Possible Elements of a UMRBA Proposal for a 604(b) Water Quality Management Planning Grant *(Draft 3/11/09)*

1. WATER QUALITY STANDARDS AND ASSESSMENT

Project Areas and Tasks[1]

a) Review and Refinement of Designated Uses:
Data Review and Analysis: Examination of existing physical, chemical, and biological data sets to determine where CWA-relevant distinctions exist between aquatic areas on the UMR, in order to inform revision of aquatic life use designations or creation of aquatic life use subcategories. Will be assisted by data gathering, analysis, and gap identification (see work area 3 below). Map and report on findings.

Main Channel Assessment Approach: This would be informed by the findings above, IPA work on designated uses, review of existing monitoring programs (e.g. EMAP and LTRMP), and biological indicators work (see 1b below). Develop a recommended assessment approach for determining the attainment of the aquatic life use on the main channel of the UMR, including appropriate criteria and indicators. Produce a consensus recommended practices document for main channel assessment.

b) Application of Biological Indicators on the UMR:
Followup work to support outcomes of May 2009 Biological Indicators workshop. Depending on outcomes of the workshop, may include refinement of existing indices, identification of new indicators, or development of new indices. Produce report and/or incorporate into recommended practices document (see above).

Rationale for Inclusion

- Generally, work on standards and assessment falls in line with recommendations of 2006 Organizational Options report.
- Designated use work supports tasks already being undertaken under the IPA, but gives a boost in the data examination component.
- Main channel assessment work in line with WQTF's inclination to "start with the main channel," as that is defined under the designated use work. Also, gives a place to fit in a main channel fish IBI – another goal of the WQTF.
- Indicators work follows up on both the CWA-Ecosystem Restoration workshops from 2008 and the 2009 Biological Indicators workshop. Also, gets at cross-program coordination (see work area 4 below).

2. NUTRIENT-RELATED EFFORTS

Project Areas and Tasks[1]

a) Nutrient Monitoring Needs Assessment for the UMR and UMR Tributaries
Data Review and Analysis: Review existing nutrient and nutrient-related data for the UMR and tributaries to identify gaps (both spatially and in terms of water quality parameters). This will be assisted by data gathering, analysis, and gap identification (see work area 3 below), and could include limited monitoring to support analysis. Map and report on findings.

Recommendations for UMR and UMR Tributary Monitoring: Based on the findings above, recommend extensions/enhancements/modifications to existing monitoring efforts or new monitoring initiatives.

b) Examination of "Local" Impacts to Aquatic Life and other Designated Uses from Nutrients
Review of existing data/literature to assess the impact of elevated nutrient levels on aquatic life in the UMR (vegetation, fisheries, mussels, and others). May also include an investigation of nutrient impacts on other uses (e.g. drinking water and recreation). Produce summary report.

Rationale for Inclusion

- Generally, the nutrient-related efforts respond to EPA's push that something happen on nutrients, while the more methodical work on standards (above) continues.
- The data review and monitoring recommendations reflect interest in getting a better handle on nutrient levels in both main stem and tributaries. Also informed by recent NRC panel recommendation regarding a "Mississippi River Basin Water Quality Center" (as is work area 3 below) and Region 7 tributary monitoring proposal.
- The review of nutrient effects seeks to get at "local" problems resulting from nutrients, potentially providing a more regionally relevant perspective on the issue (vs. just Gulf hypoxia as a driver).

3. DATA GATHERING, REVIEW, ANALYSIS AND GAP IDENTIFICATION

Project Areas and Tasks[1]

a) Comprehensive UMR Water Quality Data Set
Building on previous work done by US EPA and the UMRCC, scope and create a framework for a cross-cutting UMR water quality data set that will incorporate data from multiple river programs and resources (UGSG, LTRMP, EMAP, states, etc.).

b) Gap and Data Sharing Obstacle Identification
As informed by the work above, identify data gaps and obstacles to data sharing between programs. Recommend enhancements and enhancements in UMR monitoring and data programs.

Rationale for Inclusion

- Responds to recommendations in 2007 and 2008 NRC panel reports regarding lack of comprehensive UMR water quality data sets/monitoring.
- Supports designated use and nutrient work as described above.
- Also, responds to CWA-Ecosystem Workshops recommendation regarding data sharing obstacles.

4. CROSS-PROGRAM COLLABORATION AND COORDINATION

Project Areas and Tasks[1]

Interface with other UMR and basin-focused programs, such as those administered by USACE and USDA, to present CWA-informed water quality perspectives, encourage the consideration of these perspectives in project design/selection, and seek shared goals for ecosystem health. Also, facilitate the participation of state CWA program staff in these discussions.

Rationale for Inclusion

- Continues collaborative work initiated the 2008 CWA-Ecosystem Restoration workshops and follows up on workshop recommendations.
- To the extent that project design/selection is informed by water quality needs, may meet "Green Infrastructure" goals of the stimulus package.

EPA Comment Response

Economic Benefit of the above project: Provides funding to UMRBA allowing the contractor to maintain existing staff or hire additional staff.

Total cost of proposed project: $45,000

The portion of Project 9 that is for the payment of annual dues for UMRBA is clearly ineligible under the above cited law and regulations. – The UMRBA due portion has been removed.

