

HIAWATHA VALLEY RESOURCE CONSERVATION & DEVELOPMENT AREA

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28 April 2010

Wally Hildebrandt, Chairman
George Poch, Vice-Chair
Roland Wood, Sec'y-Treasurer
Bruce Kubicek, Alternate

The Hiawatha Valley RC&D submits this application for the funding of the Rush- Pine sub-watersheds within the Root River watershed as part of the Mississippi River Basin Healthy Watershed Initiative. The Root River is richly endowed with high-value trout streams that are often impaired by excessive levels of nitrates, turbidity and e-coli bacteria. The larger cool- and warm water tributaries also have a high potential for diverse fish and other aquatic life that is not being realized because of excessive runoff. The Root River watershed has become a priority site for a variety of resource investigation and restoration efforts.

Hiawatha Valley RC&D and its partners have committed to an aggressive plan with significant non federal resources being utilized to deliver both technical and financial assistance to the area.

Hiawatha Valley RC&D had been providing natural resource conservation and development activities in the 11 counties of SE Minnesota for nearly 40 years. The RC&D partnered with five other RC&Ds to form the four-state Driftless Area Initiative. The DAI is a non-profit management partnership which strives to coordinate natural resource conservation efforts of organizations and interested people within the 24,000 square-mile driftless region of the upper Mississippi River Basin.

The Hiawatha Valley RC&D has worked and will continue to work closely with all parties involved so that the best possible information is used to develop comprehensive watershed plans for resource protection and restoration. The funding of priority watersheds under the MRBI will provide an excellent opportunity to see how intensive implementation efforts within a small area can make a difference to water quality and broader ecosystem indicators.

Sincerely:

George Poch
Vice-Chairman
Hiawatha Valley RC&D

All programs and services of the Hiawatha Valley Resource Conservation and Development Association are available without regard to race, color, national origin, religion, sex, age, marital status or handicap.

Sponsored by the Soil and Water Conservation Districts and the Boards of County Commissioners of the Counties of
DODGE • FILLMORE • FREEBORN • GOODHUE • HOUSTON • MOWER • OLMSTED • RICE • STEELE • WABASHA • WINONA

"MAKING THINGS HAPPEN THROUGH RURAL DEVELOPMENT"

a) Project Title: **Rush-Pine Creek Watershed Initiative
Root River Healthy Watershed Initiative
Mississippi River Basin Initiative (MRBI)**

b) Jeff Koster, Coordinator, (507) 282-6153 ext. 123, Jeffery.Koster@mn.usda.gov

c) Hiawatha Valley Resource Conservation and Development (RC&D)

Collaborating Partners:

Winona County Soil and Water Conservation District (SWCD)

Fillmore County Soil and Water Conservation District (SWCD)

Root River Soil and Water Conservation District (SWCD)

Land Stewardship Project (LSP)

MN Board of Water and Soil Resources (BWSR)

MN Department of Agriculture (MDA)

MN Department of Natural Resources (DNR)

SE SWCD Technical Joint Powers Board (JPB)

The Nature Conservancy (TNC)

Trout Unlimited (TU)

University of Minnesota Extension

U.S. Fish and Wildlife Service

Winona State University (WSU)

d) Hiawatha Valley RC&D

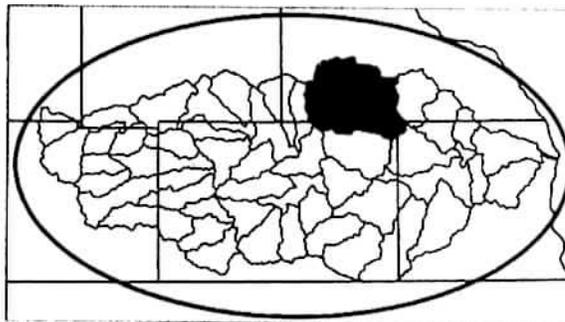
1485 Industrial Drive NW

Rochester, MN 55901

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e) Root River watershed	07040008
Upper Rush	070400080501
Middle Rush	070400080502
Lower Rush	070400080402
Pine	070400080503

Minnesota Congressional District 1 represented by Congressman Tim Walz.



