

The Lower Fox River Watershed Monitoring Program is coordinated and administered by staff from the UW Green Bay Department of Natural and Applied Sciences and Cofrin Center for Biodiversity and from the UW Milwaukee Biology Department.

Program Partners include:

- US Geological Survey - Madison
- Green Bay Metropolitan Sewerage District
- Oneida Nation
- Green Bay Southwest High School
- Appleton East High School
- Luxemburg-Casco High School
- Green Bay Preble High School
- Markesan High School
- West DePere High School

Program Website:

www.uwgb.edu/watershed

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THE LOWER FOX RIVER



watershed
monitoring
program

Third Annual

Watershed Symposium

Wednesday, March 15, 2006

UNIVERSITY of WISCONSIN
GREEN BAY

**University Union
Niagara Rooms**

Agenda
 2006 Watershed Symposium
 Wednesday, March 15, 2006
 UWGB Campus
 University Union Niagara Rooms

8:00 **Registration** (Outside Niagara Rooms)

8:30 – 9:00 **Welcome & Update** (Christie Theatre)

Welcome

Provost Sue Hammersmith, UW-Green Bay

Program Update

Kevin Fermanich, UW-Green Bay

9:15 – 10:45 **Student/Professional Presentations**
 (Niagara Rooms)

Moderators:

Scott Ashmann, UW – Green Bay

Assistant Professor, Science Education

Pat Robinson UW – Extension

Environmental Restoration & Estuary Outreach

Coordinator

	<u>Niagara A</u>
9:15	Luxemburg-Casco
9:30	Southwest 1
9:45	Appleton East 1
10:00	LFRWMP staff
10:15	Markesan 2
10:30	Appleton East 3

	<u>Niagara B</u>
	Preble
	Markesan 1
	Appleton East 2
	LFRWMP staff
	Southwest 2
	UW-Milwaukee

10:45 – 11:00

Break

11:00 – 11:45

Poster Session (Niagara Rooms)

- School Monitoring Team Posters
- University & Agency Posters

12:00 – 1:00

Lunch (Niagara Buffet)

12:30 - 1:00

Optional Information Session on College Programs (for high school students)

- UW-Green Bay
- UW-Milwaukee

1:00 – 2:30

Student Break-out Sessions

Each student will attend one session of the Cofrin Grants presentations and one of either the Quiz Bowl or GPS Skills sessions.

Cofrin Grants
 (1965 Room)

Quiz Bowl
 (Christie Theatre)

GPS skills
 (MAC Gathering Room)

1:00–1:40

Session 1A

Session 2A

Session 3A

1:45-2:25

Session 1B

Session 2B

Session 3B

List of Posters

School Monitoring Team Posters

Apple Creek Watershed

Appleton East High School
Teachers Kara Pezzi and Ryan Marx

Baird Creek Watershed

Luxemburg-Casco High School and Preble High School
Teachers Charlie Frisk, Kevin Hendricksen and Chris Hansel

Duck Creek Watershed

Green Bay Southwest High School
Teachers Lynn Terrien and Rick Berken

Spring Brook Watershed

Markesan High School
Teachers Dave Burbach and Aaron Burbach

Ashwaubenon Creek Watershed

West DePere High School
Teacher Dana Lex

University and Agency Posters

Lower Fox River Watershed Monitoring Program

UWGB

Lower Fox River Watershed School-Based Monitoring Program

UWGB

Stream Sampling Methods Used for the Lower Fox River Watershed Monitoring Program

UWGB

Phosphorus Forms and Fate in the Lower Fox River Watershed

UWGB

Biological Monitoring of the Lower Fox River Watershed: 2005 Update

UW Milwaukee

Provisional Monitoring Results – Annual Flow, Precip, TSS and Phosphorus: WY 2004-05

UWGB

List of Presentations and Posters

Niagara A: Scott Ashmann, moderator

9:15 Luxemburg-Casco High School. **Baird's Creek.**

9:30 Nicole Martin and Fei Yin Luk, Green Bay Southwest High School. ***Artificial Substrates....To Do or Not To Do.***

During the past two years of monitoring we have noticed the substrates of our two monitoring sites are very different. Last year, we explored the possibility that the different substrates affect the benthic community. As an extension to our question this year we researched artificial substrates and have decided to employ the use of basket substrates. Additionally, we began to explore other variables that affect colonization such as the life histories of the organisms, energy input into the stream continuum and the impact of exotic species.