PROJECT FUNDING REQUEST

Date: March 16, 2009
Project Title: Lake St. Croix TMDL Implementation Plan and Plan Coordinator funding
Staff Requestee: Kathy Bartilson, Ken Schreiber, and Buzz Sorge
Proposed Funding Source: 604(b) Stimulus
Passthrough eligible?: Possibly: potential contract and funding partners: Minnesota Pollution Control Agency (MPCA); St. Croix County Planning and Zoning and Land Conservation Departments; St. Croix Basin Water Resources Planning Team; St. Croix River Association; or West Central or Northwest Regional Planning Commissions
Project time period (including completion of deliverables): October 1, 2009 through June 30, 2011.

Project Description:

Lake St. Croix is proposed for 303(d) listing by both Minnesota and Wisconsin. MPCA has hired a contractor to write a TMDL plan (basin-wide in both states), and is seeking funding for development of an Implementation Plan. Funding is being sought through this source to cover Wisconsin's share of the Implementation Plan development costs. The TMDL and Implementation Plan are needed to achieve the objectives of the St. Croix Nutrient Reduction Agreement to reduce phosphorus inputs to Lake St. Croix (signed by Wis. DNR and MPCA for both states in 2006).

Watershed Planning Support:

- Based on the TMDL report being developed by October of this year, develop and write an implementation plan that will achieve the Lake St. Croix TMDL goals.
- Amend the Area-wide Water Quality Management Plan to include the TMDL limits and goals.

End products: (see "Project deliverables for more details)

- Implementation plan written using DNR and EPA recommended elements and based on stakeholder input.
- Area-wide Water Quality Management Plan amendment.

Project Objective:

Nutrient addition is the number one threat to the St. Croix Basin and Lake St. Croix. Developing the TMDL Implementation plan will set the framework for imposing point and non-point controls to stop the eutrophication of Lake St. Croix, as well as improving the main stem, tributaries, and lakes within the basin in both Minnesota and Wisconsin.

Project Deliverables:

- Lake St. Croix TMDL Implementation Plan, developed with stakeholder input.
- Area-wide Water Quality Management Plan amendment.
- Mass cap limits for phosphorus to be placed in WPDES permits.
- Road map for achieving non-point source reductions needed to achieve the TMDL goals.

EPA Comment Response

Economic Benefit of the above project:

This project will help retain existing local planning staff for development of the TMDL implementation plan. Developing the Implementation Plan will help guide local planning agencies in getting projects on the landscape to reduce phosphorus inputs to the basin and work toward the TMDL reduction goal.

Total cost of proposed project: $40,000 for Implementation Plan ($20,000/year)

In particular we recommend the development of a project workplan. Also, are there any more details on partner funding?

Minnesota Pollution Control Agency is funding TMDL Development, and this funding proposal would dovetail with development of the Implementation plan. The local planning agency receiving the funding will provide support through administrative services (office space, etc). Other St. Croix Basin Water Resources Planning Team partner agencies will provide staff time to guide Implementation Plan development and technical review.

PROJECT FUNDING REQUEST

Date: 3/19/2009
Project Title: Lafayette County TMDL planning and assessment
Staff Requestee: Robert Hansis
Proposed Funding Source: 604(b) Stimulus
Passthrough eligible? Yes
Project time period (including completion of deliverables): Now through 6/30/2010

Project Description:

The project will support Lafayette County staff time and travel to complete on-farm assessments in the Silver Spring, Cherry Branch and Apple Branch sub-watersheds.

These streams are all impaired, and are included in the EPA-approved "Sediment – Impaired Streams in the Sugar-Pecatonica Basin" TMDL.

Implementation of the TMDL in these watersheds is identified as a work task in the county's Land and Water Resource Management Plan.

Work activities will include farm inventories to identify sediment source reduction to the level required by the TMDL. Individual field-level management practices will be identified to reach the prescribed sediment loss goals. Identification of funding sources will also be completed as part of the activities.

DNR will complete water quality monitoring in the streams to track water quality changes under existing monitoring protocols using separate funding sources.

Lafayette County will provide supervision, office space, vehicles and other tools needed to complete the project.

Project Objective:

Identify sediment sources in the identified sub-watersheds where sediment reduction is needed to meet TMDL-established goals.

Project Deliverables:

Identify sediment sources that are above the TMDL-established target.
Revise farm plans for the identified farms to meet the target.
Identify funding sources and other tools to help the producers reach the goals.

EPA Comment Response

Economic Benefit of the above project: Provides county with staff funding.

Total cost of proposed project: $10,000

PROJECT FUNDING REQUEST

Date: **3/31/09**
Project Title: **Black Earth Creek Monitoring and Analysis**
Staff Requestee: **Andy Morton**
Proposed Funding Source: **604(b) Stimulus**
Passthrough eligible? **Yes –Capitol Area Regional Planning Commission (CARPC)**
Project time period (including completion of deliverables): **12/2010**

Project Description:

Black Earth Creek Monitoring and Analysis – USEPA Comments

This project is a key component of a water quality monitoring and planning project designed to determine the impact that agricultural runoff is having on Black Earth Creek. The project includes a cooperative monitoring project that involves Dane County LCD, USGS, WDNR Fisheries, CARPC, WDNR Watershed Management, and support from Partner Organizations such as the Black Earth Creek Watershed Association.

The principal needs that the monitoring will address include identification of water chemistry conditions that may be limiting trout populations. A determination will be made regarding the feasibility of establishing an alert system that would use real-time water chemistry parameters to indicate when stream conditions may potentially induce a fish kill. This alert system would notify the WDNR and other organizations to activate management plans to reduce the impact on the fisheries resource.

This project funds collection and analysis of water quality data sondes at two locations along BEC to help identify areas of water chemistry changes. These sites would use regressions to estimate the discharge (non-published) between the site locations and the active stream gages located on BEC. Manual EWI samples will be collected during base flow and periods of storm runoff. These samples will be used in the development of the regression analyses to predict real-time constituent concentrations from the water quality sonde data and water quality samples.