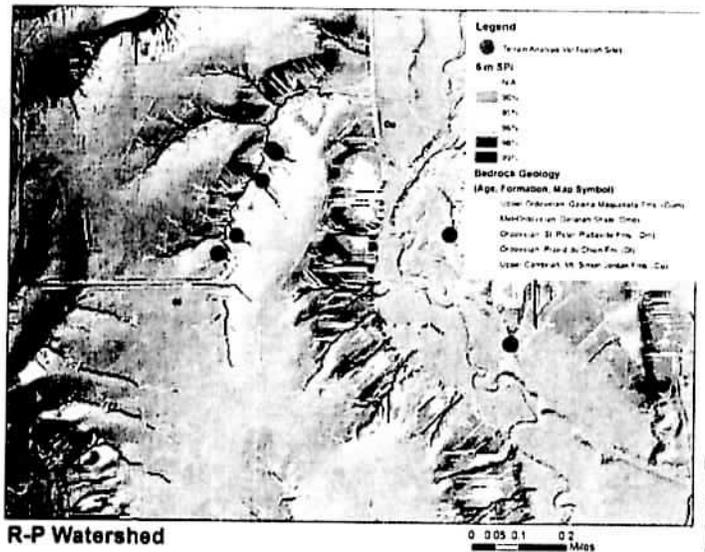
f) Description/summary of project and resource issues: The natural resource issues in Rush-Pine watershed that relate to the MRBI priorities and objectives are soil erosion, manure storage, manure/nutrient management, grazing and water quality (turbidity, nitrogen, phosphorus, fecal coliform bacteria). Nitrate in ground water is another resource concern that has health implications for infants and other vulnerable populations since all drinking water sources in the watershed are from ground water. The karst landscape creates many interconnections between surface and ground water. There are 229 sinkholes in the watershed concentrated in the area along the northern watershed boundary. Runoff entering these sinkholes discharges in springs that create the cold

water stream habitat in the middle to lower reaches of the watershed. The water bypasses the natural filtering capacity of the soil. Overland flow and ground water discharge from springs each contribute to nutrient loading into Rush-Pine Creek and downstream to the Mississippi River. The Minnesota Department of Agriculture (MDA) has been monitoring 18 springs in the southeast Minnesota, of which 12 are located in the Root River watershed. Six of these 18 springs are in a comparable geologic setting as those in Rush-Pine Creek and show elevated nitrate levels above natural background levels.

Severe flooding in August of 2007 in the watershed also pointed out the need for land use practices that hold water on the landscape, which is also beneficial for reducing the amount of nutrients entering waterways. As a result of the formation of a watershed group made up of landowners and staff from various organizations and agencies, numerous technical and financial resources are coming together to focus efforts in the watershed to implement BMPs, monitor effectiveness at the field, subwatershed and watershed scales, and promote civic engagement among landowners in the watershed process. This MRBI project is aimed at helping landowners in the watershed implement practices that avoid, control and trap nutrient runoff. Existing technical assistance is available in the watershed for controlling runoff from feedlots and designing manure storage, developing and implementing manure/nutrient management plans, and developing and implementing prescribed grazing plans. A WREP proposal for restoring riparian wetlands in the lower Root River watershed (HUC 07040080904) will trap sediments and nutrients in the Root River before it joins the Mississippi. The combination of the proposed practices can effectively address the primary sources of nitrogen and phosphorus found in the streams and ground water in the watershed.

g) Description of planning already completed at the field and watershed scales that identify conservation practices needed to address resource concerns: Following the severe flooding in the watershed in August of 2007, several meetings were organized by landowners in the watershed and other concerned citizens about issues raised by the floods; in particular, about the amount of runoff during storm events, the implications for water quality, and the need for restoring stream banks that were extremely eroded by the flood. From these initial meetings, it was determined that more information was needed about the watershed. TNC funded a Watershed Assessment completed by WSU which evaluated the current state of the watershed, identified the resources of the watershed, compiled existing data, and summarized the outstanding monitoring needs and areas of concern within the watershed. Additional funding from TNC is being used to build on this information by funding water quality monitoring and hiring a Watershed Coordinator to work one-on-one with famers in the watershed with the primary goals to:

