

DATE: October 16, 2009

TO: Rock River Recovery Steering Committee

FROM: James Congdon, Project Leader

SUBJECT: Rock River Recovery Plan

First, please note that the planning team has chosen to use the title "Rock River Recovery Plan" rather than TMDL Implementation Plan for our planning effort. We feel that "Rock River Recovery Plan" has a more positive, friendly and less regulatory tone. If the term TMDL is used, then one must always explain what a TMDL is. Secondly, a TMDL is the modeling process to estimate wasteload reduction necessary to achieve water quality standards and assign wasteload allocations to sources of pollutants. A TMDL is only one step, an important one, but only one step in a process to restore water quality and remove waters from the Impaired Waters List. The recovery plan is the entire process of achieving restoration of water quality in the Rock River Basin.

The Rock River Recovery Planning Team is requesting that the Steering Committee approve the plan outlined below for initiating a process to develop a plan/strategy for restoring water quality in the Rock River Basin (Implementing the Rock River Basin TMDL).

A Rock River TMDL implementation planning internal kick-off meeting was held on October 16, 2008. At that meeting it was recommended that a Steering Committee be appointed to provide guidance and oversight of the implementation planning process. In subsequent discussions it was recommended that the Steering Committee membership should include Russ Rasmussen (WT Bureau Director), Ken Johnson (SCR Water Leader), Charles Verhoevan (NER Water Leader), Jim McNelly (SER Water Leader), Jim Congdon (Upper Rock Watershed Supervisor.), Sue Josheff (Lower Rock Watershed Supervisor.), Jim D'Antuono (Illinois Fox Watershed Supervisor.) and Rob McLennan (Lower Fox Watershed Supervisor.). It is recommended that Gordon Stevenson (Runoff Management Section Chief), Susan Sylvester (WPDES Permits Section Chief), Tom Mугan (Wastewater Section Chief) and Bob Masnado (Water Evaluation Section Chief) serve as advisors to the Steering Committee.

The role of the Steering Committee is to provide overall direction and approval for the process and activities planned by the Implementation Planning Team. The Steering Committee will serve as the final decision maker on policy, budget, implementation process and method, staff time allotments and serve as link to Secretary's office or Natural Resource Board as necessary

Rock River Recovery Planning Team

At the October, 2008 meeting, the South Central Region was assigned the lead role to develop a plan for implementation of the TMDL. The following team has been appointed to begin development of a plan to implement the TMDL:

Project Leader --Jim Congdon, Upper Rock Watershed Supervisor.
Asst. Project Leader --Dan Heim, Water Resources Management Specialist

Technical Sector Teams:

- Agriculture Sector Team Leader --Corinne Billings, Water Resources Management Specialist, CO
- Urban Stormwater Sector Team Leader--Eric Rortvedt, Stormwater Engineer, SCR
- Municipal and Industrial Wastewater Sector Team Leader--Jackie Fratrack, Wastewater Engineer, SER
- Communication/Outreach Team Leader --Suzanne Wade, UWEX Basin Educator
- Assessment Team Leader --Dan Heim, Water Resources Management Specialist, SCR

Support:

- Kevin Kirsch—Rock River TMDL Coordinator—technical advice
- Suzanne Wade—UWEX Basin Educator—facilitation assistance
- Joleen Henneman—UWEX TMDL Assistant
- Stephan Warrner—UWEX TMDL Assistant

Planning Team Charge:

Develop a practical plan/strategy to achieve the pollutant load reductions set forth in the Rock River Basin TMDL which considers feasibility and cost-effectiveness. The primary objective of the plan is to restore surface water quality in the Rock River Basin; however, the plan recommendations should be mindful of additional environmental benefits/negative impacts to groundwater, wildlife habitat and air quality that may result from practices that are implemented.