The funds are intended to be used for equipment, gage stations, and analysis by USGS. The results of this work will be used in a subsequent Phase two effort, to be conducted four to six years in the future, to conduct comprehensive watershed planning, including all land uses in the watershed with the goal of preserving and restoring a healthy aquatic ecosystem for Black Earth Creek. This is a key component of areawide water resources management planning for the area. The information from the current project will be tied in with other ground and surface water modeling work conducted in the watershed by the USGS, and used to estimate pollutant loading from specific land uses in the watershed, set goals, identify load reductions and establish habitat protection measures and strategies as part of an overall comprehensive watershed management plan supported and implemented by all the various stakeholders and groups in the watershed."

Reporting of monitoring

Estimated Project Cost: $30,000 for monitoring, data analysis, and modeling.

Project Deliverables: Project report with recommended alternatives including monitoring data and analysis results

EPA Comment Response

Economic Benefit of the above project: There has been a tremendous investment in the enhancement and protection of these resources in terms of land acquisition, habitat protection and local/private protection efforts since the 1950s when fishery management began on this stream. The value of resource protection efforts go well into the millions. For the priority watershed project that took place in the 1990s on this stream the private and public funding spent on nonpoint source controls was approximately $1,500.000.

Total cost of proposed project: $30,000

In the work plan please include information on whether other potential factors affecting the trout population such as habitat were considered; and was an analysis done to look at potential or likely water quality stressors in the watershed and how those stressors can be linked to the information obtained from continuous monitoring probes?

Much of the stream has had extensive habitat work implemented as part of a nonpoint source priority watershed project. Potential water quality stressors such as runoff from liquid manure, land-spread manure, and other forms of nonpoint source pollution, will be analyzed and to the extent possible linked to the information obtained from the monitoring devices.

CARPC, the recipient agency, refers to the Capital Area Regional Planning Commission, which is the contract agency for development and oversight of the Dane County Areawide Water Quality Management Plan.

Please note that this would be an excellent project to include a discussion on some of the expected economic benefits from this grant.

The expected economic benefits – that of protecting and security long-term viability of the trout fishery and healthy aquatic communities -- are tremendous. This area of the state is well known for its high quality fishery and atypically serene quality of life within close proximity to a major university and the state capital. The economic benefits of protecting and maintaining this resource, as well as the prevention of legal action at the local or state level, are large.

PROJECT FUNDING REQUEST

Date: **3/18/09**
Project Title: **Clark Creek Water Quality and Management Project**
Staff Requestee: **Andy Morton**
Proposed Funding Source: **604(b) Stimulus**
Passthrough eligible? **Yes--Sauk County has agreed to accept this project (in cooperation with WDNR and the Town of Greenfield)**
Project time period (including completion of deliverables): **12/2010**

Project Description:

Clark Creek is a tributary of the Baraboo River located in the Town of Greenfield, Sauk County. The stream is typical of streams that drain the Baraboo Range in that it has very good water quality and actually supports a population of wild Brook Trout.

Hydrologic conditions and stream geomorphology have been radically altered as a result of the flooding of 2008. Sedimentation has greatly impacted habitat in the stream channel and there is a need for a comprehensive planning effort which would guide restoration efforts. The flow dynamics, stream geomorphology, chemical parameters, and biological indices need to be assessed and recommendations developed in conjuction with a comprehensive watershed assessment and planning report. Planning efforts and documentation would emphasize sustainable a sustainable management process that focuses on enhancing water quality, habitat restoration, and floodplain/riparian cooridoor management.

In June of 2008, storm water run-off from heavy rains deposited four to five feet of sediment in the channel and the floodplain of this reach of Clark Creek. The base flow is flowing on top of the deposited sediment, which saturates the sediment deposits and causes hydrostatic pressures on the basement walls of the residences. Also, since the floodway is full of sediment, there is no flood conveyance capacity for this reach of Clark Creek.

Project Cooperators/Partners

This project will be coordinated by the Clark Creek Watershed Group, which is comprised of local, state, and federal units of government and local organizations. These groups are listed below:

Wisconsin Department of Natural Resources
Wisconsin Department of Transportation
Town of Greenfield
Sauk County Land Conservation Department
Natural Resources and Conservation Service
Sauk County Emergency Management

This work group which has been meeting on a regular basis, would serves to coordinate this study. Sauk County could serve to administer the funding.

Project Outline

1. **Watershed Assessment and Monitoring** In conjuction with the watershed project committee a watershed assessment and monitoring effort will be conducted and to determine and pinpoint problem areas with regard to sedimentation and habitat impairment. Included in this assessment will be a hydorologic and geomorphological analyis. ***Time Period: 4 months***

2. **Develop and Evaluate Feasibility of a Range of Planning Recommendations and Restoration Alternatives** This will focus on sustainable habitat restoration alternatives that

emphasize water quality improvements and sustainability and recognize changing hydrologic, flow and climatic changes. ***Time Period: 4 months***

3. **Facilitation and Coordination of Planning Recommendations** Once a set of water quality/resource management alternatives have been developed, the project committee will then work with local entities to review and develop a course of implementation for those alternatives. These recommendations would be incorporated into the WDNR Basin Plan, the Sauk County Land and Water Plan, and local planning documents. ***Time Period 2 months***

4. **Outreach and Education** After planning recommendations have been developed and adopted. An outreach and education effort will be implemented to carry out the recommendations of the project. ***Time Period 2 Months***

Project Objective:

Project Deliverables: Water quality and resource assessment including flow, hydrology, geomorphology, chemistry, habitat and biotic indicies. Report with water resource planning recommendations.