- 1) Utilize new and emerging critical area identification tools for each individual farm
 - a. Phosphorous Index
 - b. Basal Corn stalk nitrate sampling
 - c. Terrain analysis and Stream Power Index
- 2) Deliver precision conservation based on information gathered with those tools;
- 3) Develop and make operational a conservation delivery mechanism utilizing items 1 and 2 with the support of the local agricultural and landowner community, an ad hoc watershed advisory group made up of watershed farmers, residents, SWCD staff and supervisors, County Commissioners and agencies provides guidance to project staff and overall project direction.



In addition to the watershed planning described above, local technical staff have been working with individual operators in the watershed to develop and implement eight prescribed grazing plans covering 1,061 acres and six nutrient management plans covering 1,252 acres. Another 30 producers have been identified by the county feedlot officers as potentially needing nutrient management plans. Technical assistance is available for implementing practices that control runoff from feedlots using staff from the SE SWCD Technical Support Joint Powers Board, which has representatives from 11 southeastern Minnesota counties including the three collaborating on this project.

A cooperative project funded by an appropriation from Minnesota's Clean Water Fund and a grant from Monsanto to TNC involves MDA, TNC, and the MN Ag Water Resources Coalition to do edge of field monitoring to evaluate agricultural nonpoint source pollution and best management practice (BMP) effectiveness. The three small watersheds for the study were chosen to be representative of the region so that the results can be transferable to similar watersheds. One of the evaluation sites is in a small watershed directly south of Rush-Pine and representative of the landscape of Rush/Pine. The results from this study will be beneficial to understanding the water quality effects from practices implemented in Rush-Pine. Implementing conservation practices in the Rush/Pine is a critical component of the Small Watershed Evaluation Project. Like the Rush/Pine project, the small watershed evaluation project uses in field indices of Soil Conditioning Index, Basal Corn Stalk Nitrate sampling, Phosphorous Index and terrain analysis.

h) List of approved FOTG practices to address concerns:

Core practices:		Supporting practices:	
Avoiding	340	Avoiding	313
	528		382
	590		472
Controlling	329/345		516
	330		558
	412		614
	512		561
	643		
Trapping	332	Controlling	342
	393		362
	657		386
	659		410
			638

Conservation Activity Plans	102	Comprehensive Nutrient Management Plan
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i) Proposed project start and end date: July 1, 2010 to June 30, 2015

2) **Project Natural Resource Objectives and Actions:**

a) Detail about natural resource concerns and how each objective addresses concerns:

A watershed assessment conducted by WSU has identified and summarized potential critical areas within the Rush-Pine watershed located north of the City of Rushford. This assessment will serve as the foundation for further study and action within the watershed.

Natural Resource Concerns –Excess Nitrogen

1. **Nitrogen** concentrations in Lower Mississippi River Basin tributaries have been increasing for several decades. Since the 1970s, MPCA Milestone monitoring program's trend analysis shows that nitrate concentrations are increasing in the Root River. Detections of high concentrations (>10 ppm) in private wells are common. In 2008 and 2009, the percentage of samples analyzed with nitrate levels over the drinking water standard of 10 ppm was 16-19% in the project area. The karst topography in this part of Minnesota creates many interconnections between surface water and ground water so that applications of nutrients on the landscape can easily enter ground water. According to statewide estimates, soil organic matter and nitrogen fertilizer are the leading sources of inorganic nitrogen, the form of greatest concern to ground water contamination. These sources provide 42 percent and 36 percent of total inorganic nitrogen, respectively. While manure and legumes each contribute only 6 percent of inorganic nitrogen in the state, the failure of farmers to take credit for these sources when determining commercial fertilizer application rates leads to excessive fertilizer application and increased potential for nitrogen leaching and runoff. This has been confirmed by farm nutrient management evaluations conducted by the MDA. Southeastern Minnesota river counties, and counties adjacent to them, are estimated to have some of the highest levels of plant-available nitrogen contributions from manure in the state. A 1993 evaluation of dairy farmers in several southeastern Minnesota counties by the MDA showed a higher difference between actual and recommended applications. Factoring in all appropriate credits from fertilizer, legumes and manure, farmers over-applied nitrogen by an average of 53 pounds per acre.