Planning Team Responsibilities:

- Interface with the Steering Committee
- Develop process and strategy for creation of the Implementation Plan.
- Provide resources, assistance, coordination and oversight for the technical sector teams
- Host TMDL 101
- Assist with public outreach for draft TMDL public informational hearing and roll-out
- Conduct public outreach to seek broad stakeholder involvement during plan development process
- Author, edit and publish the implementation plan

Recommendations for Conducting a Public Participation Process to Develop a Water Quality Recovery Plan

The Recovery Planning Team's goal is to develop and conduct a planning process that: 1) is open and welcoming to public participation, and 2) will accomplish water quality recovery. We believe this can be achieved by the planning process outlined below.

Timeline for Recovery Plan Development:

- Two months before TMDL public informational hearing hold a "TMDL 101" meeting. The TMDL 101 meeting is an informational meeting/kickoff of process to appoint technical sector team members. Prospective sector team members and important stakeholder group representatives will be invited to this informational meeting to explain the TMDL implementation planning process. Invitations to the TMDL 101 meeting will be mailed one month before

meeting date. Each sector team leader has an assignment to develop a recommended invitation list of prospective team members.

- Appoint Sector Team members prior to the draft TMDL public informational hearing date so that they can review the draft TMDL and attend the hearing
- Hold DNR staff informational meetings or communications prior to the draft TMDL public informational hearing
- EPA approval of TMDL
- The Rock River Basin TMDL development is scheduled for completion and approval by USEPA by March, 2010
- Implementation Plan approval: Target date April 22, 2012 (two years from EPA approval)

Interim Steps and Timelines:

- Mid-January 2010: Implementation sector teams attend draft TMDL public informational hearing
- April 2010: Implementation technical sector teams begin monthly meetings
- June 2010: Start holding quarterly public informational meetings
- March 2012: Public informational hearing to approve plan and amend Areawide Water Quality Management Plans for the Upper Rock and Lower Rock River Basins
- April 2012: Recovery plan approved

This proposed timeline may require modification depending on the controversy that may be generated by the plan development process. Development of a trading process or other conflict resolution processes may require an extension of the timeline.

Technical Sector Team Membership Appointment Process

Each Sector Team Leader has developed a list of suggested persons to consider for appointment to their team (Central\Water\Wt_Watershed\Impaired_Waters_Program\Rock_River). Those persons will be sent a letter inviting them to attend the TMDL 101 meeting and explaining the implementation planning process. At the TMDL 101 meeting attendees will be asked their interest in serving on a sector team. We will request additional nominations to consider for appointment. Appointments to sector teams will be recommended from those indicating willingness to serve and commit to the process. Appointments will be made by Russ Rasmussen, Watershed Bureau Director.

Criteria for appointment of sector team members may include: willingness to serve; technical expertise in a sector; representative of a stakeholder group; creativeness and ability to think “out-of-the-box”; ability to work effectively with other stakeholders.

Sector Team meetings will be public noticed and open to the public to attend. A public comment period will be included in the agenda for all meetings.

Technical Sector Team Charge and Scope:

Each technical sector team shall develop a plan for effectively implementing practices to achieve wasteload allocations or load allocations identified in the TMDL for their sector of the basin plan. EPA guidance recommends that the following information be included in watershed-based plans to restore impaired waters (Derived from EPA's Section 319 Program Guidance-"9 key elements" for developing watershed-based plans to control NPS pollution"):

