

## PROJECT FUNDING REQUEST

Date: 3/13/09

Project Title: Regional Watershed and TMDL Planning Support

Staff Requester: Lisa Helmuth, Nicki Richmond

Proposed Funding Source: 604(b) Stimulus

Pass through eligible? NO

Project time period (including completion of deliverables):

1<sup>st</sup> year of WT Planning, TMDL Planning: 7/01/2009-6/30-2010.

### **Project Description:**

This project provides contractual funding (tentatively UW Extension) for the dual purpose of Watershed Planning and Total Maximum Daily Load Planning. These two complementary activities are high priority activities within the Watershed Program as well as two activities with the lowest regional staff support.

Nearly all DNR's regionally based planning positions were eliminated during 1996, yet expectations for deliverables remain in place. With the development of the federal and state Impaired Waters Program Total Maximum Daily Load expectations of 80 TMDLs per year, the agency is struggling to meet basic program requirements with existing staff. This project will provide data entry, data management, and data analysis support to work closely with existing biologists and watershed supervisors. These positions can be subdivided based on the following general functions:

#### Watershed Planning Support:

- Review proposed assessments for a minimum of 4 or 5 watersheds per region (reflecting the assessment and update of 1 watershed per basin per year);
- Provide additional data/information to confirm or adjust assessment recommendations for rivers, streams and lakes using the proposed assessment methodology; ensure entry into the WATERS data system.
- Provide impaired waters data entry and documentation for the 2010 Impaired Listing process.
- Ensure all appropriate documentation is updated in the WATERS data system the 2010 Integrated Reporting process.
- Support regional public informational meetings or hearings as requested for Watershed Plans updates (i.e., Area-wide Water Quality Management Planning) and/or other public notice processes for amendments to the Area-wide Water Quality Management Plan for TMDLs.

#### TMDL Plan and Watershed Plan Development:

- Assist water quality biologists gather relevant biological, habitat and physical/chemical data for the purpose of validating existing impaired waters listings as well as assessing potential waters for listing or delisting.
- Analyze data stored in data systems and hosted by partners for the development of total maximum daily load plans for high priority impaired waters.
- Support the translation of monitoring results into detailed assessments to evaluate the potential for listing additional impaired waters and/or delisting waters that have been restored.
- Assist Central Office Staff in completing a Statewide Mercury TMDL
- Ensure that all data assessment updates and listing recommendations or changes are entered into the WATERS system.

## Project Objective:

Provide support to regional biologists and managers for water/shed planning and total maximum daily load (TMDL) plan development to meet these high priority work items which provide the foundation for water resources protection, management and restoration.

Ensure regional staff is fully trained and able to conduct updates and navigate the surface water monitoring system, the fish database, and the water assessment tracking and electronic reporting system (WATERS).

Meet Wisconsin's Environmental Performance Partnership Agreement (ENPPA) and core water program indicator measures for the state of Wisconsin.

## Project Deliverables:

### Watershed Planning Support:

- Updated assessment data for a minimum of 4 or 5 watersheds per region (reflecting the update of 1 watershed per basin per year); ensure entry into the WATERS data system.
- Provide impaired waters data entry and documentation for the 2010 Impaired Listing process.
- Ensure all appropriate documentation is updated in the WATERS data system the 2010 Integrated Reporting process.
- Regional public informational meetings or hearings as needed for Watershed Plans updates (i.e., Area-wide Water Quality Management Planning) and/or other public notice processes for amendments to the Area-wide Water Quality Management Plan for TMDLs.

### TMDL Plan Development:

- Validation of existing impaired waters listings; assessment of waters for listing or delisting.
- Analysis of data systems and hosted by partners for the development of total maximum daily load plans for high priority impaired waters.
- Creation of detailed assessments to evaluate the potential for listing additional impaired waters and/or delisting waters that have been restored.
- Updated information in WATERS and related data delivery systems.
- Planning our public communications strategy for various aspects of the Impaired Waters Program.
- Statewide Hg TMDL to address up to 315 mercury impaired waterbodies in Wisconsin.
- Creation of TMDLs or alternate management plan for Lake Tomah, Wisconsin.