Nitrates in surface water are being assessed by the MPCA as it relates to the drinking water standard of 10 mg/L in cold water trout streams (Class 1B waters) because they interact directly with ground water. Six streams in the Root River watershed have been identified with nitrate impairments and are on the draft 303(d) impaired waters list.

Goal: Reverse the trend of increasing nitrogen concentrations by 10 percent by 2015.

Monitoring

Tier 1 - Edge of Field: Basal Corn Stalk sampling will be conducted on 70 farms to evaluate nitrogen efficiency. MPCA will be deploying a lysimeter network to assess nitrate movement.

Tier 2 – 12 Digit HUC: Nitrate-nitrogen sampling will take place at 7 stream water quality stations within the project area.

Tier 3 – 8 Digit HUC: Nitrate-nitrogen sampling will continue near the mouth of the Root River by USGS. This will be used to calculate nitrate-nitrogen loads and changes. MDA will continue to monitor for nitrate levels in springs in the Root River watershed.

Objective 1: Implement core practices to achieve a 25 ton reduction in nitrogen entering the system by avoiding, controlling and trapping 5 tons per year.

Avoiding

Action 1: Complete at least 20 new comprehensive nutrient management plans by 2015 and update plans that have been completed. (4 plans/yr)

Action 2: Install 5-10 agricultural waste systems (1-2/yr) with storage and 5-10 small feedlot fixes to allow better utilization and timing of manure applications.

Action 3: Conduct basal stalk nitrate tests on 70 farms in five years to evaluate nitrogen use efficiency (14 farms per year)

Action 4: Enroll 50 new participants in the NRCS/MDA Nutrient Management Initiative (10 participants/yr)

Action 5: Conduct comprehensive nutrient management interviews (Farm Nutrient Management Assessment Program-FANMAP) on 70 farms by 2012.

Controlling

Action 6: Implement forest management on 20 properties.

Action 7: Implement cover crops on 2500 acres (500ac/yr) on low-residue cropland

Action 8: Implement residue and tillage management on 17,500ac (3500 ac/yr)

Action 9: Install 10 grade stabilization structures (2 structures/yr)

Action 10: Install Grassed waterways on 75 ac (15 ac/yr)

Trapping

Action 11: Install Contour buffers on 500 ac (100 ac/yr)

Action 12: Install Filter Strips on 50 ac (10ac/yr)

Natural Resource Concerns –Excess Phosphorus and Turbidity

According to background information in the Root River Turbidity TMDL Work Plan, high concentrations of suspended sediment (turbidity) impair the Root River at the mouth and in several tributaries. The concentration of total suspended solids at the mouth of the river during the 1990s was more than twice as high as any other monitored major tributary in the Lower Mississippi River Basin of Minnesota. An examination of Long Term Resource Monitoring Program (LTRMP) data from the mouth of the Root River from 1993 - 2002 shows turbidity to be twice the state standard. Following storm events a pronounced sediment plume is evident downstream on the Mississippi River, which is listed as impaired by turbidity between the confluence with Coon Creek in Wisconsin downstream to Lock and Dam #8 at Genoa, Wisconsin.

