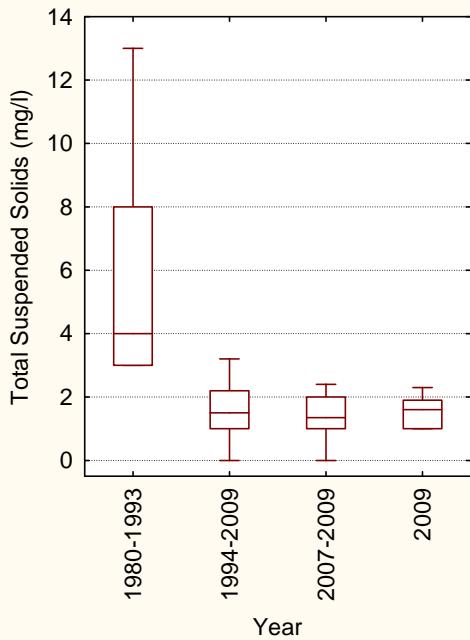
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	12.1	10.7	0.73	0.66	0.007	0.67	0.014	0.08	0.019	0.018	1.76
Standard Error	0.0	0.7	0.3	0.13	0.06	0.001	0.06	0.003	0.03	0.003	0.002	0.12
Median	8.1	10.8	11.4	0.67	0.49	0.006	0.49	0.010	0.00	0.022	0.022	1.70
Mode	8.1	20.0	11.7	0.43	0.41	0.000	1.30	0.000	0.00	0.000	0.000	2.40
Standard Deviation	0.3	4.1	1.6	0.45	0.35	0.006	0.35	0.017	0.16	0.016	0.013	0.73
Sample Variance	0.1	16.5	2.7	0.21	0.12	0.000	0.12	0.000	0.03	0.000	0.000	0.54
Kurtosis	0.0	-0.1	0.0	0.12	-0.91	13.335	-0.91	-0.533	0.69	-1.191	-1.262	-0.93
Skewness	0.1	0.2	-0.9	0.58	0.71	2.976	0.70	0.822	1.58	0.142	-0.344	0.09
Range	1.3	15.9	5.8	1.64	1.04	0.037	1.03	0.051	0.49	0.048	0.038	2.56
Minimum	7.4	4.1	7.0	0.00	0.26	0.000	0.27	0.000	0.00	0.000	0.000	0.64
Maximum	8.7	20.0	12.8	1.64	1.30	0.037	1.30	0.051	0.49	0.048	0.038	3.20
Count	39	39	39	13	39	39	39	39	38	39	39	39
Confidence Level(95.0%)	0.1	1.3	0.5	0.27	0.11	0.002	0.11	0.005	0.05	0.005	0.004	0.24

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	5.6	10.2	203.8	202.2	0.6	1.6	1.4	331	18.7	10	0.3	ND
Standard Error	0.9	0.8	11.2	11.2	0.3	0.3	0.2	6	1.1	8	0.2	ND
Median	5.1	11.1	190.0	188.4	0.0	1.6	1.3	317	16.0	0	0.0	ND
Mode	2.4	11.0	180.0	ND	0.0	1.6	1.7	298	12.0	0	0.0	ND
Standard Deviation	3.1	2.6	40.3	40.5	1.0	0.9	1.0	38	6.9	29	0.6	ND
Sample Variance	9.4	6.8	1625.6	1640.7	1.0	0.9	0.9	1434	47.1	818	0.4	ND
Kurtosis	0.1	2.5	1.3	1.2	-0.5	3.2	4.8	0	-0.4	12	4.4	ND
Skewness	0.9	-2.0	1.3	1.3	1.1	1.1	1.8	1	0.8	3	2.1	ND
Range	9.2	7.5	140.0	140.3	2.4	4.0	4.7	132	25.0	100	2.0	0
Minimum	2.4	4.5	160.0	158.4	0.0	0.0	0.4	289	11.0	0	0.0	0
Maximum	11.6	12.0	300.0	298.7	2.4	4.0	5.2	421	36.0	100	2.0	0
Count	13	12	13	13	12	13	39	39	39	12	12	0
Confidence Level(95.0%)	1.9	1.7	24.4	24.5	0.6	0.6	0.3	12	2.2	18	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

SOUTH SHORE - SITE 12
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.31	12.23	0.0	3.1	3.6	0.8	0.0	15.3	0.0	0.1	1.3	ND
Standard Error	0.52	0.26	0.0	0.1	0.6	0.3	0.0	4.1	0.0	0.1	0.9	ND
Median	36.00	12.00	0.0	3.2	3.2	0.0	0.0	11.0	0.0	0.0	0.0	ND
Mode	36.00	12.00	0.0	2.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.89	0.93	0.0	0.3	2.1	1.1	0.0	14.9	0.0	0.5	2.8	ND
Sample Variance	3.56	0.86	0.0	0.1	4.6	1.2	0.0	221.9	0.0	0.2	7.6	ND
Kurtosis	0.14	-0.55	ND	-1.4	3.0	-1.2	ND	-0.6	ND	13.0	1.7	ND
Skewness	-0.09	0.21	ND	0.0	1.2	0.8	ND	0.7	ND	3.6	1.8	ND
Range	7.00	3.00	0.0	0.9	9.0	2.8	0.0	44.0	0.0	1.8	7.1	0.0
Minimum	32.00	11.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	39.00	14.00	0.0	3.6	9.0	2.8	0.0	44.0	0.0	1.8	7.1	0.0
Count	13	13	13	13	13	13	13	13	13	13	10	0
Confidence Level(95.0%)	1.14	0.56	0.0	0.2	1.3	0.7	0.0	9.0	0.0	0.3	2.0	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	138	107	0.3	2.9	27.7	25.3	2.3	ND
Standard Error	2	1	0.3	0.1	0.2	0.2	0.0	ND
Median	140	110	0.0	2.9	27.0	25.0	2.3	ND
Mode	140	110	0.0	2.8	27.0	25.0	2.3	ND
Standard Deviation	8	7	1.0	0.4	1.5	1.4	0.2	ND
Sample Variance	69	43	1.0	0.2	2.1	2.0	0.0	ND
Kurtosis	1	1	12.0	0.6	0.1	-0.2	-0.4	ND
Skewness	-1	-1	3.5	0.7	0.2	0.1	0.4	ND
Range	30	34	3.5	1.5	7.0	6.0	0.7	0.0
Minimum	120	86	0.0	2.3	24.0	22.0	2.0	0.0
Maximum	150	120	3.5	3.8	31.0	28.0	2.7	0.0
Count	13	39	12	12	39	39	39	0
Confidence Level(95.0%)	5	2	0.6	0.3	0.5	0.5	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

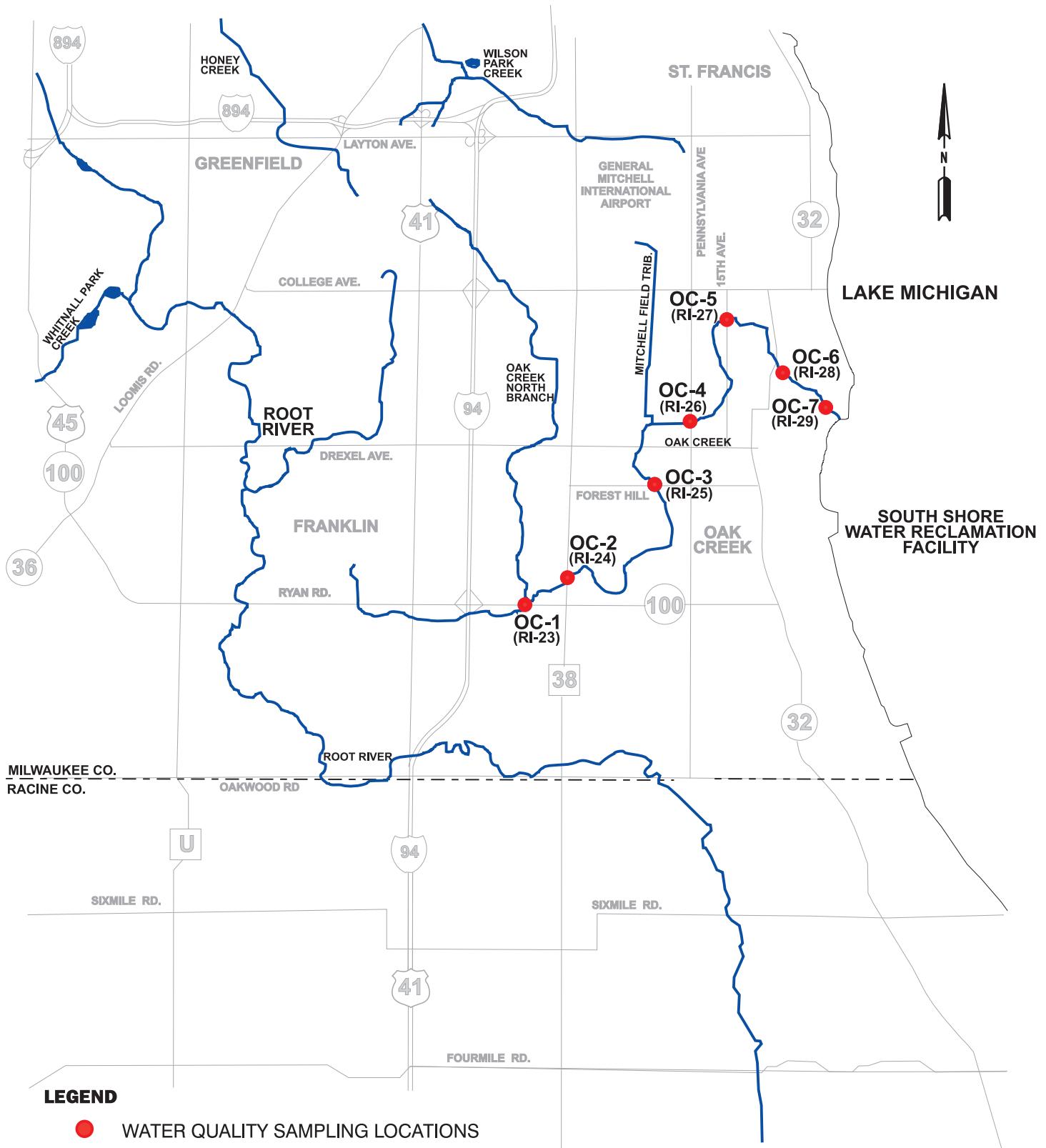
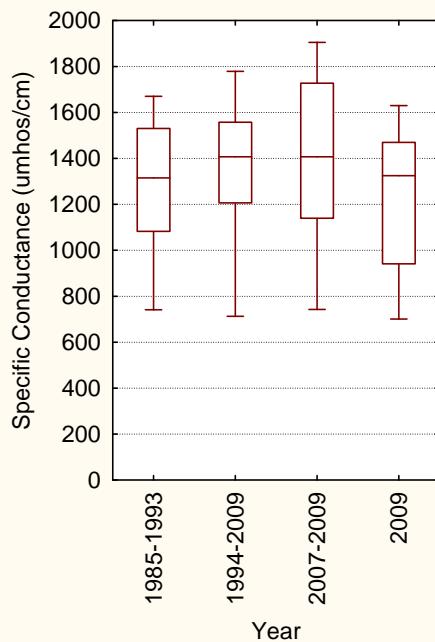
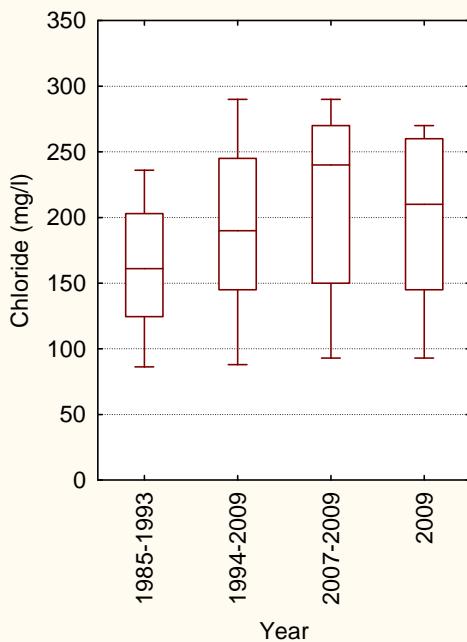
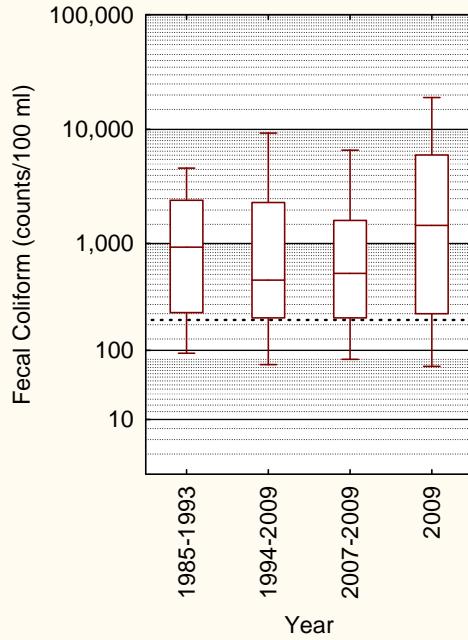
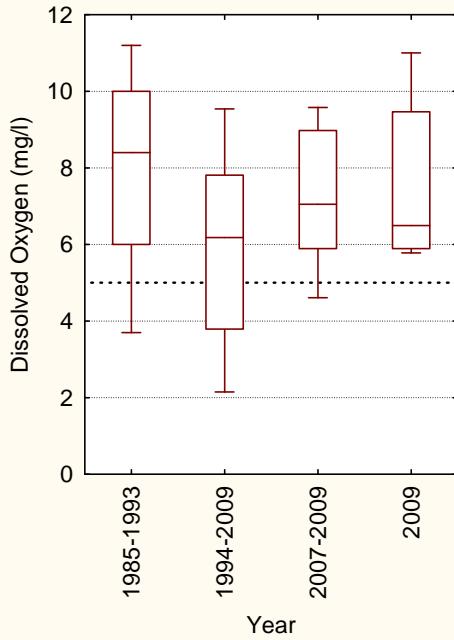


FIGURE 11
OAK CREEK (OC) SURVEY
WATER QUALITY SAMPLING LOCATIONS

7/28/09

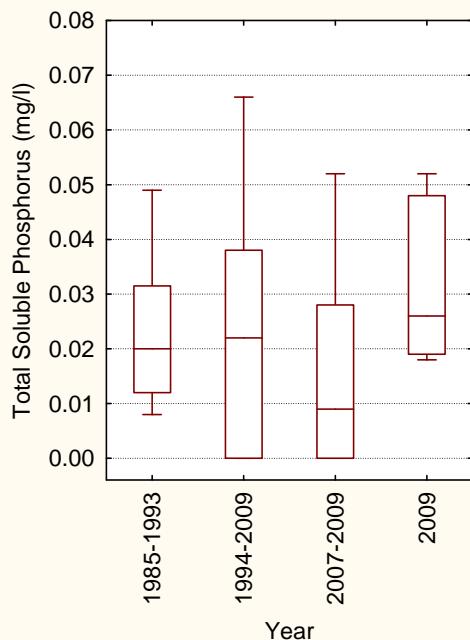
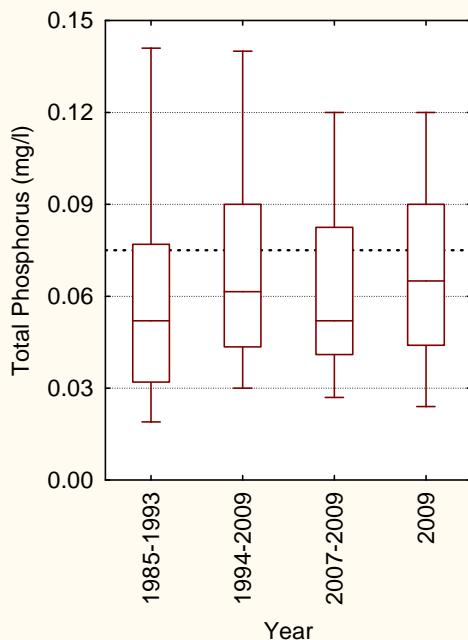
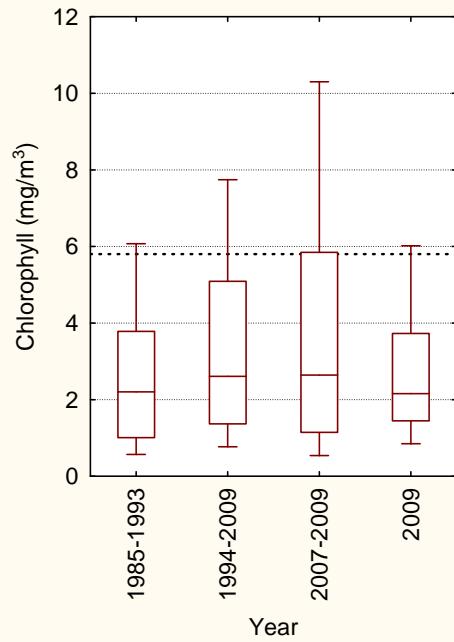
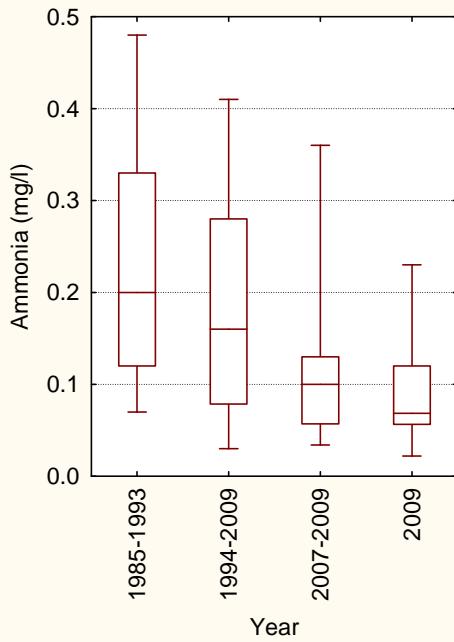
02-034 pg10 REPORT

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



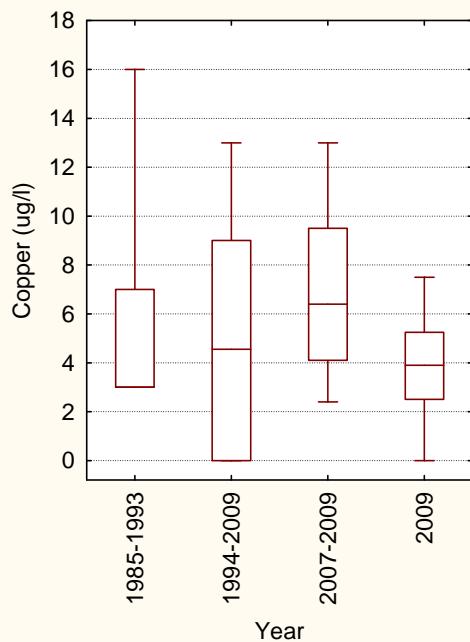
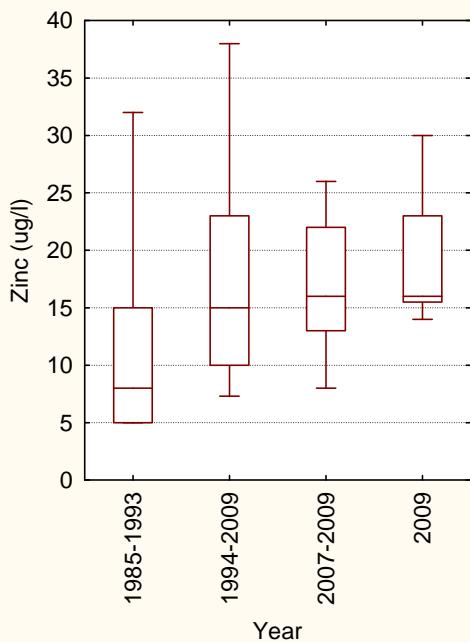
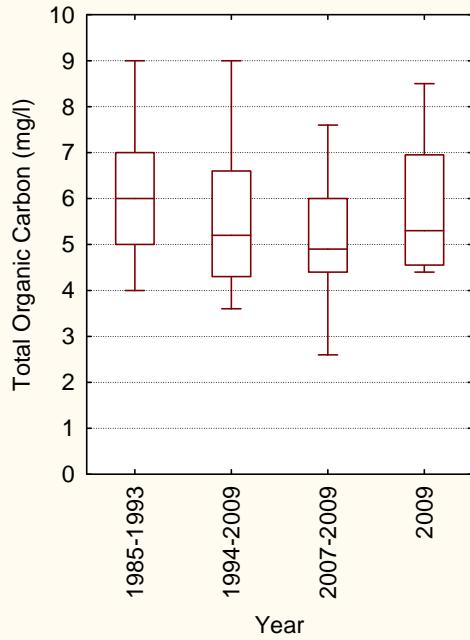
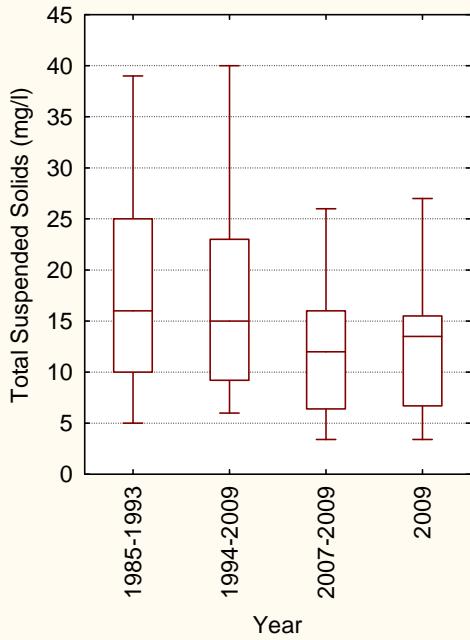
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	7.6	2.69	0.63	0.024	0.65	0.093	0.84	0.067	0.031	ND
Standard Error	0.1	2.1	0.7	0.63	0.13	0.003	0.14	0.023	0.11	0.012	0.005	ND
Median	7.6	12.8	6.5	2.16	0.47	0.021	0.48	0.069	0.85	0.065	0.026	ND
Mode	7.6	ND	ND	ND	0.36	ND	ND	ND	ND	ND	0.019	ND
Standard Deviation	0.2	5.9	2.1	1.79	0.38	0.010	0.40	0.065	0.32	0.033	0.014	ND
Sample Variance	0.0	34.6	4.3	3.20	0.14	0.000	0.16	0.004	0.11	0.001	0.000	ND
Kurtosis	3.2	-1.3	-1.3	0.32	-0.13	0.131	0.37	2.633	-0.37	-0.420	-1.231	ND
Skewness	-1.6	-0.1	0.8	1.13	1.14	0.715	1.25	1.518	0.50	0.412	0.809	ND
Range	0.6	16.7	5.2	5.17	1.01	0.030	1.08	0.208	0.95	0.096	0.034	0.00
Minimum	7.1	4.4	5.8	0.85	0.29	0.011	0.32	0.022	0.45	0.024	0.018	0.00
Maximum	7.7	21.1	11.0	6.02	1.30	0.041	1.40	0.230	1.40	0.120	0.052	0.00
Count	8	8	8	8	8	8	8	8	8	7	7	0
Confidence Level(95.0%)	0.2	4.9	1.7	1.50	0.32	0.008	0.33	0.054	0.27	0.030	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	702.5	689.8	2.7	12.7	15.6	1226	199.1	4303	3.1	ND
Standard Error	ND	ND	83.7	86.0	0.7	2.6	3.4	123	24.3	2275	0.3	ND
Median	ND	ND	745.0	731.5	2.9	13.5	13.4	1325	210.0	1450	3.2	ND
Mode	ND	ND	ND	ND	0.0	15.0	ND	ND	260.0	ND	ND	ND
Standard Deviation	ND	ND	236.7	243.1	2.1	7.4	9.6	348	68.7	6436	0.9	ND
Sample Variance	ND	ND	56021.4	59116.1	4.3	55.1	91.5	120778	4720.4	41421743	0.8	ND
Kurtosis	ND	ND	-0.5	-0.5	-1.4	1.0	3.4	-1	-1.2	5	-1.3	ND
Skewness	ND	ND	-0.6	-0.6	-0.2	0.8	1.6	-1	-0.6	2	-0.2	ND
Range	0.0	0.0	660.0	679.8	5.5	23.6	31.2	929	177.0	18933	2.5	0
Minimum	0.0	0.0	320.0	293.0	0.0	3.4	5.2	701	93.0	67	1.8	0
Maximum	0.0	0.0	980.0	972.8	5.5	27.0	36.4	1630	270.0	19000	4.3	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	197.9	203.3	1.7	6.2	8.0	291	57.4	5381	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

RYAN ROAD - SITE 1
OAK CREEK
WATER QUALITY DATA - 2009

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	71.88	33.63	0.1	5.1	3.9	9.8	1.3	19.1	0.0	0.0	0.0	ND
Standard Error	8.21	4.51	0.1	0.3	0.8	6.3	0.9	2.0	0.0	0.0	0.0	ND
Median	78.50	37.50	0.0	4.9	3.9	3.6	0.0	16.0	0.0	0.0	0.0	ND
Mode	ND	ND	0.0	ND	3.9	ND	0.0	16.0	0.0	0.0	0.0	ND
Standard Deviation	23.23	12.75	0.2	0.8	2.3	17.9	2.5	5.6	0.0	0.0	0.0	ND
Sample Variance	539.55	162.55	0.1	0.6	5.5	318.7	6.4	31.6	0.0	0.0	0.0	ND
Kurtosis	-0.23	-0.38	8.0	1.8	0.2	8.0	1.4	0.5	ND	ND	ND	ND
Skewness	-0.90	-0.81	2.8	1.2	0.0	2.8	1.7	1.2	ND	ND	ND	ND
Range	67.00	37.00	0.7	2.6	7.5	51.1	6.4	16.0	0.0	0.0	0.0	0.0
Minimum	31.00	12.00	0.0	4.1	0.0	2.9	0.0	14.0	0.0	0.0	0.0	0.0
Maximum	98.00	49.00	0.7	6.7	7.5	54.0	6.4	30.0	0.0	0.0	0.0	0.0
Count	8	8	8	8	8	8	8	8	8	8	6	0
Confidence Level(95.0%)	19.42	10.66	0.2	0.7	2.0	14.9	2.1	4.7	0.0	0.0	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	318	211	1.1	6.1	55.8	50.0	5.8	5.7
Standard Error	39	26	0.5	0.8	5.2	5.7	0.6	0.5
Median	350	225	0.0	5.4	57.5	53.0	5.3	5.2
Mode	ND	280	0.0	4.6	69.0	ND	ND	ND
Standard Deviation	110	73	1.5	2.2	14.7	16.0	1.6	1.4
Sample Variance	12107	5339	2.2	4.6	217.4	256.0	2.5	2.1
Kurtosis	0	-1	-1.5	-1.5	-0.9	-0.8	-0.4	-0.9
Skewness	-1	-1	0.8	0.6	-0.6	-0.6	1.0	0.9
Range	310	192	3.5	5.5	41.0	45.0	4.1	3.6
Minimum	130	88	0.0	3.8	31.0	23.0	4.4	4.3
Maximum	440	280	3.5	9.3	72.0	68.0	8.5	7.9
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	92	61	1.3	1.8	12.3	13.4	1.3	1.2

ND = No Data

Provisional MMSD Water Quality Data

HIGHWAY 38 - SITE 2
OAK CREEK
WATER QUALITY DATA - 2009

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	13.7	9.0	3.54	0.41	0.024	0.43	0.036	0.67	0.070	0.033	ND
Standard Error	0.1	2.4	0.9	0.98	0.09	0.007	0.09	0.012	0.11	0.016	0.010	ND
Median	7.7	12.7	8.3	3.31	0.36	0.022	0.41	0.033	0.49	0.049	0.032	ND
Mode	7.6	ND	ND	ND	ND	0.028	ND	0.000	ND	0.040	0.000	ND
Standard Deviation	0.1	6.9	2.5	2.76	0.24	0.019	0.25	0.035	0.32	0.046	0.027	ND
Sample Variance	0.0	47.9	6.3	7.64	0.06	0.000	0.06	0.001	0.10	0.002	0.001	ND
Kurtosis	-0.2	-1.5	-1.3	4.11	-0.88	2.498	-1.12	0.071	-0.80	0.667	-1.401	ND
Skewness	0.8	-0.1	0.6	1.82	0.49	1.251	0.29	0.775	1.01	1.149	0.083	ND
Range	0.4	18.3	6.7	8.87	0.71	0.064	0.72	0.100	0.82	0.136	0.073	0.00
Minimum	7.6	3.2	6.1	0.85	0.10	0.000	0.10	0.000	0.38	0.024	0.000	0.00
Maximum	8.0	21.5	12.8	9.72	0.81	0.064	0.82	0.100	1.20	0.160	0.073	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.1	5.8	2.1	2.31	0.20	0.016	0.21	0.029	0.27	0.039	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	673.8	653.6	3.8	20.2	23.3	1157	210.3	1908	2.7	ND
Standard Error	ND	ND	70.9	76.8	1.3	8.0	10.0	133	26.2	1023	0.3	ND
Median	ND	ND	720.0	702.0	2.8	13.0	14.7	1250	220.0	375	2.6	ND
Mode	ND	ND	800.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	200.4	217.4	3.7	22.5	28.3	377	74.0	2893	0.8	ND
Sample Variance	ND	ND	40169.6	47246.1	13.4	505.8	800.3	142071	5474.8	8372325	0.6	ND
Kurtosis	ND	ND	-1.1	-0.9	4.2	5.8	7.0	-1	-1.0	4	-1.5	ND
Skewness	ND	ND	-0.6	-0.7	1.9	2.3	2.6	-1	-0.6	2	0.4	ND
Range	0.0	0.0	540.0	599.0	12.0	70.6	88.5	1062	198.0	8337	2.1	0
Minimum	0.0	0.0	370.0	297.0	0.0	2.4	3.3	528	92.0	63	1.8	0
Maximum	0.0	0.0	910.0	896.0	12.0	73.0	91.8	1590	290.0	8400	3.9	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	167.6	181.7	3.1	18.8	23.7	315	61.9	2419	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

HIGHWAY 38 - SITE 2
OAK CREEK
WATER QUALITY DATA - 2009

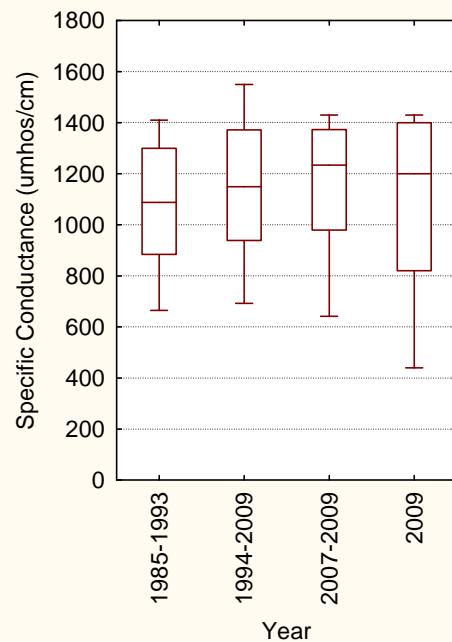
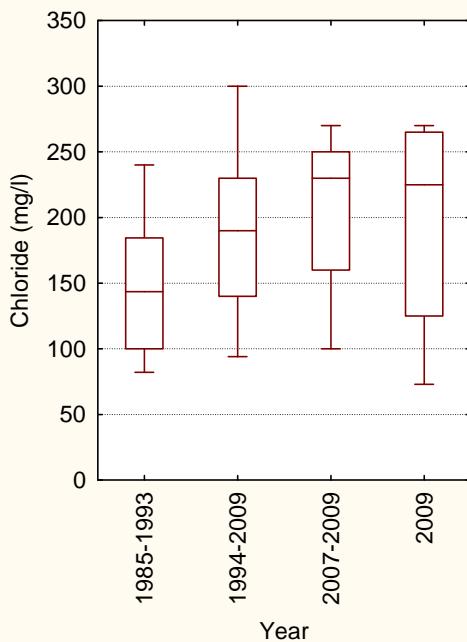
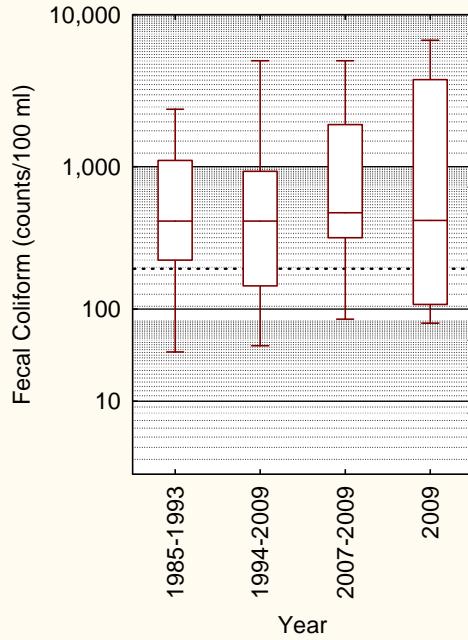
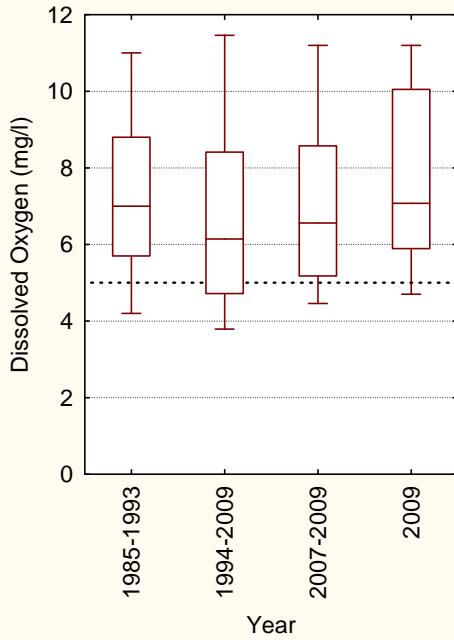
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	63.00	28.88	0.0	5.1	4.2	4.1	0.0	24.2	0.0	0.0	1.3	ND
Standard Error	6.67	3.92	0.0	0.3	1.0	0.3	0.0	4.3	0.0	0.0	1.3	ND
Median	68.50	31.00	0.0	5.1	3.9	4.0	0.0	23.5	0.0	0.0	0.0	ND
Mode	80.00	ND	0.0	5.4	ND	ND	0.0	38.0	0.0	0.0	0.0	ND
Standard Deviation	18.86	11.08	0.0	0.8	3.0	0.9	0.0	12.1	0.0	0.0	3.1	ND
Sample Variance	355.71	122.70	0.0	0.7	8.8	0.8	0.0	145.2	0.0	0.0	9.4	ND
Kurtosis	-0.36	-0.65	ND	0.6	-0.1	-1.2	ND	-1.9	ND	ND	6.0	ND
Skewness	-0.99	-0.64	ND	0.4	0.5	0.4	ND	-0.1	ND	ND	2.4	ND
Range	50.00	32.00	0.0	2.5	9.2	2.4	0.0	30.7	0.0	0.0	7.5	0.0
Minimum	30.00	11.00	0.0	4.0	0.0	3.0	0.0	7.3	0.0	0.0	0.0	0.0
Maximum	80.00	43.00	0.0	6.5	9.2	5.4	0.0	38.0	0.0	0.0	7.5	0.0
Count	8	8	8	7	8	8	8	8	8	8	6	0
Confidence Level(95.0%)	15.77	9.26	0.0	0.8	2.5	0.7	0.0	10.1	0.0	0.0	3.2	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	276	192	0.9	5.8	52.3	46.0	6.3	6.0
Standard Error	32	26	0.4	0.5	5.4	5.5	0.3	0.3
Median	300	215	0.0	5.5	57.0	51.5	6.0	5.9
Mode	270	260	0.0	5.0	61.0	55.0	ND	ND
Standard Deviation	92	73	1.3	1.3	15.2	15.7	1.0	0.8
Sample Variance	8398	5374	1.6	1.7	230.8	245.7	0.9	0.6
Kurtosis	-1	0	-1.6	-1.2	-0.6	-0.8	1.8	0.8
Skewness	-1	-1	0.8	0.0	-0.8	-0.8	1.2	0.9
Range	240	201	2.9	3.6	43.0	42.0	3.1	2.5
Minimum	120	59	0.0	3.8	26.0	20.0	5.1	5.0
Maximum	360	260	2.9	7.4	69.0	62.0	8.2	7.5
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	77	61	1.1	1.1	12.7	13.1	0.8	0.7

ND = No Data

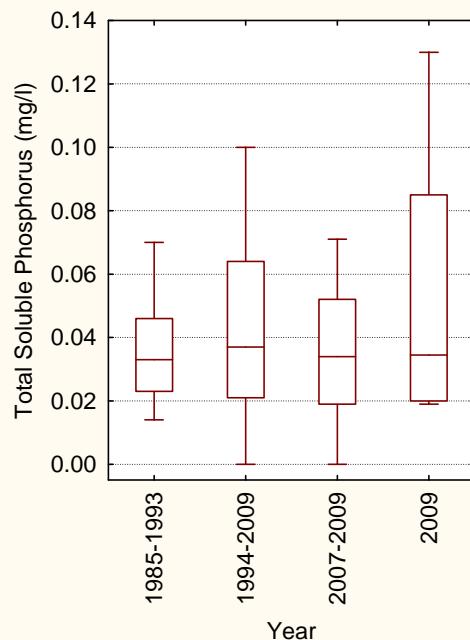
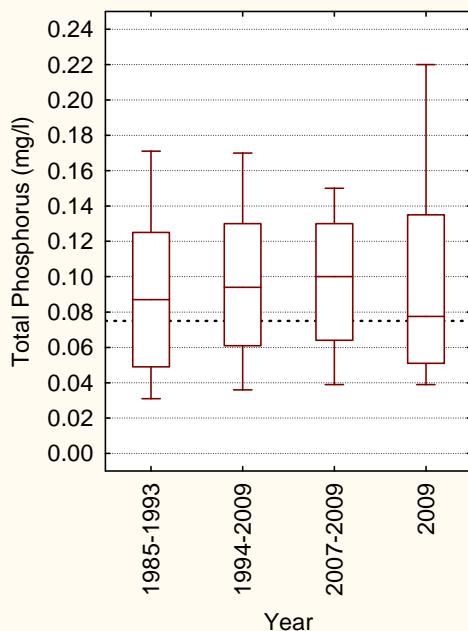
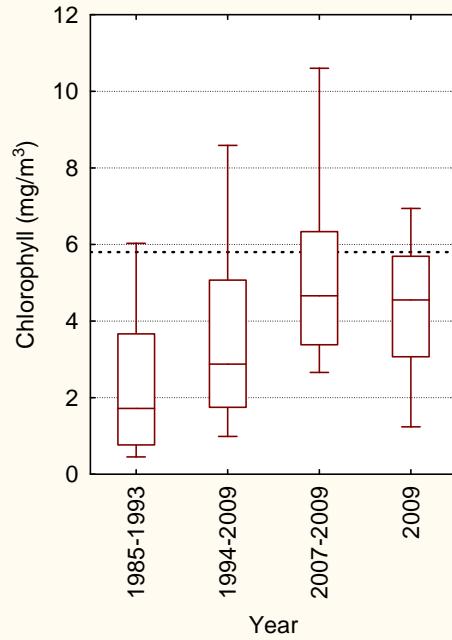
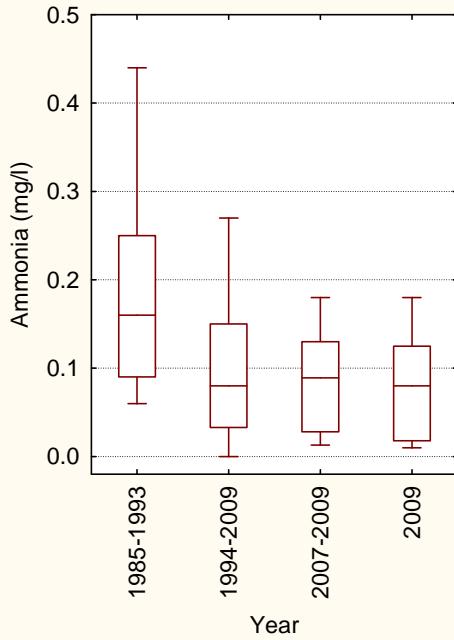
Provisional MMSD Water Quality Data