1. An identification of the **causes and sources** or groups of similar sources that will need to be controlled to achieve the load reductions estimated in the TMDL (and to achieve any other watershed goals identified in the IP), as discussed in item (2) immediately below. Sources that need to be controlled should be identified at the significant subcategory level with estimates of the extent to which they are present in the watershed
2. An estimate of the **load reductions** expected for the point source or non-point source management practices described under paragraph (3) below (recognizing the natural variability and the difficulty in precisely predicting the performance of management practices over time). Estimates should be provided at the same level as in item (1) above (e.g., the total load reduction expected for dairy cattle feedlots; row crops; or eroded streambanks, wastewater treatment plant modifications, urban stormwater practices, etc.).
3. A description of the management practices that will need to be implemented to achieve the load reductions estimated under paragraph (2) above (as well as to achieve other watershed goals identified in the IP), and an identification (using a map or a description) of the critical areas in which those practices will be needed to implement the plan.
4. An estimate of the amounts of **technical and financial assistance** needed, associated costs, and/or the sources and authorities that will be relied upon, to implement the plan.
5. An **information/education** component that will be used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the management practices that will be implemented.
6. A **schedule** for implementing the management practices identified in the plan that is reasonably expeditious.
7. A description of interim, **measurable milestones** for determining whether BMPs or other control actions are being implemented.
8. A set of **criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made towards attaining water quality standards** and, if not, the criteria for determining whether the plan needs to be revised or whether the NPS TMDL needs to be revised.
9. A **monitoring** component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established under item (8) immediately above.

Budget Request

It is requested that a budget allocation be made to support the activities of the Recovery Planning Committee. The following is a breakdown of estimated costs for conducting an effective, well organized planning process:

Planning Team Support Staff

A two-year project position or two consecutive LTE positions for two years.

Justification: Support technical sector teams with meeting logistics, public notices, meeting notes, conduct research and data development. Development and maintenance of mapping tools. Development of outreach tools such as graphics and Powerpoint and website maintenance. Assist with development of outreach materials and mailings.

Estimated Cost: Project position--\$15/ hour salary; 2080 hours = \$31,200 + fringe=?/year + \$3,000 per year travel cost/ or LTE—Two consecutive LTE positions @ 1040 per year@ \$15/hour= \$31,200 per year + fringe +\$3,000/ year travel costs.

Fiscal 10: \$15,600 + fringe + \$1,500 travel (High Priority)

Fiscal 11: \$31,220 + fringe + \$3,000 travel (High Priority)

Fiscal 12: \$15,600 + fringe + \$1,500 travel (High Priority)

Technical Sector Team and Quarterly Public Outreach Meeting Costs

Travel Cost for Technical Sector Team Members

Justification: Monthly meetings will be necessary for the implementation and technical team members to discuss, coordinate, and draft the TMDL implementation plan for the Rock River Basin. Travel is broken down into two categories: travel for the implementation team members and technical team members.

1) Estimated Cost (estimated for two years) for Implementation team members to travel to all meetings: Average meetings per month—6 total meetings (1 implementation team meeting and 5 technical team meetings) = 144 meetings within the next two years. Average mileage per meeting is approximately 150 total miles @ \$0.37/mile= \$56 dollars per meeting. Total cost= 144 meetings * \$56 = \$8,064. Some of this cost could be offset by having live meetings or conference calls, but we would still need to consider funds to purchase headsets for live meetings.

Fiscal 10: \$2,016 (high priority)

Fiscal 11: \$4,032 (high priority)

Fiscal 12: \$2,016 (high priority)

- 2) Participation at each technical team meeting is critical. Therefore, in order to ensure participation we want to cover mileage for all team members to attend these meetings (secondary priority). Estimated Cost (estimated for two years) for technical team members to travel to all meetings: Average number of technical team members is approximately 15 * 5 technical teams = 75 members. Average mileage is approximately 30 miles for each team member @ \$0.37/mile = \$11. Total cost = 24 meetings * \$11/member * 75 members= \$19,800.

Fiscal 10: \$4,950 (second priority)

Fiscal 11: \$9,900 (second priority)
Fiscal 12: \$4,950 (second priority)

Total Travel Cost: \$27,864

Technical Sector Team and Quarterly Public Outreach Meeting Costs

Justification: These funds will go primarily towards refreshments and miscellaneous amenities for each of the monthly technical team meetings.