### End Products:

- Water quality management plan updates for each of the state's basins.
- Updated and proofed entries for new assessments for selected watersheds.
- Regional recommendations and data submittals for the 2010 Integrated Reporting procedure.
- Creation of TMDL schedules for plan creation for selected areas of the state.
- Draft Statewide mercury TMDL for all waterbodies in Wisconsin impaired by atmospheric deposition of mercury.
- Regional recommendations and data submittals for the 2010 Integrated Reporting procedure.

## EPA Comment Response

Economic Benefit of the above project: This project contributes substantially to the retention of highly skilled contractors who would have otherwise lost their positions. Approximately 6 FTE equivalent contractors are partly funded through this project.

Total cost of proposed project: (see spreadsheet) \$206,108

How do these TMDL projects differ from TMDL efforts funded from other EPA grants?

All of the TMDLs planned for development under this funding, are not funded by EPA grants (i.e. Statewide Hg TMDL). The efforts associated with Basin Planning may result in a greater number of TMDLs in the future, if gaps in data can be identified through our planning processes. An environmental accountability project will be completed for Lake Tomah. This is in lieu of a TMDL, and other funding sources may include 319 funds for implementation of this plan.

## PROJECT FUNDING REQUEST

2

Date: 3/14/09

Project Title: Central Office GIS Analyst Watershed and TMDL Planning Support

Staff Requester: Lisa Helmuth

Proposed Funding Source: 604(b) Stimulus

Pass through eligible? NO

Project time period (including completion of deliverables):

2 years of WT Planning, TMDL Planning: 10/01/2009-6/30/2011

### **Project Description:**

This project funds two years of one LTE position (2080) in Central Office for existing LTE staff. This position currently provides extensive, advanced level GIS programming support; watershed GIS data maintenance, ArcGIS and ArcIMS infrastructure management, and critical GIS element system support for WATERS, SWIMS, and on an as-needed basis for SWAMP. This position also manages the highly popular public interactive web mapping tool – the Surface Water Data Viewer - and the internal version, the Intranet-Surface Water Data Viewer. These GIS-Oracle integrated tools are highly customized, requiring a high-level skill set and working knowledge of html, xml, and. asp programming, the Moxi-Media infrastructure, and ArcIMS, ArcGIS, and PL SQL. The knowledge base and permissions for managing the infrastructure and enterprise datasets contained in these systems has been developed by this staff over a five to six year period. Maintaining the stability and integrity of these tools is of primary importance for the Watershed Management Planning and TMDL Planning programs. Retaining qualified staff is integral to realizing that stability.

#### Watershed Planning Support:

- Support GIS elements in WATERS, SWIMS, and SWAMP and contribute to the support of the state's 24K scale hydrography dataset. Review proposed changes to the hydro-geodatabase structure in light of existing programming work in WATERS and SWIMS and provide technical feedback to minimize impact to these watershed program data systems.
- Provide hands-on programming support for Watershed Planning dynamic webpages to display the state's watershed assessment updates, including water condition, recommendations, and ongoing activities in the state.
- Provide additional file manager backup support for the SWIMS and WATERS data systems.
- Provide impaired waters mapping and analysis work for the 2010 Impaired Listing process and the overall Integrated Reporting process.
- Support GIS products for regional public informational meetings or hearings as requested for Watershed Plans updates (i.e., Area-wide Water Quality Management Planning) and/or other public notice processes for amendments to the Area-wide Water Quality Management Plan for TMDLs.

#### End Products:

- Provide data system stability for ongoing use during the 2009-2011 data entry and management.
- Support online dynamic webpages hosting water quality management plan updates for each of the state's basins in 2010.
- Provide GIS products displaying updated and proofed entries for new assessments for selected watersheds.
- Provide GIS infrastructure support for the state's critical Watershed Program databases – WATERS and SWIMS.
- Provide backup GIS support for TMDL plans for selected areas of the state as needed.

