

Green Bay Metropolitan Sewerage District

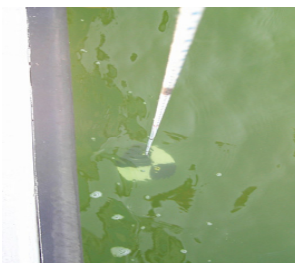
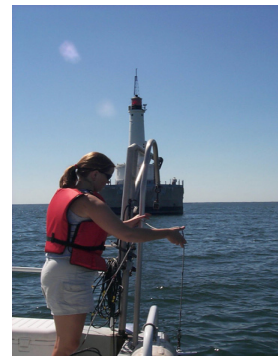
GBMSD Mission Statement
"Promote public health and welfare through the collection, treatment and reclamation of wastewater, while assessing stable, competitive rates. In conjunction with others the organization will encourage pollution prevention and support programs that help ensure that water contaminated by human activity is returned clean to the environment."

Ambient Water Quality Monitoring Program

The Green Bay Metropolitan Sewerage District has been operating a voluntary Ambient Water Quality Monitoring Program (AWQMP) since 1986 on the waters of the lower Fox River and Green Bay. The area of coverage extends from De Pere Dam to 14 miles into Green Bay. The district has committed to a long term monitoring program to better understand the quality of its receiving waters. The primary purpose of the program is to provide high quality data to GBMSD in order to determine the effect of our discharge on the Fox River and Green Bay. In addition, GBMSD makes available the data to other research and regulatory agencies that are interested in using of the data gathered by the program.

Water Quality surveys are conducted on a routine basis from May-October; typically 12-16 surveys are conducted in a given year. Surveys consist of whole water column profile measurements, depth of solar radiation penetration, secchi depth readings, and the collection of water for laboratory analysis. Several important variables such as phosphorus, nitrate/nitrite, total suspended solids, chlorophyll a, and ammonia are analyzed in order to determine the relative health of the waters.

Collection of data and analysis of water samples leads to another equally important aspect of the AWQMP, interpretation of data. The District, for several years, has been working closely with the University of Green Bay Wisconsin on long term trend analysis of data on the Fox River and Green Bay. Furthermore, in conjunction with other researchers it has been possible to correlate our water quality data with other noted biological changes on the bay, such as the introduction of the zebra mussel.

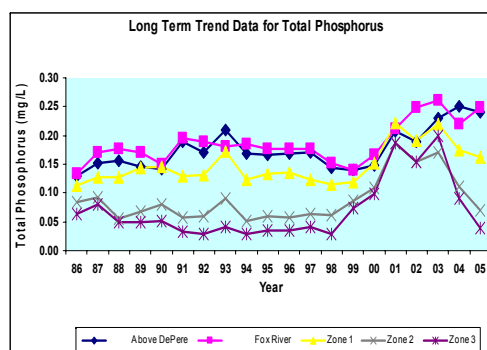
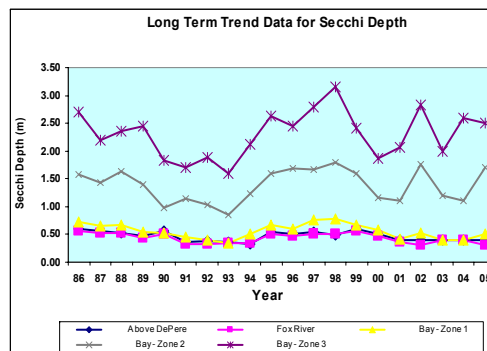


- The Green Bay Metropolitan Sewerage District (GBMSD) is a single purpose government utility that reclaims water and promotes pollution prevention.
- GBMSD Serves 175, 000 residents over a 238 square mile area.
- GBMSD treats an average of 30 million gallons of wastewater a day, removing 97% of all pollutants.

The Lower Fox River Watershed Monitoring Program

GBMSD in partnership with the Lower Fox River Watershed Monitoring Program is involved in several aspects of the five year study. The laboratory at GBMSD was chosen to conduct all the analyses on the water collected during storm water events for the selected tributaries. The laboratory will generate total phosphorus, dissolved total phosphorus and total suspended data for the project.

To assure quality data, there are many laboratory functions that need to be controlled in order to maintain the sample's integrity. All samples are analyzed in accordance with state and federal procedures. All laboratory equipment is calibrated to manufacturer's specifications. The precision and accuracy of test methods is verified and documented daily.



GBMSD Effluent and Fox River Data

2005 Data	TP (mg/L)	NH ₃ (mg/L)	TSS (mg/L)
GBMSD	0.37	0.26	3.8
Fox Above De Pere Dam	0.24	0.17	39
Fox Below De Pere Dam	0.25	0.19	49
Bay Zone 1	0.16	0.11	35
Bay Zone 2	0.07	0.079	15
Bay Zone 3	0.04	0.08	6

Storm Event Data Generated by GBMSD

Date	Tributary (mg/L)	Total Phosphorus (mg/L)	Dissolved Total Phosphorus (mg/L)	Total Suspended Solids (mg/L)
3-28-05	Apple Creek	.91	.18	644
3-28-05	Ashwaubenon Creek	1.39	N/A	1024
3-28-05	Baird Creek	2.51	.29	1467
3-29-05	Duck Creek	.39	N/A	432
3-29-05	East river	.57	.20	342

GBMSD is responsible for collection of weekly water samples on the East River from an automated ISCO sampler throughout the year and during storm events. The sampler is equipped with an acoustic velocity meter (AVM) which measures current velocity and then calculates the flow of the East River. The AVM will supply the flow data that is needed to calculate loading of nutrients and sediments from the East River as it discharges into the Fox River.