EPA Comment Response

Economic Benefit of the above project:

Repeated flooding of this area has damaged infrastructure (roads) and residences several times over last two decades. Identifying cost effective hydrologic mitigation measures will result in large savings in terms of dealing more effectively with future flooding events. These future savings are estimated to be well in excess of $100,000 based on the damage to structures and public infrastructure that occurred in past events.

Total cost of proposed project: $30,000

PROJECT FUNDING REQUEST

Date: March 20, 2009
Project Title: Willow Creek Comprehensive Watershed Protection & Improvement Plan
Staff Requestee: Vic Pappas
Proposed Funding Source: 604(b) Stimulus
Passthrough eligible? Sheboygan River Basin Partnership (a 501© 3)
Project time period (including completion of deliverables): April, 2010 (or sooner)

Project Description:

Description of Project Area

Willow Creek is considered a remnant coastal resource that includes documented reproducing anadromous salmonid populations within a rapidly urbanizing region of east-central Wisconsin. The WDNR has completed baseline monitoring in Willow Creek from 2002-2005 observed brook & brown trout, juvenile and adult coho salmon, chinook salmon, and steelhead along with other pollution intolerant species. These findings have sparked public interest and a need to further assess the aquatic habitat/watershed features and inform/educate the public of the importance of this resource.

Willow Creek is located in the Sheboygan River Watershed. It is an approximately 5-mile long waterway with a mix of agricultural, urban, and undeveloped land uses crossing five municipal boundaries, including: 1) City of Sheboygan, 2) Town of Sheboygan, 3) Village of Kohler, 4) City of Sheboygan Falls, and 5) Town of Sheboygan Falls. Today, the single largest threat facing Willow Creek is development. For the past several years, the local units of government have approved plans to develop parts of the watershed including lands adjacent to Willow Creek. They are considering new site developments and annexation of additional land to support residential and commercial developments. Proposed land use changes, loss of riparian habitat, and changes in the hydrologic flow regime within the watershed could have a significant impact on the water quality and stream habitat, which could impact the ability of Willow Creek to support natural salmonid reproduction in the future.

Since February 2005, the Sheboygan River Basin Partnership volunteers have organized a community-based initiative in partnership with the County and WDNR biologists to address watershed issues associated with Willow Creek. SRBP efforts have accomplished numerous initial team building and public awareness tasks, including:

- Created a strategic plan to promote land use practices that will protect the Willow Creek watershed from urbanization. The SRBP's Mission Statement reads ***"Maintain or enhance baseline water quality and habitat conditions within the Willow Creek watershed using a community-based approach."***
- Created GIS maps showing aerial photography, watershed boundary, parcels, surface waters, wetlands, representative landscape photographs, and political boundaries.
- Developed a database of landowner information within the watershed.
- Met with landowners with large holdings within the watershed.
- Met with the Village of Kohler Planning Commission and the Town of Sheboygan Town Board to educate officials regarding ecological significance of Willow Creek and form an alliance with SRBP.
- Completed 2 informational mailings updating landowners of stream data and land use issues.
- Completed 2 Public Informational Meetings.
- Conducted stakeholder meetings with municipal leaders
- Developed partnerships with local conservation groups (Trout Unlimited and Sheboygan County Conservation Association).
- Completed a Willow Creek Fact Sheet and Newsletter.
- Promoted public awareness through two press releases.
- Received media attention via several newspaper articles (Sheboygan Press and Plymouth Review).
- Completed and distributed a tri-fold brochure on Willow Creek
- Completed a watershed monitoring program and report
- Collected additional fishery data with partners and worked with DNR staff to designate the lower portions of Willow Creek as an official class II trout stream.

Project Objective:

Today, the single largest threat facing Willow Creek is development. Previous development in the watershed has degraded the stream through channelization, stream diversion, increase in impervious area, diversion of groundwater springs, installation of culverts and lengthy stream enclosures, loss of in-stream cover and streambank vegetation, reduced water quality, diminished base flow and degraded habitat. Although future growth in the watershed is inevitable, many of the associated watershed impacts can be minimized or avoided through a better understanding of the baseline conditions and communication of this information to local decision makers and regulators.

The best way to direct stream restoration activities and protection in Willow Creek should include habitat assessment, understanding stream hydrology and potential pollution sources that impair water chemistry and how they relate to the watershed land use. The impact of current and future land use on water quality conditions in Willow Creek are not well understood. Therefore, planning needs to be completed to help guide the types of BMP's and management policies that will be needed to preserve and restore water quality and habitat in the watershed. The watershed plan can identify types of restoration and stream improvement projects that could be implemented.

The purpose of this project is to implement portions of a Willow Creek Comprehensive Watershed Protection and Stream Improvement Plan. The objective is to bring together the stakeholders to develop a comprehensive watershed plan for Willow Creek. Funds sought under this planning grant would assist in the development of data, maps and recommended BMP's which would be used to preserve and enhance habitat, hydrology, water quality, and the biological integrity of Willow Creek within a set of recommendations within a final plan. It is anticipated that DNR FTE staff and SRBP volunteer time would also be utilized for some tasks identified for this watershed planning project.