## Project Objective:

Provide advanced level GIS programming support; watershed GIS data maintenance, ArcGIS and ArcIMS infrastructure management, and critical GIS element system support for WATERS, SWIMS, and on an as-needed basis for SWAMP. Provide continued management of the highly popular public interactive web mapping tool – the Surface Water Data Viewer - and the internal version, the Intranet-Surface Water Data Viewer.

Maintain the knowledge base and key staff with permissions for managing the infrastructure and enterprise datasets contained in these systems. Maintain the stability and integrity of these tools, which is of primary importance for the Watershed Management Planning and TMDL Planning programs. Retaining qualified staff is integral to realizing system stability.

## Project Deliverables:

### Watershed Planning Support:

- Support GIS elements in WATERS, SWIMS, and SWIMS and contribute to the support of the state's 24K scale hydrography dataset. Review proposed changes to the hydro-geodatabase structure in light of existing programming work in WATERS and SWIMS and provide technical feedback to minimize impact to these watershed program data systems.
- Provide hands-on programming support for Watershed Planning dynamic webpages to display the state's watershed assessment updates, including water condition, recommendations, and ongoing activities in the state.
- Provide additional file manager backup support for the SWIMS and WATERS data systems.
- Provide impaired waters mapping and analysis work for the 2010 Impaired Listing process and the overall Integrated Reporting process.
- Support GIS products for regional public informational meetings or hearings as requested for Watershed Plans updates (i.e., Area-wide Water Quality Management Planning) and/or other public notice processes for amendments to the Area-wide Water Quality Management Plan for TMDLs.

### End Products:

- Provide data system stability for ongoing use during the 2009-2011 data entry and management.
- Support online dynamic webpages hosting water quality management plan updates for each of the state's basins in 2010.
- Provide GIS products displaying updated and proofed entries for new assessments for selected watersheds.
- Provide GIS infrastructure support for the state's critical Watershed Program databases – WATERS and SWIMS.
- Provide backup GIS support for TMDL plans for selected areas of the state as needed.

## **EPA Comment Response**

Economic Benefit of the above project: Provides funding for 2 LTE GIS analyst.

Total cost of proposed project: \$48,885

## PROJECT FUNDING REQUEST

3

Date: 3/22/09

Project Title: Wadeable Stream Natural Community Reference Site Monitoring

Staff Requester: Greg Searle

Proposed Funding Source: 604(b) Stimulus

Pass through eligible? NO

Project time period (including completion of deliverables): 07/01/2009-6/30/2011

### **Project Description:**

#### **Monitoring Project Purpose (data need)**

One of the objectives set forth by the Watershed Bureau's Assessment Methodology team is to use and update a Wisconsin Stream model for classifying "Natural Communities" as developed by Lyons et al.

The Wisconsin stream model has two main uses, 1) to classify stream reaches into a relatively small number of categories for data summarization, assessment, reporting, prioritization, and management, and; 2) to inventory the current state of Wisconsin streams and to explore the potential effects of various landscape-scale variables on stream flow, water temperature, and stream fish communities and fisheries.

In order to calibrate the model, biological, physical and chemical data are needed for reference sites across Wisconsin's four eco-regions. Reference sites data will be used to establish the "potential" for each wadeable stream natural community type within each eco-region. Fish, macroinvertebrates, quantitative habitat, and water chemistry will be collected at each site following standard protocols.

#### **Monitoring Design**

Based on the classification, there are eleven wadeable-stream natural communities: eight of which support fish and bugs, and one which supports bugs only. This monitoring design divided the state into Omernik's four major ecoregions. This yields 36 different possible types of stream categories (9 communities x 4 ecoregions). This represents the best manner of capturing regional differences in natural conditions, human impacts, and stream potential. The goal is to sample a minimum of 10 streams within each of the 36 categories.