Phosphorus often is the limiting growth factor that contributes to the production of excessive algae in surface water in southern Minnesota. Major sources of phosphorus to surface water are from nonpoint sources. Nonpoint sources include surface runoff from agricultural and urban land. Most phosphorus is exported from cropland as sediment-attached runoff. High erosion rates generally are associated with high phosphorus runoff. Practices that reduce soil erosion also help to reduce phosphorus runoff. For example, University of Minnesota data show that conventionally tilled corn experiences approximately four times as much phosphorus runoff as no-till corn. Soil erosion control practices combined with proper adjustment of rate and placement can reduce phosphorus runoff from agricultural fields by two-thirds or more, compared to black-till conditions. Surface-applied manure is an obvious source of phosphorus runoff, but few studies have estimated the magnitude. MPCA modeling of two lake watersheds in southern Minnesota indicate that livestock feedlot runoff comprises less than 15 percent of all phosphorus runoff. Cropland runoff, which includes the effect of surface-applied manure, typically contributed 80 percent or more of all phosphorus runoff.

Since many of the nutrient runoff concerns in the watershed are related to animal waste management and land application, many of the proposed practices that help to reduce nutrient runoff provide a double benefit by also reducing runoff of fecal coliform bacteria. The 2007 Implementation Plan for the Lower Mississippi River Basin Fecal Coliform Bacteria TMDL states that “the widespread problem of fecal coliform impairment is caused by thousands of ubiquitous pollutant sources spread across the basin – feedlots, manured fields, wildlife, and failing septic systems, to name the main ones -- rather than by a few large, discrete sources. Pollution can be reduced and prevented by ensuring that these individual sources are brought into conformance with state rules and local ordinances as well as BMPs for land use.”

There are 211 registered feedlots in Rush-Pine watershed (189 in Winona County and 22 in Fillmore County) with a total of 26,953 animal units according to records from the Winona and Fillmore County Feedlot Officers. Of those 211, there are 44 feedlots that have been identified as

having a pollution problem plus 18 more that are in need of manure storage in order to address a land application problem (e.g. too few acres available for spreading in the winter). Nutrient management plans and other practices funded by MRBI will assist watershed producers address pollution issues and avoid violations.

It is vital that livestock operations are maintained in the watershed in order to keep more pasture and hay acres on the land. Managed grazing can also help to reduce fecal coliform runoff. According to the TMDL plan, there are several studies that have found a strong correlation between livestock grazing and fecal coliform levels in streams running through pastures. However, carefully managed grazing can be beneficial to stream water quality. A study of southeastern Minnesota streams by Sovell found that fecal coliform, as well as turbidity, were consistently higher at continuously grazed sites than at rotationally grazed sites where cattle exposure to the stream corridor was greatly reduced. This study and several others indicate that sediment-embeddedness, turbidity and fecal coliform concentrations are positively related.

Goal: Reduce turbidity and total phosphorous by 10% by 2015 to align with the 2003 Clean Water Initiative goal of a 20% reduction in turbidity.

Monitoring

Tier 1 - Edge of Field: Phosphorous Index and Soil Conditioning Index will be calculated on 70 farms to assess the risk of phosphorous and sediment delivery. Indices will be recalculated to evaluate effectiveness of BMPs. Terrain analysis and stream power index is also used on the farm and field level to identify erosion areas acting as nutrient conduits.

Tier 2 – 12 Digit HUC: Turbidity sampling will take place at 7 stream water quality stations within the project area.

Tier 3 – 8 Digit HUC: Turbidity and Total Phosphorous sampling will continue near the mouth of the Root River as part of the turbidity TMDL.

Objective 1: Use core BMP practices to avoid, control, and trap sediment with a goal of implementing practices to treat 20% of the upland acres to reduce phosphorous delivery in the watershed in by 2015.

Avoiding

Action 1: Identify areas where soil erosion is most likely to occur using the LiDAR data, digital terrain analysis and stream power index completed by WSU.

Action 2: Identify areas at high risk for soil erosion using soil conditioning index. **Action 3:** Identify areas at high risk for phosphorous delivery using phosphorous index on 70 farms.

Action 4: Implement prescribed grazing and associated practices 1000 ac (200 ac/yr)

Controlling

Action 5: Implement forest management on 20 properties.