Project Deliverables

Task 1	Data Collection – soils, land use, topo, aerial, use of approved municipal stormwater plans, floodplain maps, H&H studies – 4 weeks	$2,500
2	Compile GIS Base Maps – 2 weeks	$4,000
3	Delineate planning drainage basins & sub-basins – 3 weeks	$3,000
4	Hydrologic and hydraulic modeling to establish peak discharge, runoff volumes, in-stream flow velocities – 3 weeks	$5,500
5	Estimate sediment loadings – 3 weeks	$4,000
6	Stakeholder Planning Meetings (3) – 9 months	$4,000
7	Development of Management Alternatives – 3 weeks	$4,000
8	Stakeholder Meeting Rank and Prioritize Alternatives – 2 weeks	$700
9	Finalize Recommendations and Costs – 2 weeks	$4,000
	TOTAL COST	**$31,700**

EPA Comment Response

The Willow Creek Comprehensive Watershed Protection & Improvement Plan is projected to give employment to a number of professional engineers, scientists and technicians during the four-month duration of the project. More significantly, additional construction jobs are anticipated to be created to implement the recommendations of this project. These projects will lead to long term jobs to be created and retained by the expanded recreational opportunities focusing on the trout and salmon in Willow Creek. The recreation economy of the region, is already well known for its golf, and Lake Michigan fishing. Recreation jobs are becoming more important in light of the many manufacturing jobs that have been lost throughout the county due to the plant cutbacks and closures.

PROJECT FUNDING REQUEST

Date: 3/19/2009
Project Title: Spring Creek daylighting / restoration planning, Village of Sussex, Waukesha County
Staff Requestee: Jim D'Antuono
Proposed Funding Source: 604(b) Stimulus
Passthrough eligible? no
Project time period (including completion of deliverables): 24 months

Project Description:

Planning and study of culvert removals and stream restoration of an impaired waterway, Spring Creek, in the Village of Sussex. Pre-project assessment of stormwater and stream flow in this culverted stream based on the removal of man-made culvert and stream barriers and restoration of a normal run, riffle, pool system; planning including assessment of water quality improvements for this particular system for the direct drainage area, necessary stabilization and habitat restoration efforts, time frame for removal, public buy-in and participation of the project. Study of a suburban stream's natural ability to capture and treat urban runoff as compared to a man-made stormwater system via in-stream nutrient uptake and sediment transport and incorporation into stream bed and banks.

Estimated Project Budget (areas shaded in grey will be completed by admin):

Expenditure Category	Amount	Comments
LTE Hours		
Fringe (will be calculated by Admin)		
Travel		
Supplies & Services		
Contractual	36,000	Plan & study
Total Direct (calculated by admin)		
Indirect (calculated by admin)		
Total Project Budget (calculated by admin)		
Match Required?		

Project Objective:

Develop a strategy to remove man-made barriers to this waterway and restore a natural stream flow pattern. Collect data to be used in a study on the water quality benefits and treatment of urban pollutants through restoration of natural stream segments in suburban areas, including the capacity for mitigating urban runoff impacts, through:

- more evenly-dispersed flow through natural meanders and in-stream vegetation during storm events as compared to piped systems;
- nutrient uptake by in-stream and nearby vegetation;
- incorporation of sediment into restored streambed;
- transport of "normal" amounts of sediment downstream, as compared to excessive scouring of streambed due to current "flashy" type of system
- evaporation and infiltration of runoff throughout the drainage area, rather than depositing excess water in the downstream reaches of the basin
- temperature stabilization

Project Deliverables:

A detailed plan describing the strategy for removing artificial barriers to the stream system which could be adopted by local units of government, to be used for development of infrastructure and downtown re-development planning. Recommendations from this plan could be adopted by other communities with similar stream obstacles.
The study would determine if there is a water quality benefit to daylighting and restoring other stream segments in semi-urban communities by allowing runoff to be treated by the natural ecosystem, as opposed to directing water away to the nearest downstream surface water. Other previous studies around the country have primarily focused on the habitat values of daylighting projects, as opposed to water quality improvements. Results of this study could be considered in deciding other water quality projects to implement in the region.

EPA Comment Responses:

Economic Benefit of the above project:

Spring Creek flows through a portion of downtown Sussex that Village officials plan to revitalize. Current plans for this area include redeveloping under-utilized properties and introducing more mixed-use development, focusing on the historic and recreational features in the area, including an existing recreational trail and Spring Creek. This rehabilitated downtown atmosphere would offer new opportunities for businesses in an attractive, open-air setting designed to bring consumers in.

Other communities could use the results of this project when considering options for rehabilitating districts or neighborhoods, or for cost-benefit analyses of future stormwater quality facilities.

Total cost of proposed project: $36,000

Projects involving construction activities are not eligible for 604(b) grants. The removal of the culvert including the ripping up concrete, stabilization measures and vegetative restoration would also not appear to be eligible activities. However, pre-project assessment and stream study would appear to be eligible activities.

Revise scope of work to include eligible activities and re-budget project. Scope has been revised.

PROJECT FUNDING REQUEST

Date: March 16, 2009
Project Title: Lake Mallalieu/Willow River TMDL Implementation Plan development
Staff Requestee: Kathy Bartilson, Buzz Sorge, and Ken Schreiber
Proposed Funding Source: 604(b) Stimulus
Pass through eligible? Yes, a local planning agency or St. Croix County
Project time period (including completion of deliverables): October 2009 through September 2010 (one year). The work could be done the following year if year 1 of the funding cycle is over-subscribed.

Project Description:

A TMDL is currently being prepared for Lake Mallalieu in St. Croix County. This lake is impaired due to eutrophication from historic and present phosphorus inputs. Following TMDL report completion this summer, an Implementation Plan will be developed. This proposal requests funding for a contractor to draft the Implementation Plan and amend the Area-wide Water Quality Management Plan (both with stakeholder input).