### **Project Deliverables:**

**Products and/or Deliverables:** The data collected as part of this project will support WDNR's Natural Community Reference Site classification and will be incorporated in the Assessment Methodology approach.

**Planned Completion Date:** Any field work associated with this project will be completed during field seasons '09 and '10.

**Link to Monitoring Strategy:** Wisconsin's Monitoring Strategy provides an organizational framework for collecting and using water quality data to make consistent surface water assessment decisions. This project provides resources to evaluate the natural community reference site classification.

**EPA Comment Response**

Economic Benefit of the above project: The use of ARRA funding for this project is an offset of CWA s. 106 funding that been allotted for Natural Community Reference Site Monitoring. This will allow other uses of the s. 106 funds, including other surface water monitoring, and employment of limited term employees to meet the Department's Clean Water Act requirements.

Total cost of proposed project: (see spreadsheet): \$200,000

## PROJECT FUNDING REQUEST

Date: 3/14/09

Project Title: Central Office Watershed Planning and TMDL Data Management Support (1 LTE, 2 years)

Staff Requester: Lisa Helmuth

Proposed Funding Source: 604(b) Stimulus

Pass through eligible? NO

Project time period (including completion of deliverables): Two years of 1 LTE position to support regional and central office data entry and management related to the watershed updates to Area-wide Water Quality Management Plans, as well as an update of the state's Continuous Planning Process document, which was last updated in 1988. 07/01/2009-6/30/2011

### **Project Description:**

This project funds two years of 1 LTE to support the statewide Water Quality Management Planning Program and related TMDL Planning Program work. This project fully funds an existing LTE who is highly qualified and interested in this much-needed support work. The work involves several related activities in support of re-establishing Wisconsin's Area-wide Water Quality Management Planning Program as the legal and substantive foundation for subsequent resource restoration work through Total Maximum Daily Load Plans and issuance of permits and NPS grants. This position supports regional and central office data entry and management related to the watershed updates to Area-wide Water Quality Management Plans, as well as an update of the state's Continuous Planning Process document, which was last updated in 1988.

This position will conduct the following (all of which will alleviate the workload of the staff in the Policy, Planning and Communications Unit).

#### Watershed Planning Support:

- Provide statewide hands-on training and help desk support for water quality biologists and regional LTE positions as they begin entering data in the Water Assessment Tracking and Electronic Reporting System (WATERS) for Watershed Planning (23-25 watersheds per year).
- Help with WATERS Guidance team duties including meeting notes, follow up assignments and support of statewide tracking of plan update work.
- Provide support for data management and analysis for the rough-cut assessment work in central office for rivers, streams and lakes, which will provide data for water quality biologists to use for the 2010 Integrated Reporting process and which tests the proposed Fish and Aquatic Life Assessment Methodology.
- Provide data entry/management support for the 2010 Integrated Reporting work including insuring that impaired waters data documentation work is in place for all proposed waters.
- Help the Policy, Planning and Communications Unit update the Continuous Planning Process document and other key documentation in support of re-establishing the legal foundations of Wisconsin's Watershed Planning Framework.

#### End Products:

- 25 updated watersheds in each of the two years (50 total) as formal updates to the state's Area-wide Water Quality Management Plan;
- Well-trained and supported regional staff (permanent and LTE) in the use of the WATERS data system (see attached training outline).
- A well-documented, timely 2010 Integrated Reporting Submittal to USEPA (305b updates and 303d data submittals and updated websites and lists).
- Updated Continuous Planning Process document to support the state's legal framework for Area-wide Water Quality Management Planning, Total Maximum Daily Load Plans and related implementation work.