- 1) Estimated Costs (estimated for two years): Number of technical meetings = 120 per two years. Average number of technical team members = 15 members @ \$5/person for amenities = \$75/meeting. 120 meetings @ \$75/meeting = \$9,000. Additional amenities for TMDL 101 and public informational meetings—2 meetings of 100 people @ \$5/person = \$1,000.

Fiscal 10: \$2,500 (second priority)
Fiscal 11: \$5,000 (second priority)
Fiscal 12: \$2,500 (second priority)

Total Meeting Cost=\$10,000

Educational and Outreach Materials Costs

Fiscal 10: (high priority)

\$2500—Develop powerpoint presentation to explain TMDL, TMDL implementation planning process. Contract for UWEX graphic designer services.
\$800—Brochure/fact sheet on TMDL and development of recovery plan
\$2,500--Conflict management specialist to facilitate meetings
\$15,000—Web-based interactive mapping system (See explanation below)

Fiscal 11: (high priority)

\$7,500-- Conflict management specialist to facilitate meetings

Fiscal 12: (second priority)

\$800—Brochure on implementation plan-general audience
\$800—Brochure on implementation plan for agriculture sector
\$300—Poster for display at Co-ops and agency offices
\$300—New display for use at meetings, fairs, etc.

The Implementation Team feels strongly that it is very important to have a user-friendly web-based interactive map for both documentation of TMDL data and effective public outreach.

Dynamic Map Summary

This is an outline of the features and applications that the TMDL implementation team want to incorporate into an interactive map for the Rock River TMDL website. It is the intent of the implementation team that the WDNR will subcontract James Beaudoin of the Applied Population

Laboratory (University of Wisconsin-Extension) to create the interactive map using data provided by the department plus additional information and software.

Overview

In order for the TMDL implementation plan to be successful, it is vital that we educate the general public while encouraging participation in the implementation plan itself. With these goals in mind, the overall objective for making an interactive map for the TMDL website is to create an “eye catching” display of information relating to the TMDL implementation strategy. This map will be very user friendly, allowing site visitors to guide themselves throughout the Rock River Basin (RRB). Finding a particular area of interest, each visitor can then obtain more detailed information on the overall quality of streams/lakes within the area. All information concerning the TMDL model (load reductions, etc.) will be displayed in a relatively simple format in order to reduce confusion. In addition, this map will be designed to allow WDNR staff to constantly update feature information (including stream quality, specific restoration project, citizen monitoring, loadings, etc.) with the purpose to inform and encourage participation in the implementation program. All information and features in the interactive map can also be printed or extracted as a Microsoft Excel or ArcGIS shapefile. There are several considerations at this stage of planning, such as which tools to use when designing the interactive map and what features should be incorporated. The next several paragraphs discuss these issues.

Map Extent

Rather than beginning at the extent of the entire state of Wisconsin (see WDNR Surface Water Data viewer), the map extent will focus on the entire RRB. Open source Google maps, a free online software, will also be active at this extent. These layers will be designed in a way to easily allow the website visitor to navigate to their particular area of interest within the RRB, such as a nearby stream or city. Drop down menus could also provide a way to zoom into a specific county or subwatershed (similar to UW-Extension designed <http://www.getfacts.wisc.edu/>). This could be particularly helpful if someone wanted to create a map of a particular area.

One major drawback of using Google maps software is that these maps are coded so that they cannot be printed as a hardcopy or saved as an ArcGIS shapefile. Therefore, it will be advantageous to add several layers (see [Basic Features](#)) that include features already present on Google maps so that we can 1) print or save these features and 2) accent several of the features on these maps such as the rivers and lakes, since these features do not “stand out” on Google maps.

Basic Features

Displaying these layers will allow the site visitor to find a location within the RRB while providing the basic information on each feature (i.e. stream name, road name, etc.). These layers could be toggled on/off depending on what the visitor would like to display. Here is a list of the basic features that will be included in these interactive maps. All of the data for these features are available from the WDNR.

