

Water Quality Monitoring Special Project Workplan Proposal - FY 2007

GENERAL INFORMATION

Author Name: Pat Oldenburg
Region: WC
Basin: Lower Chippewa

Telephone: (715) 831-3262
Program: WT

PROJECT INFORMATION

Project Category: 4
Project Location(s): Eau Claire River
Watershed(s): Black and Hay Creeks
County or Counties: Eau Claire

Activity Code: WTSI

WORKPLAN DETAILS

1. Project Description:

The goal of this project is to collect additional water chemistry from the Eau Claire River at CTH G. This soampling is a continuation of an approved FY 2006 project. Samples will be analyzed for total phosphorus, othro-phosphorus, and total suspended solids (6 sample events). Field parameters including temperature, pH, and dissolved oxygen will also be collected. There is a USGS gage site at the sampling location operated by the National Weather Service's North Central River Forecast Center. Sample and flow data will be used to calculate nutrient and sediment loads to Lake Eau Claire.

2. Justification:

Lake Eau Claire is an 860 acre eutrophic, polymictic impoundment in eastern Eau Claire County (WTSI = 63-65). The U.S. Army Corps of Engineers (USACOE) completed a detailed limnological and loading study on Lake Eau Claire in 1998. It was found that the Eau Claire River accounted for 93% of the annual external nutrient loading to the lake.

Eau Claire County is in the process of applying for a Lake Protection Grant to develop a Soil and Water Assessment Tool (SWAT) model for the Eau Claire River basin. The SWAT model will be developed through the University of Wisconsin - Stevens Point. Since there is only one year of loading data currently available at this site, the goal of this project is to provide an additional year of loading data to assist in the development of the SWAT model for the Eau Claire River basin.

In addition to the studies mention above, the USACOE is currently performing additional modeling on Lake Eau Claire to determine what management actions could result in reduced internal loading. Also, the USACOE has performed detailed limnological and loading studies on two other impoundments in the Eau Claire River basin: Lake Altoona (2000) and Mead Lake (2002-2004). Finally, in 1997 the Department performed a similar study on another reservoir in the Eau Claire River basin, Coon Fork Reservoir.

A SWAT model has already been developed for the Coon Fork Reservoir watershed. The Department is in the process of developing a SWAT model for the Mead Lake watershed as part of a future TMDL. These completed SWAT models will be used in the further development of the Eau Claire River basin SWAT model. The Eau Claire River basin SWAT model will be used to establish nutrient goals for Lake Eau Claire and Lake Altoona. Nutrient goals have already been established for Coon Fork Reservoir and will be established for Mead Lake as part of the Mead Lake TMDL.

3. Performance Measure(s):

Data will be evaluated to augment the existing loading data at for Lake Eau Claire. Data will be used to calibrate/validate a watershed model for the Lake Eau Claire basin. This in conjunction with previous studies in the basin will be used to develop nutrient goals for Lake Eau Claire and Lake Altoona.

4. Data Storage System:

STORET, State Lab of Hygiene (SLOH) Database for sample data and field data.

5. File Manager Responsible for Data Entry:

Samples collected as part of this project will be submitted to the SLOH. The analytical results are then placed into the laboratory's database.

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Cost Worksheet

FY 2007

July 1, 2006 - June 30, 2007

	Hours	Cost (\$)
FTE Resources	6	
LTE Resources	12	\$144
Line S (supplies, contracts, travel)		\$195
SLOH Lab Services (attach lab spreadsheet)		\$450
Equipment <\$5,000		
Capital Equipment =>\$5,000		
Subtotal DNR contributions		\$789
Partner Contributions		
Total Contributions		\$789