## Project Objective:

This project funds two years of 1 LTE to support the statewide Water Quality Management Planning Program and related TMDL Planning Program work. This project fully funds an existing LTE who is highly qualified and interested in this much-needed support work. The work involves several related activities in support of re-establishing Wisconsin's Area-wide Water Quality Management Planning Program as the legal and substantive foundation for subsequent resource restoration work through Total Maximum Daily Load Plans and issuance of permits and NPS grants. This position supports regional and central office data entry and management related to the watershed updates to Area-wide Water Quality Management Plans, as well as an update of the state's Continuous Planning Process document, which was last updated in 1988.

## Project Deliverables:

### Watershed Planning Support:

- Provide statewide hands-on training and help desk support for water quality biologists and regional LTE positions as they begin entering data in the Water Assessment Tracking and Electronic Reporting System (WATERS) for Watershed Planning (23-25 watersheds per year).
- Help with WATERS Guidance team duties including meeting notes, follow up assignments and support of statewide tracking of plan update work.
- Provide support for data management and analysis for the rough-cut assessment work in central office for rivers, streams and lakes, which will provide data for water quality biologists to use for the 2010 Integrated Reporting process and which tests the proposed Fish and Aquatic Life Assessment Methodology.
- Provide data entry/management support for the 2010 Integrated Reporting work including insuring that impaired waters data documentation work is in place for all proposed waters.
- Help the Policy, Planning and Communications Unit update the Continuous Planning Process document and other key documentation in support of re-establishing the legal foundations of Wisconsin's Watershed Planning Framework.

### End Products:

- 25 updated watersheds in each of the two years (50 total) as formal updates to the state's Area-wide Water Quality Management Plan;
- Well-trained and supported regional staff (permanent and LTE) in the use of the WATERS data system (see attached training outline).
- A well-documented, timely 2010 Integrated Reporting Submittal to USEPA (305b updates and 303d data submittals and updated websites and lists).
- Updated Continuous Planning Process document to support the state's legal framework for Area-wide Water Quality Management Planning, Total Maximum Daily Load Plans and related implementation work.

## EPA Comment Response

Economic Benefit of the above project: Provides funding for 2 Water Management Specialist LTE positions.

Total cost of proposed project: \$40,258

The "Project deliverables" and "Project description" sections include the same information. Was this intentional, or is project deliverable information missing? Please see clarification below:

#### Watershed Planning Support:

- Hands-on training and help desk support for water quality biologists and regional LTE positions as they begin entering data in the Water Assessment Tracking and Electronic Reporting System (WATERS) for Watershed Planning (23-25 watersheds per year).
- Meeting notes, follow up assignments and support of statewide tracking of plan update work.
- Data management and analysis for the rough-cut assessment work in central office for rivers, streams and lakes, which will provide data for water quality biologists to use for the 2010 Integrated Reporting process and which tests the proposed Fish and Aquatic Life Assessment Methodology.
- Impaired waters data documentation work is in place for all proposed waters.
- Continuous Planning Process document and other key documentation in support of re-establishing the legal foundations of Wisconsin's Watershed Planning Framework.

#### End Products:

- 25 updated watersheds in each of the two years (50 total) as formal updates to the state's Area-wide Water Quality Management Plan;
- Well-trained and supported regional staff (permanent and LTE) in the use of the WATERS data system (see attached training outline).
- A well-documented, timely 2010 Integrated Reporting Submittal to USEPA (305b updates and 303d data submittals and updated websites and lists).
- Updated Continuous Planning Process document to support the state's legal framework for Area-wide Water Quality Management Planning, Total Maximum Daily Load Plans and related implementation work.

## PROJECT FUNDING REQUEST

5

Date: 3/14/09

Project Title: Central Office Citizen Based Stream Monitoring Program Coordination (2 LTEs)

Staff Requester: Lisa Helmuth/Greg Searle

Proposed Funding Source: 604(b) Stimulus

Pass through eligible? NO

Project time period (including completion of deliverables):

2 concurrent LTE positions to support the Citizen Based Stream Monitoring Program:  
07/01/2009-6/30/2010

### **Project Description:**

This project funds one year of the state's Citizen Based Stream Monitoring Coordinator position through 2 LTE positions. The existing position is funded through other sources and is hosted at the River Alliance. The River Alliance would like DNR to maintain oversight of the program. The current coordinator provides statewide support and communication with volunteer monitors for streams in Wisconsin. This program has developed and grown dramatically in the state over the last two years. For more information see: <http://dnr.wi.gov/org/water/swims/cbsm/>

These funds will be used to fulfill the function of the Coordinator's position, which includes training and support for citizen stream monitors, equipment maintenance, generation of summary reports documenting monitoring results, and successful operation of program to support watershed planning in Wisconsin.