- 1) Counties: This layer should contain an outline of each county (with no fill) so that the site visitor can still observe all other active layers and Google maps.
- 2) Sub-watersheds: This layer should have an outline of each subwatershed (with no fill) so that the site visitor can still observe all other active layers and Google maps.
- 3) Cities/Municipal boundaries: This layer will allow the site visitor to identify cities as well as use them as “landmarks” within the extent of a county or subwatershed.
- 4) Roads: The amount of detail for this layer will be limited initially, as it may take a significant amount of time to identify all of the roads within the RRB. Currently the WDNR has a roads layer that only identifies major thoroughways (US interstates, US highways, and state highways).
- 5) Rivers/Lakes: We may want to display this information as individual stream segments and reservoirs depending on how the data is structured within the TMDL model.

Advanced Features

Displaying these layers would allow the site visitor to obtain more detailed information about water quality conditions within the RRB. These features will be toggled on/off depending on what information

the visitor would like to display. Here is a list of the advanced layers that will be included in these interactive maps. This information will be provided by the WDNR as well as additional sources.

- 1) Phosphorus loadings: The site visitor will be able to “click” on each stream segment and view that segment’s current phosphorus and sediment levels as well as projected load reductions. Based on the TMDL load reductions, each stream segment will be assigned to a category depending on the size of the reduction, thus allowing the site visitor to determine which stream segments are in the most need of restoration
- 2) Sediment loadings: Same layout as phosphorus loadings feature
- 3) Landuse: Summary characteristics of the landscape including urban, agricultural, forest, wetlands, and etc. areas will be at the county or subwatershed scale.
- 4) Best management practices (BMPs)—This information will only be provided at the county or subwatershed level. While this information is not readily available, it is possible to combine records from DATCAP as well as county offices to determine the total acreage of fields utilizing BMPs.
- 5) Permitted entities: The WDNR has all of the GPS coordinates for permitted surface and groundwater outfalls within the RRB in the SWAMP database. It will take a relatively short amount of time to generate a master list of all these locations. The site visitor will be able to “click” on each outfall location to view its 1) phosphorus and sediment limits as well as 2) future load reductions. It may be possible to connect the WATERS database to the interactive map so that information on each permitted entity can be instantly updated.
- 6) Citizen monitoring efforts: This feature will display all current citizen monitoring efforts within the RRB as well as areas where monitoring efforts are needed. This information will be obtained through cooperation with the Rock River Partnership.
- 7) Stream monitoring: This feature can have several functions including providing 1) baseline information about water quality in the RRB, 2) identify 303d list streams, and 3) highlight recent monitoring efforts by DNR staff. We could also color code each stream segment to indicate relative level of quality (excellent to poor quality). Groups could be similar to the ones for phosphorus and sediment loadings.

Modeling to Target High Delivery Farms

It is proposed to develop and employ a screening tool, similar to that partially laid out in the Wisconsin Buffer Initiative, to target P loss reduction efforts across broad areas to achieve measurable improvements in water quality at minimal costs. Because of the large size of the Rock River Basin it is not possible to address non-point source pollutant load reduction in the entire basin at one time. Installing a limited acreage of management practices across a large watershed area has failed to achieve measurable water quality improvements. A targeted approach is recommended to install management practices first in those sub-watersheds contributing the highest pollutant loads to most economically achieve measurable pollutant load reduction. The models used in the TMDL will identify those sub-watersheds with the highest non-point pollutant delivery loads. However, the scale used for the TMDL modeling is too large to be useful for identifying and targeting practices at the farm or field level. Applying an approach similar to that used by Dr. Goode, University of Wisconsin in the Green Valley watershed, a predictive screening tool will be developed to target “P hotspots” in the sub-watersheds with the largest loadings identified by the TMDL. This model can then be applied throughout the basin to identify high priority pollutant delivery farms.

Fiscal 11: \$150,000 (high priority)

Fiscal 12: \$50,000 (high priority)