Watershed Planning Support:

- Based on the TMDL report being developed this year, amend the Area-wide Water Quality Management Plan to implement TMDL water quality goals and limits.
- Develop and write an implementation plan to outline the process for improving Lake Mallalieu and the Willow River that incorporates the TMDL goals.
- Update information on the Willow River watershed in Department water quality planning databases (SWIMS, WATERS).
- Coordinate work activities and stakeholder input with the Lake St. Croix TMDL and Implementation Plan development (the Willow River watershed is a "nested TMDL" in the Lake St. Croix TMDL). Phosphorus reduction measures in the Willow River will be implemented in concert with those for the downstream Lake St. Croix.

End products: (see "Project deliverables for more details)

- Implementation plan written using DNR and EPA recommended elements and based on stakeholder input.
- Timeline and process for implementing point source mass cap limits and non-point source phosphorus reduction goals and best management practices.
- Amended Area-wide Water Quality Management Plan.

Project Objective:

Complete a TMDL Implementation Plan for the Willow River and Lake Mallalieu. This plan will outline a framework for implementing point and non-point source controls in the watershed that will reverse eutrophication of the lake and the Willow River. Using information gathered from previous monitoring in the watershed, DNR water quality planning databases will be updated for the Willow. The Area-wide Water Quality Management Plan will also be amended to include the Willow River water quality goals and limits.

Project Deliverables:

- Area-wide Water Quality Plan amendment that implements the Willow River TMDL goals and loading limits.
- Lake Mallalieu TMDL Implementation Plan developed with stakeholder input.
- Mass cap limits for phosphorus to be incorporated in WPDES permits.
- Road map for achieving non-point source reductions needed to achieve the TMDL goals.
- Updated DNR basin planning databases for the Willow River watershed.

EPA Comment Response

Economic Benefit of the above project: Provides county with funding to retain existing planning staff.

Total cost of proposed project: $25,500

Under "End products" please identify the reference for the EPA recommended elements referred to in the first bullet.
- The EPA elements referenced are EPA's 9 key elements for watershed-based planning taken directly from the federal register for the Section 319 Program.

Under "Project Deliverables" please confirm that monitoring and evaluation planning elements will be included as part of the implementation plan.
- Monitoring and evaluation for the Lake Mallalieu/Willow River TMDL is being pursued by an alternative funding source.

Project Funding Request

Date: March 25, 2009
Project Title: Brown County LCD TMDL Implementation Planning
Staff and Management Requester: Nicole Richmond
Proposed Funding Source: 604(b) Pass-through
Project time period (including completion of deliverables): Sept 1, 2009- Sept 31, 2010

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

This proposal will help County staff implement actions related to the Clean Water Act and DNR's targeted performance standards for nonpoint source pollution. A TMDL is in development for the Lower Fox River Basin and a cost optimization framework is being developed for Plum and East River Watersheds. This modeling will help determine the most cost effective pollutant control measures for these watersheds. These monies will be used by Brown County Land Conservation Department to evaluate these management practices and further plans toward targeted performance measures for these watersheds, to determine what is needed to meet load allocations determined by the TMDL.

Project Objective: Support of Targeted Performance Standards & TMDL Implementation in Brown County

Project Deliverables:
County Staff would:

- Gather data from farmers including detailed information from Nutrient Management Plans, in particular, in the Plum and East River Watersheds in Brown County.
- Use part of the grant to collect supplemental data for fields that do not have soil tests.
- Input appropriate data into SNAP-Plus.
- Create a GIS map displaying PI values for targeting resources to reduce phosphorus loading in the Plum and East River Watersheds as part of planning for Lower Fox River TMDL Implementation.

EPA Comment Response

Economic Benefit of the above project: **This project will provide funding for the County to focus efforts on planning for water quality improvements, while. This will free up other staff time to work on other priorities. This is a project that would not be completed if there wasn't supplemental funding.**

Total cost of proposed project**: $40,000**

In the workplan please include information on where other potential factors affecting the trout population such as habitat considered? Was an analysis done to look at potential or likely water quality stressors in the watershed and how those stressors can be linked to the information obtained from continuous monitoring probes? What deliverable will include the identification of actions needed to meet TMDL load allocations?

This comment is not applicable to the project, since this is not a listed Trout stream in Wisconsin. However, the work done in these watersheds will provide WDNR with crucial information to create targeted performance standards (Phosphorus Index) needed for nonpoint source controls to meet the phosphorus load allocations expressed in the Lower Fox River TMDL for these two watersheds.

Project Funding Request

Date: 4/1/09
Project Title: Supplemental Funds for Water Quality Planning in Designated Management Areas
Staff and Management Requester: Lisa Helmuth
Proposed Funding Source: 604(b)
Project time period (including completion of deliverables):

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

This project provides supplemental funding for two of the four agencies that provide Water Quality Management Planning services for designated planning areas due to recent reductions in pass through funds from the economic recession. Both the Southeast Wisconsin Regional Planning Agency (SEWRPC) and the Capital Area Regional Planning Commission (CARPC) have experienced declines in pass through allocations over the past three years due to reductions in federal pass through funds. These two agencies will receive allocations sufficient to maintain quality services for local planning activities including sewer service area planning; lake, stream, and groundwater planning support; facility and collection system planning support to local governments; stormwater impact analysis and planning support; and related activities.