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



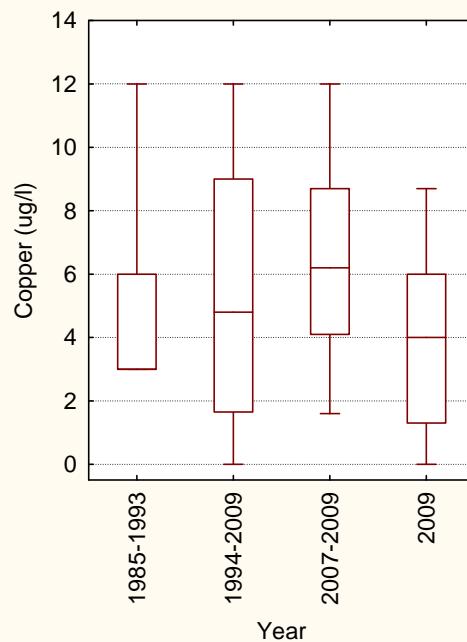
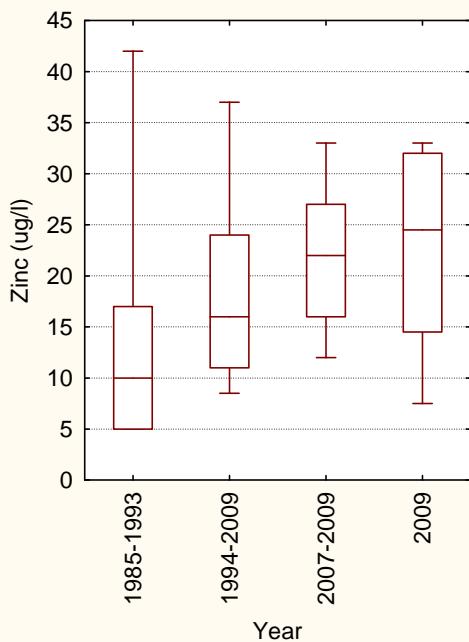
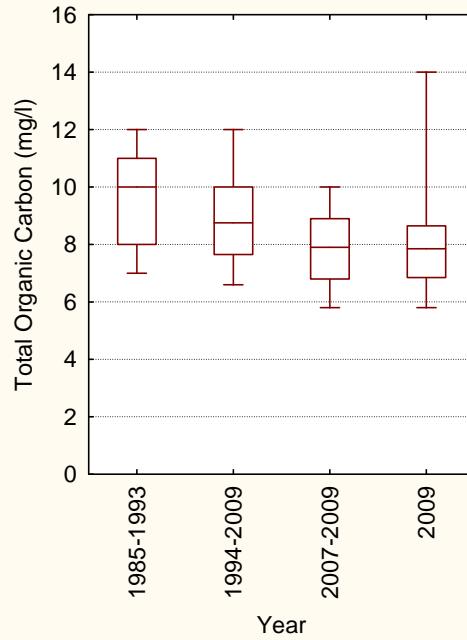
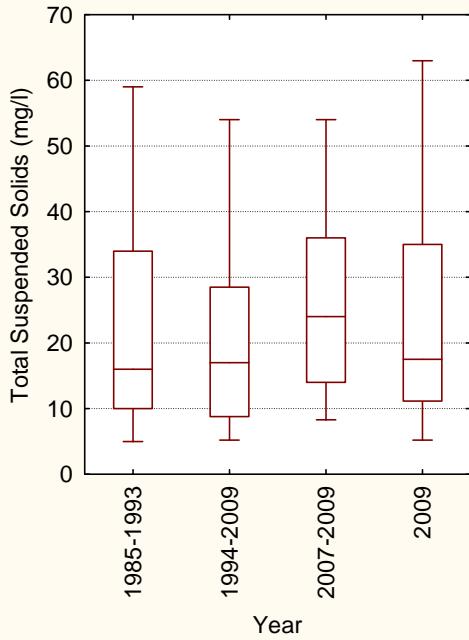
— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	14.0	7.7	4.35	0.35	0.022	0.37	0.080	0.92	0.098	0.054	ND
Standard Error	0.1	2.5	0.9	0.66	0.09	0.005	0.09	0.022	0.16	0.022	0.016	ND
Median	7.6	13.0	7.1	4.55	0.36	0.022	0.39	0.080	0.70	0.078	0.035	ND
Mode	7.8	21.6	ND	ND	ND	ND	ND	ND	0.68	ND	0.019	ND
Standard Deviation	0.2	7.2	2.4	1.86	0.26	0.014	0.26	0.062	0.46	0.062	0.044	ND
Sample Variance	0.0	51.3	5.9	3.45	0.07	0.000	0.07	0.004	0.21	0.004	0.002	ND
Kurtosis	-1.4	-1.6	-1.6	-0.48	0.34	-0.689	-0.06	-1.085	0.78	0.914	-0.387	ND
Skewness	0.3	-0.1	0.3	-0.38	0.76	-0.095	0.58	0.320	1.54	1.168	1.073	ND
Range	0.5	18.4	6.5	5.70	0.76	0.041	0.77	0.170	1.19	0.181	0.111	0.00
Minimum	7.4	3.4	4.7	1.24	0.07	0.000	0.07	0.010	0.61	0.039	0.019	0.00
Maximum	7.9	21.8	11.2	6.94	0.83	0.041	0.84	0.180	1.80	0.220	0.130	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.1	6.0	2.0	1.55	0.21	0.011	0.22	0.052	0.38	0.052	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	667.5	643.1	4.4	24.4	25.0	1089	196.6	1933	2.8	ND
Standard Error	ND	ND	64.2	71.0	1.5	7.1	7.2	132	28.3	926	0.3	ND
Median	ND	ND	725.0	710.0	3.4	17.5	19.1	1200	225.0	435	2.6	ND
Mode	ND	ND	830.0	ND	ND	ND	ND	ND	270.0	ND	ND	ND
Standard Deviation	ND	ND	181.6	200.8	4.2	20.0	20.4	374	80.0	2619	0.8	ND
Sample Variance	ND	ND	32992.9	40312.7	17.6	398.9	414.4	140068	6405.4	6858998	0.6	ND
Kurtosis	ND	ND	0.1	0.2	0.1	0.8	0.8	-1	-1.6	0	-1.8	ND
Skewness	ND	ND	-1.1	-1.1	1.1	1.3	1.3	-1	-0.5	1	0.3	ND
Range	0.0	0.0	500.0	557.8	12.0	57.8	60.1	990	197.0	6723	1.9	0
Minimum	0.0	0.0	330.0	267.0	0.0	5.2	4.0	440	73.0	77	1.9	0
Maximum	0.0	0.0	830.0	824.8	12.0	63.0	64.1	1430	270.0	6800	3.8	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	151.9	167.9	3.5	16.7	17.0	313	66.9	2190	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

FOREST HILL ROAD - SITE 3
OAK CREEK
WATER QUALITY DATA - 2009

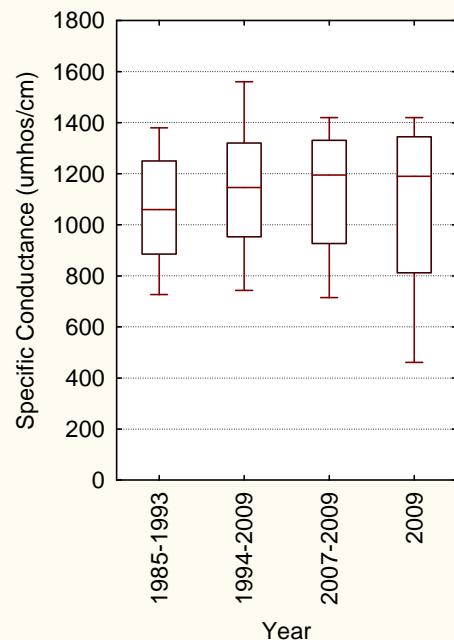
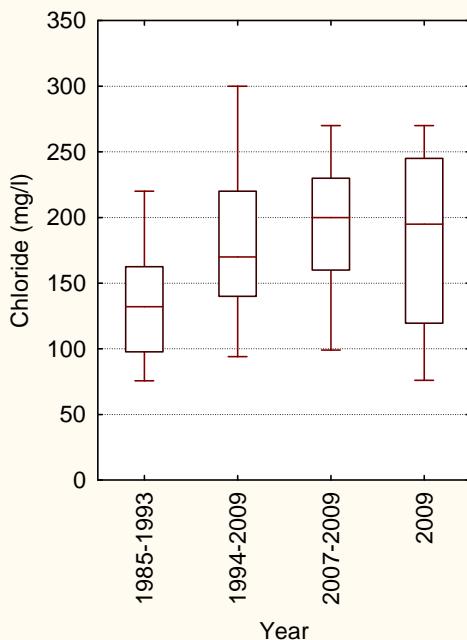
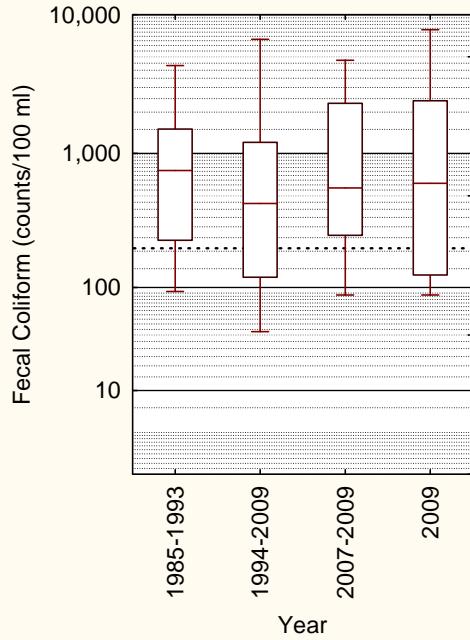
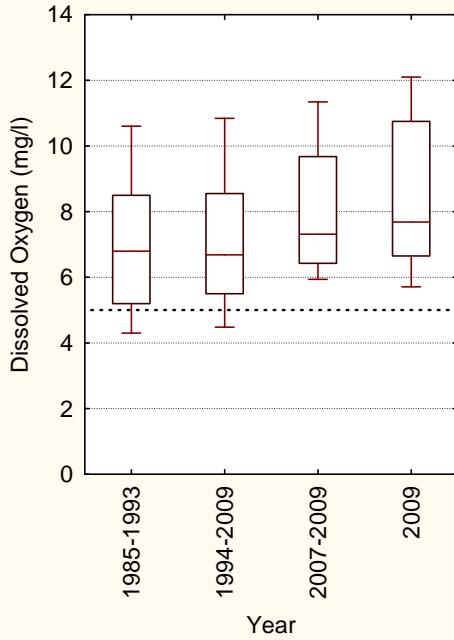
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	64.00	28.05	0.0	5.5	3.9	3.9	1.9	22.8	0.0	0.0	0.0	ND
Standard Error	7.25	3.82	0.0	0.5	1.1	0.3	1.9	3.5	0.0	0.0	0.0	ND
Median	73.50	31.50	0.0	5.2	4.0	4.1	0.0	24.5	0.0	0.0	0.0	ND
Mode	ND	ND	0.0	ND	0.0	2.9	0.0	32.0	0.0	0.0	0.0	ND
Standard Deviation	20.51	10.82	0.0	1.3	3.2	1.0	5.3	9.8	0.0	0.0	0.0	ND
Sample Variance	420.57	116.99	0.0	1.8	10.0	0.9	28.1	95.4	0.0	0.0	0.0	ND
Kurtosis	0.26	-0.31	ND	2.0	-0.8	-0.5	8.0	-1.4	ND	ND	ND	ND
Skewness	-1.28	-1.02	ND	1.4	0.3	0.4	2.8	-0.4	ND	ND	ND	ND
Range	55.00	29.60	0.0	4.1	8.7	2.7	15.0	25.5	0.0	0.0	0.0	0.0
Minimum	26.00	9.40	0.0	4.2	0.0	2.9	0.0	7.5	0.0	0.0	0.0	0.0
Maximum	81.00	39.00	0.0	8.3	8.7	5.6	15.0	33.0	0.0	0.0	0.0	0.0
Count	8	8	8	8	8	8	8	8	8	8	4	0
Confidence Level(95.0%)	17.14	9.04	0.0	1.1	2.6	0.8	4.4	8.2	0.0	0.0	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	276	198	1.0	6.6	55.8	47.6	8.3	8.0
Standard Error	34	28	0.5	0.5	6.6	6.1	0.9	0.8
Median	315	225	0.0	6.5	59.5	52.5	7.9	7.8
Mode	350	ND	0.0	5.9	ND	ND	ND	ND
Standard Deviation	96	80	1.4	1.5	18.6	17.4	2.5	2.3
Sample Variance	9141	6340	2.0	2.3	344.2	302.0	6.3	5.1
Kurtosis	0	0	-2.2	-0.8	0.1	0.0	4.5	3.8
Skewness	-1	-1	0.7	0.2	-0.9	-1.0	1.9	1.6
Range	250	216	2.8	4.5	53.0	49.0	8.2	7.6
Minimum	100	54	0.0	4.4	22.0	16.0	5.8	5.4
Maximum	350	270	2.8	8.9	75.0	65.0	14.0	13.0
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	80	67	1.2	1.3	15.5	14.5	2.1	1.9

ND = No Data

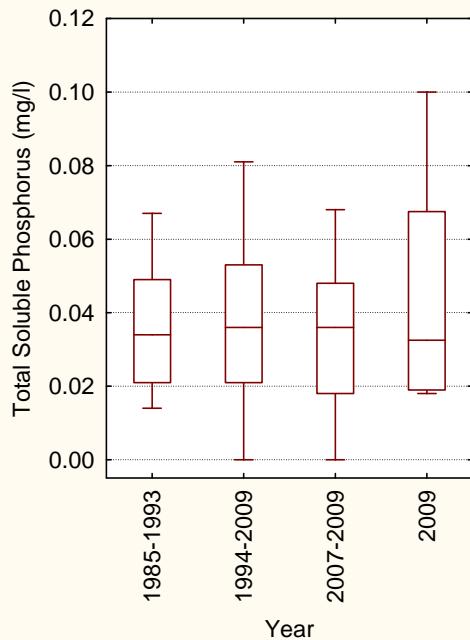
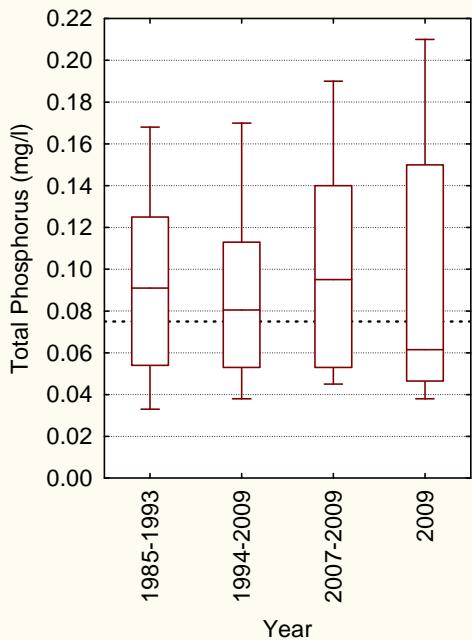
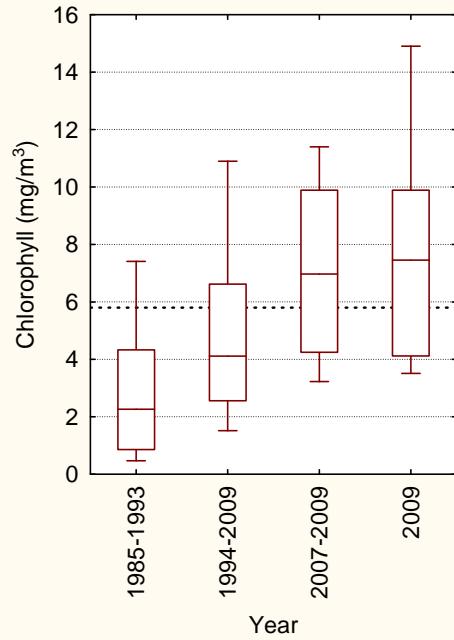
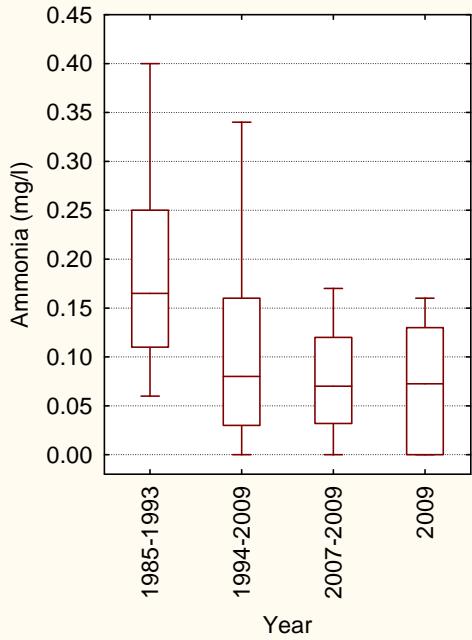
Provisional MMSD Water Quality Data

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



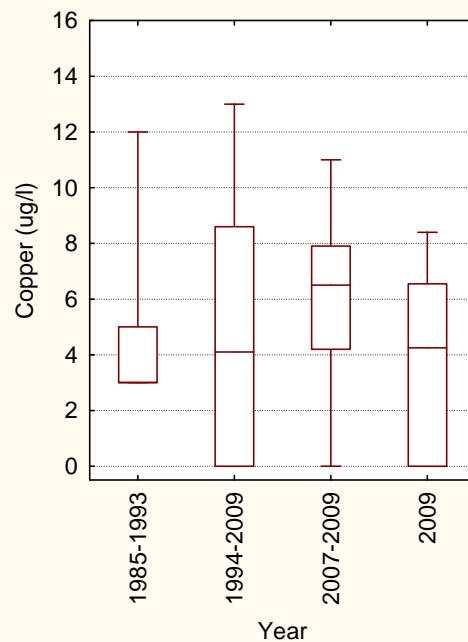
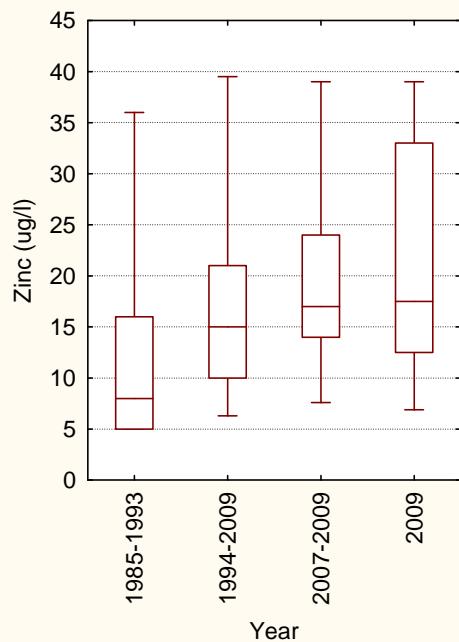
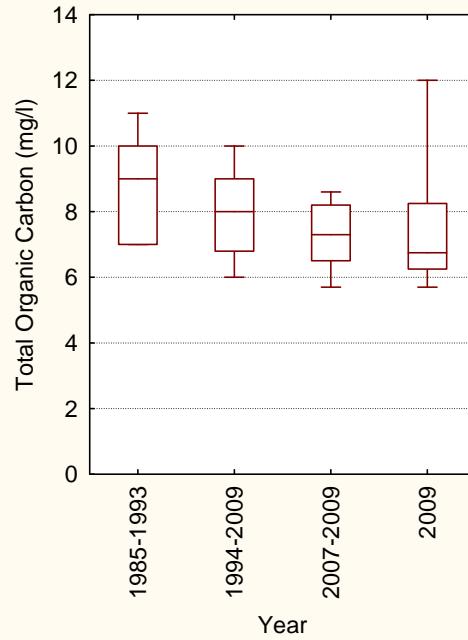
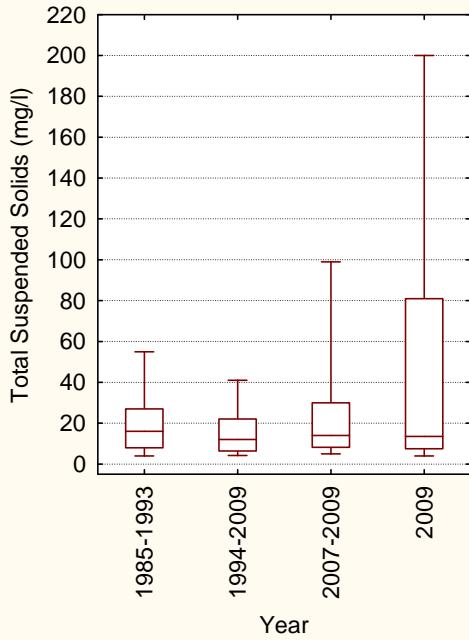
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	14.0	8.5	7.67	0.37	0.023	0.40	0.071	0.80	0.096	0.045	ND
Standard Error	0.1	2.5	0.8	1.38	0.09	0.006	0.09	0.024	0.14	0.023	0.011	ND
Median	7.7	13.3	7.7	7.46	0.37	0.022	0.41	0.073	0.72	0.062	0.033	ND
Mode	7.6	ND	ND	ND	0.11	ND	0.12	0.000	ND	ND	0.018	ND
Standard Deviation	0.2	7.0	2.4	3.91	0.25	0.017	0.26	0.067	0.39	0.065	0.031	ND
Sample Variance	0.0	48.3	5.7	15.29	0.06	0.000	0.07	0.004	0.15	0.004	0.001	ND
Kurtosis	-1.6	-1.6	-1.4	0.11	0.21	-1.822	-0.24	-2.034	5.22	-0.756	-0.534	ND
Skewness	0.4	-0.1	0.5	0.77	0.76	0.082	0.59	0.075	2.14	0.917	0.884	ND
Range	0.5	18.4	6.4	11.39	0.73	0.046	0.74	0.160	1.22	0.172	0.082	0.00
Minimum	7.5	3.6	5.7	3.51	0.11	0.000	0.12	0.000	0.48	0.038	0.018	0.00
Maximum	8.0	22.0	12.1	14.90	0.84	0.046	0.86	0.160	1.70	0.210	0.100	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	5.8	2.0	3.27	0.21	0.015	0.22	0.056	0.33	0.055	0.026	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	678.8	627.8	8.0	51.0	27.0	1072	183.1	1768	2.8	ND
Standard Error	ND	ND	55.1	75.3	3.3	24.4	9.3	127	25.8	930	0.3	ND
Median	ND	ND	705.0	696.0	3.3	13.5	12.9	1190	195.0	605	2.7	ND
Mode	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	156.0	212.8	9.4	69.1	26.3	360	72.9	2629	0.7	ND
Sample Variance	ND	ND	24326.8	45302.2	88.3	4781.1	691.8	129456	5314.1	6912424	0.5	ND
Kurtosis	ND	ND	-0.9	-0.5	2.5	2.8	-0.8	-1	-1.6	5	-1.6	ND
Skewness	ND	ND	-0.7	-0.9	1.6	1.8	1.0	-1	-0.4	2	0.3	ND
Range	0.0	0.0	400.0	570.0	28.0	196.0	63.6	959	194.0	7713	2.0	0
Minimum	0.0	0.0	440.0	260.0	0.0	4.0	4.4	461	76.0	87	1.9	0
Maximum	0.0	0.0	840.0	830.0	28.0	200.0	68.0	1420	270.0	7800	3.9	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	130.4	177.9	7.9	57.8	22.0	301	60.9	2198	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

PENNSYLVANIA AVENUE - SITE 4
 OAK CREEK
 WATER QUALITY DATA - 2009

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	66.25	29.00	0.0	5.8	3.8	4.2	0.0	21.5	0.0	0.0	1.7	ND
Standard Error	7.76	3.99	0.0	0.5	1.2	0.5	0.0	4.3	0.0	0.0	1.7	ND
Median	76.50	31.50	0.0	5.7	4.3	4.1	0.0	17.5	0.0	0.0	0.0	ND
Mode	ND	ND	0.0	ND	0.0	ND	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	21.95	11.29	0.0	1.3	3.5	1.3	0.0	12.1	0.0	0.0	3.9	ND
Sample Variance	481.64	127.43	0.0	1.8	12.0	1.8	0.0	147.6	0.0	0.0	15.1	ND
Kurtosis	-0.07	-0.61	ND	-0.7	-1.6	0.3	ND	-1.3	ND	ND	5.0	ND
Skewness	-1.21	-0.71	ND	0.5	0.1	0.8	ND	0.6	ND	ND	2.2	ND
Range	58.00	32.00	0.0	3.9	8.4	4.1	0.0	32.1	0.0	0.0	8.7	0.0
Minimum	27.00	11.00	0.0	4.0	0.0	2.6	0.0	6.9	0.0	0.0	0.0	0.0
Maximum	85.00	43.00	0.0	7.9	8.4	6.7	0.0	39.0	0.0	0.0	8.7	0.0
Count	8	8	8	8	8	8	8	8	8	8	5	0
Confidence Level(95.0%)	18.35	9.44	0.0	1.1	2.9	1.1	0.0	10.2	0.0	0.0	4.8	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	284	206	1.4	6.5	56.8	49.4	7.5	7.1
Standard Error	36	31	0.5	0.5	6.8	6.7	0.7	0.6
Median	320	240	1.2	6.4	61.0	54.5	6.8	6.5
Mode	320	280	0.0	ND	55.0	ND	ND	ND
Standard Deviation	102	87	1.5	1.5	19.3	19.0	2.0	1.8
Sample Variance	10341	7617	2.2	2.2	370.8	361.4	4.2	3.2
Kurtosis	0	0	-2.6	-2.3	-0.4	-0.5	3.3	3.7
Skewness	-1	-1	0.1	0.0	-0.9	-1.0	1.8	1.8
Range	280	222	3.1	3.7	51.0	50.0	6.3	5.5
Minimum	110	58	0.0	4.7	23.0	17.0	5.7	5.5
Maximum	390	280	3.1	8.4	74.0	67.0	12.0	11.0
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	85	73	1.2	1.2	16.1	15.9	1.7	1.5

ND = No Data

Provisional MMSD Water Quality Data

15TH AVENUE - SITE 5
OAK CREEK
WATER QUALITY DATA - 2009

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	8.9	8.00	0.45	0.022	0.47	0.054	0.83	0.092	0.036	ND
Standard Error	0.1	2.4	0.9	1.71	0.08	0.006	0.08	0.022	0.14	0.022	0.011	ND
Median	7.7	13.5	8.0	7.81	0.41	0.018	0.43	0.030	0.69	0.059	0.033	ND
Mode	7.7	ND	ND	ND	ND	ND	ND	0.000	ND	ND	0.000	ND
Standard Deviation	0.2	6.7	2.6	4.83	0.23	0.017	0.24	0.062	0.39	0.064	0.032	ND
Sample Variance	0.0	44.9	6.6	23.32	0.05	0.000	0.06	0.004	0.15	0.004	0.001	ND
Kurtosis	-0.4	-1.5	-1.2	-1.37	1.70	-1.723	0.97	-0.877	1.02	-1.709	-0.249	ND
Skewness	0.8	-0.2	0.6	0.34	1.29	0.249	1.08	0.816	1.29	0.666	0.554	ND
Range	0.6	18.1	7.0	13.17	0.69	0.045	0.71	0.160	1.15	0.157	0.092	0.00
Minimum	7.5	3.8	6.1	2.53	0.22	0.000	0.22	0.000	0.45	0.033	0.000	0.00
Maximum	8.1	21.9	13.1	15.70	0.91	0.045	0.93	0.160	1.60	0.190	0.092	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.2	5.6	2.2	4.04	0.19	0.014	0.20	0.052	0.33	0.053	0.026	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	681.3	651.2	5.5	30.1	26.4	1109	189.1	2807	3.0	ND
Standard Error	ND	ND	76.4	85.9	1.8	10.8	9.2	132	25.7	975	0.3	ND
Median	ND	ND	755.0	746.3	3.3	18.0	16.9	1245	210.0	2500	3.3	ND
Mode	ND	ND	ND	ND	3.3	ND	ND	ND	250.0	ND	ND	ND
Standard Deviation	ND	ND	216.1	242.8	5.2	30.6	26.1	373	72.8	2759	0.8	ND
Sample Variance	ND	ND	46698.2	58962.1	27.3	937.9	680.1	138927	5299.8	7612769	0.7	ND
Kurtosis	ND	ND	-0.2	-0.2	-0.5	-0.4	-0.2	-1	-1.7	-2	-1.8	ND
Skewness	ND	ND	-0.8	-1.0	1.0	1.2	1.2	-1	-0.5	0	-0.5	ND
Range	0.0	0.0	640.0	692.0	14.0	76.6	66.5	1000	179.0	6733	2.0	0
Minimum	0.0	0.0	300.0	220.0	0.0	3.4	4.3	540	91.0	67	1.8	0
Maximum	0.0	0.0	940.0	912.0	14.0	80.0	70.8	1540	270.0	6800	3.8	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	180.7	203.0	4.4	25.6	21.8	312	60.9	2307	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

15TH AVENUE - SITE 5
OAK CREEK
WATER QUALITY DATA - 2009

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	74.25	32.13	0.0	5.6	3.9	3.7	0.2	24.0	0.0	0.0	1.7	ND
Standard Error	9.32	4.40	0.0	0.4	1.3	0.4	0.2	4.3	0.0	0.0	1.7	ND
Median	83.50	36.00	0.0	5.8	4.2	3.6	0.0	22.5	0.0	0.0	0.0	ND
Mode	ND	ND	0.0	6.3	0.0	ND	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	26.35	12.45	0.0	1.0	3.7	1.1	0.6	12.1	0.0	0.0	3.4	ND
Sample Variance	694.50	154.98	0.0	1.1	13.8	1.3	0.4	147.6	0.0	0.0	11.2	ND
Kurtosis	-0.18	-0.36	ND	-1.3	-1.5	0.1	8.0	0.1	ND	ND	4.0	ND
Skewness	-1.18	-1.01	ND	-0.1	0.3	-0.2	2.8	0.7	ND	ND	2.0	ND
Range	70.00	34.00	0.0	3.0	9.0	3.6	1.7	37.3	0.0	0.0	6.7	0.0
Minimum	30.00	12.00	0.0	4.1	0.0	1.8	0.0	8.7	0.0	0.0	0.0	0.0
Maximum	100.00	46.00	0.0	7.1	9.0	5.4	1.7	46.0	0.0	0.0	6.7	0.0
Count	8	8	8	8	8	8	8	8	8	8	4	0
Confidence Level(95.0%)	22.03	10.41	0.0	0.9	3.1	0.9	0.5	10.2	0.0	0.0	5.3	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	212	1.3	6.4	57.1	50.4	6.9	6.7
Standard Error	42	32	0.5	0.5	6.9	6.8	0.7	0.7
Median	355	250	1.0	6.1	62.5	56.5	6.3	6.3
Mode	ND	ND	0.0	ND	ND	62.0	ND	ND
Standard Deviation	118	90	1.4	1.4	19.5	19.3	1.9	1.9
Sample Variance	13984	8117	2.1	2.0	380.4	374.0	3.6	3.7
Kurtosis	0	-1	-2.1	-0.9	-0.7	-0.7	3.2	4.2
Skewness	-1	-1	0.3	0.6	-0.9	-0.9	1.7	1.9
Range	320	230	3.2	3.9	50.0	51.0	6.1	6.2
Minimum	120	70	0.0	4.7	25.0	19.0	4.9	4.8
Maximum	440	300	3.2	8.6	75.0	70.0	11.0	11.0
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	99	75	1.2	1.2	16.3	16.2	1.6	1.6

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY (E. of HWY 32) - SITE 6
 OAK CREEK
 WATER QUALITY DATA - 2009

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	14.0	9.8	6.43	0.57	0.022	0.60	0.043	0.73	0.090	0.033	ND
Standard Error	0.1	2.3	0.9	1.38	0.13	0.005	0.13	0.018	0.14	0.023	0.011	ND
Median	7.9	13.8	9.2	5.86	0.48	0.017	0.52	0.031	0.61	0.044	0.034	ND
Mode	7.7	ND	ND	ND	0.31	ND	ND	0.000	ND	0.160	0.000	ND
Standard Deviation	0.2	6.5	2.7	3.89	0.36	0.015	0.36	0.050	0.40	0.062	0.029	ND
Sample Variance	0.0	42.1	7.1	15.15	0.13	0.000	0.13	0.002	0.16	0.004	0.001	ND
Kurtosis	0.5	-1.3	-0.8	-1.12	1.40	-1.483	1.12	0.790	-0.64	-2.754	-0.520	ND
Skewness	1.0	-0.2	0.6	0.40	1.30	0.631	1.18	1.122	0.72	0.380	0.338	ND
Range	0.5	17.9	7.4	10.65	1.10	0.038	1.09	0.140	1.12	0.122	0.079	0.00
Minimum	7.7	4.1	6.9	1.35	0.20	0.007	0.21	0.000	0.28	0.038	0.000	0.00
Maximum	8.2	22.0	14.3	12.00	1.30	0.045	1.30	0.140	1.40	0.160	0.079	0.00
Count	8	8	8	8	8	8	8	8	8	7	7	0
Confidence Level(95.0%)	0.1	5.4	2.2	3.25	0.30	0.013	0.30	0.042	0.33	0.057	0.026	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	690.0	663.0	5.4	27.0	24.9	1143	177.6	2669	2.9	ND
Standard Error	ND	ND	74.1	85.1	2.3	11.6	9.9	130	24.8	1140	0.3	ND
Median	ND	ND	755.0	742.5	2.7	12.5	12.0	1280	175.0	825	2.9	ND
Mode	ND	ND	ND	ND	16.0	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	ND	ND	209.7	240.8	6.6	32.7	28.1	367	70.1	3223	0.8	ND
Sample Variance	ND	ND	43971.4	57960.6	43.8	1069.8	789.0	134615	4910.8	10387778	0.7	ND
Kurtosis	ND	ND	-0.7	-0.7	-0.1	-0.1	-0.1	-1	-2.1	-1	-1.6	ND
Skewness	ND	ND	-0.6	-0.8	1.3	1.3	1.3	-1	0.1	1	-0.2	ND
Range	0.0	0.0	590.0	660.4	16.0	79.6	69.6	1016	179.0	7537	2.1	0
Minimum	0.0	0.0	370.0	294.0	0.0	2.4	3.9	564	91.0	63	1.8	0
Maximum	0.0	0.0	960.0	954.4	16.0	82.0	73.5	1580	270.0	7600	3.9	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	175.3	201.3	5.5	27.3	23.5	307	58.6	2695	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

PARKWAY (E. of HWY 32) - SITE 6
 OAK CREEK
 WATER QUALITY DATA - 2009

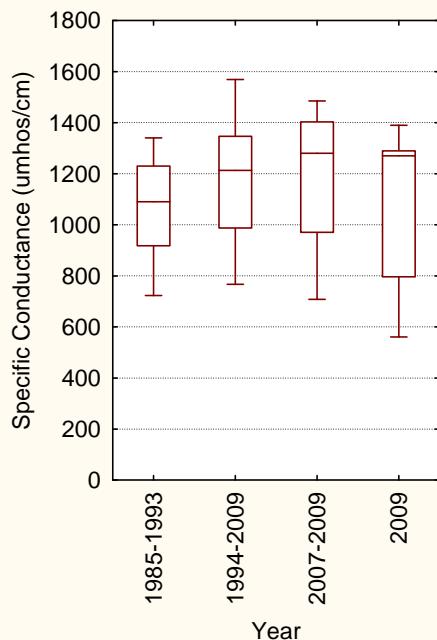
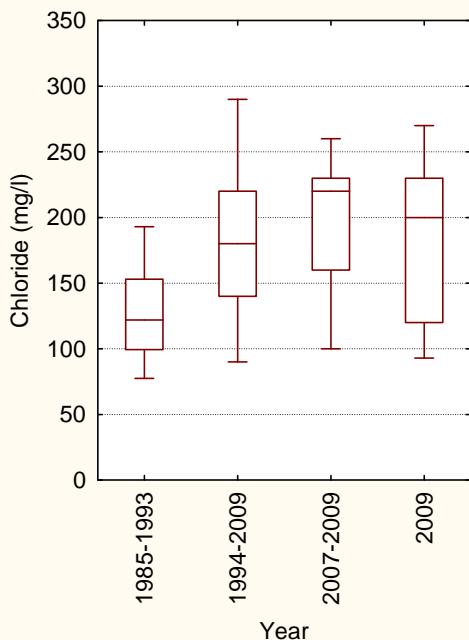
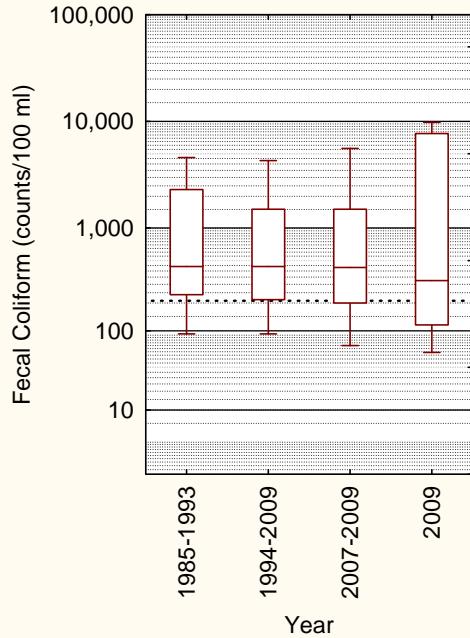
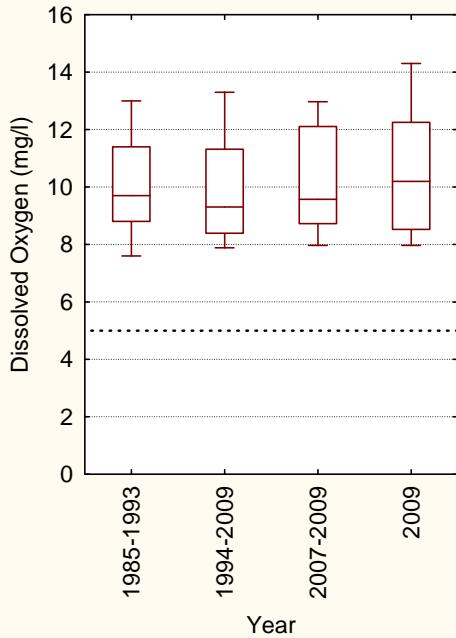
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	74.38	31.88	0.0	5.8	3.7	3.7	0.0	19.4	0.0	0.0	0.0	ND
Standard Error	9.50	4.39	0.0	0.5	1.3	0.3	0.0	3.9	0.0	0.0	0.0	ND
Median	83.50	35.50	0.0	5.3	3.6	3.5	0.0	18.0	0.0	0.0	0.0	ND
Mode	ND	40.00	0.0	ND	0.0	2.8	0.0	17.0	0.0	0.0	0.0	ND
Standard Deviation	26.88	12.41	0.0	1.4	3.7	0.9	0.0	11.0	0.0	0.0	0.0	ND
Sample Variance	722.55	154.13	0.0	1.9	14.0	0.8	0.0	120.8	0.0	0.0	0.0	ND
Kurtosis	-0.73	-0.78	ND	-1.8	-1.1	-0.3	ND	0.7	ND	ND	ND	ND
Skewness	-0.61	-0.62	ND	0.5	0.5	1.0	ND	-0.2	ND	ND	ND	ND
Range	75.00	35.00	0.0	3.4	9.6	2.4	0.0	36.0	0.0	0.0	0.0	0.0
Minimum	35.00	13.00	0.0	4.4	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	110.00	48.00	0.0	7.8	9.6	5.2	0.0	36.0	0.0	0.0	0.0	0.0
Count	8	8	8	8	8	8	8	8	8	8	6	0
Confidence Level(95.0%)	22.47	10.38	0.0	1.2	3.1	0.7	0.0	9.2	0.0	0.0	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	316	216	0.8	5.8	58.6	51.9	6.6	6.5
Standard Error	42	31	0.5	0.5	6.9	6.9	0.6	0.6
Median	355	250	0.0	5.6	64.0	58.0	6.4	6.2
Mode	390	250	0.0	ND	ND	23.0	6.2	7.2
Standard Deviation	118	88	1.4	1.4	19.6	19.6	1.7	1.8
Sample Variance	13998	7720	2.0	2.0	385.7	382.4	2.8	3.1
Kurtosis	-1	-1	0.0	-1.0	-0.9	-0.8	2.5	2.0
Skewness	-1	-1	1.4	0.6	-0.8	-0.8	1.0	1.0
Range	330	240	3.1	3.8	51.0	52.0	5.8	5.9
Minimum	140	80	0.0	4.4	29.0	23.0	4.2	4.1
Maximum	470	320	3.1	8.2	80.0	75.0	10.0	10.0
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	99	73	1.2	1.2	16.4	16.3	1.4	1.5

ND = No Data

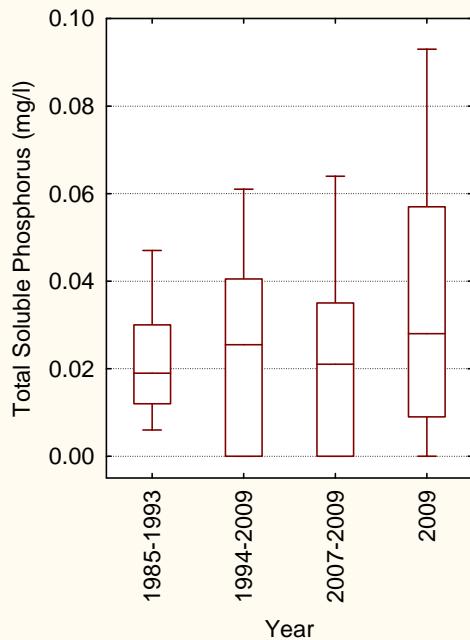
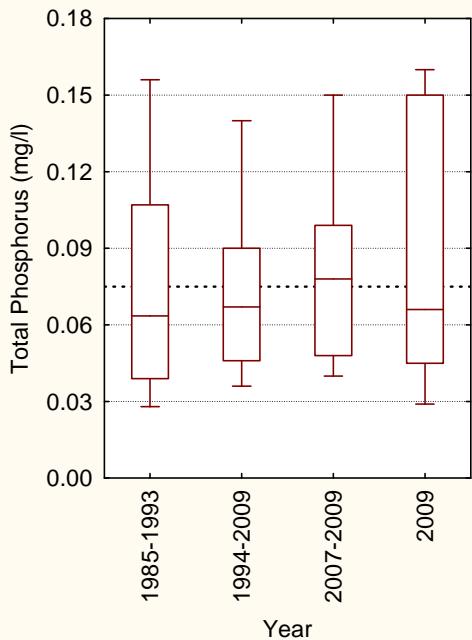
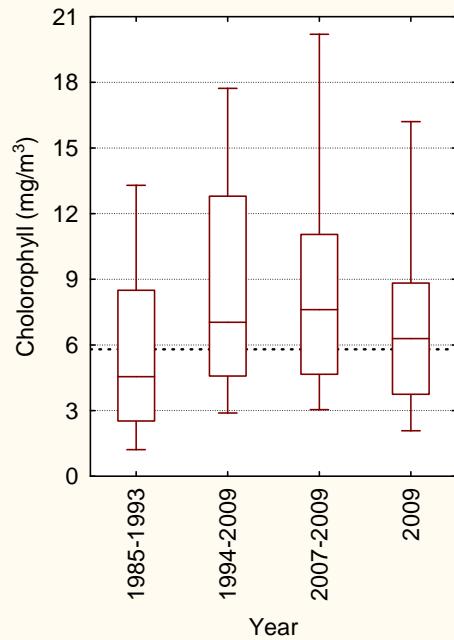
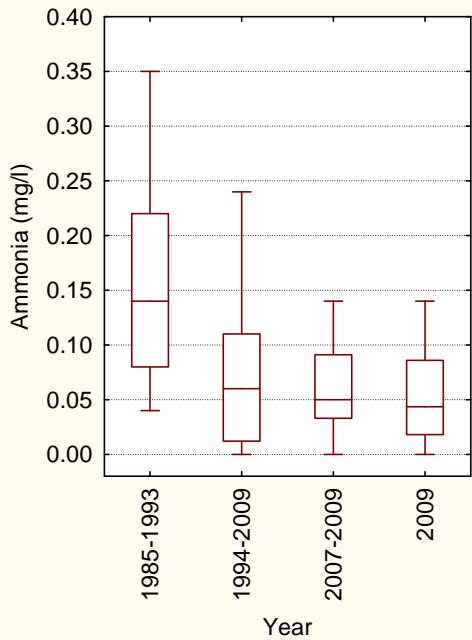
Provisional MMSD Water Quality Data