#### Watershed Planning Support:

- Fund Statewide CBSM Coordinator
- Training and providing support for volunteer stream monitors in Wisconsin as they monitor the water quality of their streams.
- Provides reports and recommendations on the CBSM Program findings.

### **Project Objective:**

Provide statewide support and communication with volunteer monitors for streams in Wisconsin.

### **Project Deliverables:**

- Help ensure that the CBSM Program runs smoothly and uses standard protocols and data management procedures.
- Help ensure that CBSM equipment is maintained in good condition and is readily available as needed to citizen volunteers.
- Provide summary reports on findings through the use of the Surface Water Integrated Monitoring System (SWIMS).
- See example report here: <http://dnr.wi.gov/org/water/swims/cbsm/reports/stations/NOR.htm>

### **EPA Comment Response**

Economic Benefit of the above project: The use of ARRA funds for this project will allow the Citizen-Based Stream Monitoring program to continue to function at the current level and explore growing the program.

Total cost of proposed project: (see spreadsheet): \$54,183

Explain the CBSM coordinator's salary funding: Due to the deficit in Wisconsin's state budget, the current funds that support the position will be used in other aspects of the state's monitoring program and ARRA funds will be used to for the CBSM salary.

## PROJECT FUNDING REQUEST

6

Date: March 16, 2009

Project Title: Lake Michigan Tributary and Nearshore Monitoring

Staff Requestee: Jim Baumann

Proposed Funding Source: 604(b) Stimulus

Passthrough eligible? No

Project time period (including completion of deliverables): 12 months – corresponding to state fiscal year

### **Project Description:**

There are two parts to this project.

Nutrient and Sediment Loading to Lake Michigan -- Up to 24 grab samples will be collected at or close to existing gauging stations on majority tributaries to Lake Michigan including Milwaukee River, Sheboygan River, Manitowoc River, Fox River and Menominee River. One sample will be collected each month at a predetermined date and up to 12 samples will be collected on a "flow related" basis. Samples will be analyzed for total phosphorus, dissolved phosphorus, nitrite+nitrate, total Kjeldahl nitrogen and total suspended sediment. All samples will be collected per the Department's standard water chemistry sampling procedures. Samples will be analyzed by the State Laboratory of Hygiene. Flow information will be obtained from corresponding USGS flow gauging stations.

Cladophora and Nutrients in Nearshore Waters -- About 10 stations will be monitoring in July or August to assess the nutrient concentrations and algal biomass in the nearshore waters. Grab samples will be analyzed for nutrients and biomass measurements will be made. A QAPP/SOP plan will be prepared.

### **Project Objective:**

The recurrence of the rotting Cladophora algal mats along the west shore of Lake Michigan has resulted in direct and indirect economic costs to Wisconsin. The accumulation of Cladophora on beaches has decreased resident and tourist beach use. Beach front property values have decreased. Electric utilities incur additional costs to unclog water intakes or to install filtration equipment. Bacterial growth in the rotting algal mats raises human health concerns. The economic costs of these problems likely exceed millions of dollars per year. Control of phosphorus is likely needed to minimize the Cladophora growth and attain economic benefits.

The overall objective of this project is to collect additional information to better characterize the Cladophora growth and the amount of phosphorus entering the nearshore waters of Lake Michigan. The information will be used in future modeling of the nearshore waters and their tributaries. These tributaries comprise over 60 percent of the Wisconsin drainage area to Lake Michigan, and comprise of agricultural, urban and forested land uses. These stations will allow extrapolation of results to the remaining 30 to 40 percent of the drainage area.