Estimated Project Budget (areas shaded in grey will be completed by admin):
Contractual: $92,760 - Southeastern Wisconsin Regional Planning Commission, Capital Area Regional Planning Commission, Brown County Planning Commission and East Central Regional Planning Commission.

Project Objective: Maintain existing service quality and quantity in designated planning areas that have experienced significant declines in pass-through funding under the Local Water Quality Planning Aids Program.

Project Deliverables:

Support existing designated area Water Quality Planning Program activities, including: wastewater systems planning, urban service area and environmental corridor delineations, regional groundwater modeling support, and related water quality planning activities. These activities may extend to support of subcontract work for modeling, stormwater planning, environmental corridor delineations, and related work.

EPA Comment Response

Economic Benefit of the above project:
Key staff and contractors will be retained if these funds are provided to the regional planning agencies and the county/local planning departments.

Total cost of proposed project: (see spreadsheet)

Title	Description	Cost
CARPC - Yahara Clean – Coordinator Position – *see scope of work below.*	Coordinate multi-agency watershed initiative to restore, protect, and maintain Yahara Watershed.	$27,120*
CARPC - Black Earth Creek Monitoring and Analysis Study - *see Project #12*	Data collection in sensitive Black Earth Creek Watershed, Cold I trout stream with growing watershed development pressures.	$30,000*
CARPC- Dane County WQM Plan - *Appendix B Update below*	Update Monitoring and Planning section	$30,000
SEWRPC Water Quality Management Planning Updates –	Expedite updates for additional urban service areas with intense development pressures.	$40,000
SEWRPC -- SWEET Water Trust – *see project scope below.*	Work with partner agencies and organizations to facilitate restoration of Southeast Wisconsin waters.	$20,000*
East Central Regional Planning Commission (ECRPC) - *see scope of work below*	Update Urban Service Area Maps	$12,760
Brown County Planning Commission (BCPC) – *see scope of work below*	Update Urban Service Area Maps	$10,000
Total		

Capital Area Regional Planning Commission

Yahara CLEAN needs a project coordinator to facilitate the many aspects of this monumental partnership. Yahara CLEAN is an MOU signed by Dane County, Madison, DATCP and DNR to assess/define actions to deal with the nutrient, sediment and bacteria issues in the Yahara Lakes system – essentially a TMDL. The project has grown into a partnership to include 3 separate initiatives to improve the Yahara Lakes - Yahara CLEAN MOU, a Clean Wisconsin/Gathering Waters project funded by Madison Community Foundation, and a Madison initiative. A secondary purpose of the partnership is to provide a long-term framework for an alliance of public and private stakeholders to continue lake water quality improvement efforts.

Currently, Yahara CLEAN and the partnership are functioning as a voluntary board who share administrative and coordination duties of several parallel workgroups meeting regularly.. The partnership's workload has been steadily increasing and shortly the demands will outstrip the ability of the volunteer members' time and resources. This situation cannot be allowed to occur if the MOU goals and the broader goals of the partnership are to be met. The key duties of this position are as follows:

1. **Task Management** - Help manage task schedule/ implementation by committees, volunteers, & consultants; Oversee a centralized work plan; Support & encourage task leaders, Maintain repository of both interim & final data, documents, files
2. **Committee and Team Support** - Monitor progress/benchmark achievements, document committee outcomes & provide necessary support; Responsible for meeting agendas, minutes & tasks assigned to members
3. **Fiscal Management** - Track & pursue funding opportunities (including, but not limited to grants), Help manage project budgets & contracts
4. **Communications and public relations** - Maintain internal & external communications plan/structure, internal decision-making & communications protocols; Communicate & build relationships w/ political officials, managers, & organizational leadership; Manage & implement external communications & public relations; Oversee website maintenance;
5. **Partnerships and collaborations** - Track & identify opportunities for partnerships & collaborations; Maintain partnerships & relationships between stakeholders & external contributors

Project Objective:

To create a "TMDL" assessment and implementation plan to improve water quality for the Yahara Lakes system decreasing sediment and nutrients and decreasing beach bacteria.

Deliverables:

- An assessment and implementation plan for the Yahara Lakes system for nutrients and sediment.
- Recommended implementation partnership organization
- Partnership website to communicate with the public.

Capital Area Regional Planning Commission

WQM Plan Appendix B: WQ conditions and trends update - $30,000

Dane County Water Quality Management Plan - Appendix B (Dane County Water Quality Conditions and Trends -- last updated 2002) and expand it to include needed monitoring and needed advanced planning for potential changes (such as climate change, agricultural manure reuse, plant-based alternative energy production, aquatic habitat impact of land use change (as in increased imperviousness), etc.).

Southeastern WI Regional Planning Commission
Sweet Water Trust - Watershed Planning and Implementation 604(b)

Date: April 6, 2009
Project Title: Southeastern Wisconsin Watersheds Trust (SWWT)
Staff Requestee: Sharon L. Gayan, Milwaukee River Basin Supervisor
Proposed Funding Source: 604(b) Stimulus
Passthrough eligible? Yes, the grant would be issued to the Southeastern Wisconsin Regional Planning Commission or to MMSD as a pass through to the SWWT consultant.
Project time period (including completion of deliverables): June 2009 through June 2010

The Southeastern Wisconsin Watersheds Trust (SWWT) currently is developing Watershed Restoration Plans (WRP) for the Kinnickinnic River. The focus of this plan will be to compute the pollutant loads to the waterway and then develop a suite of best management practices that can be used to reduce those loads. Using this plan and the existing water quality monitoring data, improvements will be quantified.