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



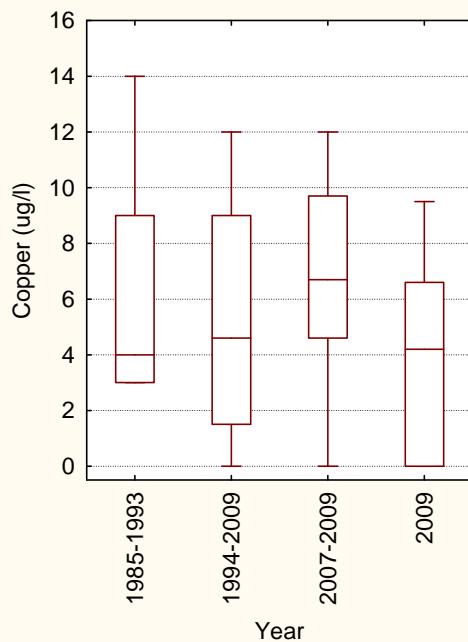
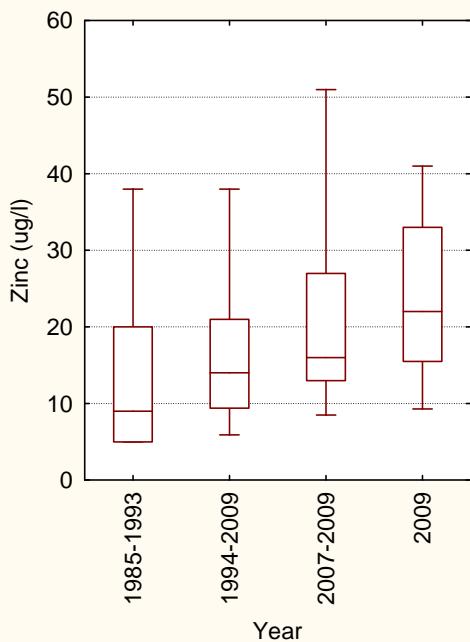
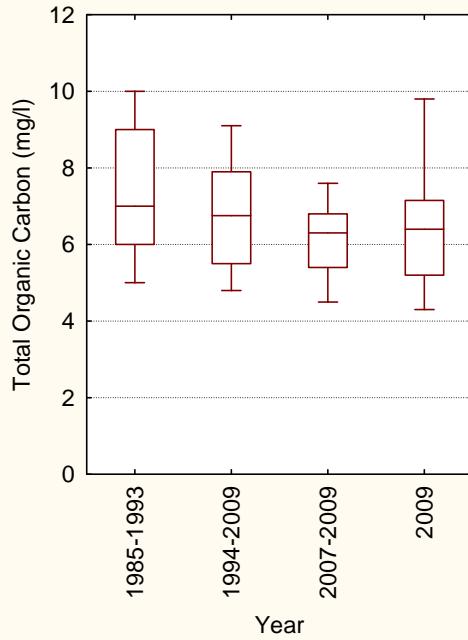
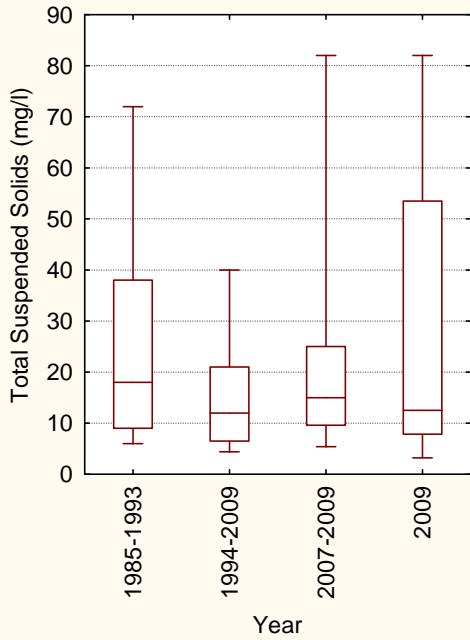
— Median □ 25%-75% ─ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	14.4	10.5	7.00	0.42	0.022	0.44	0.054	0.74	0.089	0.035	ND
Standard Error	0.1	2.4	0.8	1.60	0.08	0.006	0.08	0.017	0.14	0.020	0.011	ND
Median	8.0	14.1	10.2	6.29	0.38	0.017	0.40	0.044	0.63	0.066	0.028	ND
Mode	8.1	ND	ND	ND	ND	0.042	0.22	ND	0.55	0.150	0.000	ND
Standard Deviation	0.2	6.7	2.3	4.52	0.23	0.017	0.23	0.047	0.39	0.056	0.032	ND
Sample Variance	0.0	45.1	5.4	20.46	0.05	0.000	0.05	0.002	0.16	0.003	0.001	ND
Kurtosis	0.0	-1.4	-1.3	1.82	1.46	-1.868	0.87	-0.075	-0.66	-2.167	-0.213	ND
Skewness	0.5	-0.2	0.4	1.23	1.26	0.272	1.09	0.780	0.70	0.395	0.707	ND
Range	0.5	18.0	6.3	14.12	0.66	0.042	0.67	0.140	1.11	0.131	0.093	0.00
Minimum	7.8	4.3	8.0	2.08	0.21	0.000	0.22	0.000	0.29	0.029	0.000	0.00
Maximum	8.3	22.3	14.3	16.20	0.87	0.042	0.89	0.140	1.40	0.160	0.093	0.00
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.1	5.6	1.9	3.78	0.19	0.014	0.19	0.039	0.33	0.047	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	671.3	642.1	6.0	29.1	34.6	1083	182.9	3265	2.8	ND
Standard Error	ND	ND	60.3	71.8	2.4	11.8	15.3	119	23.0	1572	0.3	ND
Median	ND	ND	755.0	744.5	3.0	12.5	12.7	1270	200.0	315	2.5	ND
Mode	ND	ND	ND	ND	ND	82.0	ND	1270	200.0	9800	4.0	ND
Standard Deviation	ND	ND	170.5	203.1	6.9	33.3	43.1	337	65.0	4446	0.9	ND
Sample Variance	ND	ND	29069.6	41234.2	47.6	1108.2	1861.8	113683	4229.0	19771030	0.9	ND
Kurtosis	ND	ND	-0.6	-0.5	0.1	-0.2	0.1	-1	-1.3	-1	-2.0	ND
Skewness	ND	ND	-1.1	-1.1	1.4	1.3	1.4	-1	-0.3	1	0.4	ND
Range	0.0	0.0	420.0	492.0	18.0	78.8	106.2	829	177.0	9741	2.2	0
Minimum	0.0	0.0	390.0	308.0	0.0	3.2	3.8	561	93.0	59	1.8	0
Maximum	0.0	0.0	810.0	800.0	18.0	82.0	110.0	1390	270.0	9800	4.0	0
Count	0	0	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	ND	ND	142.5	169.8	5.8	27.8	36.1	282	54.4	3717	0.8	ND

ND = No Data

Provisional MMSD Water Quality Data

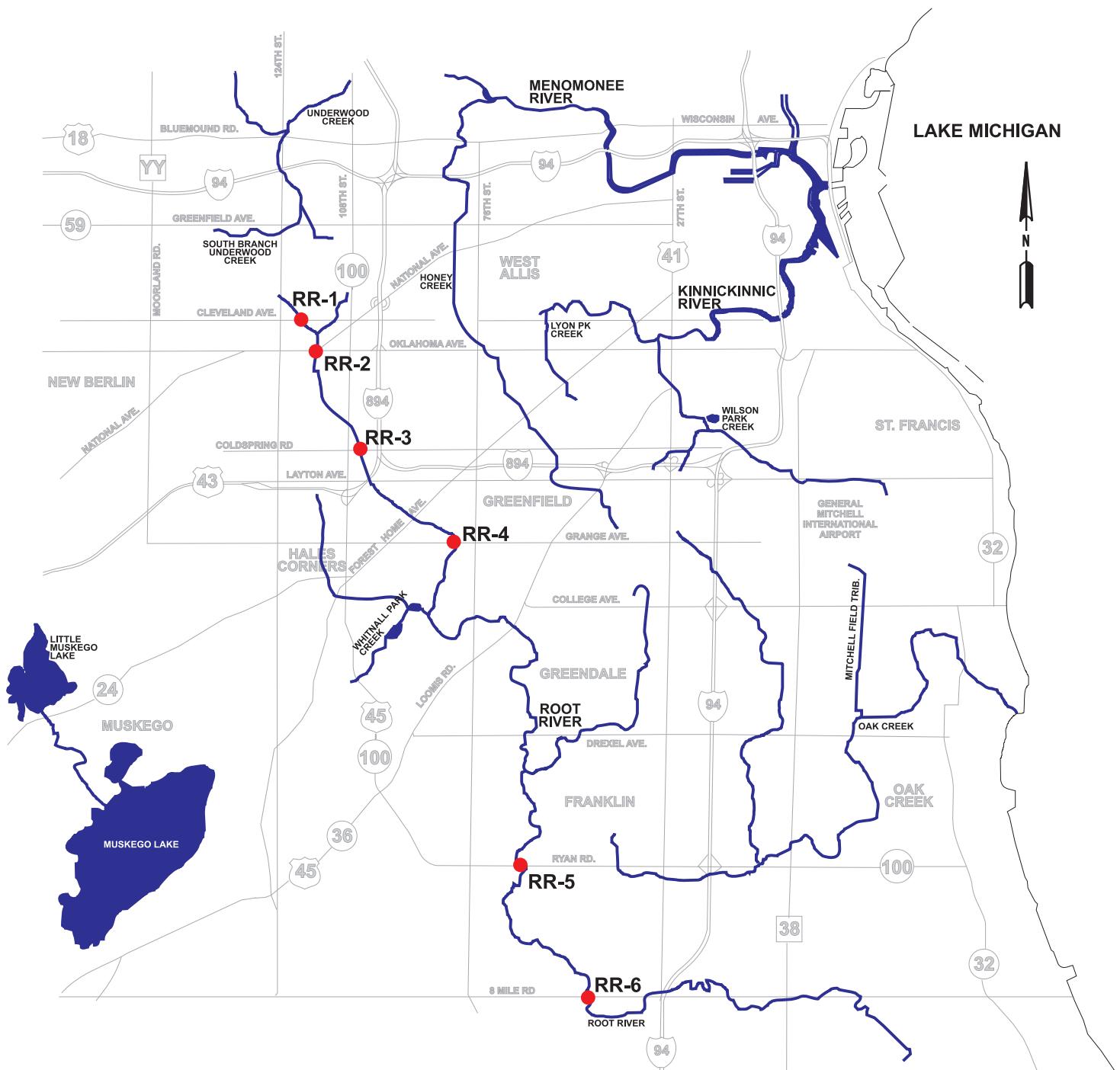
PARKWAY (E. of LAKE DR. EXTENDED) - SITE 7
 OAK CREEK
 WATER QUALITY DATA - 2009

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	70.75	30.25	0.0	5.6	3.9	3.7	0.0	23.9	0.0	0.3	1.9	ND
Standard Error	8.81	4.01	0.0	0.3	1.3	0.3	0.0	3.9	0.0	0.3	1.2	ND
Median	83.50	35.00	0.0	5.6	4.2	3.5	0.0	22.0	0.0	0.0	0.0	ND
Mode	88.00	39.00	0.0	ND	0.0	ND	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	24.91	11.35	0.0	0.9	3.8	0.9	0.0	11.2	0.0	0.9	3.2	ND
Sample Variance	620.50	128.79	0.0	0.8	14.1	0.8	0.0	124.6	0.0	0.8	10.3	ND
Kurtosis	-0.78	-0.77	ND	-0.1	-1.3	-0.5	ND	-1.4	ND	8.0	-0.6	ND
Skewness	-1.02	-1.00	ND	0.4	0.3	0.6	ND	0.3	ND	2.8	1.3	ND
Range	62.00	27.00	0.0	2.8	9.5	2.6	0.0	31.7	0.0	2.6	7.1	0.0
Minimum	31.00	13.00	0.0	4.3	0.0	2.6	0.0	9.3	0.0	0.0	0.0	0.0
Maximum	93.00	40.00	0.0	7.1	9.5	5.2	0.0	41.0	0.0	2.6	7.1	0.0
Count	8	8	8	8	8	8	8	8	8	8	7	0
Confidence Level(95.0%)	20.83	9.49	0.0	0.7	3.1	0.7	0.0	9.3	0.0	0.8	3.0	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	212	0.8	6.0	56.3	49.6	6.5	6.1
Standard Error	39	31	0.5	0.4	6.5	6.5	0.6	0.6
Median	350	260	0.0	5.4	65.0	59.0	6.4	6.0
Mode	380	260	0.0	5.2	65.0	61.0	ND	ND
Standard Deviation	110	87	1.5	1.3	18.4	18.3	1.7	1.7
Sample Variance	12000	7615	2.3	1.6	338.8	333.1	2.9	2.7
Kurtosis	-1	-1	0.1	-1.1	-0.5	-0.5	1.4	3.1
Skewness	-1	-1	1.5	0.8	-1.1	-1.1	1.0	1.5
Range	270	206	3.4	3.2	48.0	47.0	5.5	5.5
Minimum	130	74	0.0	4.7	26.0	20.0	4.3	4.2
Maximum	400	280	3.4	7.9	74.0	67.0	9.8	9.7
Count	8	8	8	8	8	8	8	8
Confidence Level(95.0%)	92	73	1.3	1.1	15.4	15.3	1.4	1.4

ND = No Data

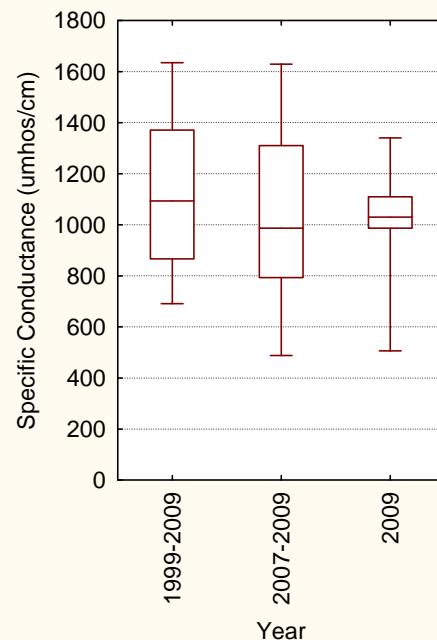
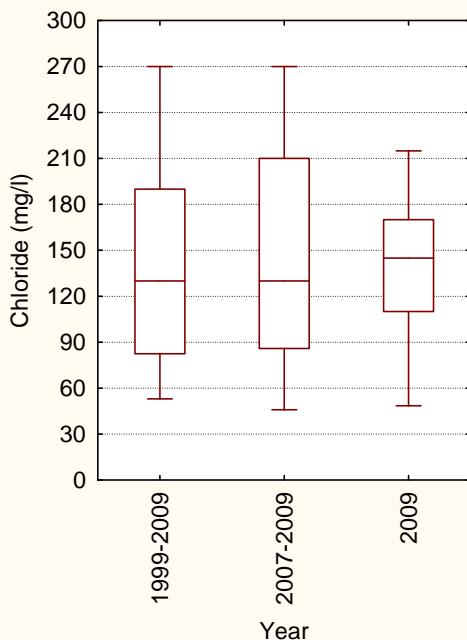
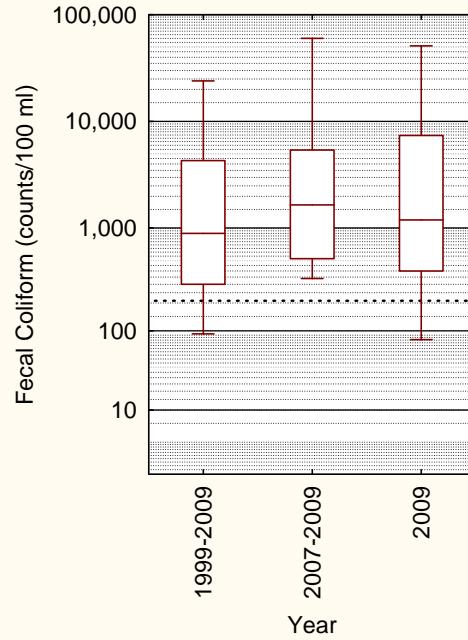
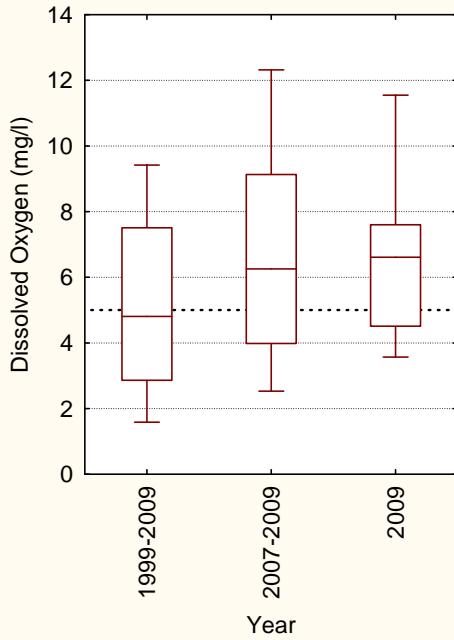
Provisional MMSD Water Quality Data



LEGEND

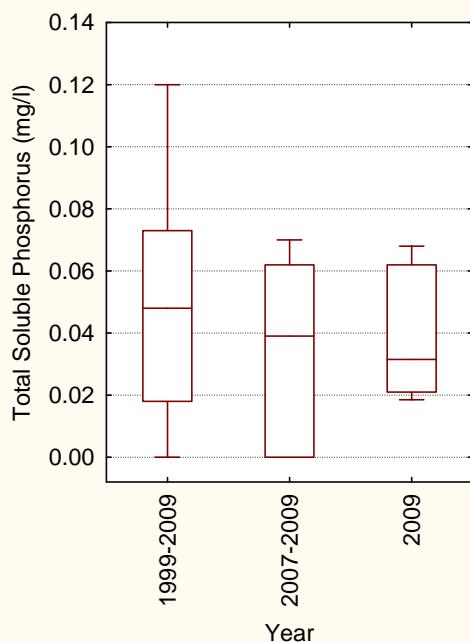
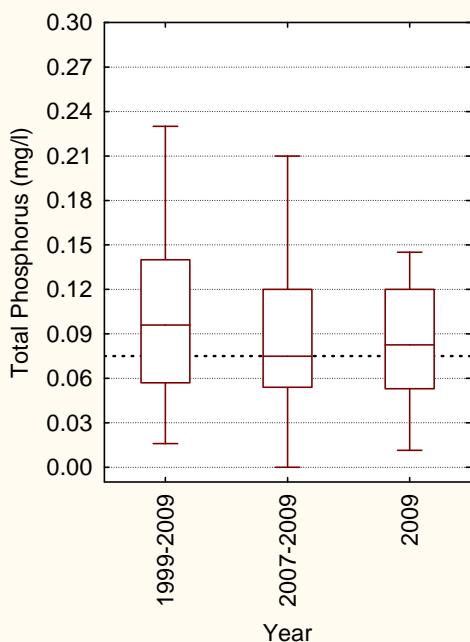
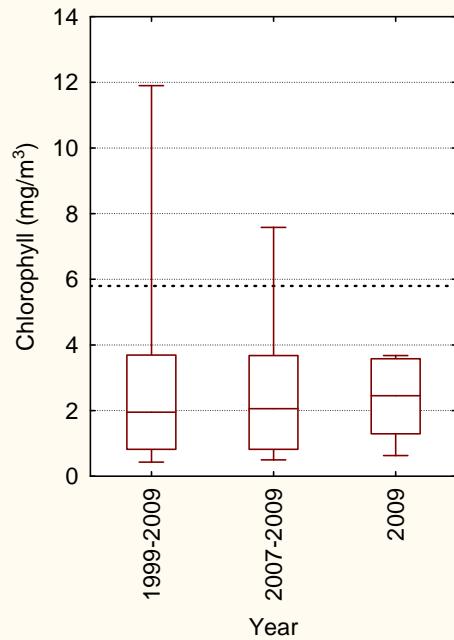
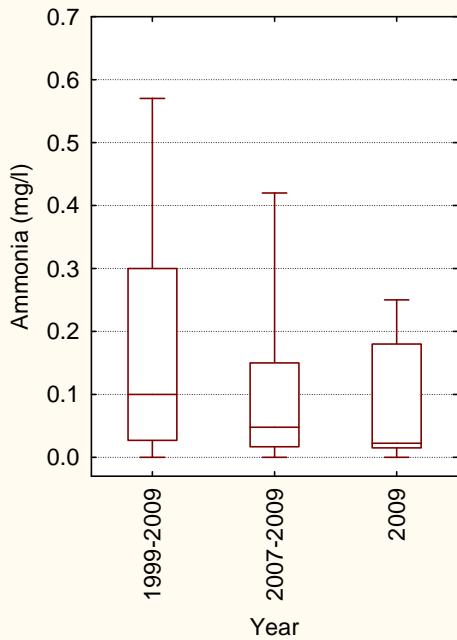
- WATER QUALITY SAMPLING LOCATIONS

MMSD Water Quality Monitoring Program Data
Root River at Cleveland Ave., Site RR-01



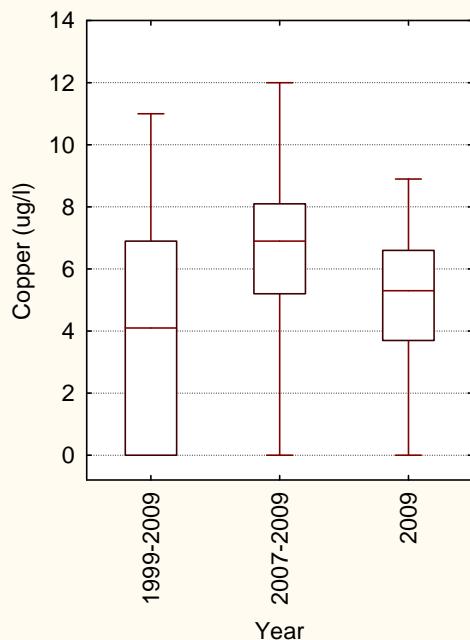
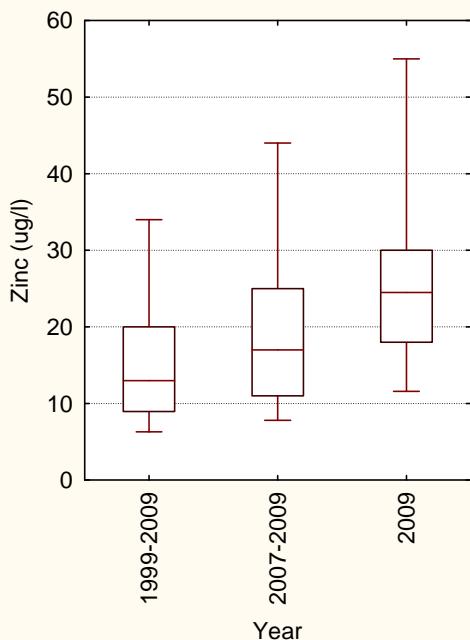
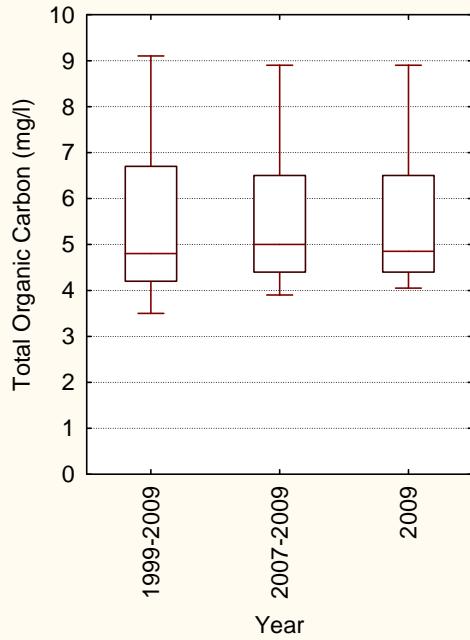
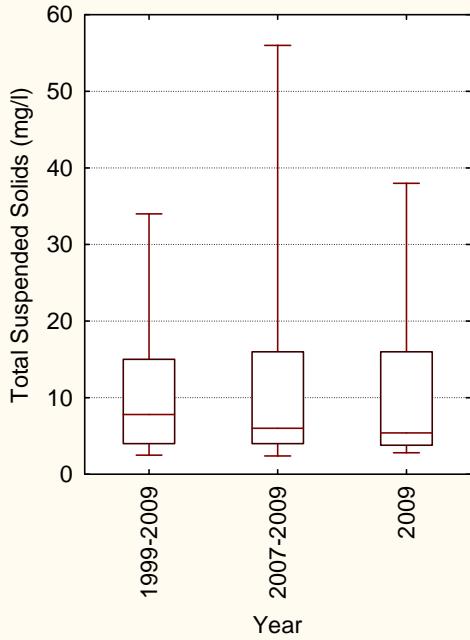
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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% I 10%-90%

CLEVELAND AVENUE, EAST OF 124TH STREET - SITE 1
 ROOT RIVER
 WATER QUALITY DATA - 2009

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	13.8	6.9	2.37	0.44	0.013	0.45	0.080	0.71	0.081	0.039	ND
Standard Error	0.1	1.8	0.9	0.40	0.16	0.002	0.15	0.033	0.10	0.015	0.007	ND
Median	7.6	15.4	6.6	2.46	0.24	0.012	0.26	0.023	0.65	0.083	0.032	ND
Mode	7.6	ND	ND	3.68	0.24	0.012	ND	0.000	0.49	ND	0.068	ND
Standard Deviation	0.2	5.7	2.9	1.25	0.49	0.007	0.49	0.105	0.31	0.048	0.021	ND
Sample Variance	0.1	32.7	8.5	1.56	0.24	0.000	0.24	0.011	0.09	0.002	0.000	ND
Kurtosis	-0.6	-0.8	0.3	-1.47	2.97	-0.298	2.92	-0.290	0.59	-0.678	-1.667	ND
Skewness	0.3	-0.6	0.7	-0.35	1.84	0.867	1.81	1.189	1.17	-0.219	0.519	ND
Range	0.7	16.6	9.6	3.31	1.57	0.020	1.56	0.280	0.96	0.150	0.050	0.00
Minimum	7.3	3.8	2.9	0.37	0.03	0.006	0.04	0.000	0.34	0.000	0.018	0.00
Maximum	8.0	20.4	12.5	3.68	1.60	0.026	1.60	0.280	1.30	0.150	0.068	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	4.1	2.1	0.89	0.35	0.005	0.35	0.075	0.22	0.035	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	591.0	578.7	3.3	12.3	12.1	992	136.7	11839	3.2	ND
Standard Error	ND	ND	41.7	45.4	1.0	4.9	5.4	91	18.6	8776	0.3	ND
Median	ND	ND	605.0	601.5	2.3	5.4	4.9	1030	145.0	1190	3.0	ND
Mode	ND	ND	630.0	ND	0.0	ND	ND	ND	110.0	ND	ND	ND
Standard Deviation	ND	ND	131.9	143.6	3.1	15.6	16.9	287	58.8	27754	1.0	ND
Sample Variance	ND	ND	17387.8	20615.4	9.6	242.2	287.0	82248	3460.9	770267744	1.0	ND
Kurtosis	ND	ND	0.0	0.5	1.4	5.1	2.2	0	-0.7	9	-0.4	ND
Skewness	ND	ND	-0.4	-0.7	1.2	2.2	1.9	-1	-0.3	3	0.2	ND
Range	0.0	0.0	440.0	485.6	10.0	49.6	48.2	882	174.0	89958	3.3	0
Minimum	0.0	0.0	350.0	298.0	0.0	2.4	1.8	488	46.0	42	1.6	0
Maximum	0.0	0.0	790.0	783.6	10.0	52.0	49.9	1370	220.0	90000	5.0	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level (95.0%)	ND	ND	94.3	102.7	2.2	11.1	12.1	205	42.1	19854	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

CLEVELAND AVENUE, EAST OF 124TH STREET - SITE 1
 ROOT RIVER
 WATER QUALITY DATA - 2009

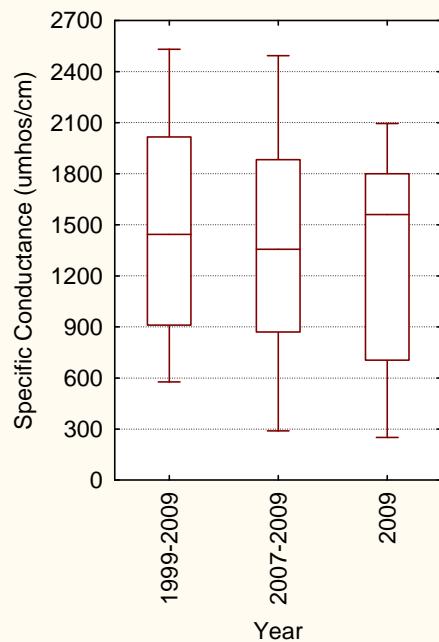
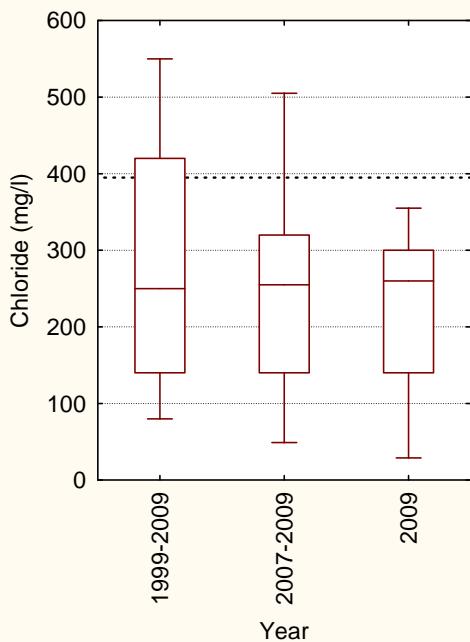
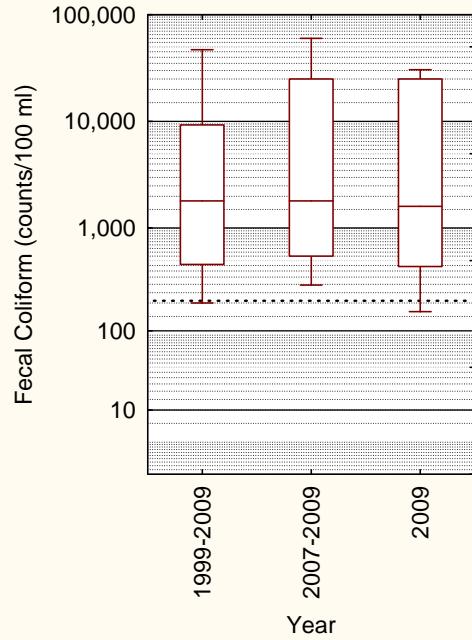
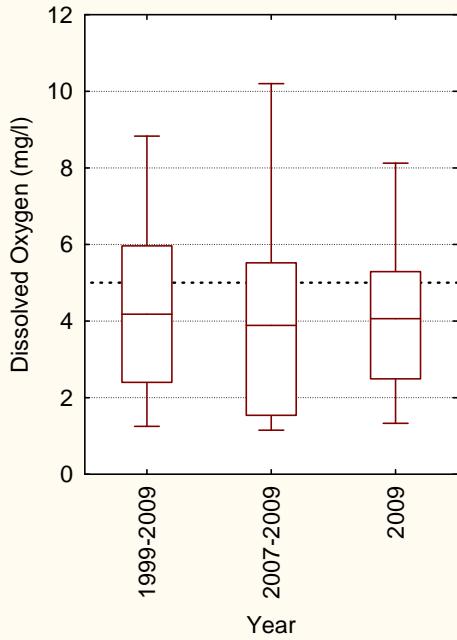
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
STATISTICS												
Mean	72.00	34.80	0.0	5.4	5.0	4.2	0.0	27.4	0.0	0.3	2.2	0.0
Standard Error	5.51	3.07	0.0	0.4	1.0	0.8	0.0	5.2	0.0	0.3	1.4	0.0
Median	78.50	40.00	0.0	4.8	5.3	3.4	0.0	24.5	0.0	0.0	0.0	0.0
Mode	ND	41.00	0.0	4.8	0.0	ND	0.0	18.0	0.0	0.0	0.0	0.0
Standard Deviation	17.42	9.69	0.0	1.2	3.2	2.4	0.0	16.6	0.0	0.9	3.8	0.0
Sample Variance	303.56	93.96	0.0	1.4	10.0	5.9	0.0	275.5	0.0	0.9	14.5	0.0
Kurtosis	0.38	0.38	ND	0.4	-0.3	1.4	ND	2.7	ND	10.0	0.1	ND
Skewness	-1.31	-1.35	ND	0.9	-0.4	1.6	ND	1.6	ND	3.2	1.4	ND
Range	47.00	26.00	0.0	4.0	9.7	7.1	0.0	56.8	0.0	3.0	8.9	0.0
Minimum	40.00	17.00	0.0	3.8	0.0	2.3	0.0	9.2	0.0	0.0	0.0	0.0
Maximum	87.00	43.00	0.0	7.8	9.7	9.4	0.0	66.0	0.0	3.0	8.9	0.0
Count	10	10	10	10	10	10	10	10	10	10	7	2
Confidence Level(95.0%)	12.46	6.93	0.0	0.9	2.3	1.7	0.0	11.9	0.0	0.7	3.5	0.0

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	268	1.8	6.5	67.7	62.1	5.6	5.2
Standard Error	26	25	0.7	0.9	5.2	5.5	0.6	0.5
Median	365	300	1.0	6.3	74.0	67.5	4.9	4.5
Mode	370	320	0.0	11.0	80.0	75.0	4.4	4.5
Standard Deviation	82	79	2.3	2.9	16.3	17.3	1.9	1.7
Sample Variance	6801	6284	5.1	8.6	265.6	299.2	3.5	3.0
Kurtosis	0	1	-0.1	-0.8	0.2	0.3	0.2	0.9
Skewness	-1	-1	1.0	0.5	-1.2	-1.3	1.3	1.5
Range	220	220	6.1	8.2	45.0	47.0	5.0	4.9
Minimum	170	120	0.0	2.8	38.0	31.0	3.9	3.8
Maximum	390	340	6.1	11.0	83.0	78.0	8.9	8.7
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	59	57	1.6	2.1	11.7	12.4	1.3	1.2

ND = No Data

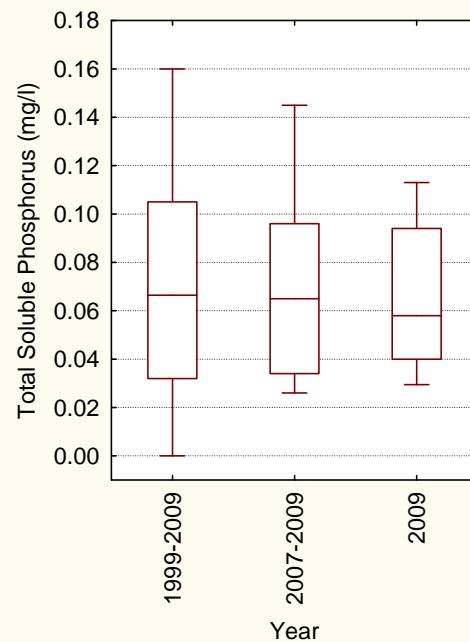
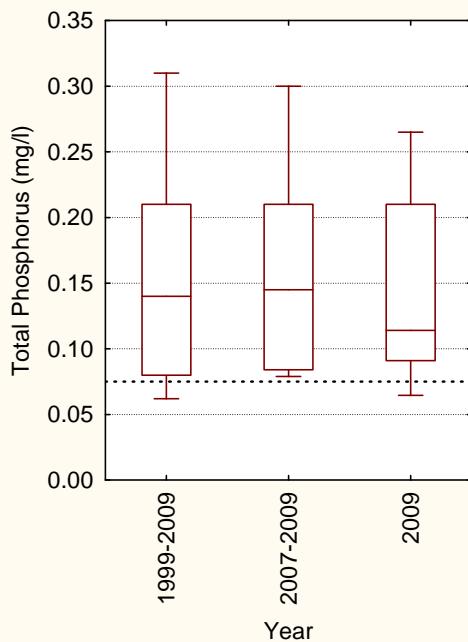
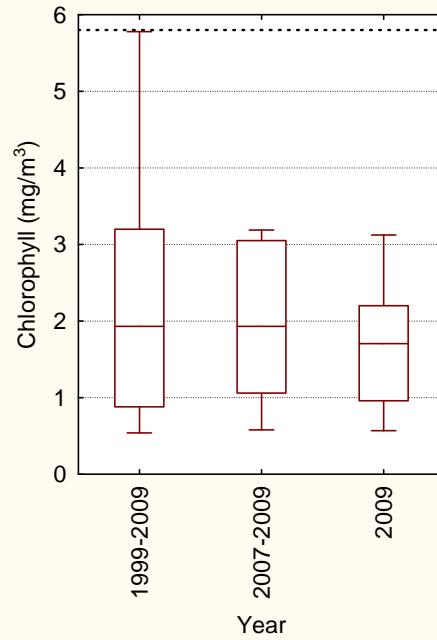
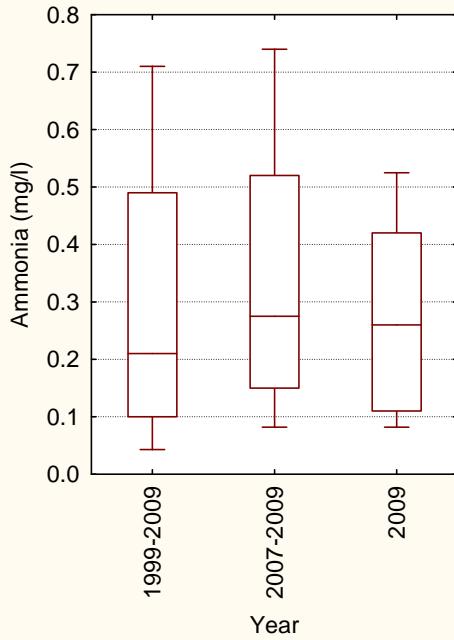
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Root River at National and Oklahoma Ave., Site RR-02



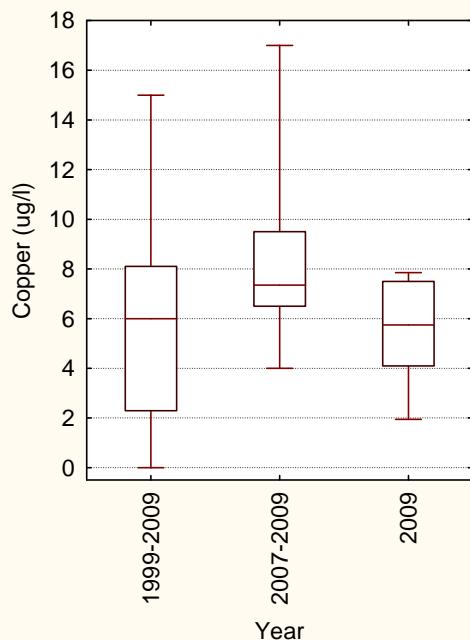
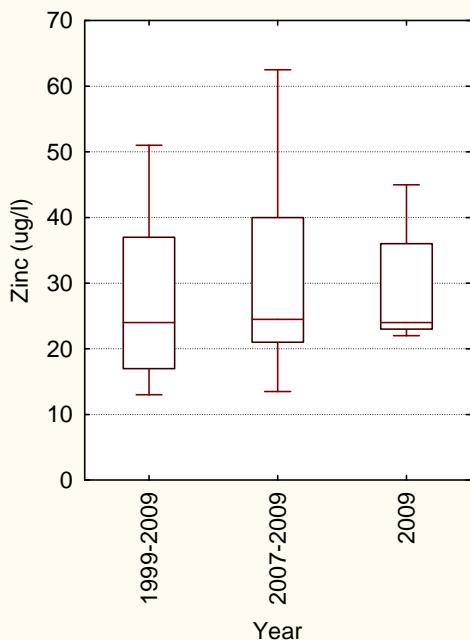
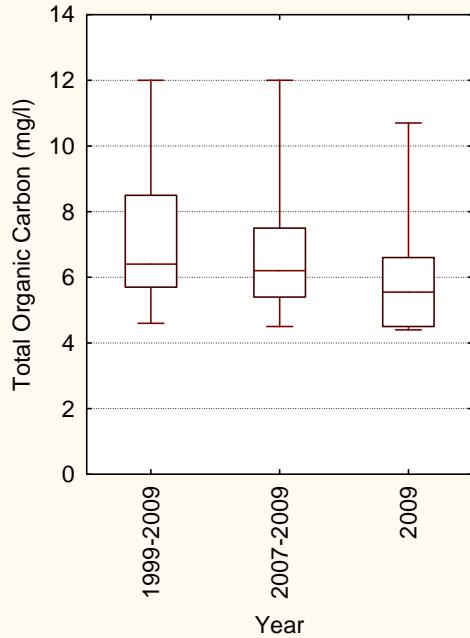
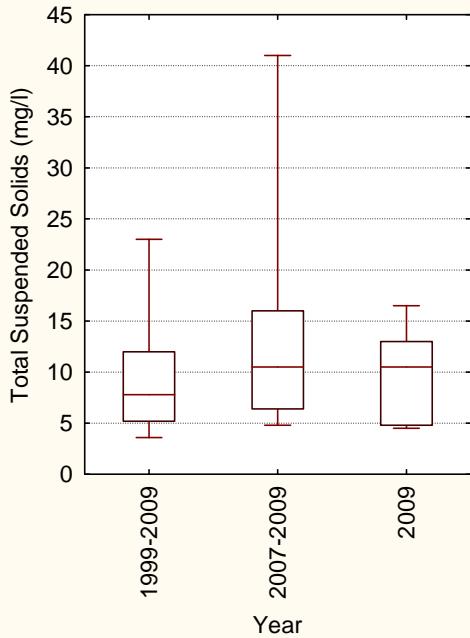
— Median □ 25%-75% █ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	14.3	4.4	1.70	0.48	0.036	0.53	0.274	0.97	0.148	0.066	ND
Standard Error	0.1	1.7	0.8	0.30	0.15	0.006	0.16	0.053	0.08	0.025	0.010	ND
Median	7.4	16.1	4.1	1.71	0.33	0.032	0.36	0.260	0.95	0.114	0.058	ND
Mode	7.1	ND	ND	ND	0.33	ND	0.36	ND	ND	ND	ND	ND
Standard Deviation	0.3	5.4	2.6	0.94	0.47	0.018	0.49	0.169	0.27	0.080	0.033	ND
Sample Variance	0.1	29.3	6.7	0.89	0.22	0.000	0.24	0.028	0.07	0.006	0.001	ND
Kurtosis	-1.7	-0.6	2.3	-0.89	1.59	-0.870	1.59	-0.992	-0.83	-1.316	-0.177	ND
Skewness	0.0	-0.7	1.1	0.37	1.53	0.626	1.54	0.472	0.23	0.536	0.734	ND
Range	0.7	16.7	9.1	2.75	1.44	0.052	1.52	0.479	0.82	0.229	0.105	0.00
Minimum	7.0	4.2	1.2	0.44	0.06	0.014	0.08	0.071	0.58	0.051	0.025	0.00
Maximum	7.7	20.9	10.2	3.19	1.50	0.066	1.60	0.550	1.40	0.280	0.130	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	3.9	1.9	0.67	0.33	0.013	0.35	0.121	0.19	0.057	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	742.0	732.1	3.6	9.9	10.8	1312	221.8	9394	3.3	ND
Standard Error	ND	ND	119.9	121.1	0.7	1.5	1.8	227	38.8	4318	0.3	ND
Median	ND	ND	950.0	942.1	4.7	10.5	10.8	1560	260.0	1600	3.2	ND
Mode	ND	ND	1000.0	ND	5.2	4.8	ND	ND	ND	25000	4.4	ND
Standard Deviation	ND	ND	379.1	383.0	2.1	4.8	5.7	718	122.7	13655	0.9	ND
Sample Variance	ND	ND	143706.7	146678.4	4.5	23.0	32.1	516140	15066.8	186466567	0.8	ND
Kurtosis	ND	ND	-1.3	-1.3	-0.5	-1.1	-0.8	-1	-0.5	0	-1.0	ND
Skewness	ND	ND	-0.6	-0.6	-1.0	0.3	0.5	0	-0.6	1	0.0	ND
Range	0.0	0.0	1040.0	1050.2	5.3	13.8	16.0	2114	377.0	35927	2.7	0
Minimum	0.0	0.0	160.0	145.0	0.0	4.2	4.5	216	23.0	73	1.9	0
Maximum	0.0	0.0	1200.0	1195.2	5.3	18.0	20.5	2330	400.0	36000	4.6	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	271.2	274.0	1.5	3.4	4.1	514	87.8	9768	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