As more years of information can be collected, the data will be used to determine trends in the tributary loads and in the nearshore water response. In the short term (within the next two years), the information will be used to determine the proportional contribution of point sources and nonpoint sources. Ultimately, a plan for reduction in phosphorus loads to Lake Michigan will be developed. The future plan may result in further control of phosphorus through WPDES permits

**Project Deliverables:**

Deliverables will be quarterly progress reports and compiled data. Quarterly reports will include the number of monthly and flow proportional samples collected. All data will be transferred via WQX system to EPA's STORET system.

**EPA Comment Response**

Economic Benefit of the above project: Provides funding to a partial LTE and continued contractual dollars to the State Laboratory of Hygiene to maintain existing staff.

Total cost of proposed project: \$25,600

The workplan should indicate that, because this is a monitoring project, the state will need to develop an appropriate Quality Assurance Project Plan/Standard Operating Procedures (QAPP/SOP) for this work as detailed in the state Quality Management Plan (EPA does not need to review or approve the QAPP). See above.

The Workplan should state that the data from this project will need to be transferred via WQX system to EPA's STORET system. The Workplan should also indicate that Quarterly progress reports will report on the number of samples collected during each reporting cycle and whether any flow-related samples were collected. See above.

## PROJECT FUNDING REQUEST

Date: 3/14/09

Project Title: Central Office SWIMS - Monitoring Data Management LTE Support

Staff Requester: Lisa Helmuth

Proposed Funding Source: 604(b) Stimulus

Pass through eligible? NO

Project time period (including completion of deliverables):

2 years of Monitoring System Data Management: 07/01/2009-6/30/2011

### **Project Description:**

This project funds two years of a .75 LTE position (1560 hrs) in Central Office for existing LTE staff. This LTE position currently provides data management support for the state's Citizen Based Stream Monitoring Data Management Program. However, the proposed funding would expand that role to general SWIMS Data Management support for internal data management projects, as well as continue support for the CBSM Program. Funding this position would alleviate pressure on the state's policy, planning and communications staff.

#### Watershed Planning Support:

- Support Data QAQC within the SWIMS system for various monitoring projects including:
  1. Special Watershed Projects
  2. LTT and Non-LTT Projects
  3. Natural Communities Baseline Reference Condition Projects
  4. Macroinvertebrate data management support with UWSP
  5. Continuous meter data management support statewide
  6. Citizen Based Stream Monitoring data management support.
- Provide hands-on training and data review for a variety of internal and citizen volunteer projects in SWIMS.
- Provide file manager backup support for the SWIMS and WATERS data systems.

#### End Products:

- Help staff ensure that their monitoring data is properly entered and annotated in the SWIMS system.
- Ensure that final reports from special studies or other work is archived with the data.
- Help ensure that staff has the training on how to use the SWIMS system and that they have the proper permissions and project folders to do their jobs well.
- Provide bulk data exports and quality control as needed to ensure that Wisconsin continues to provide quality data and information to the public, USEPA and partners.
- Help staff gain access to monitoring data for use in general and impaired waters assessments.

### **Project Objective:**

#### Watershed Planning Support:

- Support Data QAQC within the SWIMS system for various monitoring projects including:
  1. Special Watershed Projects
  2. LTT and Non-LTT Projects
  3. Natural Communities Baseline Reference Condition Projects
  4. Macroinvertebrate data management support with UWSP
  5. Continuous meter data management support statewide
  6. Citizen Based Stream Monitoring data management support.
- Provide hands-on training and data review for a variety of internal and citizen volunteer projects in SWIMS.
- Provide file manager backup support for the SWIMS and WATERS data systems.