Additionally, the Milwaukee Metropolitan Sewerage District (MMSD) is developing a flood management plan for the Kinnickinnic River. This plan will determine where existing flooding is occurring. Flood management approaches will be developed that address this flooding and will address the impacts of removing the concrete lining to the channel.

The Southeastern Regional Planning Commission would work with SWWT to use the 604(b) funding to do some targeted modeling of two subwatersheds of the Kinnickinnic River: Villa Mann Creek and Holmes Avenue Creek. These two subwatersheds will provide a good understanding of the impacts stormwater best management practices (also known as green infrastructure) might have on the quantity and quality of water in the Kinnickinnic River. The modeling would simulate the benefits of "blanketing" the subwatersheds with bioswales, rain gardens, rain barrels, and green roofs. If benefits are found through this analysis, SWWT members would then have a roadmap for implementation.

Estimated Project Budget : $20,000

Project Objective: The Southeastern Wisconsin Regional Planning Commission would pass through the 604 (b) funding to the consultant doing the Kinnickinnic River Watershed Restoration Plan for the Southeastern Wisconsin Watersheds Trust (SWWT). The consultant would also provide the information to Milwaukee Metropolitan Sewerage District to incorporate into their Kinnickinnic River Watercourse Flood Control Study.

1) To integrate the use of non-structural best management practices widely known as green infrastructure into the planning and implementation process of the Kinnickinnic Watershed Restoration Plan (WRP) process for two subwatershed: *Villa Mann Creek and Holmes Avenue Creek.*
2) To model using the "blanket approach" of green infrastructure for the two subwatersheds showing where implementation of practices would benefit water quality and quantity in the stream.
3) To integrate the use of green infrastructure practices into the Kinnickinnic Watercourse Flood Study for the two subwatersheds.
4) To identify ***areas*** in the two watersheds where the "blanketing" approach of green infrastructure would benefit water quality and water quantity goals.

Project Deliverables:

1) Completion of the green infrastructure practices "blanketing" modeling *results* for Villa Mann and Holmes Avenue Creek subwatersheds.
2) Incorporation of the green infrastructure practices "blanketing" modeling results into both the Kinnickinnic River WRP and the Kinnickinnic River Watercourse Study
3) Identification of green infrastructure practices by area in each of the subwatersheds that show the greatest water quality and water quantity benefit for the stream
4) Summarize results in a report on the effectiveness of using a blanket green infrastructure practices approach.
5) Recommend a green infrastructure pilot project (if benefits are found through this analysis) to the Southeastern Wisconsin Watershed Trust for implementation.

East Central Regional Planning Commission

Groundwater Recharge Area Identification

Project Summary/Intent: East Central staff will work in conjunction with the Wisconsin Geologic & Natural History Survey (WGNHS) to begin the preparation of groundwater recharge GIS mapping for our 7 member Counties (of which only one does not have a formal "208" Water Quality Management (SSA) Plan). This project will ultimately utilize the WGNHS's new 'Soil/Water Balance Model' which was utilized recently in an examination of the Southeast Wisconsin Regional Planning Commission's geographic area with relatively high confidence. East Central staff would dedicate approximately 130-150 hours toward this effort for the purpose of GIS data collection, creation, and manipulation in order to prepare it for use in the Soil/Water Balance Model. Refinements to East Central's current land use inventory and classification scheme alone will require some considerable hours of staff time. Staff attendance and participation at meetings with WGNHS staff and local elected officials will also occur during the balance of 2009 to coordinate the effort and to provide input during the application of the Model. The final product(s) for this project will ultimately include hardcopy maps and digital GIS data for the region which outlines areas of land that have a high probability of functioning as groundwater recharge areas.

The development of this project will serve to improve the awareness of, and protection for, aquifer recharge areas throughout the region. Moreover, this data, once completed, will enhance the ability of our staff to effectively identify and communicate issues and protection alternatives for sensitive resources within/around communities affected by an SSA plan. This in turn, will increase the likelihood that new local and regional policies will be developed that better protect our groundwater resources.

Staff Allocations to Project: The following staff will work on various aspects of the proposed project:
Eric Fowle, Executive Director
Trish Nau, GIS Coordinator
Todd Verboomen, SSA Planner
Joe Huffman, SSA Planner/GIS

Project Budget: Total $12,760 (no matching funds required)

Project Timeframe: July 1, 2009 - June 30, 2010

Brown County Regional Planning Commission

Brown County proposes a pilot project to obtain color infrared imagery (CIR) to expand of resources used to identify wetlands in the County. Project costs have increased since our original correspondence in November 2009. Infrared technology will be used to highlight those areas which are thought to be wetlands. Obtained CIR will be utilized to increase efficiencies in current Sewer Service Area (SSA) planning efforts undertaken in Brown County.
Since this is a pilot study, Brown County staff will verify the accuracy of the CIR photography through on-site field visits at randomly selected wetland sites.
The project is needed for several reasons. First, this project will serve as an additional database to be used in conjunction with the existing Wisconsin Wetland Inventory was created in 1978. Updated CIR will allow Brown County to complete several projects. The CIR will allow developers, local officials, and county staff access to more precise information on the location of wetland boundaries. CIR imagery would be utilized in the decennial land use inventory which Brown County will conduct in 2010. Additionally, the data will be utilized to evaluate the long-term effectiveness of SSA planning in protecting wetlands and other ESAs. The creation of CIR will increase data sharing efficiencies between Brown County and the Wisconsin Department of Natural Resources. Finally, the data will potentially be used in future updates of the Brown County Sewage Plan in 2012.

Project Budget: Total $10,000