NATIONAL and OKLAHOMA, approx. 116TH STREET - SITE 2
 ROOT RIVER
 WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	70.70	30.43	0.0	5.4	5.4	3.8	0.0	29.7	0.0	0.5	2.5	0.0
Standard Error	10.60	5.08	0.0	0.8	0.8	0.6	0.0	3.0	0.0	0.3	1.6	0.0
Median	80.00	35.50	0.0	4.8	5.8	3.4	0.0	24.0	0.0	0.0	0.0	0.0
Mode	ND	ND	0.0	4.9	ND	3.4	0.0	24.0	0.0	0.0	0.0	0.0
Standard Deviation	33.53	16.05	0.0	2.5	2.4	1.9	0.0	9.6	0.0	1.0	4.2	0.0
Sample Variance	1124.23	257.58	0.0	6.0	5.8	3.7	0.0	91.8	0.0	1.0	18.0	0.0
Kurtosis	-0.90	-1.21	ND	7.3	1.9	8.7	ND	0.7	ND	2.0	-0.6	ND
Skewness	-0.71	-0.61	ND	2.6	-1.2	2.9	ND	1.2	ND	1.9	1.3	ND
Range	93.00	42.30	0.0	8.6	8.0	6.7	0.0	29.0	0.0	2.7	9.4	0.0
Minimum	17.00	5.70	0.0	3.4	0.0	2.4	0.0	21.0	0.0	0.0	0.0	0.0
Maximum	110.00	48.00	0.0	12.0	8.0	9.1	0.0	50.0	0.0	2.7	9.4	0.0
Count	10	10	10	10	10	10	10	10	10	10	7	2
Confidence Level(95.0%)	23.99	11.48	0.0	1.8	1.7	1.4	0.0	6.9	0.0	0.7	3.9	0.0

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	302	207	2.5	8.5	56.1	49.8	6.3	6.1
Standard Error	47	34	0.9	1.2	7.9	7.9	0.8	0.8
Median	345	255	2.5	8.2	65.0	59.5	5.6	5.4
Mode	ND	270	0.0	11.0	ND	13.0	4.5	5.4
Standard Deviation	149	108	2.8	3.9	25.0	24.9	2.5	2.5
Sample Variance	22280	11644	7.9	14.9	623.0	618.0	6.3	6.3
Kurtosis	-1	-1	2.2	1.6	-0.9	-1.2	2.1	3.0
Skewness	-1	-1	1.3	1.1	-0.6	-0.5	1.6	1.8
Range	403	299	8.9	13.3	71.0	69.0	7.7	7.9
Minimum	67	41	0.0	3.7	17.0	13.0	4.3	4.1
Maximum	470	340	8.9	17.0	88.0	82.0	12.0	12.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	107	77	2.0	2.8	17.9	17.8	1.8	1.8

ND = No Data

Provisional MMSD Water Quality Data

COLDSPRING ROAD, EAST OF 108TH STREET - SITE 3
 ROOT RIVER
 WATER QUALITY DATA - 2009

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	14.4	5.9	2.71	0.43	0.033	0.46	0.154	0.76	0.103	0.051	ND
Standard Error	0.1	1.7	0.8	0.58	0.10	0.005	0.10	0.033	0.07	0.010	0.006	ND
Median	7.5	15.9	5.2	2.17	0.32	0.030	0.34	0.130	0.74	0.110	0.051	ND
Mode	7.8	ND	ND	ND	ND	0.013	0.34	0.120	ND	0.110	ND	ND
Standard Deviation	0.2	5.4	2.5	1.82	0.33	0.016	0.32	0.105	0.23	0.030	0.020	ND
Sample Variance	0.1	29.4	6.3	3.31	0.11	0.000	0.10	0.011	0.05	0.001	0.000	ND
Kurtosis	-1.3	-0.6	1.8	-0.42	3.09	-0.317	2.51	2.091	-0.69	-0.919	0.001	ND
Skewness	-0.2	-0.6	1.6	0.69	1.90	0.593	1.80	1.292	-0.16	-0.628	0.098	ND
Range	0.7	16.8	8.1	5.58	1.02	0.049	0.98	0.352	0.72	0.087	0.069	0.00
Minimum	7.1	4.4	3.3	0.60	0.18	0.013	0.22	0.038	0.38	0.053	0.019	0.00
Maximum	7.8	21.1	11.4	6.18	1.20	0.062	1.20	0.390	1.10	0.140	0.088	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.2	3.9	1.8	1.30	0.23	0.012	0.23	0.075	0.16	0.022	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	707.0	696.9	3.1	10.1	10.4	1287	215.0	7867	3.1	ND
Standard Error	ND	ND	99.9	100.7	0.7	2.2	1.7	178	30.8	4576	0.3	ND
Median	ND	ND	850.0	846.8	3.0	8.7	9.8	1530	245.0	1125	3.0	ND
Mode	ND	ND	220.0	ND	2.2	4.8	ND	ND	280.0	ND	ND	ND
Standard Deviation	ND	ND	316.1	318.5	2.3	7.0	5.3	563	97.3	14470	1.0	ND
Sample Variance	ND	ND	99890.0	101419.0	5.5	48.6	28.3	317115	9470.2	209387935	1.1	ND
Kurtosis	ND	ND	-1.1	-1.1	-0.1	-0.3	-0.4	0	0.4	5	-0.9	ND
Skewness	ND	ND	-0.6	-0.6	0.4	0.9	0.6	-1	-1.1	2	0.0	ND
Range	0.0	0.0	880.0	892.2	7.2	20.2	16.5	1626	299.0	44962	3.1	0
Minimum	0.0	0.0	220.0	200.0	0.0	2.8	3.7	324	41.0	38	1.6	0
Maximum	0.0	0.0	1100.0	1092.2	7.2	23.0	20.2	1950	340.0	45000	4.7	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	226.1	227.8	1.7	5.0	3.8	403	69.6	10351	0.7	ND

ND = No Data

Provisional MMSD Water Quality Data

COLDSPRING ROAD, EAST OF 108TH STREET - SITE 3
 ROOT RIVER
 WATER QUALITY DATA - 2009

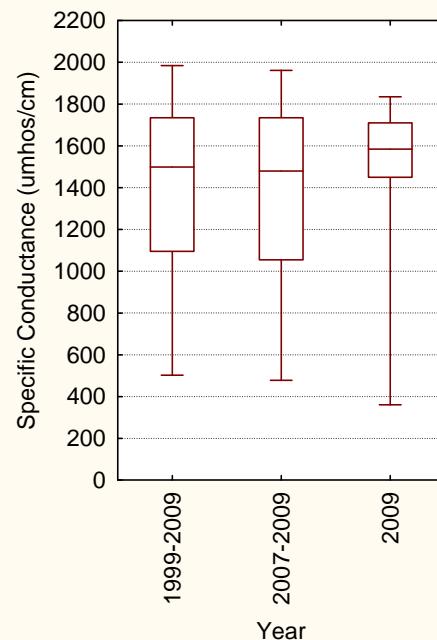
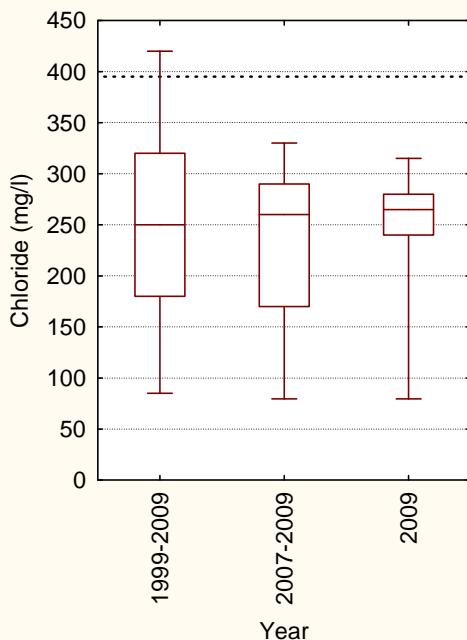
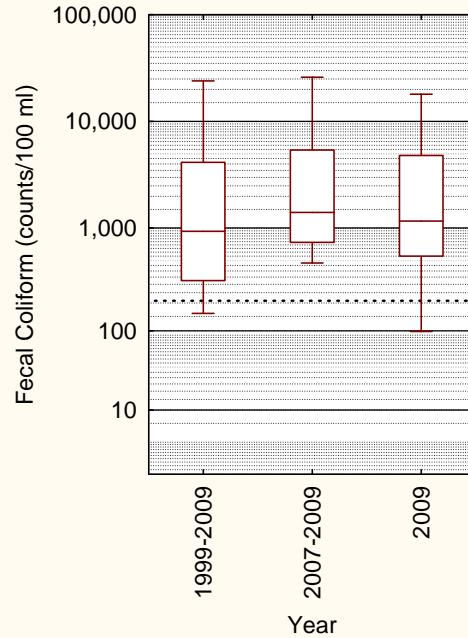
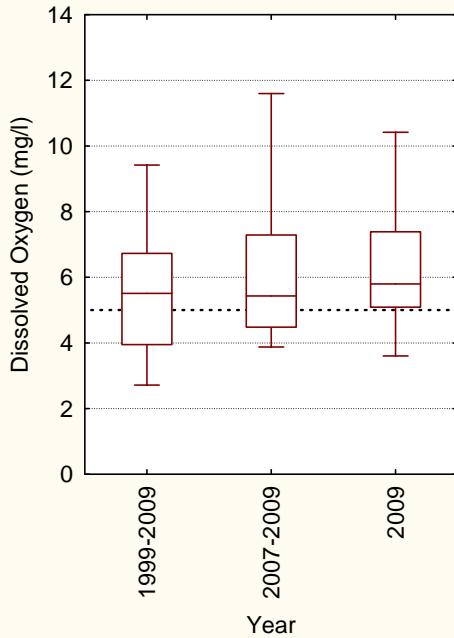
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	73.20	33.71	0.0	5.0	4.4	3.4	0.2	23.3	0.0	0.2	3.5	0.0
Standard Error	9.88	4.87	0.0	0.4	0.8	0.3	0.2	2.1	0.0	0.2	1.7	0.0
Median	83.50	39.50	0.0	4.7	4.8	3.5	0.0	22.0	0.0	0.0	0.0	0.0
Mode	21.00	44.00	0.0	ND	0.0	ND	0.0	21.0	0.0	0.0	0.0	0.0
Standard Deviation	31.24	15.41	0.0	1.3	2.7	0.8	0.6	6.5	0.0	0.7	4.8	0.0
Sample Variance	975.73	237.45	0.0	1.8	7.1	0.6	0.3	42.9	0.0	0.5	23.2	0.0
Kurtosis	-0.31	-0.42	ND	3.0	-0.3	-1.4	10.0	0.4	ND	10.0	-2.2	ND
Skewness	-0.91	-0.92	ND	1.6	-0.8	-0.3	3.2	-0.1	ND	3.2	0.6	ND
Range	89.00	43.10	0.0	4.6	7.7	2.2	1.8	23.0	0.0	2.2	9.6	0.0
Minimum	21.00	7.90	0.0	3.6	0.0	2.2	0.0	11.0	0.0	0.0	0.0	0.0
Maximum	110.00	51.00	0.0	8.2	7.7	4.4	1.8	34.0	0.0	2.2	9.6	0.0
Count	10	10	10	10	10	10	10	10	10	10	8	2
Confidence Level(95.0%)	22.35	11.02	0.0	1.0	1.9	0.6	0.4	4.7	0.0	0.5	4.0	0.0

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	226	1.5	7.0	60.8	54.4	6.7	6.5
Standard Error	45	32	0.7	1.1	7.7	7.4	0.6	0.5
Median	370	265	0.0	5.7	68.5	60.5	6.2	6.0
Mode	410	300	0.0	ND	80.0	74.0	5.8	6.0
Standard Deviation	142	101	2.3	3.5	24.2	23.5	1.8	1.7
Sample Variance	20190	10161	5.5	12.6	586.8	552.9	3.4	2.9
Kurtosis	0	0	2.6	5.1	-0.3	-0.4	2.7	1.1
Skewness	-1	-1	1.6	2.1	-1.0	-1.0	1.7	1.3
Range	396	276	7.0	12.2	65.0	64.0	6.1	5.4
Minimum	84	54	0.0	3.8	20.0	15.0	4.9	4.6
Maximum	480	330	7.0	16.0	85.0	79.0	11.0	10.0
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	102	72	1.7	2.5	17.3	16.8	1.3	1.2

ND = No Data

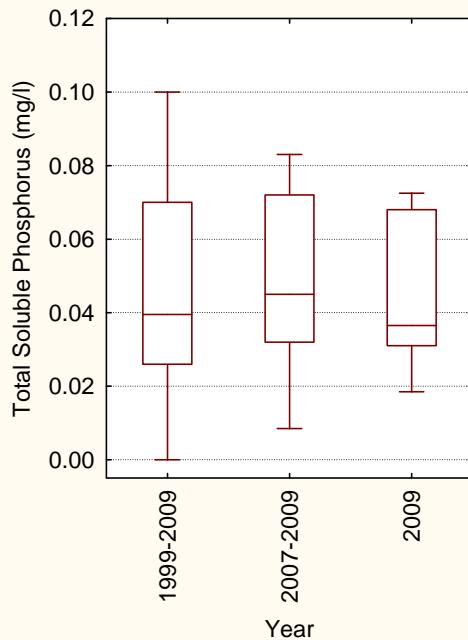
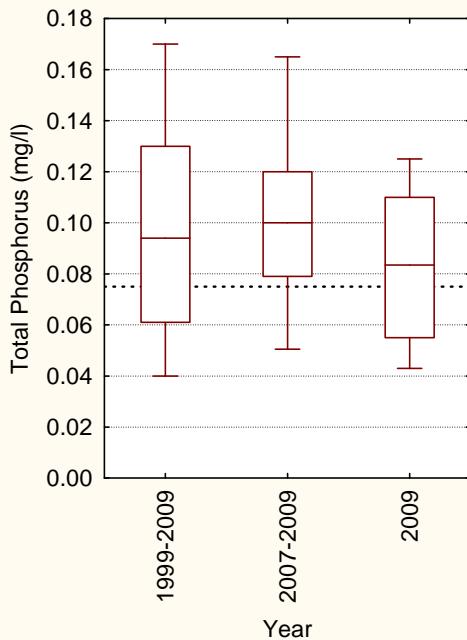
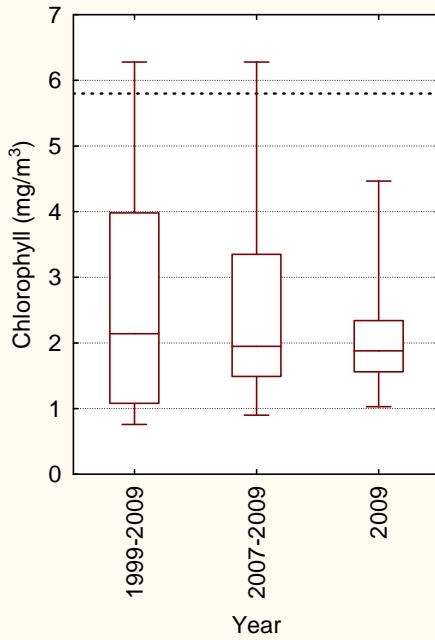
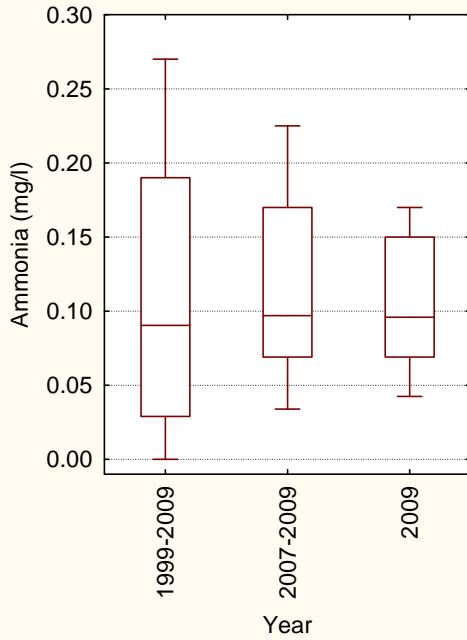
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Root River at Grange Ave., Site RR-04



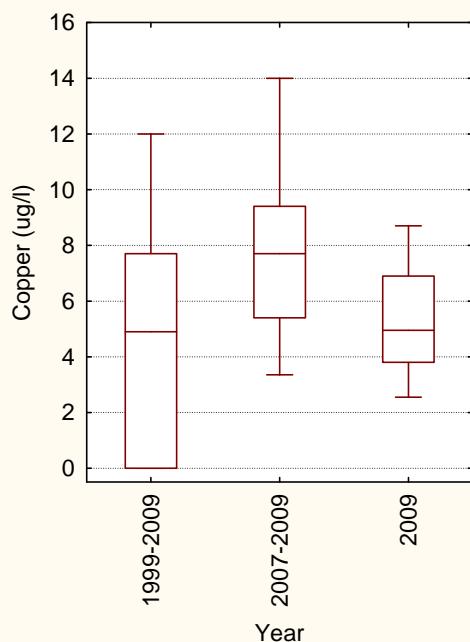
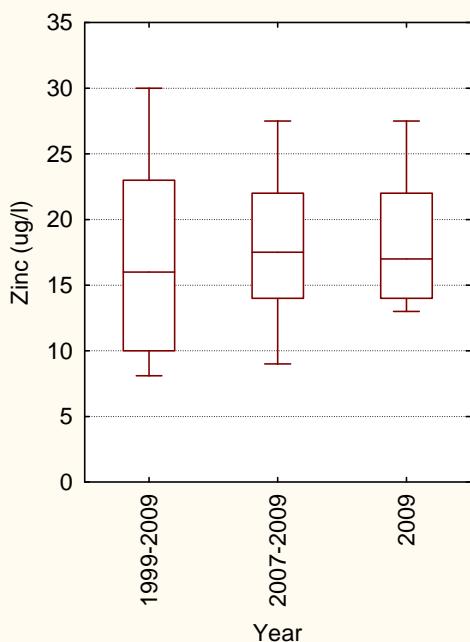
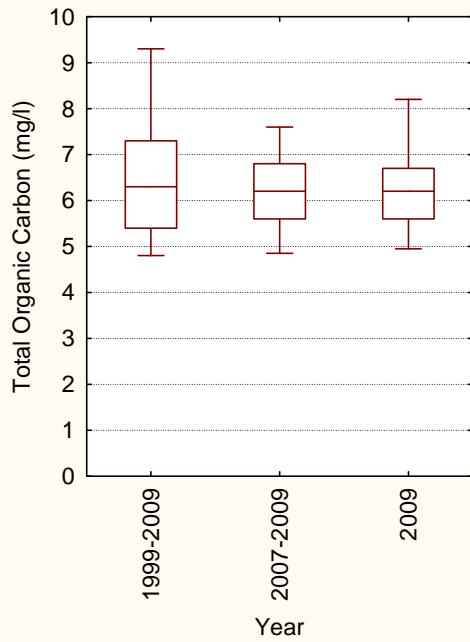
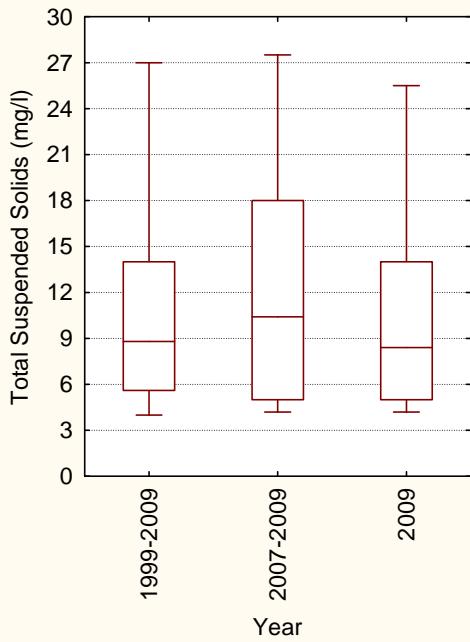
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	14.0	6.4	2.24	0.55	0.028	0.57	0.102	0.77	0.084	0.045	ND
Standard Error	0.1	1.8	0.8	0.42	0.11	0.004	0.11	0.015	0.09	0.010	0.007	ND
Median	7.6	16.0	5.8	1.88	0.42	0.028	0.46	0.096	0.75	0.084	0.037	ND
Mode	7.4	ND	ND	ND	ND	0.028	0.46	0.170	ND	ND	ND	ND
Standard Deviation	0.2	5.6	2.5	1.31	0.35	0.013	0.35	0.048	0.28	0.031	0.022	ND
Sample Variance	0.0	31.8	6.2	1.73	0.12	0.000	0.12	0.002	0.08	0.001	0.000	ND
Kurtosis	-1.3	-0.8	1.1	2.96	3.68	-0.686	3.24	-1.268	0.02	-1.227	-1.733	ND
Skewness	0.2	-0.6	1.1	1.70	2.02	0.303	1.95	0.341	0.64	-0.023	0.254	ND
Range	0.5	16.8	8.4	4.36	1.11	0.040	1.09	0.128	0.93	0.090	0.056	0.00
Minimum	7.3	4.0	3.3	0.97	0.29	0.009	0.31	0.042	0.37	0.040	0.017	0.00
Maximum	7.8	20.8	11.6	5.33	1.40	0.049	1.40	0.170	1.30	0.130	0.073	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.1	4.0	1.8	0.94	0.25	0.009	0.25	0.034	0.20	0.022	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	791.0	779.8	3.4	11.2	10.2	1387	237.9	4683	3.1	ND
Standard Error	ND	ND	86.8	88.3	1.0	2.7	2.0	177	27.7	2492	0.3	ND
Median	ND	ND	885.0	878.1	2.3	8.4	8.6	1585	265.0	1160	3.1	ND
Mode	ND	ND	1000.0	ND	1.4	5.0	ND	ND	280.0	ND	ND	ND
Standard Deviation	ND	ND	274.5	279.3	3.1	8.4	6.4	560	87.5	7881	0.8	ND
Sample Variance	ND	ND	75365.6	78021.4	9.6	70.5	40.6	313076	7654.3	62107308	0.6	ND
Kurtosis	ND	ND	0.6	0.6	1.1	1.0	0.2	1	0.8	5	-0.7	ND
Skewness	ND	ND	-1.4	-1.4	1.3	1.3	1.2	-2	-1.4	2	0.1	ND
Range	0.0	0.0	720.0	730.6	10.0	25.6	17.4	1636	263.0	24913	2.5	0
Minimum	0.0	0.0	280.0	266.0	0.0	3.4	4.0	244	77.0	87	1.9	0
Maximum	0.0	0.0	1000.0	996.6	10.0	29.0	21.4	1880	340.0	25000	4.4	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	196.4	199.8	2.2	6.0	4.6	400	62.6	5638	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data

GRANGE AVENUE, WEST OF 76TH STREET - SITE 4
 ROOT RIVER
 WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	76.10	36.50	0.0	5.0	5.4	3.4	0.0	18.9	0.0	0.0	2.8	0.0
Standard Error	8.70	4.65	0.0	0.2	0.7	0.2	0.0	1.8	0.0	0.0	1.3	0.0
Median	83.50	41.00	0.0	5.0	5.0	3.3	0.0	17.0	0.0	0.0	0.0	0.0
Mode	98.00	37.00	0.0	5.0	ND	2.8	0.0	17.0	0.0	0.0	0.0	0.0
Standard Deviation	27.52	14.71	0.0	0.7	2.3	0.7	0.0	5.6	0.0	0.0	3.8	0.0
Sample Variance	757.43	216.28	0.0	0.4	5.3	0.5	0.0	31.4	0.0	0.0	14.6	0.0
Kurtosis	0.59	0.60	ND	0.8	-0.3	-1.0	ND	-0.7	ND	ND	-2.1	ND
Skewness	-1.36	-1.36	ND	1.0	0.4	0.6	ND	0.7	ND	ND	0.7	ND
Range	74.00	40.00	0.0	2.1	7.5	2.0	0.0	17.0	0.0	0.0	7.8	0.0
Minimum	26.00	10.00	0.0	4.3	2.2	2.6	0.0	12.0	0.0	0.0	0.0	0.0
Maximum	100.00	50.00	0.0	6.4	9.7	4.6	0.0	29.0	0.0	0.0	7.8	0.0
Count	10	10	10	10	10	10	10	10	10	10	8	2
Confidence Level(95.0%)	19.69	10.52	0.0	0.5	1.7	0.5	0.0	4.0	0.0	0.0	3.2	0.0

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	341	250	1.0	6.1	64.7	58.4	6.3	6.1
Standard Error	41	31	0.5	0.6	6.9	6.9	0.4	0.4
Median	375	280	0.0	5.8	72.5	65.0	6.2	6.0
Mode	350	330	0.0	ND	76.0	19.0	6.2	6.3
Standard Deviation	129	97	1.6	2.0	21.9	22.0	1.3	1.3
Sample Variance	16566	9419	2.7	4.1	478.7	482.0	1.8	1.8
Kurtosis	1	1	-1.1	-1.4	0.5	0.5	4.4	4.0
Skewness	-1	-1	1.1	0.1	-1.3	-1.3	1.7	1.6
Range	350	258	3.7	5.9	60.0	60.0	4.9	4.9
Minimum	110	72	0.0	3.0	25.0	19.0	4.7	4.5
Maximum	460	330	3.7	8.9	85.0	79.0	9.6	9.4
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	92	69	1.2	1.4	15.7	15.7	1.0	1.0

ND = No Data

Provisional MMSD Water Quality Data

RYAN ROAD, WEST OF 60TH STREET - SITE 5
 ROOT RIVER
 WATER QUALITY DATA - 2009

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	15.5	8.2	5.99	0.49	0.017	0.51	0.041	0.58	0.064	0.034	ND
Standard Error	0.0	2.0	0.6	0.48	0.08	0.004	0.08	0.009	0.09	0.010	0.006	ND
Median	7.9	17.2	7.4	6.09	0.55	0.012	0.57	0.029	0.61	0.052	0.033	ND
Mode	7.9	ND	ND	ND	0.77	0.011	0.19	ND	ND	0.100	ND	ND
Standard Deviation	0.1	6.4	2.0	1.51	0.25	0.012	0.26	0.030	0.30	0.031	0.018	ND
Sample Variance	0.0	41.4	3.9	2.28	0.06	0.000	0.07	0.001	0.09	0.001	0.000	ND
Kurtosis	-0.2	-0.7	-1.3	1.36	-1.83	0.245	-1.76	0.246	1.14	-0.711	0.049	ND
Skewness	-0.4	-0.7	0.6	-0.72	-0.28	0.807	-0.29	1.067	-0.23	0.987	-0.184	ND
Range	0.5	18.2	5.3	5.49	0.59	0.041	0.63	0.091	1.10	0.084	0.062	0.00
Minimum	7.6	4.0	6.0	2.82	0.18	0.000	0.18	0.009	0.00	0.036	0.000	0.00
Maximum	8.1	22.2	11.3	8.31	0.77	0.041	0.81	0.100	1.10	0.120	0.062	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.1	4.6	1.4	1.08	0.18	0.009	0.18	0.021	0.21	0.022	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	633.0	620.0	3.2	13.0	11.3	1065	169.0	574	2.5	ND
Standard Error	ND	ND	44.5	46.3	0.8	2.9	2.5	67	14.8	186	0.1	ND
Median	ND	ND	685.0	679.0	2.1	9.4	7.9	1150	165.0	335	2.5	ND
Mode	ND	ND	740.0	ND	2.0	ND	ND	ND	110.0	180	2.3	ND
Standard Deviation	ND	ND	140.8	146.5	2.5	9.3	7.9	213	46.8	589	0.5	ND
Sample Variance	ND	ND	19823.3	21449.1	6.3	87.0	62.5	45448	2187.8	346804	0.2	ND
Kurtosis	ND	ND	-1.6	-1.6	0.8	0.3	0.5	-1	0.2	1	-1.1	ND
Skewness	ND	ND	-0.4	-0.4	1.1	1.1	1.2	-1	0.6	1	0.2	ND
Range	0.0	0.0	380.0	405.8	8.4	28.0	23.8	630	150.0	1730	1.4	0
Minimum	0.0	0.0	440.0	408.0	0.0	4.0	3.8	680	110.0	70	1.8	0
Maximum	0.0	0.0	820.0	813.8	8.4	32.0	27.6	1310	260.0	1800	3.3	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	100.7	104.8	1.8	6.7	5.7	153	33.5	421	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

RYAN ROAD, WEST OF 60TH STREET - SITE 5
 ROOT RIVER
 WATER QUALITY DATA - 2009

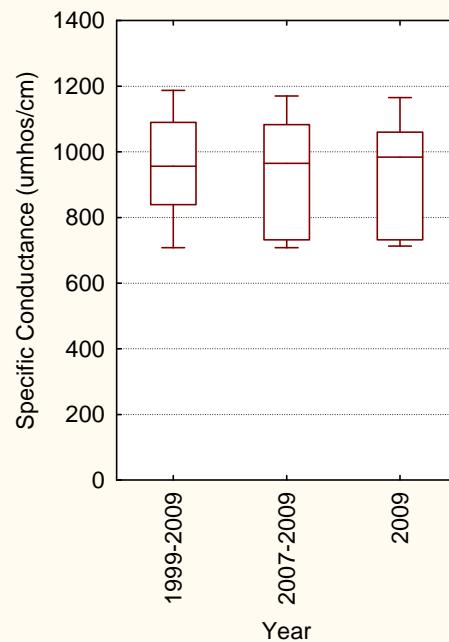
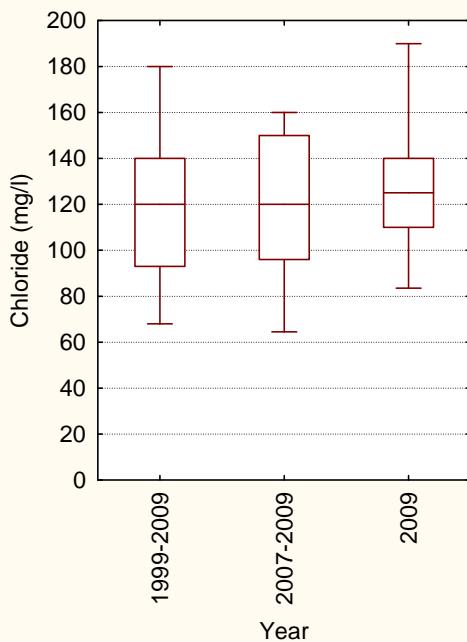
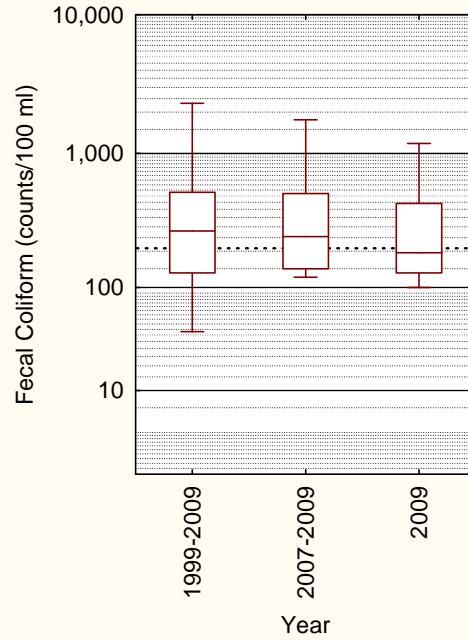
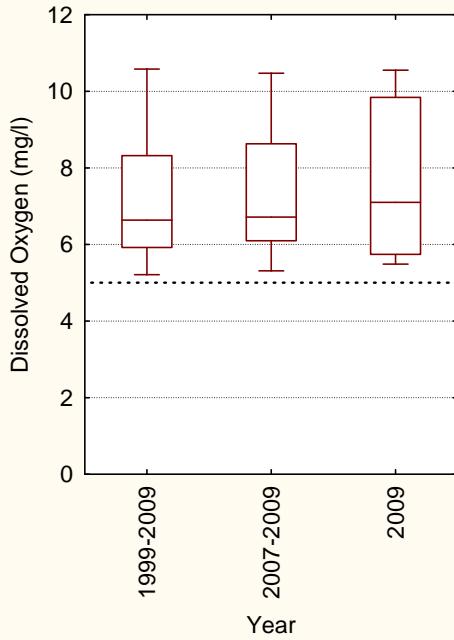
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	68.40	36.60	0.0	4.9	3.8	3.5	0.0	17.5	0.0	0.0	2.2	0.0
Standard Error	5.16	3.39	0.0	0.2	0.7	0.2	0.0	1.8	0.0	0.0	1.4	0.0
Median	72.50	36.00	0.0	4.9	4.4	3.3	0.0	18.0	0.0	0.0	0.0	0.0
Mode	ND	36.00	0.0	4.8	0.0	2.8	0.0	ND	0.0	0.0	0.0	0.0
Standard Deviation	16.32	10.72	0.0	0.6	2.1	0.8	0.0	5.6	0.0	0.0	3.8	0.0
Sample Variance	266.49	114.93	0.0	0.3	4.6	0.6	0.0	31.4	0.0	0.0	14.6	0.0
Kurtosis	-1.09	-1.02	ND	-0.6	0.3	-0.9	ND	-0.7	ND	ND	-0.3	ND
Skewness	-0.44	0.11	ND	0.1	-1.2	0.6	ND	-0.3	ND	ND	1.3	ND
Range	48.00	32.00	0.0	1.8	6.1	2.3	0.0	17.2	0.0	0.0	8.7	0.0
Minimum	42.00	20.00	0.0	4.0	0.0	2.6	0.0	7.8	0.0	0.0	0.0	0.0
Maximum	90.00	52.00	0.0	5.8	6.1	4.9	0.0	25.0	0.0	0.0	8.7	0.0
Count	10	10	10	10	10	10	10	10	10	10	7	2
Confidence Level(95.0%)	11.68	7.67	0.0	0.4	1.5	0.6	0.0	4.0	0.0	0.0	3.5	0.0

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	322	221	0.5	5.5	56.9	51.3	5.8	5.5
Standard Error	26	19	0.3	0.3	4.0	4.0	0.3	0.2
Median	335	255	0.0	5.1	62.5	56.5	5.8	5.5
Mode	340	270	0.0	4.7	38.0	63.0	5.9	5.1
Standard Deviation	84	59	1.0	1.0	12.6	12.8	0.9	0.7
Sample Variance	6996	3521	1.0	1.1	157.7	163.8	0.8	0.5
Kurtosis	-1	-1	1.4	0.7	-1.3	-1.3	-0.7	-1.2
Skewness	0	-1	1.8	1.4	-0.7	-0.7	-0.1	0.3
Range	250	150	2.4	3.0	31.0	32.0	2.6	2.0
Minimum	190	120	0.0	4.6	38.0	31.0	4.4	4.6
Maximum	440	270	2.4	7.6	69.0	63.0	7.0	6.6
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	60	42	0.7	0.7	9.0	9.2	0.6	0.5

ND = No Data

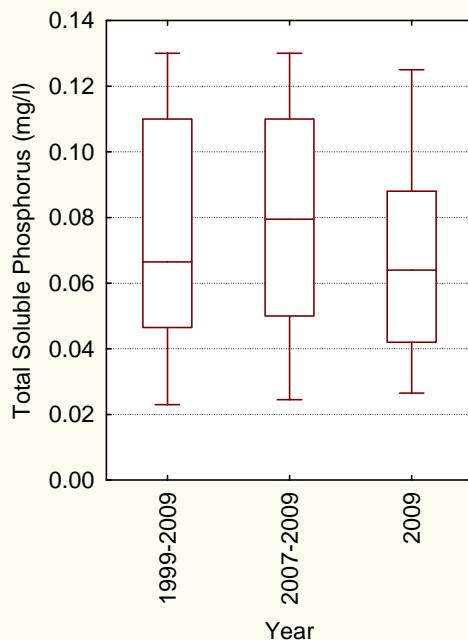
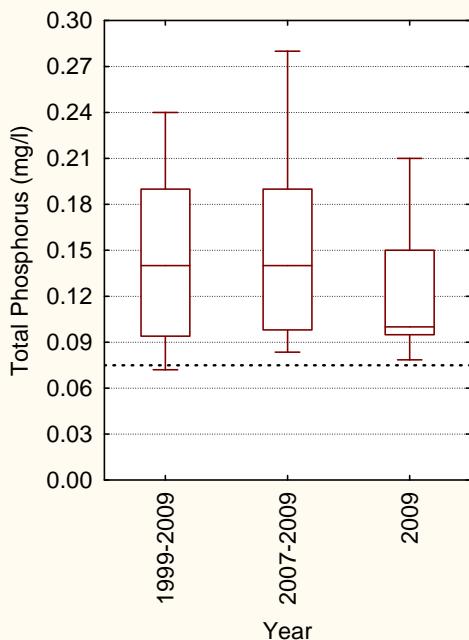
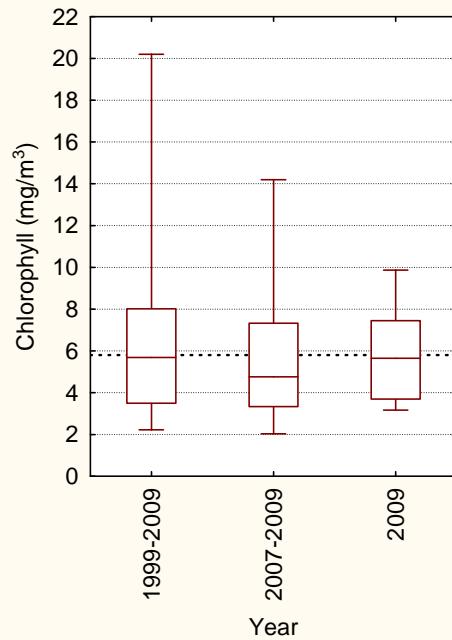
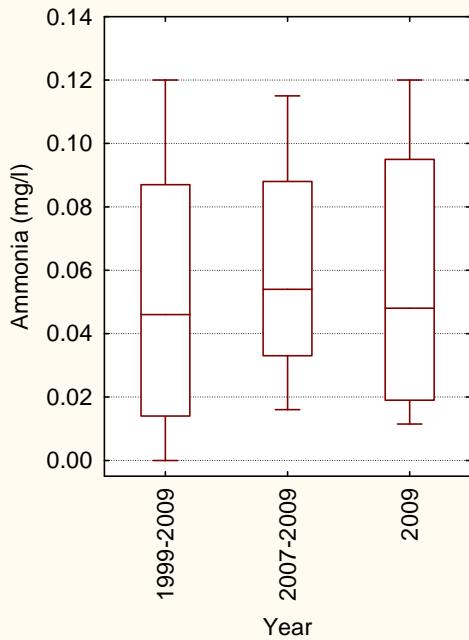
Provisional MMSD Water Quality Data

MMSD Water Quality Monitoring Program Data
Root River at County Line Rd., Site RR-06



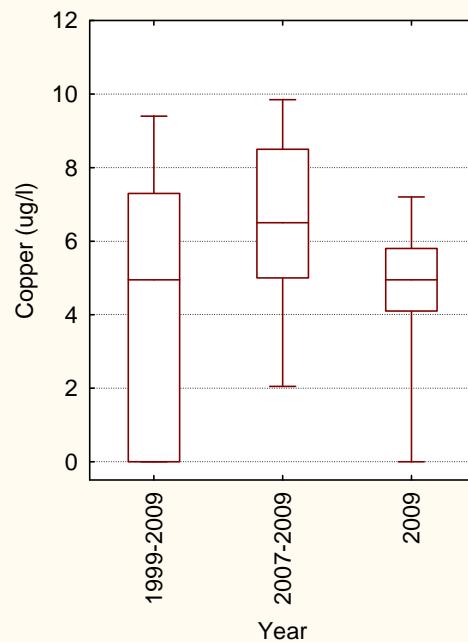
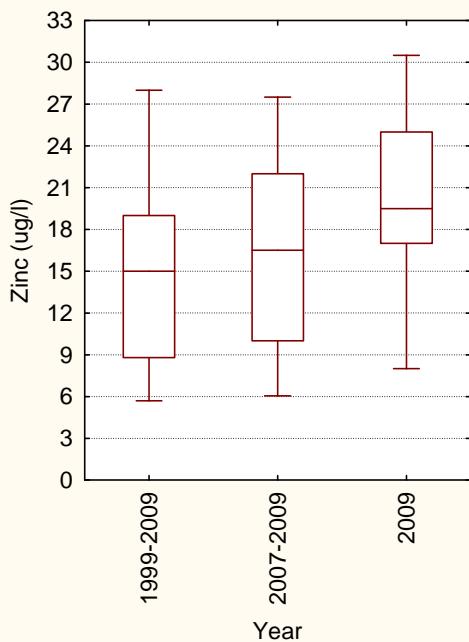
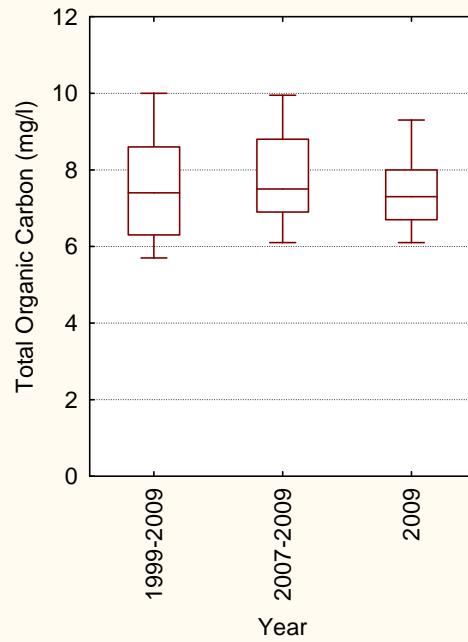
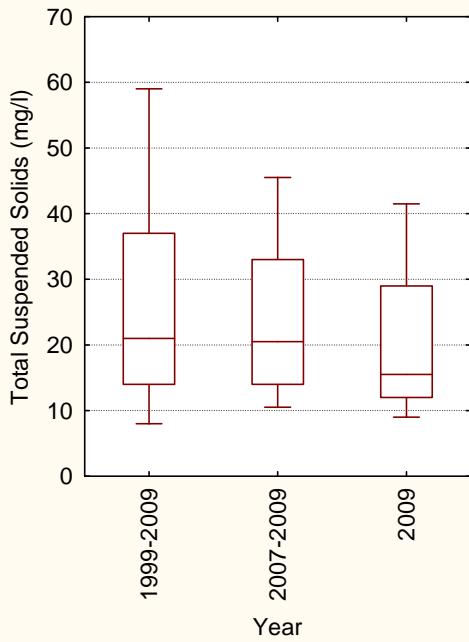
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	15.6	7.6	6.01	1.72	0.032	1.74	0.057	1.02	0.124	0.069	ND
Standard Error	0.1	2.1	0.7	0.87	0.29	0.009	0.30	0.013	0.17	0.016	0.011	ND
Median	7.8	17.6	7.1	5.65	1.50	0.019	1.50	0.048	0.96	0.100	0.064	ND
Mode	7.6	ND	ND	ND	3.30	0.017	1.30	0.120	1.10	0.100	ND	ND
Standard Deviation	0.2	6.5	2.1	2.74	0.93	0.027	0.94	0.042	0.55	0.051	0.036	ND
Sample Variance	0.0	42.6	4.3	7.50	0.86	0.001	0.88	0.002	0.30	0.003	0.001	ND
Kurtosis	-1.9	-0.8	-1.5	1.70	0.27	4.356	0.27	-1.235	4.90	0.834	-0.500	ND
Skewness	0.2	-0.7	0.5	1.16	0.92	2.057	0.94	0.529	1.92	1.322	0.602	ND
Range	0.4	18.3	5.4	9.11	2.84	0.088	2.92	0.110	1.95	0.153	0.108	0.00
Minimum	7.6	4.1	5.3	2.99	0.46	0.012	0.48	0.010	0.45	0.077	0.022	0.00
Maximum	8.0	22.4	10.7	12.10	3.30	0.100	3.40	0.120	2.40	0.230	0.130	0.00
Count	10	10	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	0.1	4.7	1.5	1.96	0.66	0.019	0.67	0.030	0.39	0.036	0.026	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	567.0	545.9	4.6	21.1	25.0	946	129.7	404	2.4	ND
Standard Error	ND	ND	29.5	32.3	0.8	4.0	5.8	57	12.4	172	0.1	ND
Median	ND	ND	565.0	550.0	4.6	15.5	16.9	984	125.0	185	2.3	ND
Mode	ND	ND	650.0	ND	2.8	13.0	10.8	1060	120.0	ND	ND	ND
Standard Deviation	ND	ND	93.3	102.1	2.6	12.7	18.5	179	39.2	545	0.4	ND
Sample Variance	ND	ND	8712.2	10422.8	6.6	160.1	341.8	31987	1536.5	296516	0.2	ND
Kurtosis	ND	ND	-0.7	-0.6	-0.2	-0.6	-0.3	-2	1.1	8	1.3	ND
Skewness	ND	ND	-0.3	-0.4	-0.1	0.9	1.1	0	0.2	3	1.1	ND
Range	0.0	0.0	300.0	326.0	8.8	36.0	49.9	463	143.0	1820	1.4	0
Minimum	0.0	0.0	400.0	361.0	0.0	8.0	9.5	707	57.0	80	1.9	0
Maximum	0.0	0.0	700.0	687.0	8.8	44.0	59.4	1170	200.0	1900	3.3	0
Count	0	0	10	10	10	10	10	10	10	10	10	0
Confidence Level(95.0%)	ND	ND	66.8	73.0	1.8	9.1	13.2	128	28.0	390	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