Project Deliverables:

End Products:

- Help staff ensure that their monitoring data is properly entered and annotated in the SWIMS system.
- Ensure that final reports from special studies or other work is archived with the data.
- Help ensure that staff has the training on how to use the SWIMS system and that they have the proper permissions and project folders to do their jobs well.
- Provide quality control as needed to ensure that Wisconsin continues to provide quality data and information to the public, USEPA and partners.
- Help staff gain access to monitoring data for use in general and impaired waters assessments

**EPA Comment Response**

Economic Benefit of the above project: Provides funding for approximately 1.5 LTE staff positions.

Total cost of proposed project: \$32,086



## Project Funding Request

Date: 4/7/09

Project Title: Upper Fox River Basin TMDL Monitoring

Staff and Management Requester: Mike Gilbertson

Proposed Funding Source: 604(b) Recovery Act (Stimulus)

Project time period (including completion of deliverables): 12 months (July 1, 2009 – June 30, 2010)

**Project Description (include goals and performance measures the project aligns with and note internal resources to manage this request):**

**\*\*2nd year of monitoring for the Upper Fox Basin TMDL\*\***

NER biologists and Central Office Surface Water Assessment Team will collect water samples from the Fox River, Puchyan River, Fond du Lac River, Montello River, Waukau Creek, Lake Poygan, Lake Winneconne, Lake Butte des Morts, and Lake Winnebago to be analyzed for TSS, Total Phosphorus, and Dissolved Phosphorus that will be used in modeling the sediment and phosphorus loads to Lake Winnebago. Results of the modeling will be used in developing a TMDL for Lake Winnebago to drive nutrient and sediment management practices in the Upper Fox Basin.

### **Project Objective:**

The development of a TMDL to address the phosphorus and sediment loading to Lake Winnebago is necessary because 50% of the nutrient and sediment load to the Lower Fox River is directly from Lake Winnebago. In order for the Lower Fox TMDL (currently in development) to meet its goals, reducing the pollutant load from Lake Winnebago is critical.

The Objective of this project is to address phosphorus and sediment loading from the Upper Fox River Basin to Lake Winnebago, and therefore support the work of the Lower Fox River Basin TMDL. This will be the second of three years of data needed to accurately model the sediment and phosphorus loading to Lake Winnebago.

### **Project Deliverables:**

There are 11 sample sites total between the 9 waterbodies that will be sampled at varying sampling schedules:

On the Fond du Lac River, Montello River, and Waukau Creek, bi-weekly surface water samples will be collected from March to November, and monthly from December to February and analyzed for total suspended solids, total phosphorus, and total dissolved phosphorus..

On the Fox and Puchyan Rivers, weekly samples will be collected from March 1 to June 30, and bi-weekly July 1 to February 28.

On lakes Poygan, Butte des Morts, and Winneconne, samples will be collected at one site on each lake bi-weekly from May 1 to Sept. 30, and 1 time beneath the ice in February. Lake Winnebago will have three sites sampled on it during the same sampling schedule as the other lakes. Lake surface water samples will be analyzed for ammonia, total phosphorus, total dissolved phosphorus, total kjeldahl nitrogen, and chlorophyll-a.

Event samples will be collected by automated samplers installed on the Montello River, and Fond du Lac River. This project estimates that 20 event samples will be collected this year at each site.

USGS will maintain the flow gauges installed on the Montello River, Puchyan River, Fox River, Waukau Creek, and Fond du Lac River. At the end of the year USGS will use the sample data and flow data to estimate phosphorus and sediment loads for each waterbody.

The deliverable from this project is the second of three years of monitoring data needed to accurately model the sediment and phosphorus loading from the Upper Fox Basin into Lake Winnebago.

**EPA Comment Response**

Economic Benefit of the above project:

1. Provides DNR LTE funding for the monitoring work conducted in the project.
2. Water samples collected for this project are submitted to the State Lab of Hygiene for analysis, therefore this project is providing that agency continued work.
3. Flow gauging is contracted through USGS, and therefore provides the USGS with continued work.

Total cost of proposed project: \$35,000