9:45 Miranda Hada and Pratha Muthiah, Appleton East High School. ***Effect of Algae on Reproducibility of Phosphorus Method.***

The values for our phosphorous testing at the retention basin site were not precise, while the results of the phosphorous testing from the other sites were more reproducible. The large amounts of algae in the retention basin versus the lower amounts of algae at the other sites could be related to the difference in reproducible data. We propose an experiment to test the hypothesis that more algae growing in the water leads to less precise data for the phosphorous tests.

10:00 Theresa Qualls, UW Sea Grant Institute. ***Lower Green Bay Trophic State Indicators.***

A water quality and trophic gradient exists within lower Green Bay. The Fox River is a major contributor to conditions in the lower Bay. What are the trophic state indicators and what are their trends? Are they improving with time?

Niagara A Presentations (continued)

- 10:15** Matt Fenske, Kaylin Werth, and Josiah Zacharias, Markesan High School. ***Seasonal Diversity and Population Density of Macro-invertebrates in Spring Brook***

Spring Brook is characteristic of fluctuating water levels throughout the year, often resulting in very fast running water to near drought conditions. How does this affect the macro-invertebrate population?

- 10:30** Greta Jochman and Bryan Swanson; Appleton East High School. ***The Effectiveness of Detention Basins on Apple Creek***

Detention basins are designed to improve water quality by slowing and storing stormwater runoff. Nutrients, conductivity, and turbidity were monitored at three locations in the detention basins on Apple Creek. Results of our first year of study will be presented as well as ideas for additional data collection.

Niagara B: Pat Robinson, moderator

- 9:15** Jordan Palubicki, Alli Thut, Alicia DeGroot, Kevin McDonald, Preble High School. ***Phosphorous levels in Baird's Creek.***

Phosphorous levels in Baird's Creek are consistently higher upstream vs. downstream. This is definitely an aberration when compared to the data of other Creeks. The presentation will also look into future plans of action to better be able to draw conclusions on these phosphorous levels.

- 9:30** Ryan Pollesh, Markesan High School. ***Factors That Are Directly Affecting the Spring Brook Watershed.***

Human influences have played a major role in reshaping the Spring Brook watershed. Sharing these events will allow one to predict the future trends of the watershed, both positive and negatively

Niagara B Presentations (continued)

- 9:45** Kevin Dombrock and Jon Fischer, Appleton East High School. ***Effect of Cow Manure on Nutrient Levels.***

This presentation focuses on the fluctuations in ammonia and phosphorus levels through the different seasons at two sites on Apple Creek. Our hypothesis is if cows affect water quality, then the phosphorus and ammonia levels will be higher in the spring after the snow has melted off and the rains come. Results from three years of monitoring will be discussed.

- 10:00** Amanda Lederer, graduate student, UW – Green Bay. ***Impacts of Round Gobies on Macroinvertebrates in Green Bay, Lake Michigan***

Native to the Black and Caspian Seas, round gobies (*Neogobius melanostomus*) have spread rapidly since they were first reported in the Great Lakes basin in the St. Clair River during 1990 (Jude *et al.* 1992) being present in all five Great Lakes a few years later (Charlebois *et al.* 1997). Results from a 2003 study on how round gobies are affecting the macroinvertebrate populations in Green Bay, Lake Michigan, will be discussed.

- 10:15** Brittany Mertens, Green Bay Southwest High School. ***Got Frogs?***

After analyzing the frog data from all of the teams in the Lower Fox River Monitoring group I asked myself if there were really so few frogs being heard or if there was a problem with the sampling itself. In my presentation I will be describing the frogs that we've heard on our Duck Creek sites, their habitat, and when it is a good time to hear them. I will present research on habitat fragmentation which is a possible cause that has impacted the success of hearing frogs on all sites.

- 10:30** Danielle Anholzer, graduate student, UW – Milwaukee. ***Effects of Land Use and Riparian Cover on Invertebrate Communities***