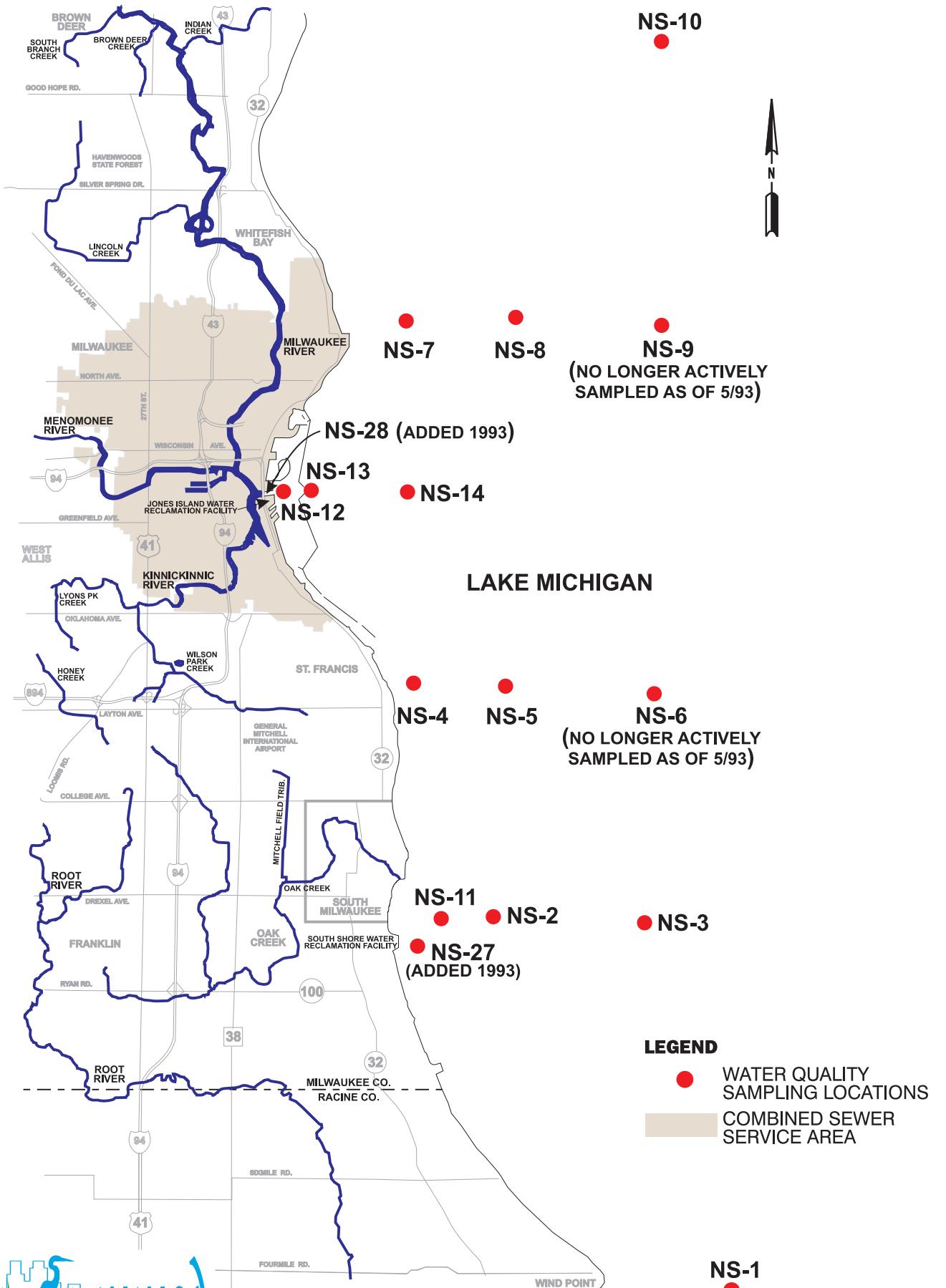
COUNTY LINE ROAD (8 MILE ROAD), approx. 47TH STREET - SITE 6
 ROOT RIVER
 WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	68.40	34.70	0.0	5.8	4.5	4.3	0.4	19.7	0.0	0.0	1.8	0.0
Standard Error	4.69	2.62	0.0	0.3	0.8	0.2	0.4	2.8	0.0	0.0	1.2	0.0
Median	71.00	35.50	0.0	5.8	5.0	4.4	0.0	19.5	0.0	0.0	0.0	0.0
Mode	ND	22.00	0.0	5.0	0.0	3.4	0.0	17.0	0.0	0.0	0.0	0.0
Standard Deviation	14.84	8.27	0.0	1.0	2.6	0.7	1.4	8.7	0.0	0.0	3.4	0.0
Sample Variance	220.27	68.46	0.0	0.9	6.6	0.4	1.8	76.0	0.0	0.0	11.3	0.0
Kurtosis	-0.76	-0.60	ND	-1.3	0.4	-1.2	10.0	2.4	ND	ND	1.6	ND
Skewness	-0.28	-0.40	ND	-0.1	-1.0	-0.1	3.2	-1.1	ND	ND	1.7	ND
Range	45.00	25.00	0.0	2.8	7.8	1.9	4.3	31.0	0.0	0.0	8.6	0.0
Minimum	46.00	22.00	0.0	4.2	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	91.00	47.00	0.0	7.0	7.8	5.3	4.3	31.0	0.0	0.0	8.6	0.0
Count	10	10	10	10	10	10	10	10	10	10	8	2
Confidence Level(95.0%)	10.62	5.92	0.0	0.7	1.8	0.5	1.0	6.2	0.0	0.0	2.8	0.0

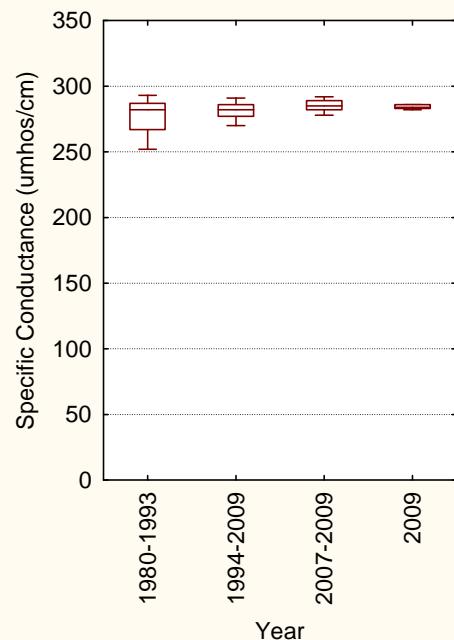
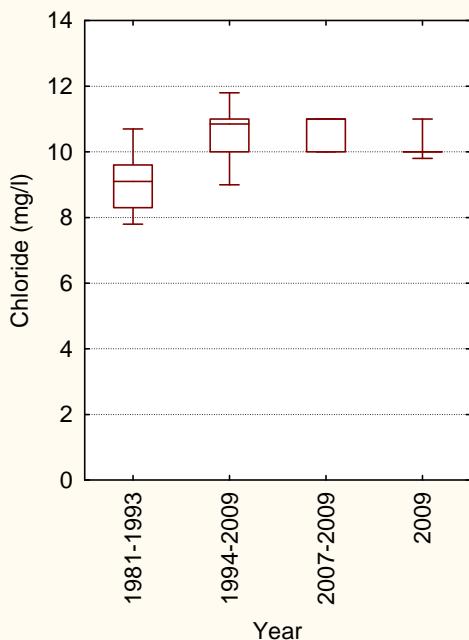
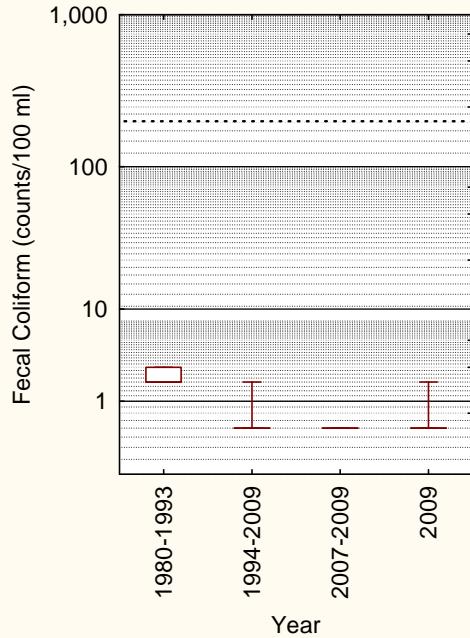
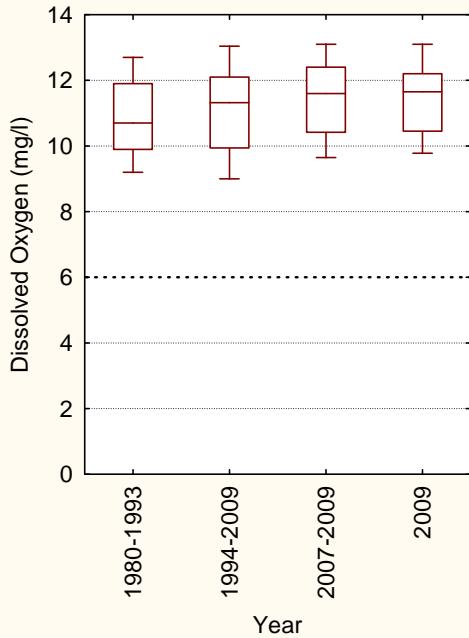
VARIABLE	HARD	TALK	BOD5	BOD20	TC	TNIC	TNOC	TNDOC
units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STATISTICS								
Mean	313	221	0.5	5.5	59.8	52.4	7.5	7.1
Standard Error	22	17	0.4	0.3	3.8	3.7	0.4	0.4
Median	320	235	0.0	5.4	63.5	56.0	7.3	7.0
Mode	ND	140	0.0	ND	ND	ND	ND	6.3
Standard Deviation	71	55	1.1	0.8	11.9	11.7	1.2	1.2
Sample Variance	4979	3054	1.3	0.7	141.7	137.6	1.4	1.4
Kurtosis	-1	-1	1.5	-0.4	-1.1	-1.2	1.3	3.2
Skewness	0	-1	1.8	0.1	-0.6	-0.6	1.0	1.5
Range	220	140	2.8	2.8	34.0	33.0	4.1	4.2
Minimum	200	140	0.0	4.1	42.0	34.0	5.9	5.7
Maximum	420	280	2.8	6.9	76.0	67.0	10.0	9.9
Count	10	10	10	10	10	10	10	10
Confidence Level(95.0%)	50	40	0.8	0.6	8.5	8.4	0.8	0.8

ND = No Data

Provisional MMSD Water Quality Data

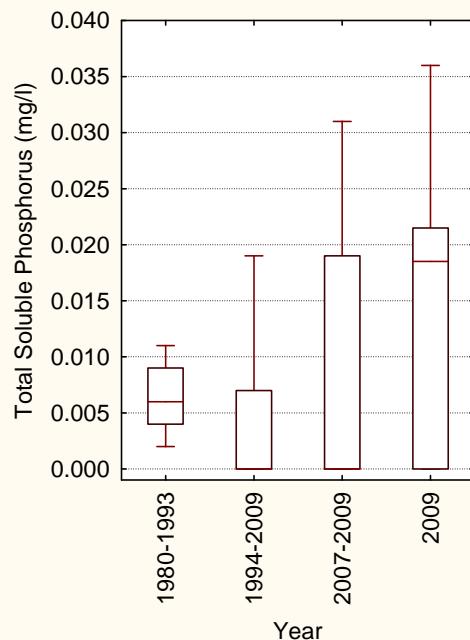
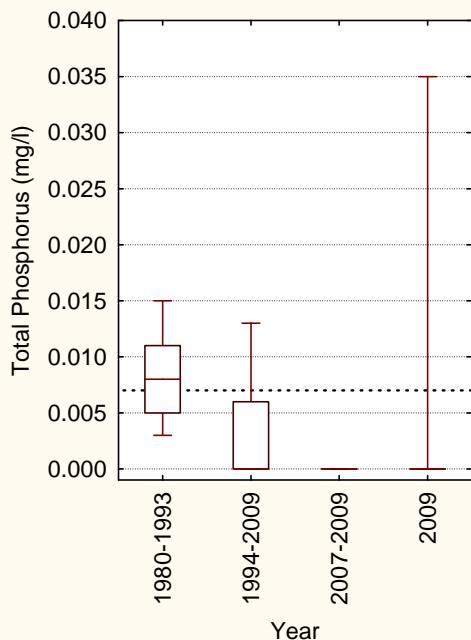
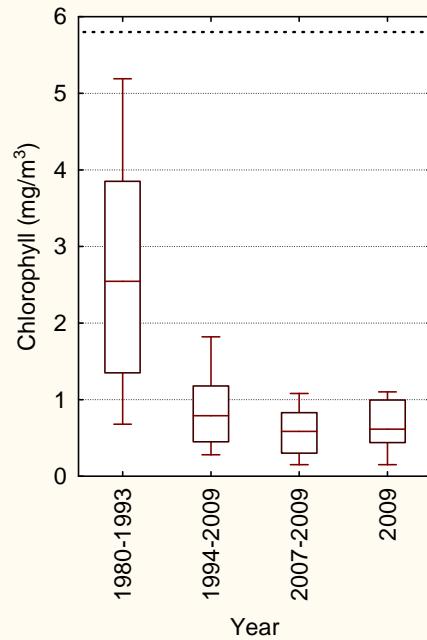
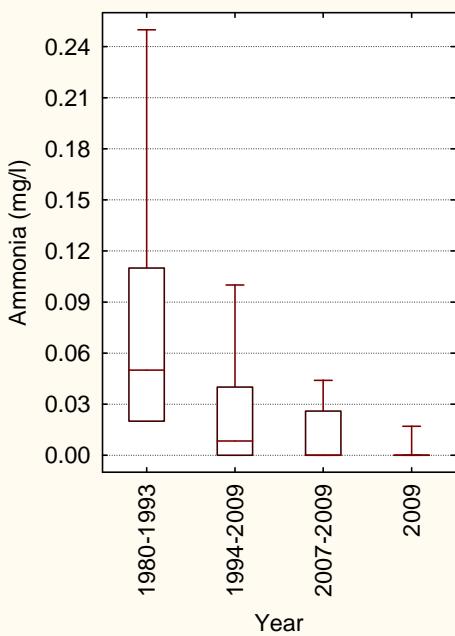


MMSD Water Quality Program Data
Nearshore survey, Site NS-1



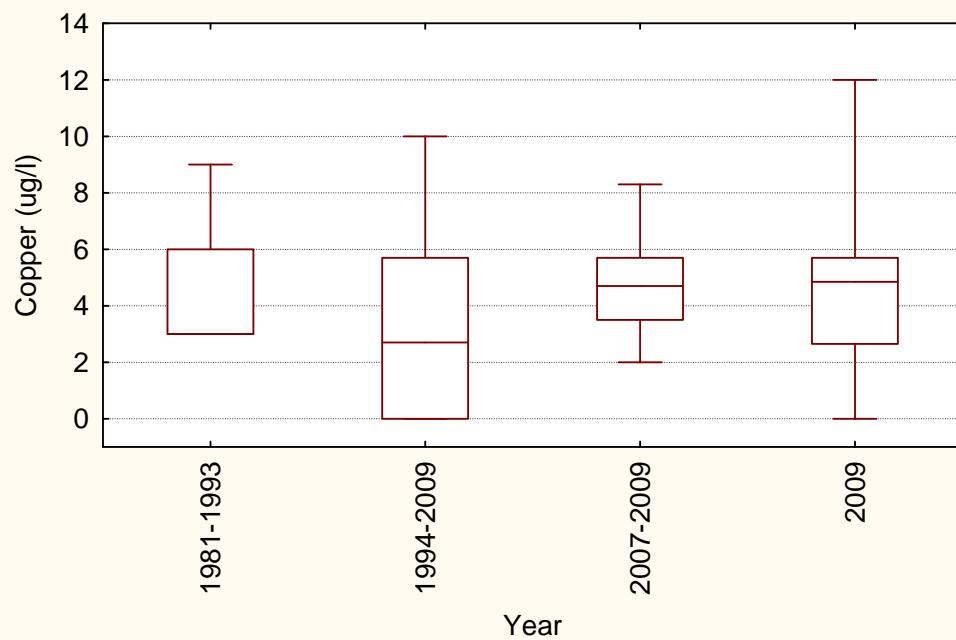
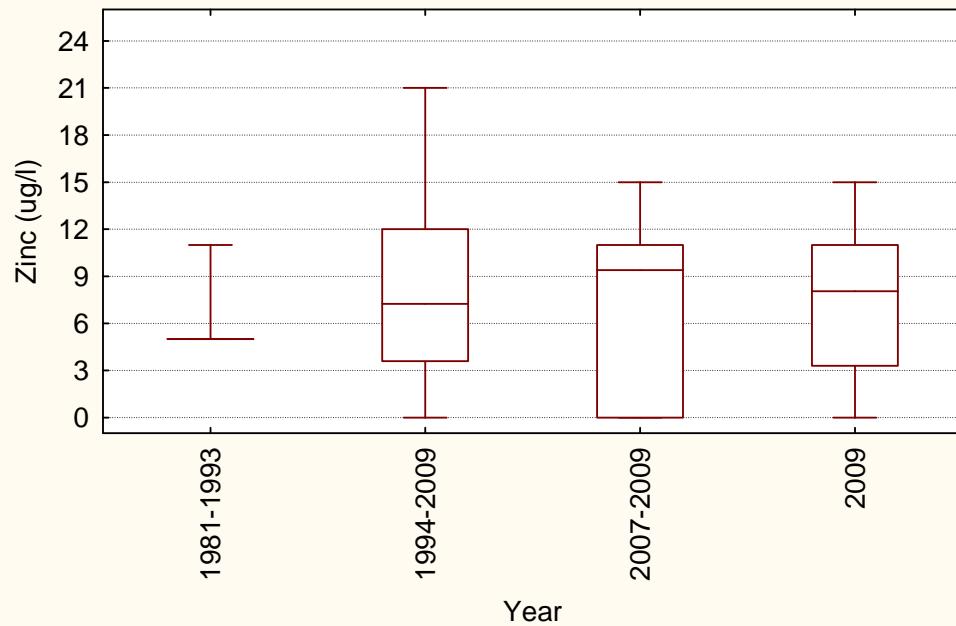
— Median □ 25%-75% I 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-1



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

MMSD Water Quality Program Data
Nearshore survey, Site NS-1



— Median □ 25%-75% ┌ 10%-90%

NEAR SHORE - SITE 1
WATER QUALITY DATA - 2009

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	10.4	11.4	0.69	0.28	0.001	0.28	0.004	0.01	0.007	0.015	1.67
Standard Error	0.0	0.9	0.2	0.07	0.01	0.000	0.01	0.002	0.01	0.004	0.003	0.08
Median	8.4	9.8	11.7	0.62	0.28	0.000	0.29	0.000	0.00	0.000	0.019	1.75
Mode	8.4	16.3	13.1	0.12	0.27	0.000	0.31	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	4.3	1.2	0.36	0.03	0.002	0.03	0.009	0.07	0.017	0.013	0.41
Sample Variance	0.0	18.5	1.4	0.13	0.00	0.000	0.00	0.000	0.00	0.000	0.000	0.16
Kurtosis	-1.0	-0.2	-0.6	-0.75	0.44	0.152	0.90	4.907	24.00	4.150	-1.159	-0.52
Skewness	-0.2	0.7	-0.4	0.15	-0.85	1.381	-1.11	2.290	4.90	2.305	0.142	-0.59
Range	0.6	15.2	4.2	1.32	0.11	0.006	0.11	0.034	0.34	0.056	0.036	1.42
Minimum	8.0	4.4	9.0	0.12	0.21	0.000	0.21	0.000	0.00	0.000	0.000	0.88
Maximum	8.6	19.6	13.2	1.44	0.32	0.006	0.32	0.034	0.34	0.056	0.036	2.30
Count	24	24	24	24	18	24	21	24	24	24	24	24
Confidence Level(95.0%)	0.1	1.8	0.5	0.15	0.01	0.001	0.01	0.004	0.03	0.007	0.005	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	12.1	23.3	ND	ND	ND	ND	0.5	285	10.2	0	0.0	ND
Standard Error	1.8	1.7	ND	ND	ND	ND	0.1	1	0.1	0	0.0	ND
Median	10.9	23.3	ND	ND	ND	ND	0.3	284	10.0	0	0.0	ND
Mode	ND	28.0	ND	ND	ND	ND	ND	286	10.0	0	0.0	ND
Standard Deviation	5.1	4.9	ND	ND	ND	ND	0.4	3	0.5	1	0.1	ND
Sample Variance	26.2	24.5	ND	ND	ND	ND	0.2	7	0.2	1	0.0	ND
Kurtosis	-0.7	-0.8	ND	ND	ND	ND	2.1	2	0.2	8	8.0	ND
Skewness	0.5	-0.4	ND	ND	ND	ND	1.7	1	1.3	3	2.8	ND
Range	14.7	14.0	0.0	0.0	0.0	0.0	1.5	11	1.4	2	0.3	0
Minimum	5.1	15.0	0.0	0.0	0.0	0.0	0.2	281	9.6	0	0.0	0
Maximum	19.8	29.0	0.0	0.0	0.0	0.0	1.7	292	11.0	2	0.3	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	4.3	4.1	ND	ND	ND	ND	0.2	1	0.2	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 1
WATER QUALITY DATA - 2009

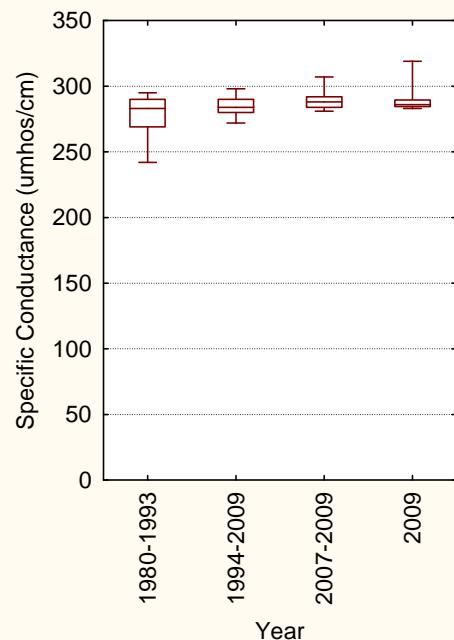
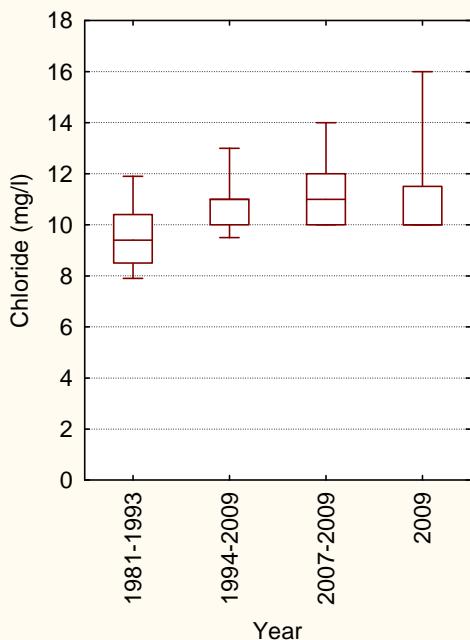
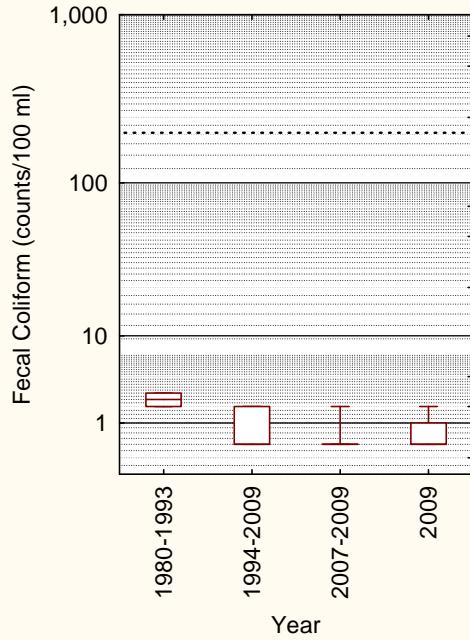
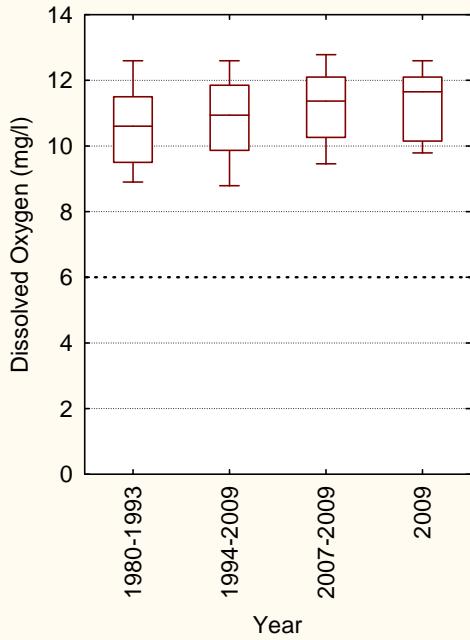
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.00	11.25	0.0	3.3	4.8	0.2	0.0	7.5	0.0	0.0	4.9	ND
Standard Error	0.38	0.16	0.0	0.3	1.2	0.2	0.0	1.9	0.0	0.0	1.6	ND
Median	33.00	11.00	0.0	3.2	4.9	0.0	0.0	8.1	0.0	0.0	6.0	ND
Mode	34.00	11.00	0.0	3.4	ND	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.07	0.46	0.0	0.8	3.5	0.7	0.0	5.3	0.0	0.0	4.0	ND
Sample Variance	1.14	0.21	0.0	0.6	12.3	0.5	0.0	28.3	0.0	0.0	16.0	ND
Kurtosis	0.35	0.00	ND	4.4	2.5	8.0	ND	-0.7	ND	ND	-1.9	ND
Skewness	-0.94	1.44	ND	1.8	1.1	2.8	ND	-0.4	ND	ND	-0.5	ND
Range	3.00	1.00	0.0	2.7	12.0	1.9	0.0	15.0	0.0	0.0	9.2	0.0
Minimum	31.00	11.00	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	34.00	12.00	0.0	5.1	12.0	1.9	0.0	15.0	0.0	0.0	9.2	0.0
Count	8	8	8	8	8	8	8	8	8	8	6	0
Confidence Level(95.0%)	0.89	0.39	0.0	0.7	2.9	0.6	0.0	4.4	0.0	0.0	4.2	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	129	ND	ND	ND	ND	ND	ND	ND
Standard Error	1	ND	ND	ND	ND	ND	ND	ND
Median	130	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	4	ND	ND	ND	ND	ND	ND	ND
Sample Variance	13	ND	ND	ND	ND	ND	ND	ND
Kurtosis	8	ND	ND	ND	ND	ND	ND	ND
Skewness	-3	ND	ND	ND	ND	ND	ND	ND
Range	10	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	130	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	3	ND	ND	ND	ND	ND	ND	ND

ND = No Data

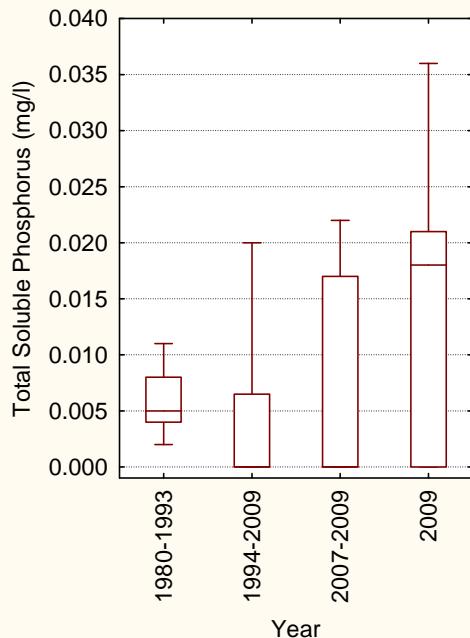
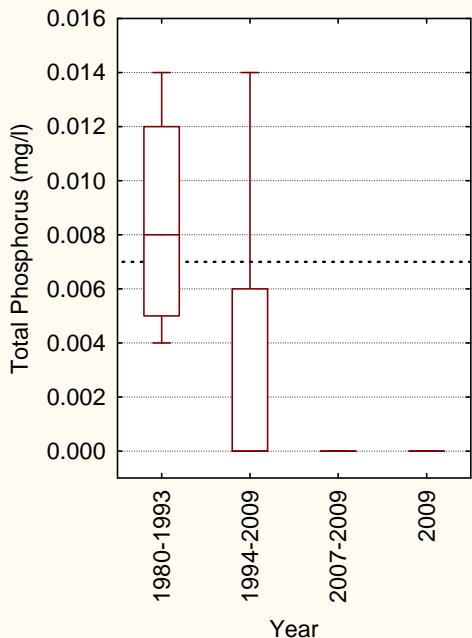
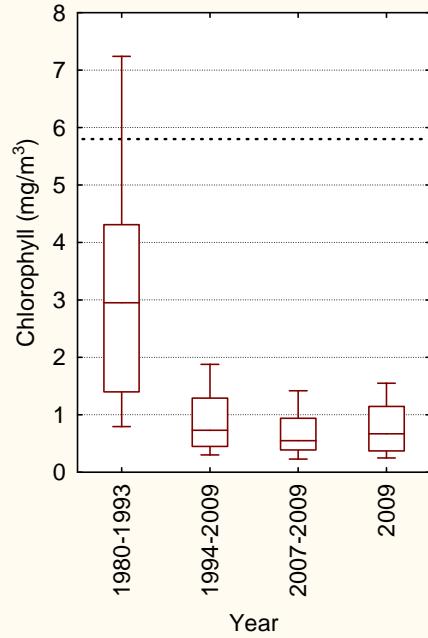
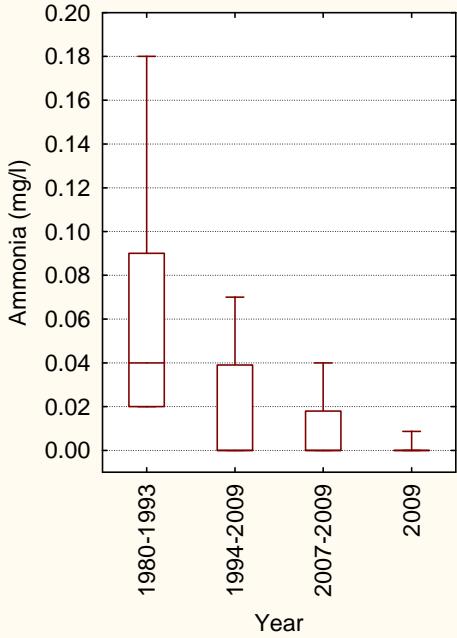
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-2



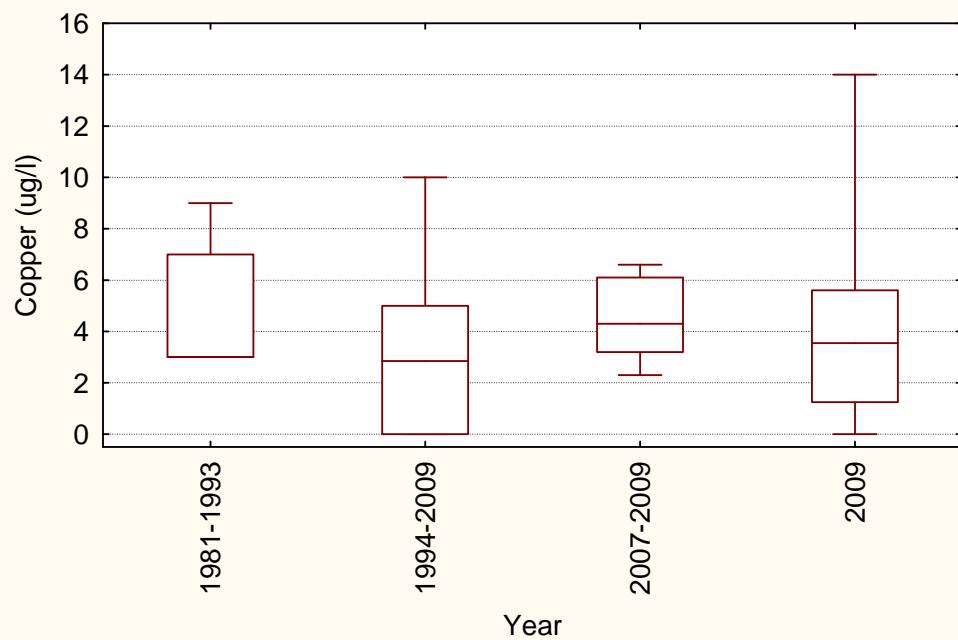
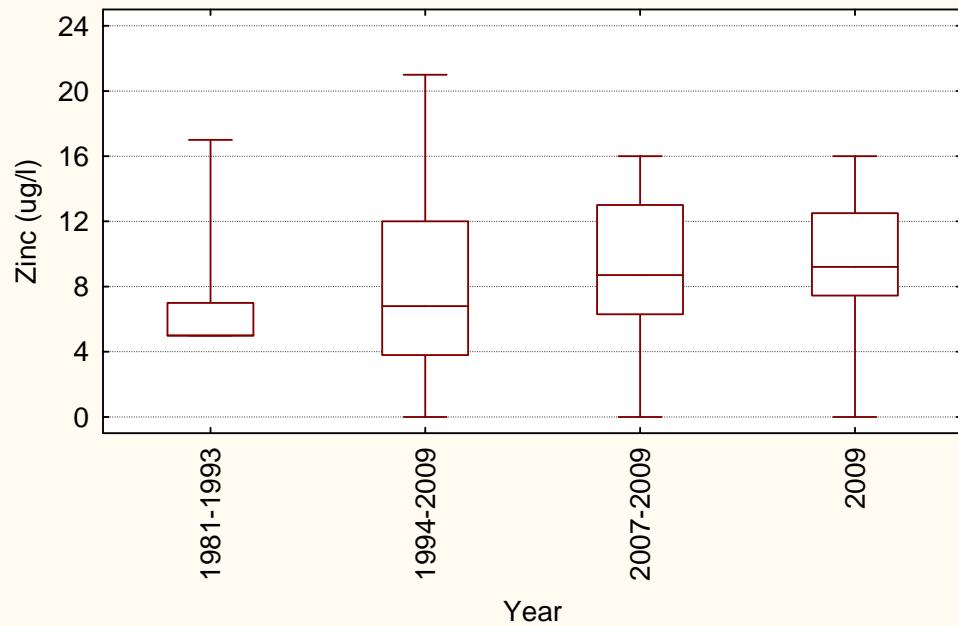
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-2



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

MMSD Water Quality Program Data
Nearshore survey, Site NS-2



— Median □ 25%-75% ━ 10%-90%

NEAR SHORE - SITE 2
WATER QUALITY DATA - 2009

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	12.0	11.3	0.79	0.29	0.002	0.29	0.001	0.04	0.003	0.017	1.46
Standard Error	0.0	0.9	0.2	0.12	0.02	0.001	0.01	0.001	0.03	0.003	0.002	0.08
Median	8.5	10.6	11.7	0.67	0.28	0.000	0.29	0.000	0.00	0.000	0.018	1.50
Mode	8.6	10.5	12.1	0.37	0.26	0.000	0.26	0.000	0.00	0.000	0.000	1.50
Standard Deviation	0.2	4.2	1.1	0.57	0.07	0.003	0.06	0.004	0.12	0.013	0.012	0.40
Sample Variance	0.0	17.8	1.3	0.32	0.00	0.000	0.00	0.000	0.02	0.000	0.000	0.16
Kurtosis	-0.9	-0.6	-0.8	0.22	-0.56	-1.446	-0.04	6.291	12.13	23.000	-0.586	0.27
Skewness	-0.4	0.9	-0.2	1.09	0.57	0.694	0.64	2.689	3.53	4.796	-0.156	-0.53
Range	0.8	12.6	4.3	1.89	0.21	0.007	0.22	0.015	0.53	0.064	0.036	1.46
Minimum	8.0	6.9	9.4	0.19	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.64
Maximum	8.8	19.5	13.7	2.08	0.41	0.007	0.42	0.015	0.53	0.064	0.036	2.10
Count	24	24	24	24	18	24	21	24	24	23	23	24
Confidence Level(95.0%)	0.1	1.8	0.5	0.24	0.03	0.001	0.03	0.002	0.05	0.006	0.005	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	9.0	15.3	ND	ND	ND	ND	0.7	292	11.2	1	0.1	ND
Standard Error	1.4	0.2	ND	ND	ND	ND	0.1	3	0.5	0	0.0	ND
Median	9.7	15.0	ND	ND	ND	ND	0.4	286	10.0	0	0.0	ND
Mode	ND	15.0	ND	ND	ND	ND	ND	286	10.0	0	0.0	ND
Standard Deviation	3.9	0.5	ND	ND	ND	ND	0.5	15	2.5	1	0.1	ND
Sample Variance	15.6	0.3	ND	ND	ND	ND	0.3	235	6.1	1	0.0	ND
Kurtosis	0.5	-0.8	ND	ND	ND	ND	0.5	5	3.7	0	0.0	ND
Skewness	0.3	0.5	ND	ND	ND	ND	1.4	2	2.2	1	1.4	ND
Range	12.8	1.5	0.0	0.0	0.0	0.0	1.7	55	8.1	2	0.3	0
Minimum	3.2	14.5	0.0	0.0	0.0	0.0	0.2	281	9.9	0	0.0	0
Maximum	16.0	16.0	0.0	0.0	0.0	0.0	1.9	336	18.0	2	0.3	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	3.3	0.4	ND	ND	ND	ND	0.2	6	1.0	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 2
WATER QUALITY DATA - 2009

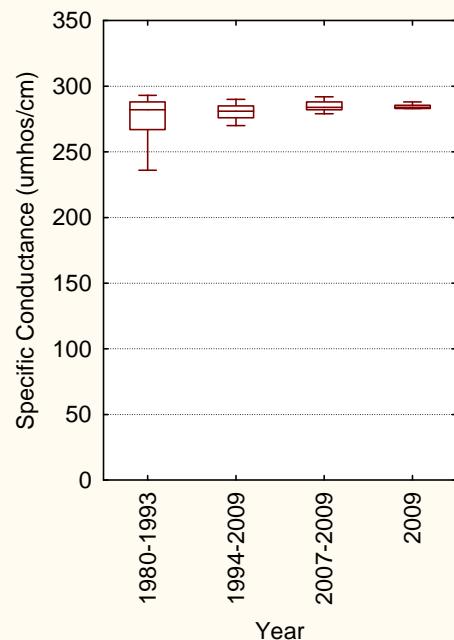
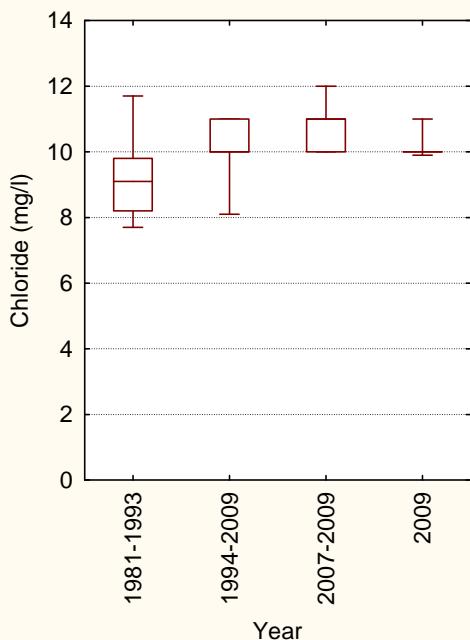
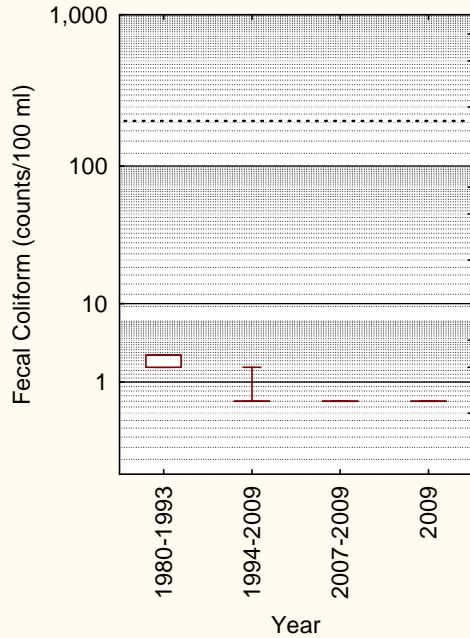
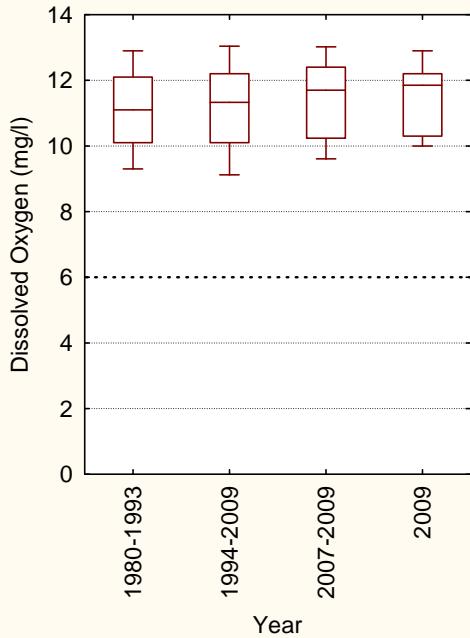
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.50	11.63	0.0	3.4	4.4	0.5	0.0	9.3	0.0	0.3	2.0	ND
Standard Error	0.42	0.26	0.0	0.2	1.6	0.3	0.0	1.7	0.0	0.3	2.0	ND
Median	33.00	11.50	0.0	3.5	3.6	0.0	0.0	9.2	0.0	0.0	0.0	ND
Mode	33.00	11.00	0.0	ND	0.0	0.0	0.0	ND	0.0	0.0	0.0	ND
Standard Deviation	1.20	0.74	0.0	0.5	4.5	0.9	0.0	4.8	0.0	1.0	4.0	ND
Sample Variance	1.43	0.55	0.0	0.3	20.1	0.8	0.0	23.0	0.0	0.9	16.0	ND
Kurtosis	2.58	-0.15	ND	-1.5	3.1	0.0	ND	1.4	ND	8.0	4.0	ND
Skewness	1.34	0.82	ND	-0.3	1.5	1.4	ND	-0.8	ND	2.8	2.0	ND
Range	4.00	2.00	0.0	1.4	14.0	2.0	0.0	16.0	0.0	2.7	8.0	0.0
Minimum	32.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	36.00	13.00	0.0	4.0	14.0	2.0	0.0	16.0	0.0	2.7	8.0	0.0
Count	8	8	8	8	8	8	8	8	8	8	4	0
Confidence Level(95.0%)	1.00	0.62	0.0	0.4	3.7	0.8	0.0	4.0	0.0	0.8	6.4	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	130	ND	ND	ND	ND	ND	ND	ND
Standard Error	2	ND	ND	ND	ND	ND	ND	ND
Median	130	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	5	ND	ND	ND	ND	ND	ND	ND
Sample Variance	29	ND	ND	ND	ND	ND	ND	ND
Kurtosis	4	ND	ND	ND	ND	ND	ND	ND
Skewness	0	ND	ND	ND	ND	ND	ND	ND
Range	20	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	4	ND	ND	ND	ND	ND	ND	ND

ND = No Data

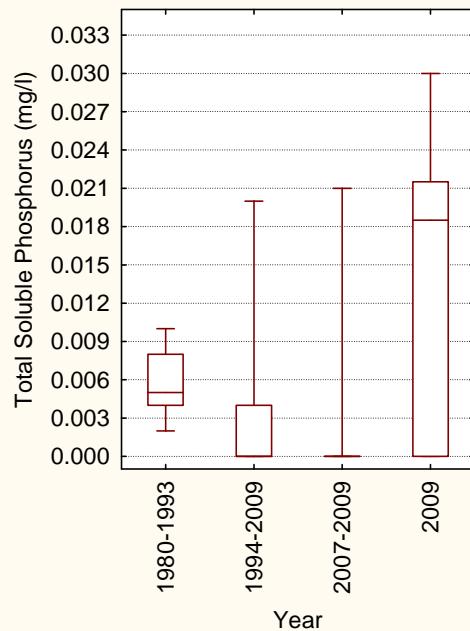
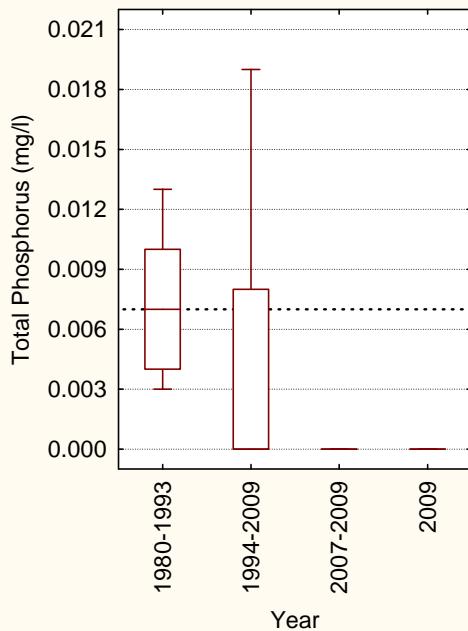
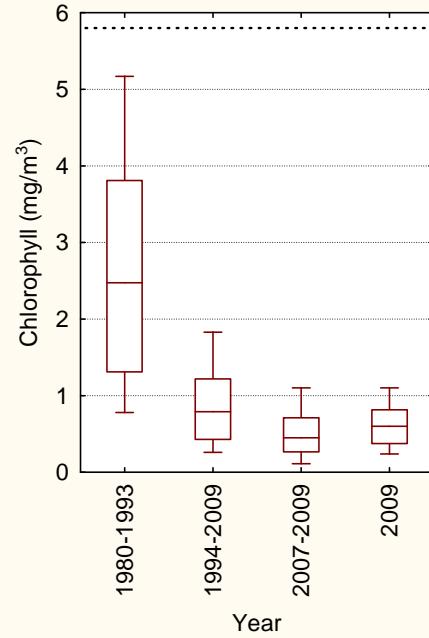
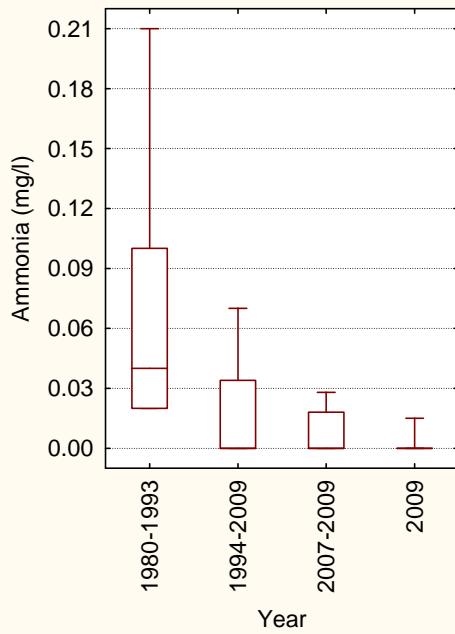
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-3



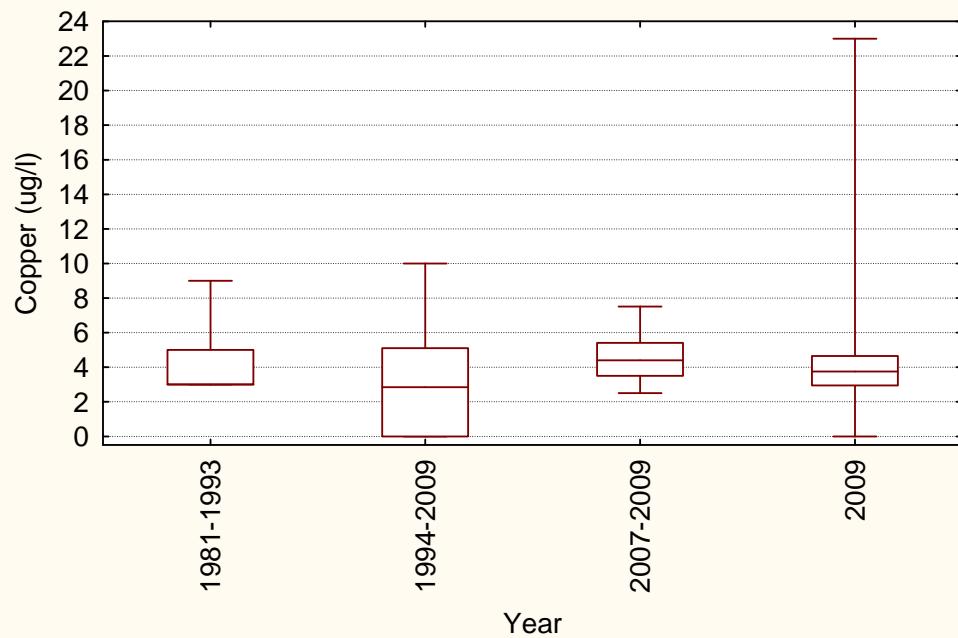
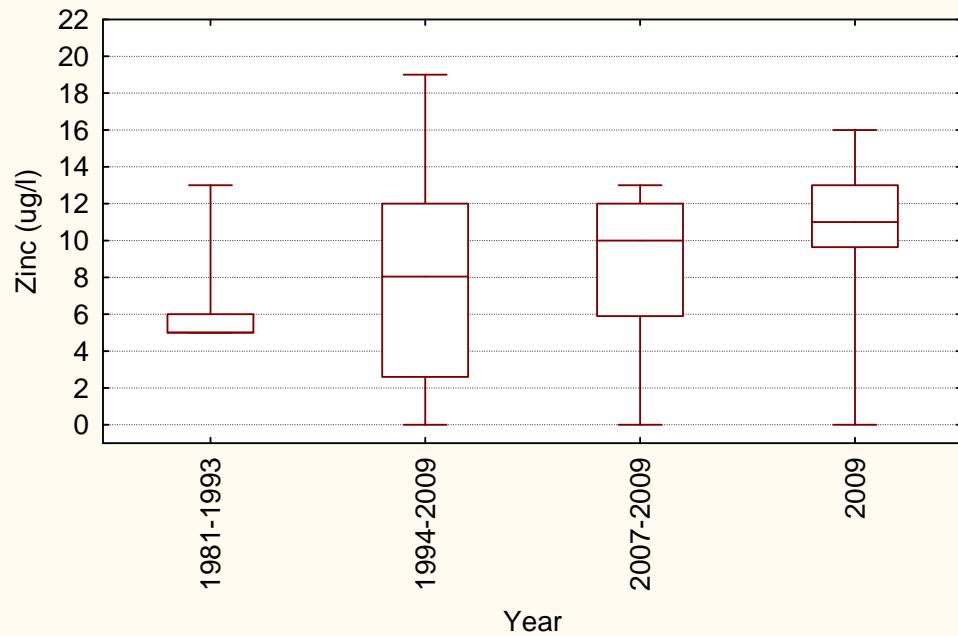
— Median □ 25%-75% ━ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-3



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

MMSD Water Quality Program Data
Nearshore survey, Site NS-3



— Median □ 25%-75% █ 10%-90%

NEAR SHORE - SITE 3
WATER QUALITY DATA - 2009

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	10.6	11.5	0.63	0.27	0.000	0.28	0.002	0.00	0.001	0.014	1.65
Standard Error	0.0	0.9	0.2	0.07	0.01	0.000	0.01	0.001	0.00	0.001	0.003	0.06
Median	8.4	9.9	11.9	0.60	0.28	0.000	0.28	0.000	0.00	0.000	0.019	1.70
Mode	8.5	11.1	11.9	ND	0.27	0.000	0.27	0.000	0.00	0.000	0.000	1.70
Standard Deviation	0.2	4.4	1.1	0.36	0.03	0.001	0.03	0.006	0.00	0.004	0.012	0.31
Sample Variance	0.0	19.3	1.2	0.13	0.00	0.000	0.00	0.000	0.00	0.000	0.000	0.09
Kurtosis	-1.2	-0.4	-0.9	0.54	0.82	9.124	0.71	5.575	ND	24.000	-1.532	-1.09
Skewness	-0.2	0.7	-0.5	0.69	-1.13	3.220	-0.90	2.594	ND	4.899	0.051	-0.09
Range	0.6	14.8	3.7	1.49	0.11	0.004	0.13	0.022	0.00	0.019	0.035	1.00
Minimum	8.0	4.9	9.4	0.00	0.20	0.000	0.20	0.000	0.00	0.000	0.000	1.20
Maximum	8.6	19.7	13.1	1.49	0.31	0.004	0.33	0.022	0.00	0.019	0.035	2.20
Count	24	24	24	24	18	24	21	24	24	24	24	24
Confidence Level(95.0%)	0.1	1.9	0.5	0.15	0.02	0.000	0.01	0.003	0.00	0.002	0.005	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	12.8	22.9	ND	ND	ND	ND	0.4	285	10.1	0	0.0	ND
Standard Error	1.3	1.7	ND	ND	ND	ND	0.0	0	0.1	0	0.0	ND
Median	12.0	25.8	ND	ND	ND	ND	0.4	284	10.0	0	0.0	ND
Mode	12.0	26.0	ND	ND	ND	ND	ND	284	10.0	0	0.0	ND
Standard Deviation	3.7	4.7	ND	ND	ND	ND	0.2	2	0.4	0	0.0	ND
Sample Variance	14.0	22.3	ND	ND	ND	ND	0.0	5	0.1	0	0.0	ND
Kurtosis	-0.3	0.1	ND	ND	ND	ND	-0.9	2	3.6	ND	ND	ND
Skewness	0.7	-1.1	ND	ND	ND	ND	0.6	1	2.1	ND	ND	ND
Range	11.0	13.0	0.0	0.0	0.0	0.0	0.5	9	1.4	0	0.0	0
Minimum	8.0	14.0	0.0	0.0	0.0	0.0	0.2	282	9.6	0	0.0	0
Maximum	19.0	27.0	0.0	0.0	0.0	0.0	0.7	291	11.0	0	0.0	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	3.1	3.9	ND	ND	ND	ND	0.1	1	0.2	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 3
WATER QUALITY DATA - 2009

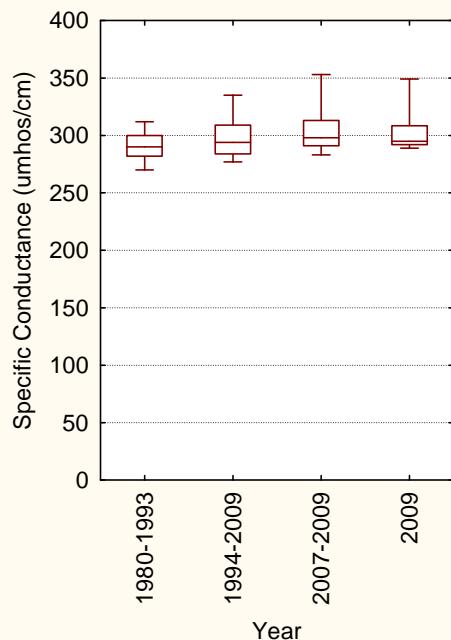
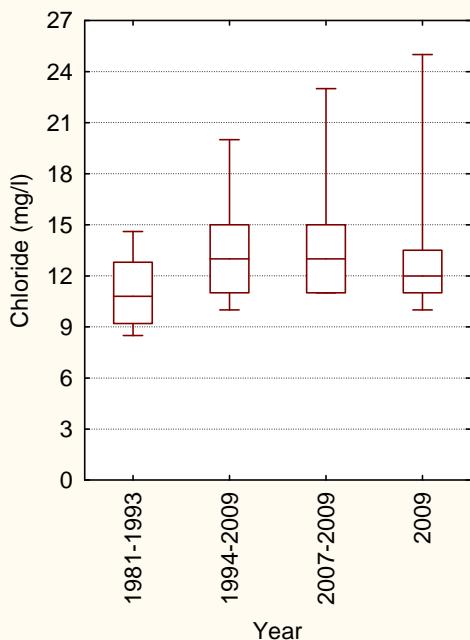
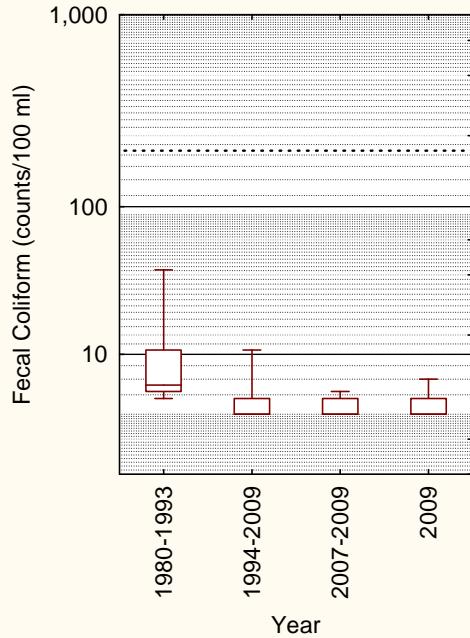
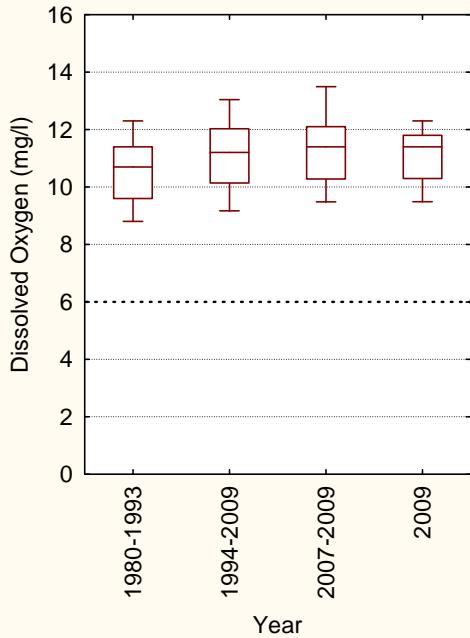
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.13	11.38	0.0	3.1	5.7	0.3	0.0	10.4	0.0	0.3	5.8	ND
Standard Error	0.52	0.26	0.0	0.2	2.5	0.3	0.0	1.7	0.0	0.3	1.5	ND
Median	34.00	11.50	0.0	3.0	3.8	0.0	0.0	11.0	0.0	0.0	7.7	ND
Mode	34.00	12.00	0.0	3.7	ND	0.0	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	1.46	0.74	0.0	0.4	7.1	0.7	0.0	4.7	0.0	0.7	4.0	ND
Sample Variance	2.13	0.55	0.0	0.2	51.1	0.6	0.0	22.2	0.0	0.5	16.0	ND
Kurtosis	2.69	-0.15	ND	-1.1	7.0	8.0	ND	4.1	ND	8.0	-0.9	ND
Skewness	-1.76	-0.82	ND	0.4	2.6	2.8	ND	-1.7	ND	2.8	-1.1	ND
Range	4.00	2.00	0.0	1.2	23.0	2.1	0.0	16.0	0.0	2.0	9.0	0.0
Minimum	30.00	10.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	34.00	12.00	0.0	3.7	23.0	2.1	0.0	16.0	0.0	2.0	9.0	0.0
Count	8	8	8	8	8	8	8	8	8	8	7	0
Confidence Level(95.0%)	1.22	0.62	0.0	0.4	6.0	0.6	0.0	3.9	0.0	0.6	3.7	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	128	ND	ND	ND	ND	ND	ND	ND
Standard Error	2	ND	ND	ND	ND	ND	ND	ND
Median	130	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	5	ND	ND	ND	ND	ND	ND	ND
Sample Variance	21	ND	ND	ND	ND	ND	ND	ND
Kurtosis	0	ND	ND	ND	ND	ND	ND	ND
Skewness	-1	ND	ND	ND	ND	ND	ND	ND
Range	10	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	130	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	4	ND	ND	ND	ND	ND	ND	ND

ND = No Data

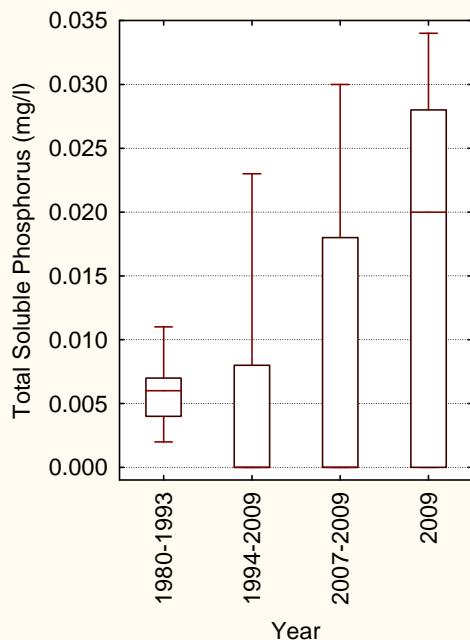
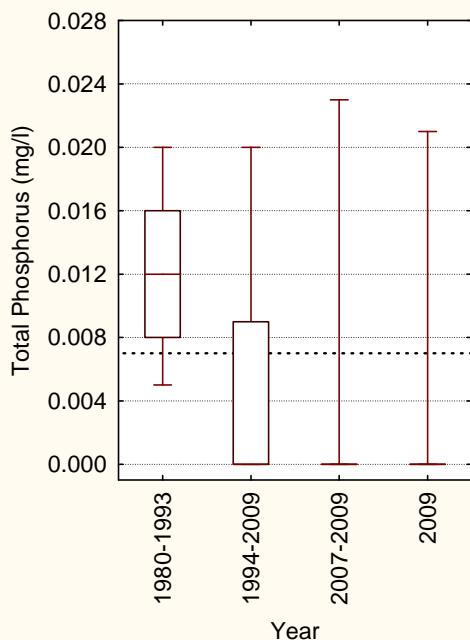
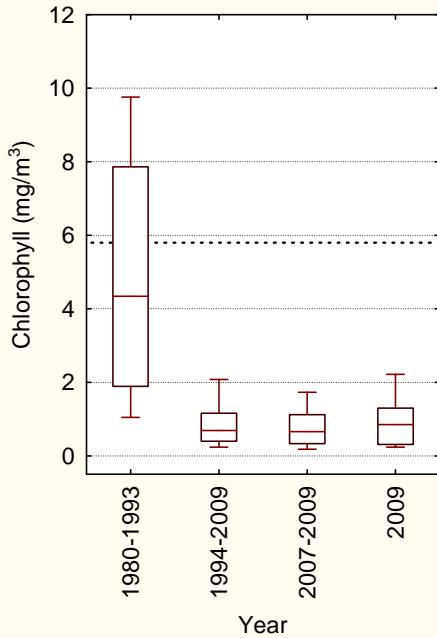
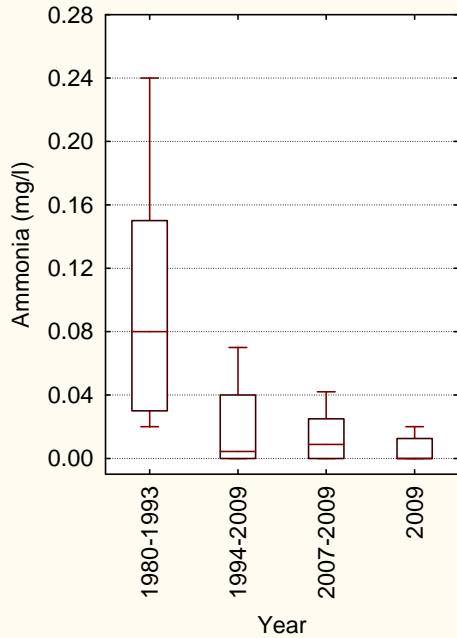
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-4



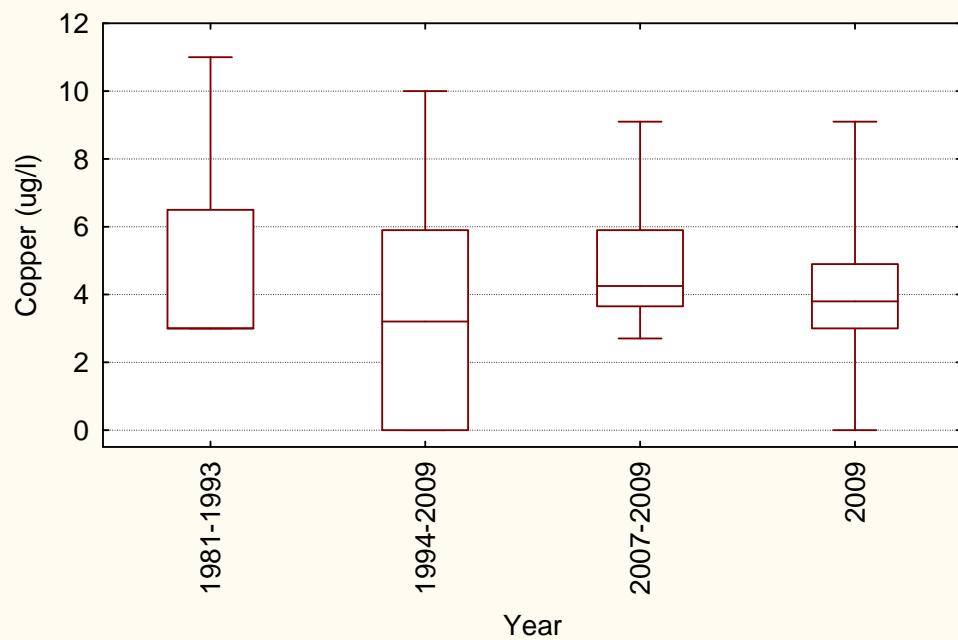
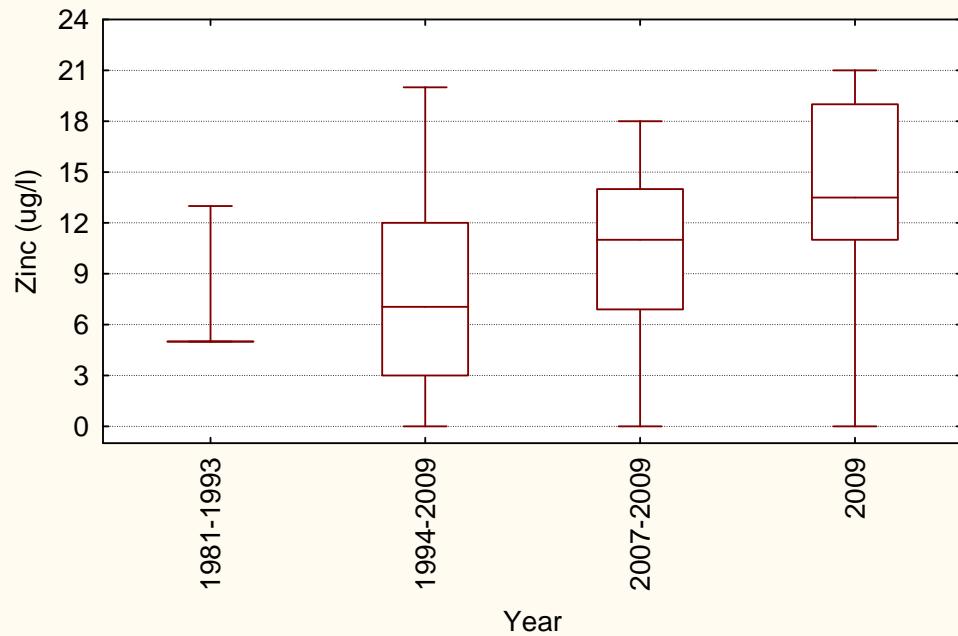
— Median □ 25%-75% □ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-4



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

MMSD Water Quality Program Data
Nearshore survey, Site NS-4



— Median □ 25%-75% ━ 10%-90%

NEAR SHORE - SITE 4
WATER QUALITY DATA - 2009

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	13.1	11.1	1.07	0.33	0.004	0.33	0.006	0.08	0.004	0.016	1.32
Standard Error	0.1	0.8	0.2	0.21	0.03	0.001	0.02	0.002	0.04	0.002	0.003	0.14
Median	8.5	11.3	11.4	0.85	0.32	0.005	0.32	0.000	0.00	0.000	0.020	1.30
Mode	8.5	10.6	11.6	0.31	0.32	0.000	0.32	0.000	0.00	0.000	0.000	1.30
Standard Deviation	0.3	4.1	1.0	1.03	0.11	0.003	0.10	0.010	0.20	0.009	0.014	0.66
Sample Variance	0.1	16.6	1.0	1.06	0.01	0.000	0.01	0.000	0.04	0.000	0.000	0.44
Kurtosis	-0.8	-1.2	-0.6	3.57	1.13	-1.178	1.94	1.608	8.16	1.865	-1.511	0.00
Skewness	-0.3	0.6	-0.2	1.82	1.42	-0.539	1.59	1.508	2.84	1.899	0.056	-0.63
Range	1.0	12.2	3.7	4.32	0.35	0.008	0.36	0.034	0.81	0.026	0.038	2.20
Minimum	7.9	8.1	9.2	0.00	0.21	0.000	0.21	0.000	0.00	0.000	0.000	0.00
Maximum	8.9	20.3	12.9	4.32	0.56	0.008	0.57	0.034	0.81	0.026	0.038	2.20
Count	24	24	24	24	18	24	21	24	24	23	23	24
Confidence Level(95.0%)	0.1	1.7	0.4	0.44	0.05	0.001	0.05	0.004	0.08	0.004	0.006	0.28

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	8.1	10.2	ND	ND	ND	ND	0.8	308	13.6	1	0.2	ND
Standard Error	1.1	0.2	ND	ND	ND	ND	0.1	6	1.0	1	0.1	ND
Median	10.0	10.0	ND	ND	ND	ND	0.7	295	12.0	0	0.0	ND
Mode	10.0	10.0	ND	ND	ND	ND	ND	294	11.0	0	0.0	ND
Standard Deviation	3.0	0.5	ND	ND	ND	ND	0.4	31	5.1	2	0.3	ND
Sample Variance	9.0	0.2	ND	ND	ND	ND	0.2	938	25.8	3	0.1	ND
Kurtosis	-1.7	-0.2	ND	ND	ND	ND	-0.7	5	3.5	3	2.1	ND
Skewness	-0.7	1.2	ND	ND	ND	ND	0.7	2	2.1	2	1.6	ND
Range	7.4	1.3	0.0	0.0	0.0	0.0	1.4	116	17.0	5	0.7	0
Minimum	3.6	9.7	0.0	0.0	0.0	0.0	0.2	283	10.0	0	0.0	0
Maximum	11.0	11.0	0.0	0.0	0.0	0.0	1.6	399	27.0	5	0.7	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	2.5	0.4	ND	ND	ND	ND	0.2	13	2.1	2	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 4
WATER QUALITY DATA - 2009

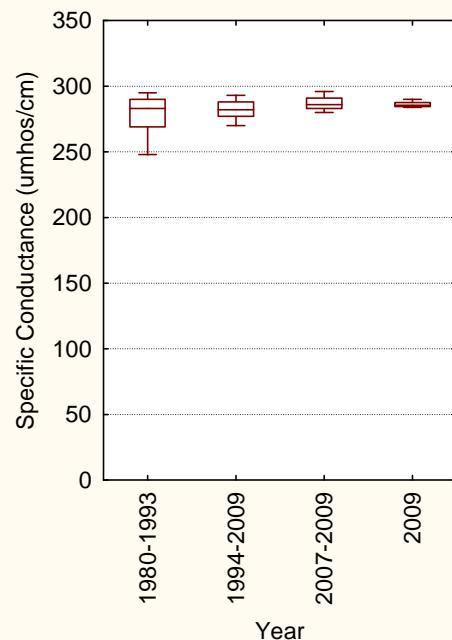
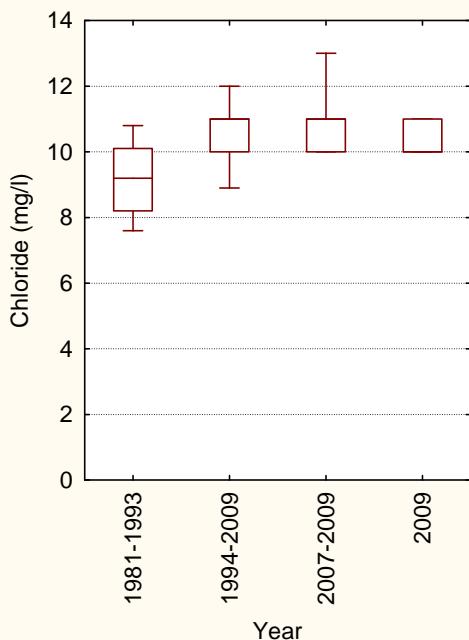
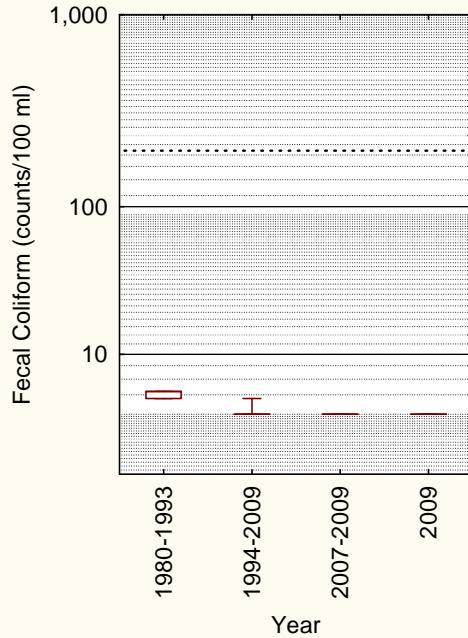
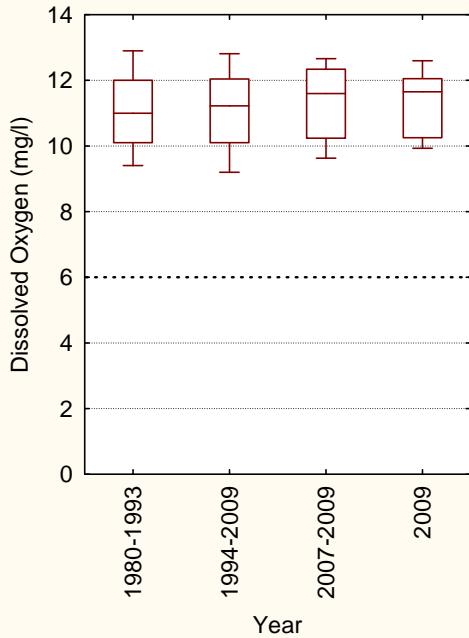
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.13	11.88	0.1	3.5	4.1	1.0	0.9	13.5	0.0	0.2	3.0	ND
Standard Error	0.85	0.40	0.1	0.2	0.9	0.4	0.9	2.4	0.0	0.2	1.4	ND
Median	34.00	11.50	0.0	3.3	3.8	0.9	0.0	13.5	0.0	0.0	2.6	ND
Mode	35.00	11.00	0.0	3.2	3.8	0.0	0.0	11.0	0.0	0.0	0.0	ND
Standard Deviation	2.42	1.13	0.3	0.6	2.6	1.0	2.7	6.7	0.0	0.7	3.4	ND
Sample Variance	5.84	1.27	0.1	0.3	6.7	1.1	7.0	45.4	0.0	0.5	11.3	ND
Kurtosis	1.97	0.29	8.0	2.2	2.2	-2.6	8.0	1.5	ND	8.0	-2.9	ND
Skewness	1.02	1.11	2.8	1.4	0.7	0.1	2.8	-1.1	ND	2.8	0.1	ND
Range	8.00	3.00	0.9	1.8	9.1	2.2	7.5	21.0	0.0	1.9	7.1	0.0
Minimum	31.00	11.00	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	39.00	14.00	0.9	4.6	9.1	2.2	7.5	21.0	0.0	1.9	7.1	0.0
Count	8	8	8	8	8	8	8	8	8	8	6	0
Confidence Level(95.0%)	2.02	0.94	0.3	0.5	2.2	0.9	2.2	5.6	0.0	0.6	3.5	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	135	ND	ND	ND	ND	ND	ND	ND
Standard Error	4	ND	ND	ND	ND	ND	ND	ND
Median	130	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	12	ND	ND	ND	ND	ND	ND	ND
Sample Variance	143	ND	ND	ND	ND	ND	ND	ND
Kurtosis	3	ND	ND	ND	ND	ND	ND	ND
Skewness	1	ND	ND	ND	ND	ND	ND	ND
Range	40	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	160	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	10	ND	ND	ND	ND	ND	ND	ND

ND = No Data

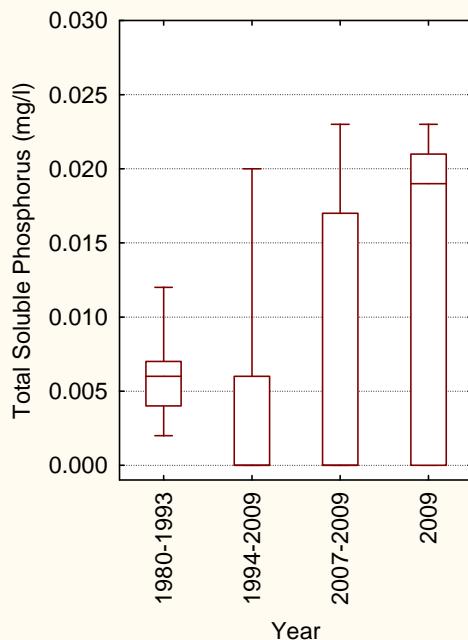
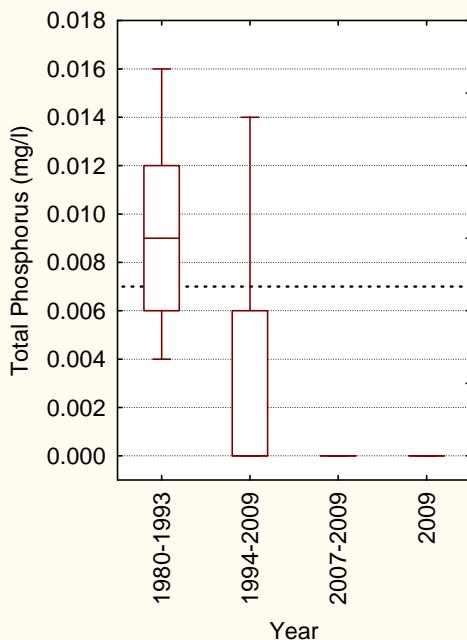
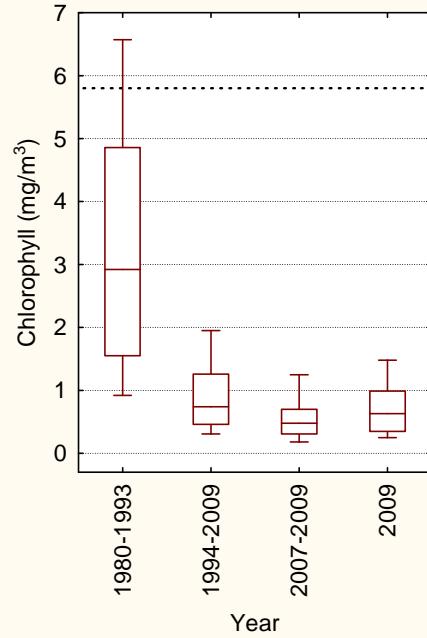
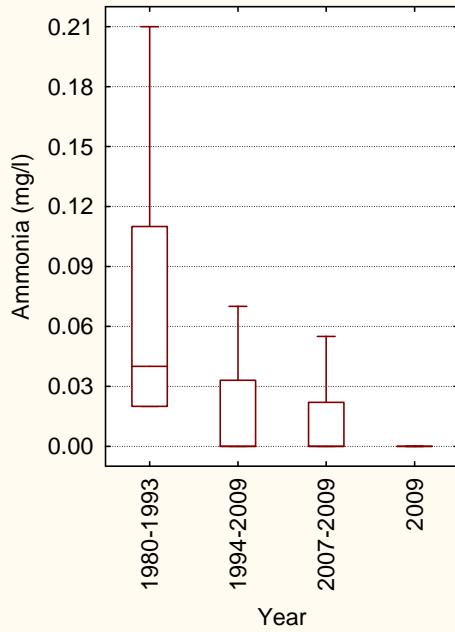
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-5



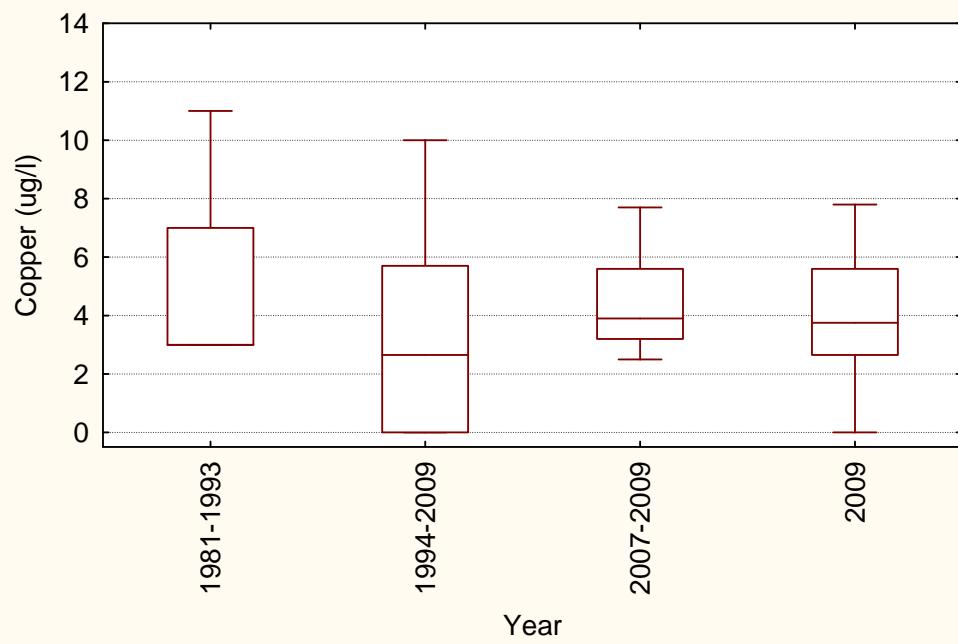
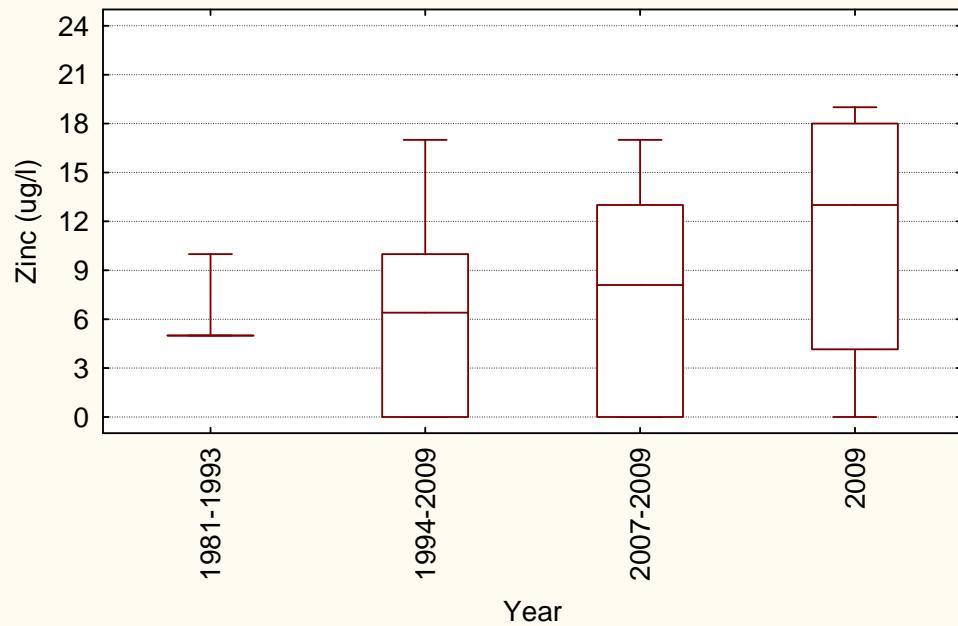
— Median □ 25%-75% □ 10%-90%
----- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-5



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

MMSD Water Quality Program Data
Nearshore survey, Site NS-5



— Median □ 25%-75% ┤ 10%-90%

NEAR SHORE - SITE 5
WATER QUALITY DATA - 2009

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	11.0	11.3	0.72	0.28	0.001	0.28	0.001	0.03	0.001	0.013	1.65
Standard Error	0.1	0.9	0.2	0.11	0.01	0.000	0.01	0.001	0.02	0.001	0.002	0.08
Median	8.2	10.0	11.7	0.63	0.28	0.000	0.28	0.000	0.00	0.000	0.019	1.60
Mode	7.9	6.4	12.6	0.35	0.32	0.000	0.32	0.000	0.00	0.000	0.000	1.60
Standard Deviation	0.3	4.5	1.0	0.52	0.04	0.002	0.03	0.004	0.10	0.005	0.011	0.37
Sample Variance	0.1	20.4	1.1	0.27	0.00	0.000	0.00	0.000	0.01	0.000	0.000	0.14
Kurtosis	-1.5	-0.6	-1.2	2.61	-0.67	-0.985	-0.14	11.720	10.75	23.000	-1.711	-0.70
Skewness	0.2	0.8	-0.4	1.50	-0.59	1.020	-0.81	3.487	3.39	4.796	-0.263	-0.08
Range	0.8	13.8	3.2	2.18	0.11	0.005	0.11	0.017	0.42	0.026	0.031	1.30
Minimum	7.8	5.7	9.4	0.12	0.21	0.000	0.21	0.000	0.00	0.000	0.000	1.00
Maximum	8.6	19.5	12.6	2.30	0.32	0.005	0.32	0.017	0.42	0.026	0.031	2.30
Count	24	24	24	23	18	24	21	24	24	23	23	24
Confidence Level(95.0%)	0.1	1.9	0.4	0.22	0.02	0.001	0.02	0.002	0.04	0.002	0.005	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	10.2	18.4	ND	ND	ND	ND	0.5	286	10.4	0	0.0	ND
Standard Error	1.5	2.3	ND	ND	ND	ND	0.0	1	0.2	0	0.0	ND
Median	10.3	20.8	ND	ND	ND	ND	0.4	286	10.0	0	0.0	ND
Mode	ND	23.0	ND	ND	ND	ND	ND	285	10.0	0	0.0	ND
Standard Deviation	4.3	6.4	ND	ND	ND	ND	0.2	3	0.8	0	0.0	ND
Sample Variance	18.7	41.0	ND	ND	ND	ND	0.0	10	0.6	0	0.0	ND
Kurtosis	2.1	0.4	ND	ND	ND	ND	3.6	3	3.8	ND	ND	ND
Skewness	1.1	-1.1	ND	ND	ND	ND	1.6	2	1.9	ND	ND	ND
Range	13.9	17.9	0.0	0.0	0.0	0.0	0.9	14	3.2	0	0.0	0
Minimum	5.1	6.1	0.0	0.0	0.0	0.0	0.2	282	9.8	0	0.0	0
Maximum	19.0	24.0	0.0	0.0	0.0	0.0	1.2	296	13.0	0	0.0	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	3.6	5.4	ND	ND	ND	ND	0.1	1	0.3	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 5
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.13	11.38	0.0	3.3	4.0	0.2	0.0	11.2	0.0	0.2	4.0	ND
Standard Error	0.40	0.18	0.0	0.2	0.8	0.2	0.0	2.7	0.0	0.2	1.7	ND
Median	33.50	11.00	0.0	3.5	3.8	0.0	0.0	13.0	0.0	0.0	6.2	ND
Mode	34.00	11.00	0.0	ND	ND	0.0	0.0	19.0	0.0	0.0	0.0	ND
Standard Deviation	1.13	0.52	0.0	0.6	2.4	0.6	0.0	7.8	0.0	0.6	3.7	ND
Sample Variance	1.27	0.27	0.0	0.3	5.7	0.4	0.0	60.4	0.0	0.4	13.8	ND
Kurtosis	0.29	-2.24	ND	-0.6	0.3	8.0	ND	-1.2	ND	8.0	-3.2	ND
Skewness	-1.11	0.64	ND	-0.1	-0.1	2.8	ND	-0.7	ND	2.8	-0.5	ND
Range	3.00	1.00	0.0	1.7	7.8	1.8	0.0	19.0	0.0	1.8	7.4	0.0
Minimum	31.00	11.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	34.00	12.00	0.0	4.2	7.8	1.8	0.0	19.0	0.0	1.8	7.4	0.0
Count	8	8	8	8	8	8	8	8	8	8	5	0
Confidence Level(95.0%)	0.94	0.43	0.0	0.5	2.0	0.5	0.0	6.5	0.0	0.5	4.6	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	128	ND	ND	ND	ND	ND	ND	ND
Standard Error	2	ND	ND	ND	ND	ND	ND	ND
Median	130	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	5	ND	ND	ND	ND	ND	ND	ND
Sample Variance	21	ND	ND	ND	ND	ND	ND	ND
Kurtosis	0	ND	ND	ND	ND	ND	ND	ND
Skewness	-1	ND	ND	ND	ND	ND	ND	ND
Range	10	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	130	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	4	ND	ND	ND	ND	ND	ND	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 7
WATER QUALITY DATA - 2009

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	10.6	11.5	0.69	0.28	0.002	0.29	0.001	0.02	0.004	0.014	1.69
Standard Error	0.0	0.9	0.2	0.12	0.01	0.001	0.01	0.001	0.02	0.002	0.003	0.07
Median	8.4	9.7	12.0	0.57	0.28	0.000	0.29	0.000	0.00	0.000	0.019	1.80
Mode	8.5	17.4	12.3	0.58	0.27	0.000	0.27	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	4.5	1.1	0.61	0.04	0.003	0.04	0.002	0.08	0.009	0.014	0.35
Sample Variance	0.0	20.4	1.2	0.37	0.00	0.000	0.00	0.000	0.01	0.000	0.000	0.12
Kurtosis	-0.9	0.1	-0.9	8.79	0.15	-1.315	-0.14	24.000	8.69	1.752	-1.485	-0.38
Skewness	0.0	1.1	-0.7	2.51	0.14	0.718	-0.15	4.899	3.15	1.765	0.298	-0.67
Range	0.7	15.4	3.6	3.01	0.16	0.007	0.16	0.012	0.28	0.029	0.037	1.24
Minimum	8.0	5.1	9.3	0.00	0.21	0.000	0.21	0.000	0.00	0.000	0.000	0.96
Maximum	8.7	20.4	12.8	3.01	0.37	0.007	0.37	0.012	0.28	0.029	0.037	2.20
Count	24	24	24	24	19	24	21	24	23	24	24	24
Confidence Level(95.0%)	0.1	1.9	0.5	0.26	0.02	0.001	0.02	0.001	0.03	0.004	0.006	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	8.5	21.2	ND	ND	ND	ND	0.6	287	10.5	0	0.0	ND
Standard Error	1.2	0.6	ND	ND	ND	ND	0.1	2	0.2	0	0.0	ND
Median	7.9	22.0	ND	ND	ND	ND	0.5	285	10.0	0	0.0	ND
Mode	ND	22.0	ND	ND	ND	ND	ND	286	10.0	0	0.0	ND
Standard Deviation	3.3	1.7	ND	ND	ND	ND	0.3	8	1.0	1	0.1	ND
Sample Variance	10.8	3.0	ND	ND	ND	ND	0.1	72	1.0	1	0.0	ND
Kurtosis	-0.9	6.3	ND	ND	ND	ND	0.3	14	7.0	8	8.0	ND
Skewness	0.6	-2.5	ND	ND	ND	ND	1.1	4	2.6	3	2.8	ND
Range	8.9	5.0	0.0	0.0	0.0	0.0	1.2	41	4.1	2	0.3	0
Minimum	5.1	17.0	0.0	0.0	0.0	0.0	0.2	282	9.9	0	0.0	0
Maximum	14.0	22.0	0.0	0.0	0.0	0.0	1.3	323	14.0	2	0.3	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	2.8	1.5	ND	ND	ND	ND	0.1	4	0.4	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 7
WATER QUALITY DATA - 2009

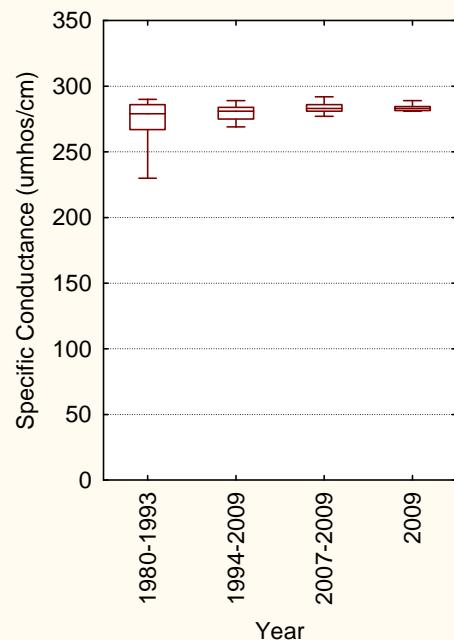
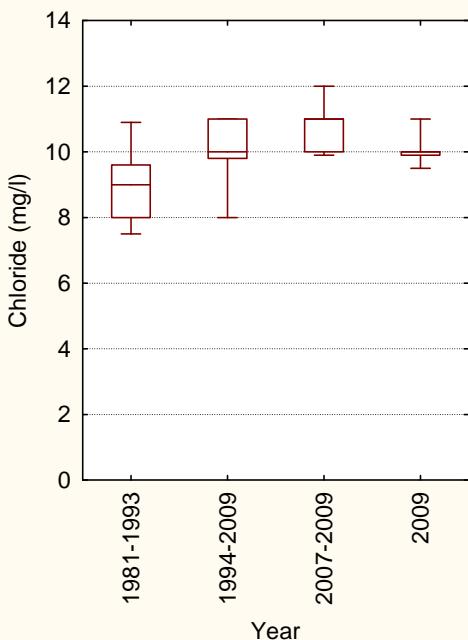
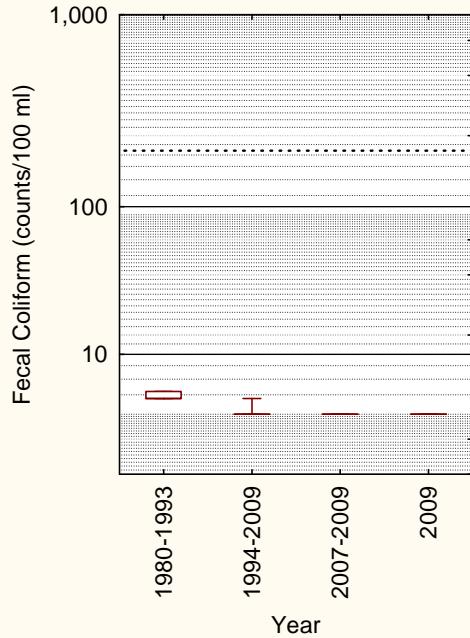
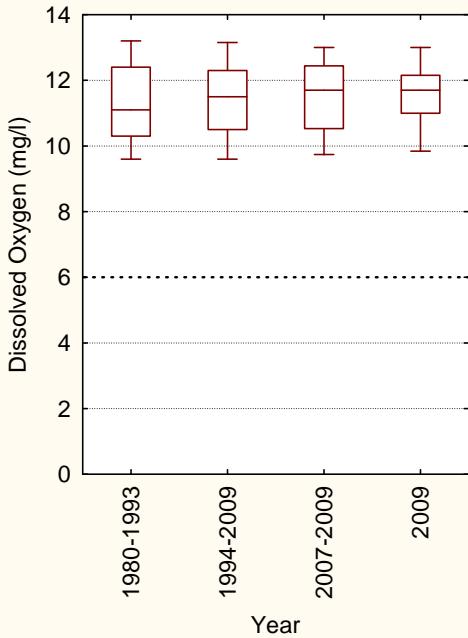
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	32.50	11.25	0.0	3.7	3.3	0.3	0.0	8.9	0.0	0.0	5.0	ND
Standard Error	0.42	0.16	0.0	0.4	0.6	0.3	0.0	2.9	0.0	0.0	2.1	ND
Median	32.50	11.00	0.0	3.4	3.3	0.0	0.0	7.9	0.0	0.0	6.3	ND
Mode	34.00	11.00	0.0	4.0	ND	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.20	0.46	0.0	1.1	1.8	1.0	0.0	8.2	0.0	0.0	4.8	ND
Sample Variance	1.43	0.21	0.0	1.2	3.2	0.9	0.0	68.0	0.0	0.0	22.6	ND
Kurtosis	-1.46	0.00	ND	4.2	0.4	8.0	ND	2.4	ND	ND	-3.1	ND
Skewness	0.00	1.44	ND	1.9	-0.6	2.8	ND	1.3	ND	ND	-0.3	ND
Range	3.00	1.00	0.0	3.5	5.5	2.7	0.0	26.0	0.0	0.0	9.6	0.0
Minimum	31.00	11.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	34.00	12.00	0.0	6.2	5.5	2.7	0.0	26.0	0.0	0.0	9.6	0.0
Count	8	8	8	8	8	8	8	8	8	8	5	0
Confidence Level(95.0%)	1.00	0.39	0.0	0.9	1.5	0.8	0.0	6.9	0.0	0.0	5.9	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	125	ND	ND	ND	ND	ND	ND	ND
Standard Error	2	ND	ND	ND	ND	ND	ND	ND
Median	125	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	5	ND	ND	ND	ND	ND	ND	ND
Sample Variance	29	ND	ND	ND	ND	ND	ND	ND
Kurtosis	-3	ND	ND	ND	ND	ND	ND	ND
Skewness	0	ND	ND	ND	ND	ND	ND	ND
Range	10	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	130	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	4	ND	ND	ND	ND	ND	ND	ND

ND = No Data

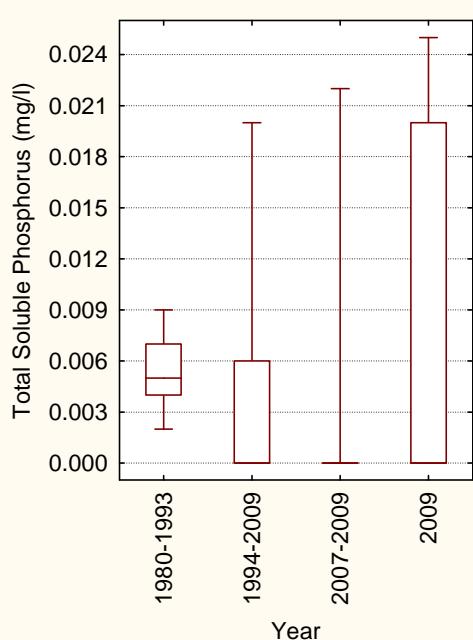
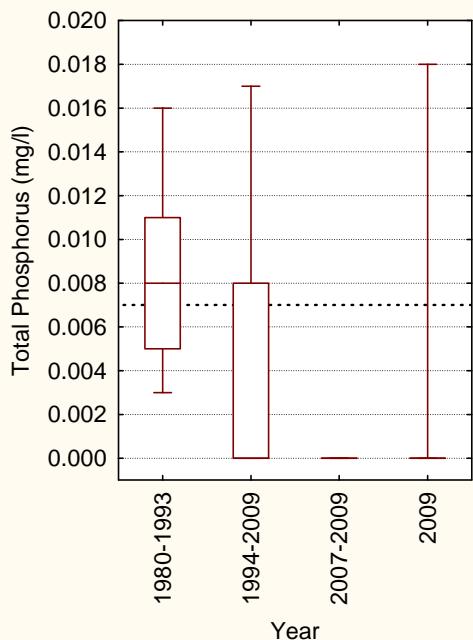
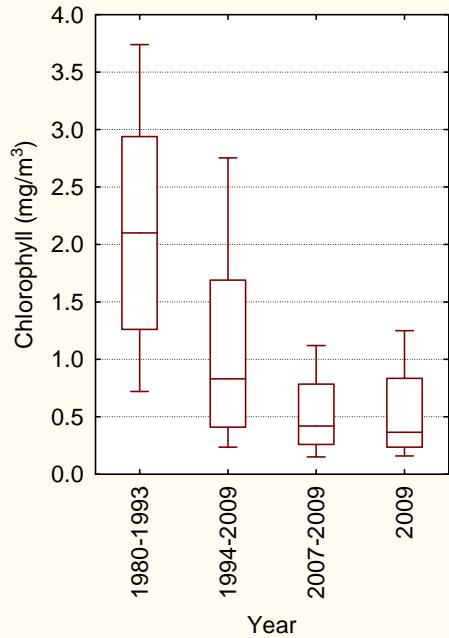
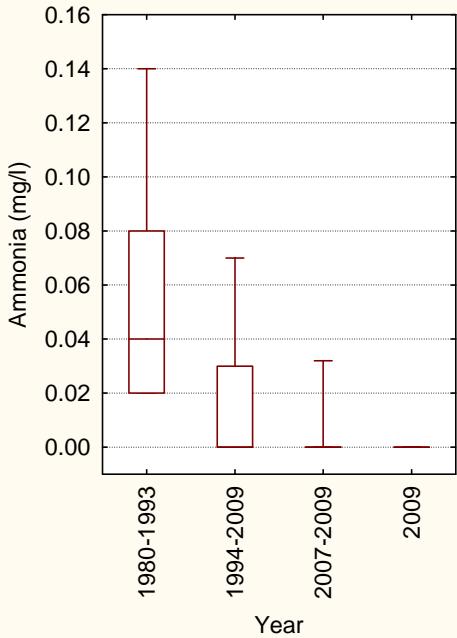
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-8



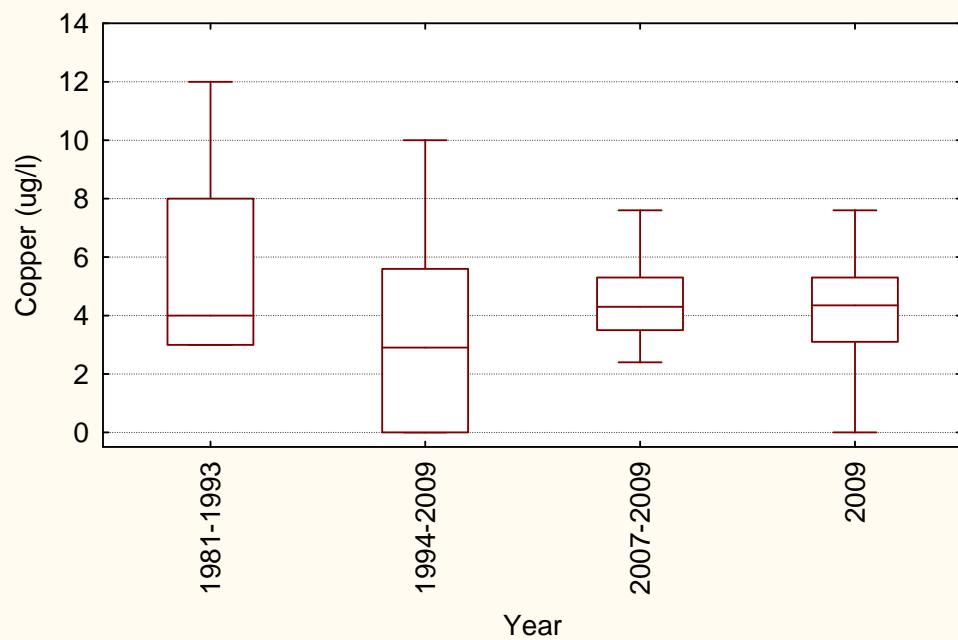
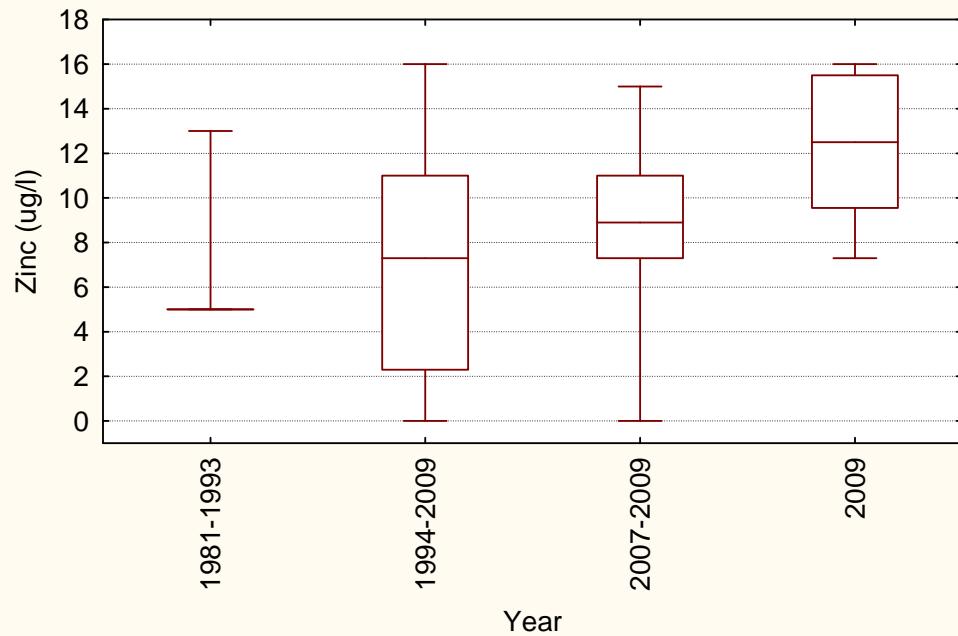
— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

MMSD Water Quality Program Data
Nearshore survey, Site NS-8



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

MMSD Water Quality Program Data
Nearshore survey, Site NS-8



NEAR SHORE - SITE 8
WATER QUALITY DATA - 2009

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	9.1	11.6	0.63	0.28	0.002	0.29	0.002	0.05	0.003	0.011	1.85
Standard Error	0.0	1.0	0.2	0.13	0.01	0.001	0.01	0.002	0.03	0.002	0.002	0.07
Median	8.3	7.7	11.7	0.37	0.29	0.000	0.29	0.000	0.00	0.000	0.000	1.90
Mode	8.3	20.3	13.0	0.29	0.25	0.000	0.29	0.000	0.00	0.000	0.000	1.90
Standard Deviation	0.2	5.0	1.1	0.62	0.03	0.003	0.03	0.009	0.14	0.007	0.012	0.33
Sample Variance	0.0	25.4	1.2	0.39	0.00	0.000	0.00	0.000	0.02	0.000	0.000	0.11
Kurtosis	-0.8	0.4	-0.3	5.49	-1.47	0.973	-1.32	24.000	7.68	1.608	-1.250	-0.70
Skewness	-0.1	1.1	-0.3	2.19	-0.01	1.556	-0.12	4.899	2.85	1.857	0.484	-0.24
Range	0.7	16.9	4.1	2.64	0.09	0.009	0.09	0.043	0.56	0.020	0.034	1.20
Minimum	7.9	3.4	9.4	0.13	0.24	0.000	0.24	0.000	0.00	0.000	0.000	1.20
Maximum	8.6	20.3	13.5	2.77	0.33	0.009	0.33	0.043	0.56	0.020	0.034	2.40
Count	24	24	24	24	21	24	21	24	23	23	23	24
Confidence Level(95.0%)	0.1	2.1	0.5	0.26	0.01	0.001	0.01	0.004	0.06	0.003	0.005	0.14

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	12.7	32.1	ND	ND	ND	ND	0.3	284	10.2	0	0.0	ND
Standard Error	2.4	2.1	ND	ND	ND	ND	0.0	1	0.1	0	0.0	ND
Median	12.3	31.0	ND	ND	ND	ND	0.3	283	10.0	0	0.0	ND
Mode	ND	25.0	ND	ND	ND	ND	ND	281	10.0	0	0.0	ND
Standard Deviation	6.8	6.0	ND	ND	ND	ND	0.2	4	0.6	0	0.0	ND
Sample Variance	46.6	36.1	ND	ND	ND	ND	0.0	15	0.4	0	0.0	ND
Kurtosis	1.5	-0.9	ND	ND	ND	ND	6.8	6	2.5	ND	ND	ND
Skewness	0.8	0.4	ND	ND	ND	ND	2.4	2	1.5	ND	ND	ND
Range	22.9	16.0	0.0	0.0	0.0	0.0	0.8	16	2.7	0	0.0	0
Minimum	3.1	25.0	0.0	0.0	0.0	0.0	0.1	281	9.3	0	0.0	0
Maximum	26.0	41.0	0.0	0.0	0.0	0.0	0.9	297	12.0	0	0.0	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	5.7	5.0	ND	ND	ND	ND	0.1	2	0.3	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 8
WATER QUALITY DATA - 2009

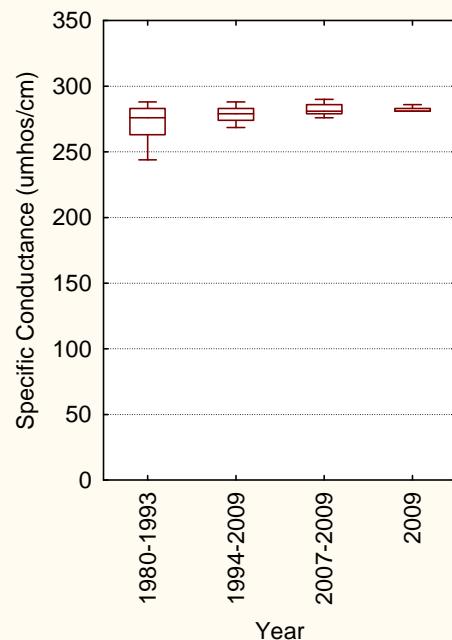
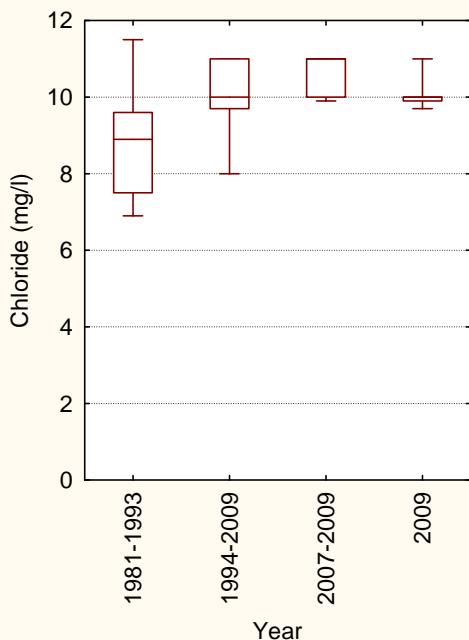
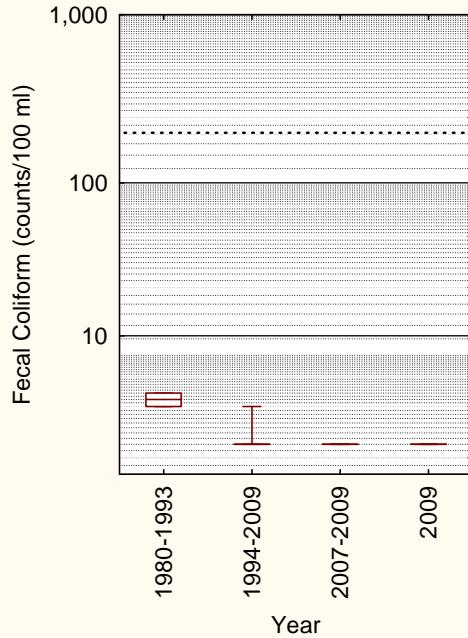
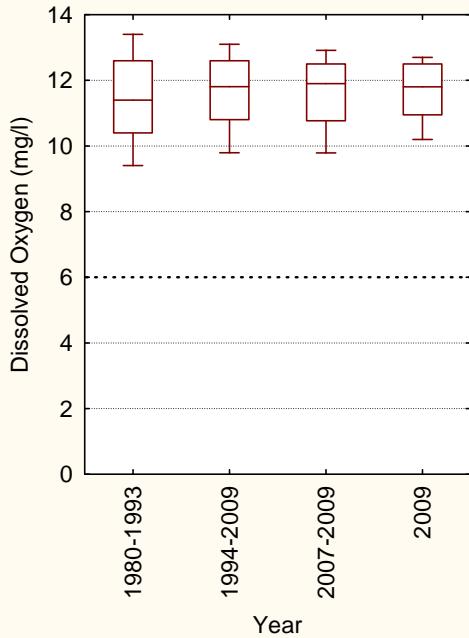
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	32.50	11.13	0.1	3.5	4.1	0.0	0.0	12.3	0.0	0.4	4.5	ND
Standard Error	0.33	0.13	0.1	0.2	0.8	0.0	0.0	1.2	0.0	0.4	1.4	ND
Median	32.50	11.00	0.0	3.3	4.4	0.0	0.0	12.5	0.0	0.0	5.3	ND
Mode	33.00	11.00	0.0	4.3	5.3	0.0	0.0	15.0	0.0	0.0	0.0	ND
Standard Deviation	0.93	0.35	0.2	0.6	2.2	0.0	0.0	3.5	0.0	1.2	4.0	ND
Sample Variance	0.86	0.13	0.0	0.4	5.0	0.0	0.0	12.5	0.0	1.4	16.1	ND
Kurtosis	0.00	8.00	8.0	-1.8	1.1	ND	ND	-2.2	ND	8.0	-2.1	ND
Skewness	0.00	2.83	2.8	0.4	-0.5	ND	ND	-0.2	ND	2.8	-0.2	ND
Range	3.00	1.00	0.5	1.5	7.6	0.0	0.0	8.7	0.0	3.4	9.1	0.0
Minimum	31.00	11.00	0.0	2.8	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0
Maximum	34.00	12.00	0.5	4.3	7.6	0.0	0.0	16.0	0.0	3.4	9.1	0.0
Count	8	8	8	8	8	8	8	8	8	8	8	0
Confidence Level(95.0%)	0.77	0.30	0.2	0.5	1.9	0.0	0.0	3.0	0.0	1.0	3.4	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	126	ND	ND	ND	ND	ND	ND	ND
Standard Error	2	ND	ND	ND	ND	ND	ND	ND
Median	130	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	5	ND	ND	ND	ND	ND	ND	ND
Sample Variance	27	ND	ND	ND	ND	ND	ND	ND
Kurtosis	-2	ND	ND	ND	ND	ND	ND	ND
Skewness	-1	ND	ND	ND	ND	ND	ND	ND
Range	10	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	130	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	4	ND	ND	ND	ND	ND	ND	ND

ND = No Data

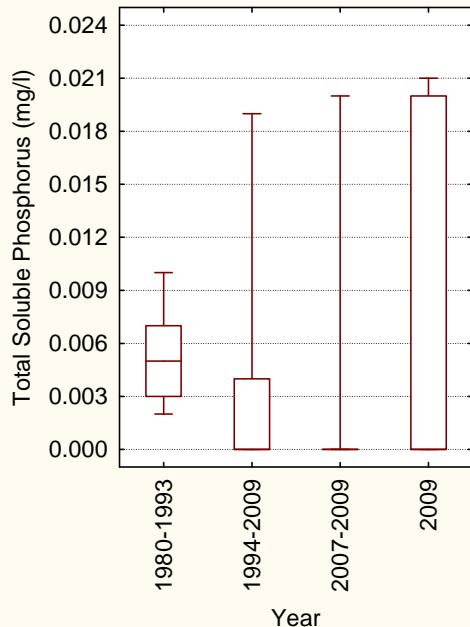
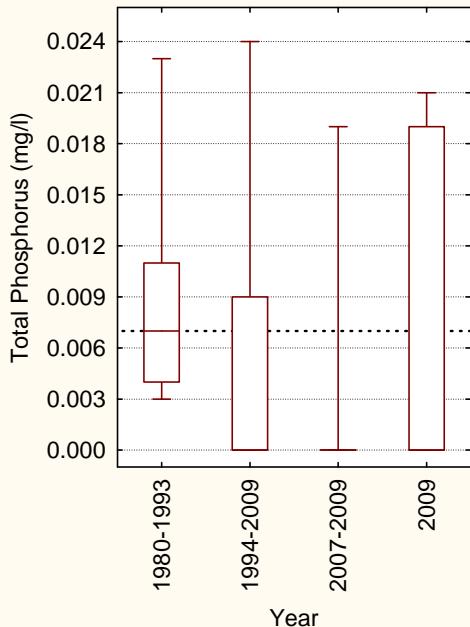
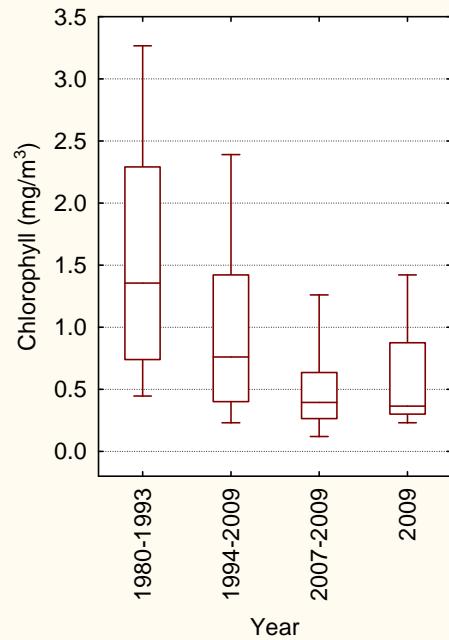
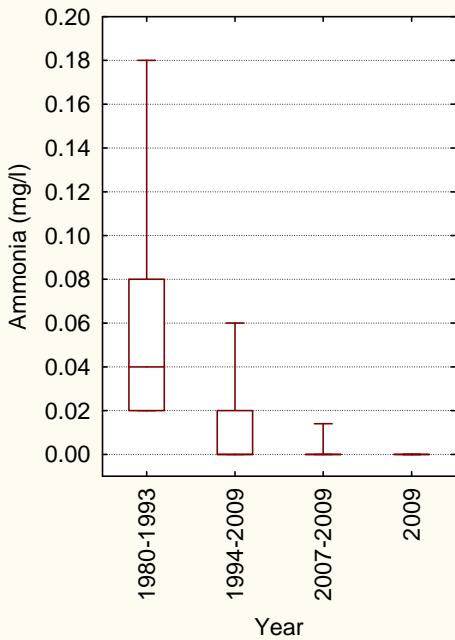
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-10



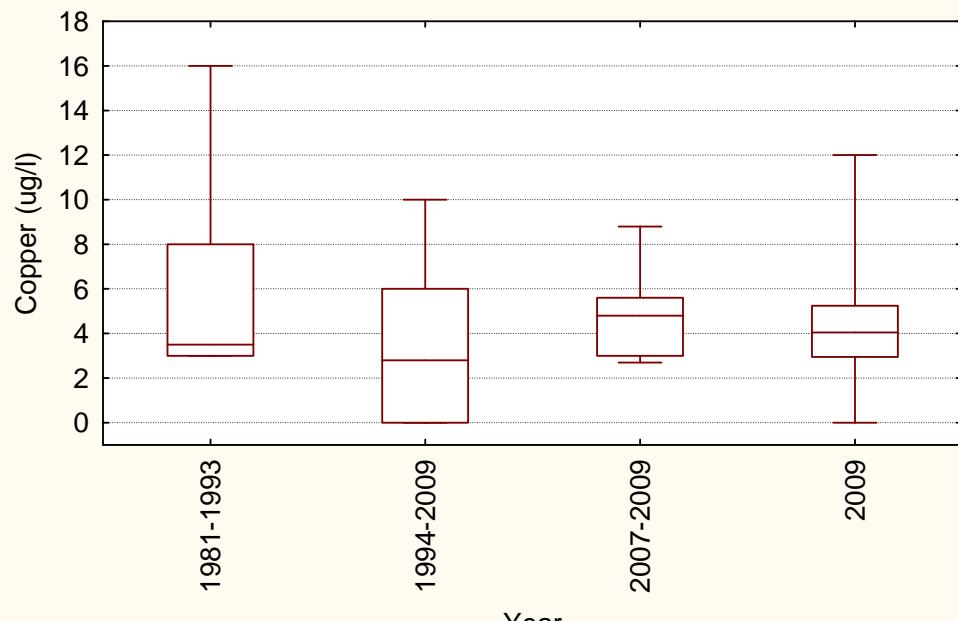
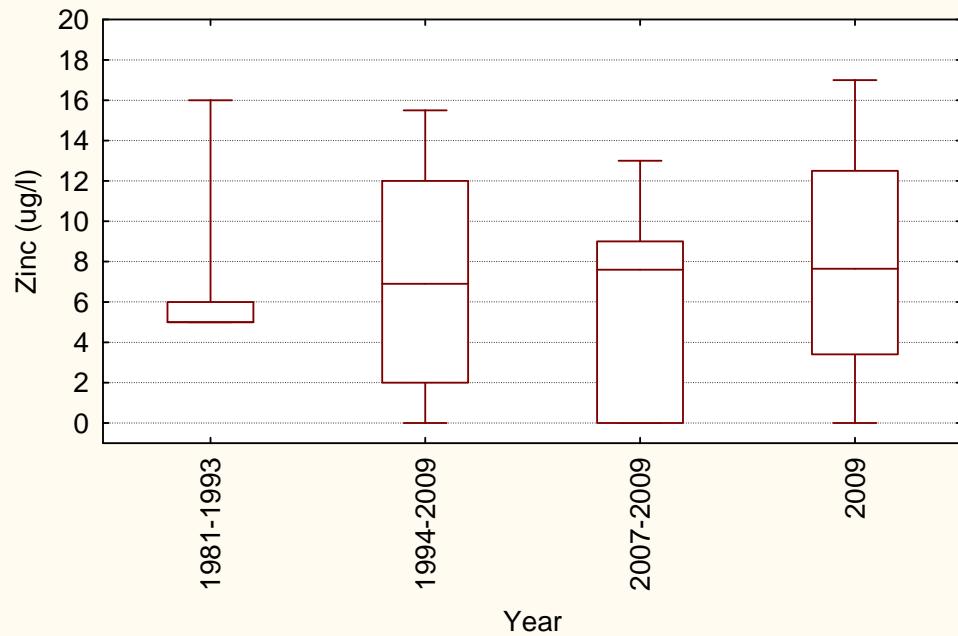
— Median □ 25%-75% ┤ 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	7.3	11.7	0.62	0.30	0.000	0.30	0.000	0.08	0.008	0.006	1.96
Standard Error	0.0	1.1	0.2	0.11	0.01	0.000	0.01	0.000	0.05	0.002	0.002	0.07
Median	8.3	4.6	11.8	0.37	0.30	0.000	0.30	0.000	0.00	0.000	0.000	2.00
Mode	8.3	ND	11.4	0.22	0.30	0.000	0.30	0.000	0.00	0.000	0.000	2.00
Standard Deviation	0.2	5.3	1.1	0.53	0.03	0.002	0.03	0.000	0.23	0.010	0.010	0.32
Sample Variance	0.1	28.0	1.1	0.28	0.00	0.000	0.00	0.000	0.05	0.000	0.000	0.11
Kurtosis	-1.1	0.7	-0.4	1.73	-0.18	11.484	-0.18	ND	7.30	-1.660	-1.093	-0.96
Skewness	-0.2	1.4	-0.3	1.62	-0.90	3.462	-0.90	ND	2.85	0.618	0.992	-0.38
Range	0.8	17.2	4.2	1.87	0.10	0.007	0.10	0.000	0.84	0.025	0.023	1.00
Minimum	7.8	2.6	9.5	0.22	0.23	0.000	0.23	0.000	0.00	0.000	0.000	1.40
Maximum	8.6	19.8	13.7	2.09	0.33	0.007	0.33	0.000	0.84	0.025	0.023	2.40
Count	24	24	24	24	21	24	21	24	23	24	24	24
Confidence Level(95.0%)	0.1	2.2	0.4	0.22	0.01	0.001	0.01	0.000	0.10	0.004	0.004	0.14

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	14.2	31.1	ND	ND	ND	ND	0.7	282	10.1	0	0.0	ND
Standard Error	1.3	2.4	ND	ND	ND	ND	0.4	1	0.1	0	0.0	ND
Median	14.8	31.0	ND	ND	ND	ND	0.3	281	10.0	0	0.0	ND
Mode	ND	35.0	ND	ND	ND	ND	0.3	281	10.0	0	0.0	ND
Standard Deviation	3.7	6.9	ND	ND	ND	ND	2.0	3	0.5	0	0.0	ND
Sample Variance	13.5	47.5	ND	ND	ND	ND	4.2	7	0.2	0	0.0	ND
Kurtosis	-1.2	-2.0	ND	ND	ND	ND	23.9	1	0.1	ND	ND	ND
Skewness	-0.4	0.1	ND	ND	ND	ND	4.9	1	1.2	ND	ND	ND
Range	10.1	17.2	0.0	0.0	0.0	0.0	10.2	10	1.4	0	0.0	0
Minimum	8.7	22.8	0.0	0.0	0.0	0.0	0.1	279	9.6	0	0.0	0
Maximum	18.8	40.0	0.0	0.0	0.0	0.0	10.3	289	11.0	0	0.0	0
Count	8	8	0	0	0	0	24	24	24	8	8	0
Confidence Level(95.0%)	3.1	5.8	ND	ND	ND	ND	0.9	1	0.2	0	0.0	ND

ND = No Data

Provisional MMSD Water Quality data

NEAR SHORE - SITE 10
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	32.63	11.00	0.0	3.3	4.6	0.2	0.0	8.0	0.0	0.3	0.0	ND
Standard Error	0.42	0.19	0.0	0.2	1.2	0.2	0.0	2.2	0.0	0.3	0.0	ND
Median	32.50	11.00	0.0	3.3	4.1	0.0	0.0	7.7	0.0	0.0	0.0	ND
Mode	33.00	11.00	0.0	3.4	ND	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.19	0.53	0.0	0.5	3.5	0.6	0.0	6.1	0.0	0.8	0.0	ND
Sample Variance	1.41	0.29	0.0	0.3	12.0	0.4	0.0	37.7	0.0	0.6	0.0	ND
Kurtosis	1.87	3.50	ND	2.8	3.4	8.0	ND	-0.8	ND	8.0	ND	ND
Skewness	0.97	0.00	ND	1.3	1.4	2.8	ND	0.0	ND	2.8	ND	ND
Range	4.00	2.00	0.0	1.7	12.0	1.7	0.0	17.0	0.0	2.2	0.0	0.0
Minimum	31.00	10.00	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	35.00	12.00	0.0	4.4	12.0	1.7	0.0	17.0	0.0	2.2	0.0	0.0
Count	8	8	8	8	8	8	8	8	8	8	2	0
Confidence Level(95.0%)	0.99	0.45	0.0	0.4	2.9	0.5	0.0	5.1	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	128	ND	ND	ND	ND	ND	ND	ND
Standard Error	3	ND	ND	ND	ND	ND	ND	ND
Median	130	ND	ND	ND	ND	ND	ND	ND
Mode	130	ND	ND	ND	ND	ND	ND	ND
Standard Deviation	7	ND	ND	ND	ND	ND	ND	ND
Sample Variance	50	ND	ND	ND	ND	ND	ND	ND
Kurtosis	0	ND	ND	ND	ND	ND	ND	ND
Skewness	0	ND	ND	ND	ND	ND	ND	ND
Range	20	0	0.0	0.0	0.0	0.0	0.0	0.0
Minimum	120	0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	140	0	0.0	0.0	0.0	0.0	0.0	0.0
Count	8	0	0	0	0	0	0	0
Confidence Level(95.0%)	6	ND	ND	ND	ND	ND	ND	ND

ND = No Data

Provisional MMSD Water Quality data

NEAR SHORE - SITE 11
WATER QUALITY DATA - 2009

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	12.1	11.0	0.86	0.38	0.007	0.38	0.012	0.11	0.007	0.013	1.67
Standard Error	0.0	0.5	0.2	0.10	0.02	0.001	0.02	0.002	0.02	0.002	0.002	0.07
Median	8.2	10.8	11.4	0.69	0.34	0.006	0.34	0.000	0.00	0.000	0.019	1.70
Mode	8.2	10.8	11.8	0.36	0.24	0.000	0.26	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.3	4.2	1.4	0.63	0.14	0.010	0.15	0.019	0.17	0.012	0.013	0.60
Sample Variance	0.1	17.6	2.0	0.40	0.02	0.000	0.02	0.000	0.03	0.000	0.000	0.35
Kurtosis	-1.1	-0.4	0.1	1.90	1.81	14.607	1.96	3.619	0.62	4.628	-1.288	-0.97
Skewness	0.2	0.3	-0.4	1.45	1.31	3.571	1.33	1.940	1.31	1.986	0.179	0.10
Range	0.9	16.6	6.3	2.81	0.67	0.058	0.68	0.081	0.63	0.058	0.041	2.20
Minimum	7.9	3.4	7.6	0.00	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.60
Maximum	8.8	20.0	13.9	2.81	0.87	0.058	0.88	0.081	0.63	0.058	0.041	2.80
Count	63	63	63	37	60	63	60	63	62	62	62	63
Confidence Level(95.0%)	0.1	1.1	0.4	0.21	0.04	0.003	0.04	0.005	0.04	0.003	0.003	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	6.5	12.7	183.1	182.1	0.5	1.0	1.1	307	13.5	1	0.1	ND
Standard Error	0.8	0.4	6.9	6.8	0.2	0.3	0.1	4	0.6	1	0.1	ND
Median	6.5	13.0	180.0	180.0	0.0	1.2	0.6	294	12.0	0	0.0	ND
Mode	6.5	13.0	160.0	150.0	0.0	0.0	ND	287	11.0	0	0.0	ND
Standard Deviation	3.6	1.8	25.0	24.6	0.7	0.9	0.9	35	4.6	3	0.3	ND
Sample Variance	12.7	3.2	623.1	606.7	0.5	0.8	0.9	1243	21.6	10	0.1	ND
Kurtosis	-0.2	10.9	-0.7	-0.7	-0.4	-1.6	2.6	10	2.9	3	2.8	ND
Skewness	0.6	-3.0	0.3	0.3	0.9	0.1	1.8	3	1.9	2	2.1	ND
Range	12.5	8.1	80.0	78.8	2.0	2.4	3.8	200	18.7	10	1.0	0
Minimum	1.5	6.0	150.0	150.0	0.0	0.0	0.3	282	9.3	0	0.0	0
Maximum	14.0	14.1	230.0	228.8	2.0	2.4	4.1	482	28.0	10	1.0	0
Count	21	20	13	13	12	13	63	63	63	21	21	0
Confidence Level(95.0%)	1.6	0.8	15.1	14.9	0.4	0.5	0.2	9	1.2	1	0.2	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 11
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	34.24	11.71	0.0	3.5	3.7	0.4	0.0	10.4	0.0	0.2	2.6	ND
Standard Error	0.36	0.21	0.0	0.1	0.6	0.2	0.0	1.8	0.0	0.1	0.9	ND
Median	34.00	11.00	0.0	3.3	4.0	0.0	0.0	8.7	0.0	0.0	0.0	ND
Mode	34.00	11.00	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.67	0.96	0.0	0.7	2.7	0.8	0.0	8.2	0.0	0.7	3.5	ND
Sample Variance	2.79	0.91	0.0	0.5	7.2	0.6	0.0	66.7	0.0	0.4	12.1	ND
Kurtosis	0.36	1.36	ND	0.0	3.8	-0.2	ND	-0.2	ND	9.0	-1.6	ND
Skewness	0.29	1.40	ND	0.7	1.1	1.3	ND	0.5	ND	3.1	0.7	ND
Range	7.00	3.00	0.0	2.5	12.0	2.0	0.0	27.0	0.0	2.5	8.2	0.0
Minimum	31.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	14.00	0.0	5.1	12.0	2.0	0.0	27.0	0.0	2.5	8.2	0.0
Count	21	21	21	21	21	21	21	21	21	21	16	0
Confidence Level(95.0%)	0.76	0.44	0.0	0.3	1.2	0.4	0.0	3.7	0.0	0.3	1.9	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	102	0.2	2.7	26.5	24.3	2.1	ND
Standard Error	2	1	0.2	0.1	0.2	0.2	0.0	ND
Median	130	100	0.0	2.7	27.0	24.0	2.1	ND
Mode	130	100	0.0	2.9	27.0	24.0	2.0	ND
Standard Deviation	8	5	0.8	0.4	1.6	1.5	0.2	ND
Sample Variance	65	30	0.7	0.1	2.4	2.3	0.0	ND
Kurtosis	0	4	12.0	-0.6	0.7	0.8	0.0	ND
Skewness	0	2	3.5	0.3	-0.4	-0.3	0.5	ND
Range	30	23	2.8	1.2	7.0	7.0	0.9	0.0
Minimum	120	97	0.0	2.2	23.0	21.0	1.8	0.0
Maximum	150	120	2.8	3.4	30.0	28.0	2.7	0.0
Count	21	39	12	12	39	39	39	0
Confidence Level(95.0%)	4	2	0.5	0.2	0.5	0.5	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 12
WATER QUALITY DATA - 2009

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	12.9	10.1	6.53	0.66	0.014	0.70	0.055	0.44	0.042	0.023	2.48
Standard Error	0.0	0.4	0.1	0.50	0.03	0.001	0.03	0.006	0.04	0.004	0.001	0.12
Median	8.1	12.1	10.3	5.57	0.63	0.012	0.65	0.040	0.43	0.040	0.025	2.20
Mode	8.0	12.1	11.2	2.34	1.10	0.015	1.10	0.000	0.00	0.000	0.000	1.90
Standard Deviation	0.2	3.8	1.3	4.54	0.24	0.009	0.30	0.056	0.32	0.032	0.013	1.04
Sample Variance	0.1	14.6	1.7	20.65	0.06	0.000	0.09	0.003	0.10	0.001	0.000	1.09
Kurtosis	-0.5	-0.3	0.0	3.28	-0.66	2.655	9.14	2.304	-0.36	3.652	1.365	-0.19
Skewness	0.3	0.2	-0.5	1.32	-0.01	1.444	2.00	1.470	0.26	1.532	-0.070	0.56
Range	1.0	16.4	6.2	25.69	1.10	0.043	2.03	0.270	1.20	0.170	0.072	4.85
Minimum	7.7	4.3	6.1	1.01	0.00	0.000	0.27	0.000	0.00	0.000	0.000	0.75
Maximum	8.7	20.6	12.3	26.70	1.10	0.043	2.30	0.270	1.20	0.170	0.072	5.60
Count	81	81	81	81	77	80	77	81	81	81	81	81
Confidence Level(95.0%)	0.1	0.8	0.3	1.00	0.06	0.002	0.07	0.012	0.07	0.007	0.003	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	1.7	5.2	243.2	234.5	1.7	8.7	7.7	435	35.9	523	1.4	1758
Standard Error	0.2	0.7	19.7	19.2	0.3	2.3	1.7	12	2.3	423	0.2	1296
Median	1.7	4.7	230.0	226.4	1.5	4.6	3.5	423	31.5	28	1.4	760
Mode	1.4	7.0	180.0	ND	0.0	ND	3.2	485	12.0	3	0.5	ND
Standard Deviation	0.8	3.3	86.0	83.8	1.4	10.0	15.6	104	20.7	2157	0.9	2591
Sample Variance	0.6	11.1	7399.2	7027.8	2.0	100.3	244.0	10773	428.7	4650656	0.9	6715092
Kurtosis	0.5	1.1	0.7	0.9	-0.2	5.6	32.9	0	7.1	25	1.2	2
Skewness	0.3	1.1	-0.5	-0.5	0.6	2.3	5.3	1	2.0	5	0.9	2
Range	3.3	13.1	339.0	331.8	4.8	39.8	117.7	411	128.0	11000	4.0	5490
Minimum	0.2	0.4	31.0	23.8	0.0	1.2	0.3	286	12.0	0	0.0	10
Maximum	3.5	13.5	370.0	355.6	4.8	41.0	118.0	697	140.0	11000	4.0	5500
Count	27	24	19	19	19	19	81	81	80	26	26	4
Confidence Level(95.0%)	0.3	1.4	41.5	40.4	0.7	4.8	3.5	23	4.6	871	0.4	4123

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 12
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	40.11	15.63	0.0	4.2	4.9	1.8	0.3	13.8	0.0	0.2	2.9	0.0
Standard Error	1.11	0.62	0.0	0.2	0.8	0.2	0.2	1.3	0.0	0.1	0.9	0.0
Median	40.00	16.00	0.0	4.1	4.4	1.9	0.0	12.0	0.0	0.0	0.0	0.0
Mode	40.00	16.00	0.0	4.1	4.4	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Standard Deviation	5.76	3.21	0.0	0.9	3.9	1.1	0.9	6.6	0.0	0.6	3.9	0.0
Sample Variance	33.18	10.32	0.0	0.9	15.4	1.3	0.9	43.1	0.0	0.3	15.5	0.0
Kurtosis	0.60	1.56	ND	3.1	14.5	1.0	9.3	3.6	ND	10.7	-1.5	ND
Skewness	1.10	1.17	ND	1.5	3.2	0.2	3.1	1.3	ND	3.5	0.7	ND
Range	22.00	14.00	0.0	4.3	22.0	4.5	3.9	35.0	0.0	2.2	9.4	0.0
Minimum	33.00	11.00	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	55.00	25.00	0.0	7.2	22.0	4.5	3.9	35.0	0.0	2.2	9.4	0.0
Count	27	27	27	27	27	27	27	27	27	27	19	4
Confidence Level(95.0%)	2.28	1.27	0.0	0.4	1.6	0.4	0.4	2.6	0.0	0.2	1.9	0.0

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	166	129	0.5	4.6	34.4	30.7	3.6	ND
Standard Error	5	3	0.3	0.3	0.9	0.8	0.2	ND
Median	160	130	0.0	4.1	32.0	29.0	3.2	ND
Mode	170	130	0.0	3.7	31.0	28.0	2.8	ND
Standard Deviation	28	24	1.2	1.4	7.0	5.7	1.6	ND
Sample Variance	764	600	1.4	2.0	48.5	32.1	2.5	ND
Kurtosis	1	3	3.1	2.3	4.5	4.6	3.0	ND
Skewness	1	1	2.1	1.5	2.0	1.9	1.9	ND
Range	110	141	3.6	5.4	33.0	30.0	6.8	0.0
Minimum	130	69	0.0	3.1	26.0	21.0	2.0	0.0
Maximum	240	210	3.6	8.5	59.0	51.0	8.8	0.0
Count	27	56	18	18	57	57	57	0
Confidence Level(95.0%)	11	7	0.6	0.7	1.8	1.5	0.4	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 13
WATER QUALITY DATA - 2009

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	11.9	10.4	4.00	0.54	0.009	0.54	0.032	0.32	0.022	0.018	2.14
Standard Error	0.0	0.5	0.2	0.43	0.03	0.001	0.03	0.004	0.04	0.003	0.002	0.11
Median	8.1	11.1	10.5	2.56	0.49	0.008	0.50	0.023	0.31	0.024	0.020	2.00
Mode	8.1	10.8	10.1	2.56	0.35	0.000	0.40	0.000	0.00	0.000	0.000	1.80
Standard Deviation	0.2	4.0	1.3	3.61	0.21	0.007	0.22	0.033	0.32	0.021	0.013	0.94
Sample Variance	0.0	16.1	1.7	13.03	0.05	0.000	0.05	0.001	0.10	0.000	0.000	0.88
Kurtosis	-0.6	0.1	-0.1	0.89	0.22	6.391	0.06	1.854	0.42	-0.368	-1.066	0.17
Skewness	0.2	0.4	-0.5	1.37	0.87	1.931	0.82	1.337	0.90	0.608	-0.199	0.62
Range	0.9	17.6	5.6	13.78	0.99	0.037	0.99	0.140	1.30	0.076	0.039	4.03
Minimum	7.7	2.9	7.2	0.22	0.21	0.000	0.21	0.000	0.00	0.000	0.000	0.57
Maximum	8.6	20.5	12.8	14.00	1.20	0.037	1.20	0.140	1.30	0.076	0.039	4.60
Count	69	69	69	69	66	69	66	69	68	68	68	69
Confidence Level(95.0%)	0.1	1.0	0.3	0.87	0.05	0.002	0.05	0.008	0.08	0.005	0.003	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	2.5	7.8	226.7	224.0	0.8	2.7	2.7	385	25.8	73	1.2	49
Standard Error	0.3	1.1	19.8	19.7	0.2	0.6	0.3	12	2.0	39	0.2	32
Median	2.4	6.5	210.0	202.0	1.0	2.6	2.1	352	20.0	19	1.3	10
Mode	2.4	9.0	210.0	ND	0.0	0.0	1.2	312	12.0	0	0.0	3
Standard Deviation	1.3	4.9	76.5	76.2	0.9	2.1	2.1	103	16.3	188	0.7	124
Sample Variance	1.8	24.4	5852.4	5808.2	0.8	4.5	4.5	10616	265.5	35237	0.6	15299
Kurtosis	-0.6	-1.1	0.8	0.8	-0.4	1.5	3.3	2	1.3	19	0.2	14
Skewness	0.7	0.6	0.9	0.9	0.7	0.9	1.7	2	1.5	4	0.1	4
Range	4.4	14.0	300.0	298.6	2.8	8.0	10.5	428	60.0	900	3.0	490
Minimum	0.8	2.0	100.0	98.0	0.0	0.0	0.4	281	11.0	0	0.0	0
Maximum	5.2	16.0	400.0	396.6	2.8	8.0	10.9	709	71.0	900	3.0	490
Count	23	20	15	15	15	15	69	69	69	23	23	15
Confidence Level(95.0%)	0.6	2.3	42.4	42.2	0.5	1.2	0.5	25	3.9	81	0.3	68

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 13
WATER QUALITY DATA - 2009

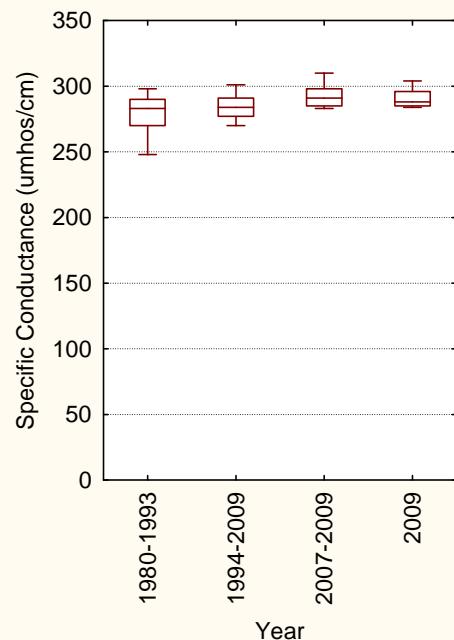
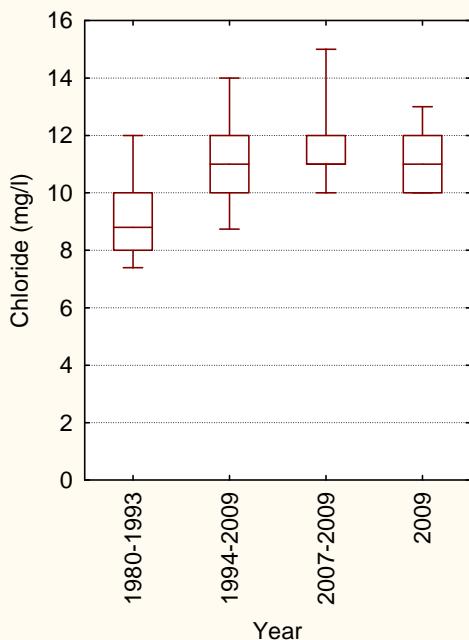
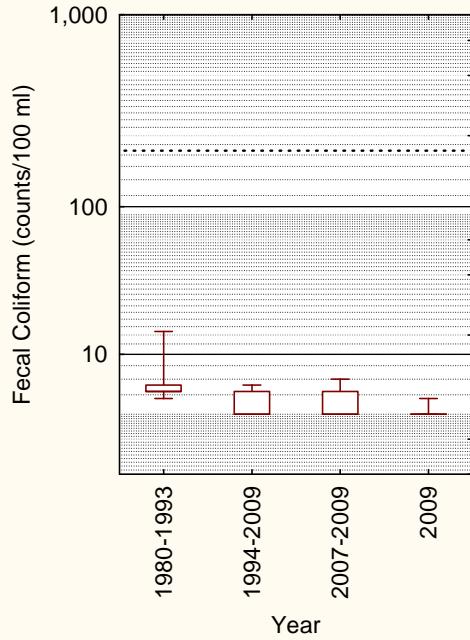
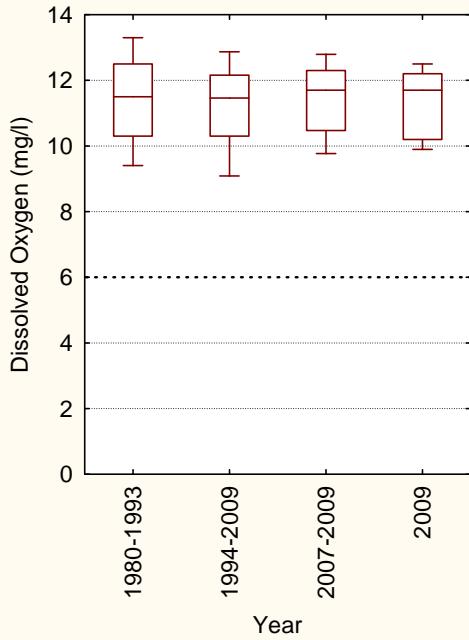
VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	38.00	14.39	0.0	3.6	4.4	1.4	0.0	12.9	0.0	0.2	3.0	ND
Standard Error	1.28	0.72	0.0	0.1	0.7	0.2	0.0	1.9	0.0	0.1	1.0	ND
Median	36.00	13.00	0.0	3.4	3.8	1.8	0.0	12.0	0.0	0.0	0.0	ND
Mode	35.00	12.00	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	6.12	3.45	0.0	0.6	3.1	1.1	0.0	9.0	0.0	0.6	4.4	ND
Sample Variance	37.45	11.89	0.0	0.4	9.9	1.2	0.0	81.2	0.0	0.4	19.0	ND
Kurtosis	3.01	3.89	ND	0.5	3.0	-0.7	ND	-0.4	ND	9.1	-1.5	ND
Skewness	1.94	2.04	ND	0.9	1.2	0.0	ND	0.2	ND	3.2	0.8	ND
Range	22.00	14.00	0.0	2.4	14.0	3.8	0.0	31.0	0.0	2.3	9.8	0.0
Minimum	33.00	11.00	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	55.00	25.00	0.0	5.2	14.0	3.8	0.0	31.0	0.0	2.3	9.8	0.0
Count	23	23	23	23	23	23	23	23	23	23	18	0
Confidence Level(95.0%)	2.65	1.49	0.0	0.3	1.4	0.5	0.0	3.9	0.0	0.3	2.2	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	154	125	0.0	3.7	32.4	29.2	3.1	ND
Standard Error	6	4	0.0	0.2	1.2	0.9	0.2	ND
Median	150	120	0.0	3.6	30.0	27.0	2.7	ND
Mode	150	110	0.0	3.4	30.0	26.0	2.4	ND
Standard Deviation	30	26	0.0	0.7	7.8	6.1	1.6	ND
Sample Variance	879	689	0.0	0.6	61.1	37.7	2.5	ND
Kurtosis	3	5	ND	-0.6	5.4	4.8	6.7	ND
Skewness	2	2	ND	0.4	2.4	2.3	2.6	ND
Range	110	120	0.0	2.4	34.0	26.0	7.3	0.0
Minimum	130	100	0.0	2.6	26.0	24.0	1.8	0.0
Maximum	240	220	0.0	5.0	60.0	50.0	9.1	0.0
Count	23	45	14	14	45	45	45	0
Confidence Level(95.0%)	13	8	0.0	0.4	2.3	1.8	0.5	ND

ND = No Data

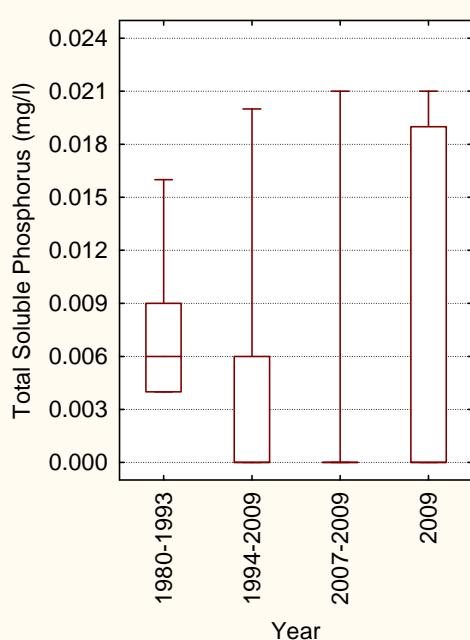
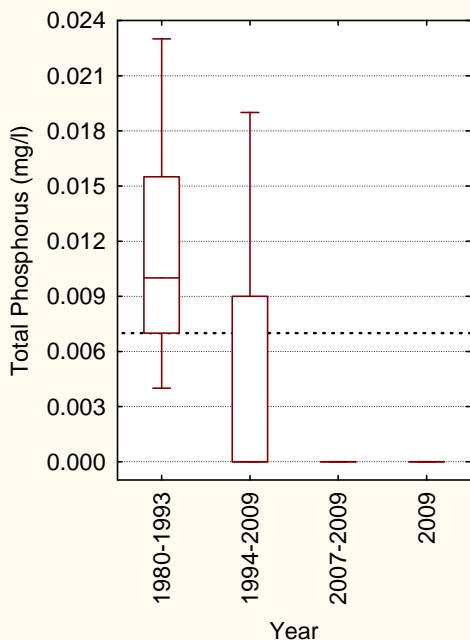
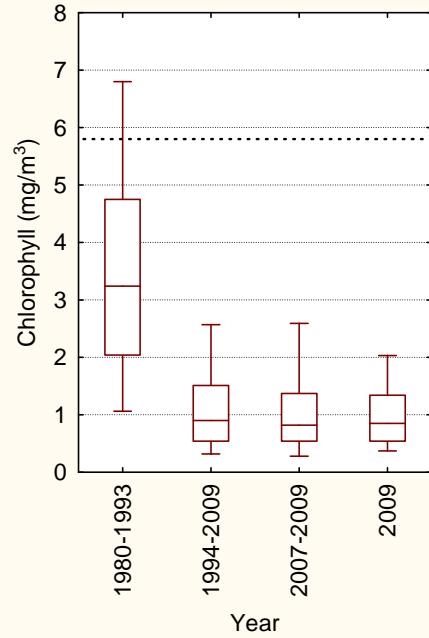
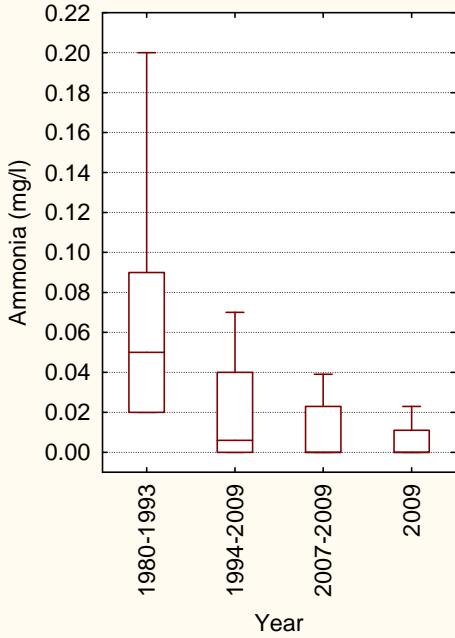
Provisional MMSD Water Quality Data

MMSD Water Quality Program Data
Nearshore survey, Site NS-14



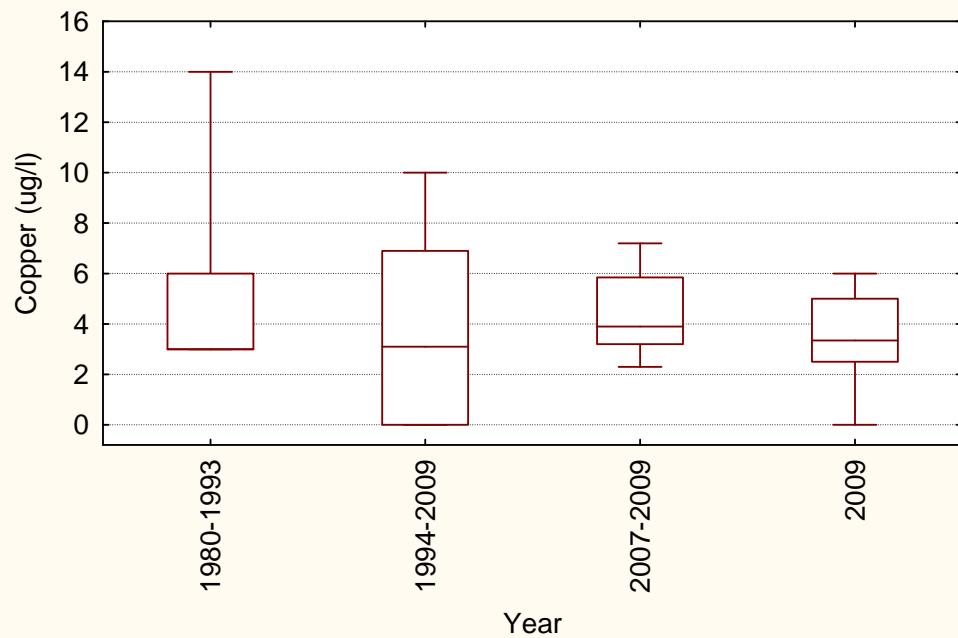
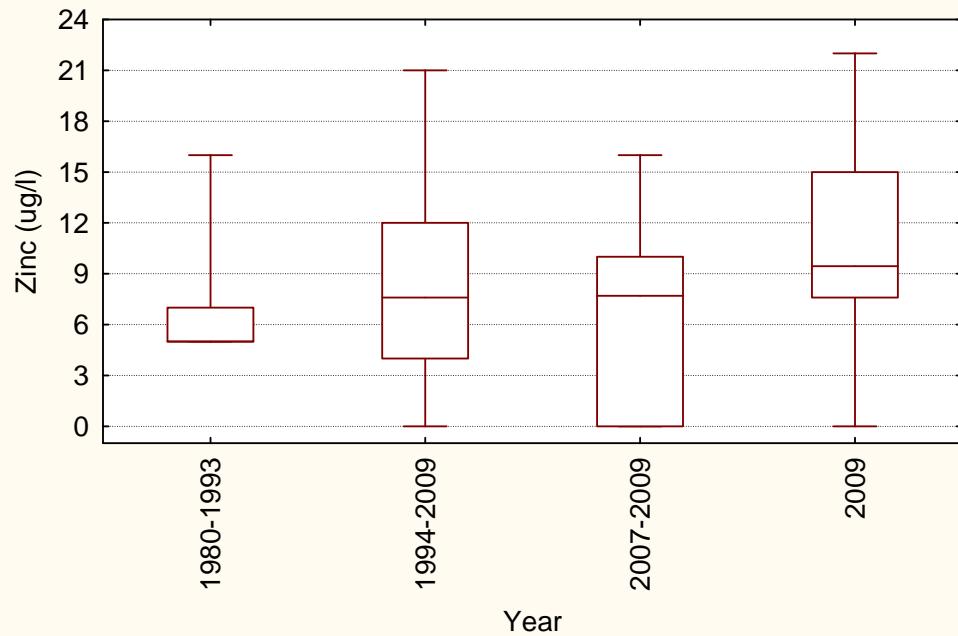
— Median □ 25%-75% | 10%-90%
---- WQ Standard/Criterion

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 - 2009

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	10.7	11.3	1.21	0.29	0.002	0.29	0.008	0.15	0.001	0.007	1.67
Standard Error	0.0	0.5	0.1	0.15	0.01	0.000	0.01	0.002	0.03	0.001	0.001	0.06
Median	8.3	10.4	11.7	0.85	0.30	0.000	0.30	0.000	0.00	0.000	0.000	1.70
Mode	8.1	10.8	11.7	0.54	0.30	0.000	0.30	0.000	0.00	0.000	0.000	1.60
Standard Deviation	0.2	4.4	1.1	1.19	0.06	0.004	0.05	0.017	0.23	0.005	0.011	0.48
Sample Variance	0.1	19.3	1.3	1.42	0.00	0.000	0.00	0.000	0.06	0.000	0.000	0.23
Kurtosis	-1.0	-0.2	0.1	10.47	6.54	3.869	-0.25	27.187	1.48	17.102	-0.260	1.42
Skewness	0.2	0.5	-0.8	2.98	-1.47	1.667	0.26	4.581	1.42	4.162	1.100	-0.79
Range	0.8	17.6	5.4	6.95	0.41	0.018	0.22	0.120	1.00	0.030	0.036	2.60
Minimum	7.9	2.4	7.8	0.00	0.00	0.000	0.20	0.000	0.00	0.000	0.000	0.00
Maximum	8.7	20.0	13.2	6.95	0.41	0.018	0.42	0.120	1.00	0.030	0.036	2.60
Count	66	66	66	66	63	66	63	66	66	66	66	66
Confidence Level(95.0%)	0.1	1.1	0.3	0.29	0.02	0.001	0.01	0.004	0.06	0.001	0.003	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	6.2	14.0	156.1	154.3	0.5	1.8	0.9	292	11.4	1	0.1	ND
Standard Error	0.6	1.2	8.9	8.7	0.2	0.9	0.1	1	0.2	0	0.0	ND
Median	6.6	15.0	155.0	153.5	0.0	1.2	0.6	288	11.0	0	0.0	ND
Mode	6.4	19.0	140.0	200.0	0.0	0.0	ND	285	11.0	0	0.0	ND
Standard Deviation	2.6	5.5	33.3	32.7	0.8	3.4	0.7	9	1.4	1	0.2	ND
Sample Variance	6.8	30.2	1108.4	1067.1	0.7	11.2	0.5	86	2.1	2	0.0	ND
Kurtosis	-1.0	-0.9	-0.1	0.0	0.9	11.6	3.7	2	1.4	6	4.8	ND
Skewness	0.0	-0.6	-0.4	-0.4	1.5	3.3	1.9	2	1.2	2	2.3	ND
Range	8.8	17.0	115.0	115.0	2.4	13.0	3.6	43	6.3	5	0.7	0
Minimum	2.0	3.0	85.0	85.0	0.0	0.0	0.3	282	9.7	0	0.0	0
Maximum	10.8	20.0	200.0	200.0	2.4	13.0	3.8	325	16.0	5	0.7	0
Count	22	20	14	14	14	14	66	66	66	21	21	0
Confidence Level(95.0%)	1.2	2.6	19.2	18.9	0.5	1.9	0.2	2	0.4	1	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 14
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	33.55	11.45	0.0	3.4	3.5	0.8	0.0	10.6	0.0	0.1	3.6	ND
Standard Error	0.30	0.13	0.0	0.1	0.5	0.2	0.0	1.4	0.0	0.1	1.2	ND
Median	33.50	11.00	0.0	3.3	3.4	0.0	0.0	9.5	0.0	0.0	0.0	ND
Mode	34.00	11.00	0.0	3.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	1.41	0.60	0.0	0.7	2.1	1.0	0.0	6.8	0.0	0.5	4.4	ND
Sample Variance	1.97	0.35	0.0	0.4	4.6	1.0	0.0	45.6	0.0	0.3	19.1	ND
Kurtosis	4.05	0.02	ND	0.2	-0.5	-1.1	ND	0.0	ND	22.0	-2.0	ND
Skewness	1.26	0.93	ND	1.1	-0.3	0.7	ND	0.5	ND	4.7	0.5	ND
Range	7.00	2.00	0.0	2.2	7.1	2.9	0.0	24.0	0.0	2.5	9.4	0.0
Minimum	31.00	11.00	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	38.00	13.00	0.0	4.8	7.1	2.9	0.0	24.0	0.0	2.5	9.4	0.0
Count	22	22	22	22	22	22	22	22	22	22	14	0
Confidence Level(95.0%)	0.62	0.26	0.0	0.3	0.9	0.4	0.0	3.0	0.0	0.2	2.5	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	106	0.0	2.1	26.7	24.4	2.2	ND
Standard Error	1	1	0.0	0.3	0.2	0.3	0.0	ND
Median	130	110	0.0	2.4	27.0	25.0	2.2	ND
Mode	130	110	0.0	2.3	27.0	25.0	2.2	ND
Standard Deviation	6	5	0.0	1.0	1.6	1.7	0.3	ND
Sample Variance	41	27	0.0	1.0	2.5	2.9	0.1	ND
Kurtosis	3	-2	ND	2.2	0.2	0.6	-0.8	ND
Skewness	1	0	ND	-1.8	-0.4	-0.8	0.1	ND
Range	30	14	0.0	3.0	7.0	7.0	1.0	0.0
Minimum	120	96	0.0	0.0	23.0	20.0	1.7	0.0
Maximum	150	110	0.0	3.0	30.0	27.0	2.7	0.0
Count	22	42	13	13	42	42	42	0
Confidence Level(95.0%)	3	2	0.0	0.6	0.5	0.5	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 27
WATER QUALITY DATA - 2009

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	12.6	10.7	0.93	0.59	0.011	0.60	0.029	0.16	0.018	0.021	1.73
Standard Error	0.0	0.5	0.2	0.12	0.05	0.001	0.06	0.006	0.03	0.003	0.002	0.10
Median	8.2	11.4	10.9	0.70	0.42	0.009	0.44	0.000	0.00	0.018	0.020	1.60
Mode	8.2	10.9	11.7	0.30	0.38	0.000	0.31	0.000	0.00	0.000	0.000	1.20
Standard Deviation	0.3	4.1	1.4	0.73	0.42	0.011	0.43	0.049	0.22	0.021	0.018	0.76
Sample Variance	0.1	16.6	2.1	0.53	0.18	0.000	0.19	0.002	0.05	0.000	0.000	0.58
Kurtosis	-0.5	-0.5	0.1	1.73	7.33	5.194	7.72	3.896	-0.38	2.460	-0.017	0.00
Skewness	0.0	0.2	-0.6	1.51	2.42	1.963	2.46	2.110	1.02	1.420	0.522	0.77
Range	1.4	16.1	6.3	2.91	2.30	0.058	2.40	0.190	0.75	0.093	0.076	3.18
Minimum	7.4	3.9	7.1	0.12	0.20	0.000	0.20	0.000	0.00	0.000	0.000	0.62
Maximum	8.8	20.0	13.4	3.03	2.50	0.058	2.60	0.190	0.75	0.093	0.076	3.80
Count	63	63	63	37	60	63	60	63	63	63	63	63
Confidence Level(95.0%)	0.1	1.0	0.4	0.24	0.11	0.003	0.11	0.012	0.06	0.005	0.004	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	6.0	10.5	190.0	188.7	0.4	1.3	1.4	347	19.3	10	0.4	ND
Standard Error	0.7	0.4	12.0	11.9	0.2	0.4	0.2	9	1.3	8	0.1	ND
Median	5.0	11.0	180.0	177.2	0.0	1.4	0.9	309	13.0	2	0.3	ND
Mode	2.9	11.0	170.0	ND	0.0	0.0	1.6	291	11.0	0	0.0	ND
Standard Deviation	3.3	1.7	43.4	43.1	0.7	1.4	1.2	70	10.7	35	0.6	ND
Sample Variance	10.7	2.8	1883.3	1853.7	0.5	1.9	1.5	4863	114.1	1191	0.3	ND
Kurtosis	-0.9	6.3	-1.0	-1.0	1.2	0.3	5.3	2	3.0	20	4.3	ND
Skewness	0.6	-2.6	-0.2	-0.2	1.6	0.9	2.3	1	1.6	5	1.8	ND
Range	10.5	6.7	140.0	138.6	2.0	4.3	5.8	292	51.0	160	2.2	0
Minimum	1.5	5.3	110.0	108.6	0.0	0.0	0.3	283	11.0	0	0.0	0
Maximum	12.0	12.0	250.0	247.2	2.0	4.3	6.1	575	62.0	160	2.2	0
Count	21	20	13	13	12	13	63	63	63	21	21	0
Confidence Level(95.0%)	1.5	0.8	26.2	26.0	0.5	0.8	0.3	18	2.7	16	0.3	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 27
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	35.05	12.33	0.0	3.4	3.5	0.6	0.0	11.9	0.1	0.5	2.8	ND
Standard Error	0.47	0.25	0.0	0.1	1.0	0.2	0.0	2.1	0.1	0.2	0.9	ND
Median	35.00	12.00	0.0	3.4	3.1	0.0	0.0	11.0	0.0	0.0	0.0	ND
Mode	33.00	12.00	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND
Standard Deviation	2.16	1.15	0.1	0.6	4.7	0.9	0.0	9.7	0.3	1.1	3.8	ND
Sample Variance	4.65	1.33	0.0	0.3	22.2	0.8	0.0	93.4	0.1	1.2	14.2	ND
Kurtosis	-0.83	-1.30	21.0	1.8	12.8	-1.5	ND	-0.6	21.0	2.7	-1.7	ND
Skewness	0.43	0.34	4.6	0.7	3.2	0.8	ND	0.5	4.6	2.0	0.6	ND
Range	7.00	3.00	0.5	2.5	22.0	2.0	0.0	30.0	1.4	3.5	8.5	0.0
Minimum	32.00	11.00	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	39.00	14.00	0.5	5.0	22.0	2.0	0.0	30.0	1.4	3.5	8.5	0.0
Count	21	21	21	21	21	21	21	21	21	21	16	0
Confidence Level(95.0%)	0.98	0.53	0.1	0.3	2.1	0.4	0.0	4.4	0.1	0.5	2.0	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	108	ND	ND	27.6	25.2	2.3	ND
Standard Error	2	1	ND	ND	0.3	0.3	0.1	ND
Median	140	110	ND	ND	27.0	25.0	2.2	ND
Mode	130	100	ND	ND	26.0	24.0	2.4	ND
Standard Deviation	9	8	ND	ND	1.8	1.7	0.3	ND
Sample Variance	89	68	ND	ND	3.4	2.9	0.1	ND
Kurtosis	-1	0	ND	ND	-0.8	-0.7	-0.5	ND
Skewness	1	1	ND	ND	0.2	0.3	0.5	ND
Range	30	30	0.0	0.0	7.0	7.0	1.3	0.0
Minimum	130	100	0.0	0.0	24.0	22.0	1.8	0.0
Maximum	160	130	0.0	0.0	31.0	29.0	3.1	0.0
Count	21	39	0	0	39	39	39	0
Confidence Level(95.0%)	4	3	ND	ND	0.6	0.6	0.1	ND

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 28
WATER QUALITY DATA - 2009

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	13.7	9.0	5.84	0.75	0.016	0.77	0.086	0.57	0.056	0.031	3.28
Standard Error	0.0	0.5	0.2	0.44	0.04	0.001	0.04	0.007	0.05	0.004	0.002	0.17
Median	8.1	13.0	9.1	5.34	0.73	0.015	0.74	0.069	0.59	0.048	0.032	2.90
Mode	8.2	11.2	11.7	5.93	0.85	0.015	0.86	0.140	0.00	0.038	0.000	2.00
Standard Deviation	0.2	3.9	1.5	3.64	0.33	0.011	0.34	0.061	0.37	0.030	0.020	1.43
Sample Variance	0.0	15.3	2.3	13.22	0.11	0.000	0.12	0.004	0.14	0.001	0.000	2.03
Kurtosis	0.7	-0.5	-0.1	5.16	1.86	5.541	2.20	2.907	2.72	4.539	0.282	-0.66
Skewness	0.5	0.5	-0.2	1.76	1.02	1.930	1.07	1.687	0.64	1.769	0.253	0.70
Range	1.0	14.4	6.3	21.38	1.68	0.057	1.78	0.300	2.10	0.162	0.091	5.20
Minimum	7.7	7.7	5.4	0.82	0.32	0.000	0.32	0.000	0.00	0.018	0.000	1.10
Maximum	8.7	22.1	11.7	22.20	2.00	0.057	2.10	0.300	2.10	0.180	0.091	6.30
Count	69	69	69	69	66	69	66	69	69	69	69	69
Confidence Level(95.0%)	0.1	0.9	0.4	0.87	0.08	0.003	0.08	0.015	0.09	0.007	0.005	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	1.3	3.4	304.8	297.5	1.8	7.3	6.1	549	53.3	168	1.9	191
Standard Error	0.1	0.3	26.0	25.4	0.3	1.9	0.5	19	3.2	45	0.1	90
Median	1.3	3.6	310.0	302.6	1.7	5.6	5.2	542	51.0	66	1.8	34
Mode	1.4	4.5	280.0	ND	0.0	5.2	12.3	ND	50.0	40	1.6	23
Standard Deviation	0.4	1.2	100.5	98.4	1.3	7.3	4.1	159	26.4	215	0.5	349
Sample Variance	0.2	1.5	10108.5	9681.6	1.6	53.8	16.5	25157	694.6	46407	0.3	121669
Kurtosis	2.0	-1.1	2.4	2.5	-0.1	10.5	8.5	-1	0.1	3	-0.5	8
Skewness	1.0	-0.3	-1.3	-1.4	0.3	3.0	2.3	0	0.4	2	0.1	3
Range	1.7	3.9	388.0	384.0	4.4	32.0	25.4	574	112.8	793	2.1	1290
Minimum	0.7	1.1	42.0	38.8	0.0	0.0	1.0	294	7.2	7	0.8	10
Maximum	2.4	5.0	430.0	422.8	4.4	32.0	26.4	868	120.0	800	2.9	1300
Count	23	20	15	15	15	15	69	69	69	23	23	15
Confidence Level(95.0%)	0.2	0.6	55.7	54.5	0.7	4.1	1.0	38	6.3	93	0.2	193

ND = No Data

Provisional MMSD Water Quality Data

NEAR SHORE - SITE 28
WATER QUALITY DATA - 2009

VARIABLE	CA	MG	CD	CR	CU	NI	PB	ZN	AG	AS	SE	HG
units	mg/L	mg/L	ug/L									
STATISTICS												
Mean	47.11	21.00	0.0	4.6	5.5	1.9	0.0	15.6	0.0	0.1	2.8	ND
Standard Error	1.32	0.82	0.0	0.1	0.7	0.2	0.0	0.9	0.0	0.1	0.7	ND
Median	45.00	20.00	0.0	4.4	4.9	2.1	0.0	15.0	0.0	0.0	0.0	ND
Mode	41.00	16.00	0.0	4.2	4.5	0.0	0.0	15.0	0.0	0.0	0.0	ND
Standard Deviation	9.62	5.98	0.0	1.0	5.0	1.1	0.0	6.9	0.0	0.4	4.0	ND
Sample Variance	92.60	35.81	0.0	1.0	24.9	1.3	0.0	47.2	0.0	0.1	16.1	ND
Kurtosis	-0.91	-0.84	ND	12.7	36.1	0.5	ND	3.3	ND	23.9	-1.2	ND
Skewness	0.52	0.29	ND	2.8	5.5	-0.1	ND	1.3	ND	5.0	0.8	ND
Range	32.00	22.00	0.0	6.7	38.0	5.0	0.0	40.0	0.0	2.0	9.9	0.0
Minimum	34.00	12.00	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	66.00	34.00	0.0	9.8	38.0	5.0	0.0	40.0	0.0	2.0	9.9	0.0
Count	53	53	53	53	53	53	53	53	53	53	38	0
Confidence Level(95.0%)	2.65	1.65	0.0	0.3	1.4	0.3	0.0	1.9	0.0	0.1	1.3	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	165	ND	ND	43.2	38.5	4.7	ND
Standard Error	7	6	ND	ND	1.7	1.4	0.3	ND
Median	200	150	ND	ND	41.0	37.0	4.0	ND
Mode	170	140	ND	ND	36.0	33.0	6.0	ND
Standard Deviation	48	41	ND	ND	11.7	9.6	2.1	ND
Sample Variance	2325	1685	ND	ND	135.8	92.6	4.6	ND
Kurtosis	-1	-1	ND	ND	-0.5	-0.6	0.2	ND
Skewness	0	0	ND	ND	0.4	0.4	0.9	ND
Range	170	130	0.0	0.0	46.0	38.0	8.1	0.0
Minimum	130	110	0.0	0.0	21.0	19.0	1.9	0.0
Maximum	300	240	0.0	0.0	67.0	57.0	10.0	0.0
Count	53	45	0	0	45	45	45	0
Confidence Level(95.0%)	13	12	ND	ND	3.5	2.9	0.6	ND

ND = No Data

Provisional MMSD Water Quality Data