Action 6: Implement cover crops on 2500 ac (500 ac/yr) on low-residue cropland

Action 7: Implement residue and tillage management on 17500 ac (3500 ac/yr)

Action 8: Install 10 grade stabilization structures (2 structures/ yr)

Action 9: Grassed waterways 75 ac (15ac/yr)

Trapping

Action 11: Install Contour Buffer Strips on 500 ac (100 ac/yr)

Action 12: Install Filter Strip on 100 ac (10ac/yr)

Action 13: Stabilize 2 miles of stream banks (1 mile of stream for 2 years)

Action 14: Install 15 sediment basins (3 basins /yr)

Natural Resource Concerns –Degraded aquatic and terrestrial wildlife habitats

The Rush/Pine watershed is a regionally significant trout fishery and home to the only native strain of brook trout remaining in Southeast Minnesota. Aquatic habitat and stream function has been severely degraded by upland erosion and altered hydrology within the watershed. This has caused incised streams, disconnected from floodplains, contributing to increased altered hydrology and sediment re-suspension. Degraded streams offer little habitat for fish and the macro invertebrates they require. Incised streams, disconnected from floodplains also greatly reduce the streams ability to attenuate nutrients by limiting nutrient enriched water contact with vegetation.

Goal: Improve aquatic and terrestrial habitat within high resource value areas.

Monitoring

Tier 1 - Edge of Field: Biological monitoring will be conducted prior to and after stream restoration as well as up and downstream of sites.

Tier 2 – 12 Digit HUC: MN DNR Fisheries will continue fish samples within each of the tributaries of the project area.

Tier 3 – 8 Digit HUC: MPCA 10X and MN DNR Fisheries Biological Monitoring at stations throughout the basin.

Objective 1: Restore 5 miles of coldwater stream habitat and 100 acres of riparian habitat by 2015

Avoiding

Action 1: Implement 2 prescribed grazing plans in the riparian zone (emphasizing limited access to stream, off stream watering, and stream crossings)

Controlling

Action 2: Restore and stabilize 1 mile of stream bank per year with additional habitat for both game and non-game wildlife species

Action 3: Restoration and management of 10 acres of rare and declining habitats within riparian corridors

Trapping

Action 4: Implement 60 acres of Vegetative buffers (12 ac/yr)

Objective 2: Restore 250 acres of upland habitat by 2015

Controlling

Action 1: Improve 200 acres of forest habitat

Action 2: Restore 50 acres of rare and declining habitat (10ac/yr)

Goal: Reach and engage 85% of land users within the watershed by 2014

Action 1: 1 Full Time Employee dedicated to outreach and technical assistance within the project area.

Action 2: Publicize and conduct two events per year to market and sign up applicants for programs (Winona SWCD Watershed Coordinator, RC&D, Land Stewardship Project)

Action 3: Hold one on-farm field day per year focused on the use of no till or cover crops (Winona SWCD, Fillmore SWCD, MDA)

Action 4: Beginning farmers (Land Stewardship Project)

Action 5: Conduct 3 grazing workshops/field days per year. (Driftless Area Initiative, RC&D)

Action 6: On farm field visits with 35 producers per year to develop whole farm plans and agronomic assessments (Winona SWCD Watershed Coordinator)

Action 7: Stream restoration workshops and field days (one event per year) (Trout Unlimited)

Action 8: Hold 2 manure management workshops per year (e.g. What is Manure Worth?) in cooperation with MDA and U of M Extension

Action 9: Promote participation in the Nutrient Management Initiative (MDA, USDA)

Action 10: Beginning farmers events by Land Stewardship Project/HVRCD (2 /yr)

3) Detailed Proposal Criteria:

- a) Description of partners history of working with agricultural producers: Each partner brings a unique perspective and quality to working with agricultural producers. Hiawatha Valley RC&D had been providing natural resource conservation and development activities in the 11 counties of SE Minnesota for nearly 40 years. The RC&D partnered with five other RC&Ds to form the four-state Driftless Area Initiative. The DAI is a non-profit management partnership which strives to coordinate natural resource conservation efforts of organizations and interested people within the 24,000 square-mile driftless region of the upper Mississippi River Basin. The SWCDs provide technical assistance for implementation of conservation practices and administer many financial assistance programs that pay farmers for implementing conservation practices, such as BWSR state cost-share, special projects, local water management plans, and the Ag BMP Low-Interest Program. SWCD staffs also assist NRCS staff with design and survey of EQIP and CRP practices. The local SWCDs have been a trusted source of assistance to farmers for over half a century. Winona SWCD just celebrated its 70th anniversary, Fillmore its 67th, and Root River its 70th. Each SWCD employs technical staff that cumulatively have decades of experience in conservation implementation. Eleven SWCDs in southeast Minnesota, including Winona, Fillmore and Root River, have formed the SE SWCD Technical Joint Powers which provides engineering assistance for conservation practices with a heavy emphasis on feedlot runoff control and manure storage funded through state cost-share, and, in some cases, EQIP. BWSR also provided technical/engineering assistance in the Root River as result of flood and will be providing technical assistance funds for implementations of MRBI funded projects in the state.

The Nature Conservancy and Trout Unlimited offer leveraging funds, technical knowledge, and support of Best Management Practices. TNC works closely with producers to enhance areas of their farms for wildlife and to implement practices that protect areas on their farms and downstream that have significant ecological value. Trout Unlimited has received funding from LCCMR for habitat work that can be targeted to Rush-Pine watershed. They have implemented several trout habitat improvement projects on private land in the Root River watershed, including Mill Creek and Trout Run.

MPCA and MDA work with producers to ensure that all rules relating to feedlots and agricultural chemical use are being followed before enforcement action is necessary. Both are also working with producers on monitoring efforts which involves getting cooperation from landowners to conduct monitoring at sites sometimes located on private property. Both agencies are working with the city of Lewiston on its Wellhead Protection Plan.

Planning and identifying resource concerns is a skill shared by all partners. The Watershed Coordinator hired with TNC funding will be working closely with SWCD staff to identify programs and practices that meet the conservation needs of producers in the watershed. Education and outreach to farmers is a specialty of agencies like Hiawatha Valley RC&D, Extension, and Land Stewardship Project. RC&D has experience organizing several grazing workshops and schools each year in the region, some of which have been held in Rush-Pine watershed. Their relationship with the Driftless Area Initiative has expanded the resources available to southeastern Minnesota for grazing and nutrient management through grants and assistance with coordinating educational events. The Extension Educator for Fillmore and Houston counties has over 25 years of experience in outreach and education and has assisted with numerous workshops on grazing, cover crops, and manure management. Land Stewardship Project has a 14-year tradition of working with beginning farmers with over 400 graduates from that program. They also work with

producers locally and around the state on community-based food projects and research on sustainable farming methods.

b) Detailed description of the watershed area:

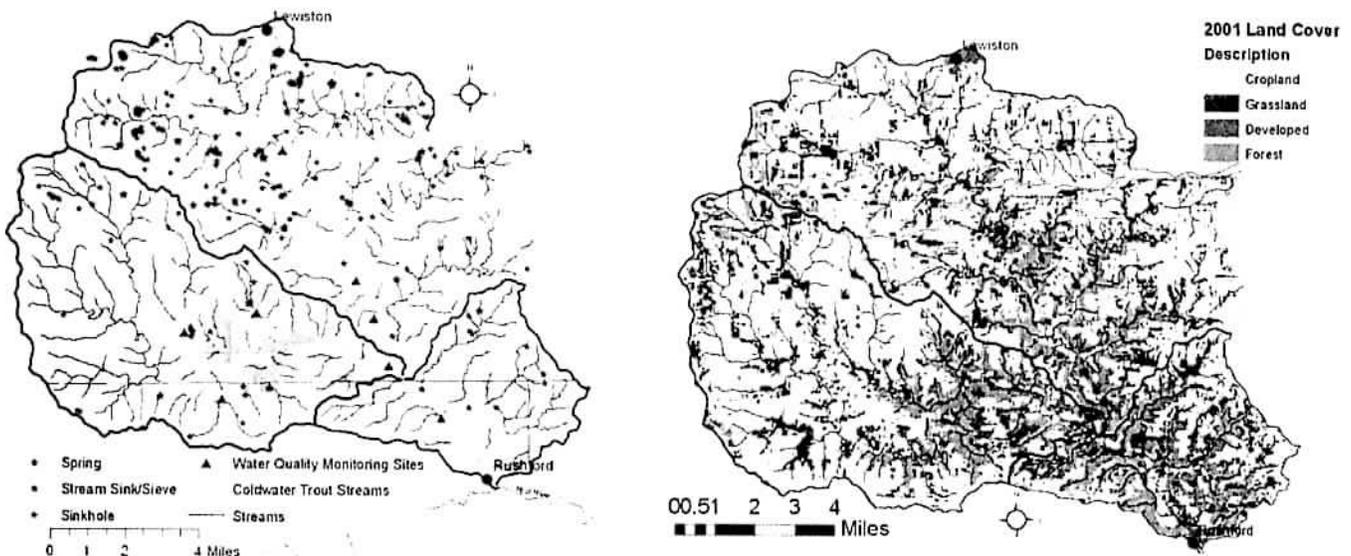
Rush Creek watershed is 86,688 acres located in southern Winona County and drains through the northeast corner of Fillmore County through the City of Rushford. There are four 12-digit HUC watersheds within the Rush Creek watershed and 12 minor watersheds ranging in size from 5,000 to 12,000 acres.

Of the 13,970 acres of forest in the watershed, 5,200 acres have been identified to be some of the most ecologically significant in Southeastern Minnesota. Within this larger area a 2,400 acre critical area has been identified for biodiversity management. A mosaic of high quality forest includes some of the best maple basswood forests in the region linked to mesic oak, dry oak, northern hardwood-conifer and lowland hardwood forests. This forest complex is the reason the area is home to one of the 10 top sites for rare birds in Southeast Minnesota. Other ecological features include many rare plants and geologic features including 2 algific talus slopes. The algific talus slopes and karst features remain intact due to hydrologic connectivity that maintains ice caves and cold air movement.

Rush Creek has 79 miles of perennial streams, 58 of those miles have been designated as trout streams. Pine Creek and its two tributaries, Hemingway and Coolridge, are considered some of the finest trout waters in the state. Pine Creek, plus its tributaries, is also considered significant for trout management because it is the only remaining stream complex in Southeast Minnesota that has native brook trout genetics. American Brook Lamprey and pickerel frog are other rare aquatic species in the watershed.

Table 1. Rush-Pine Land Cover

Cover	% Cover
Cropland	60%
Grassland	22%
Forest	16%
Developed	2%



The cities of Lewiston and Utica lie on the northern edge of the watershed. Both have delineated wellhead protection areas that go south into Rush-Pine watershed. The Mt. Simon aquifer well was

drilled after nitrate levels climbed in the Jordan aquifer well (which at the time was a multi-aquifer well) to exceed the drinking water standard of 10 mg/L. This points to the high levels of nitrate in the aquifers above the Jordan which are impacted by the karst geology. In Utica, nitrate levels have risen to over 5 mg/L and are continuing to increase. Better nutrient management in the wellhead protection areas is extremely important to protecting these public water supplies that serve over 1730 people. A nitrate probability map for Winona County shows that wells located in the area south of Lewiston and Utica in the Rush-Pine watershed have a very high probability of high nitrate levels (7-10 mg/L.)

Much of the flatter cropland in the upper end of the watershed is intensively cultivated in a corn-soybean rotation. This is also the area with the highest concentration of sinkholes. Treatment options here are practices that fit into more conventional-style operations, such as no-till, cover crops, grassed waterways, buffer strips, and strip cropping. Livestock manure is readily available as a fertilizer source, so nutrient management is another need to fully and efficiently use the nutrients in manure and to take advantage of its micronutrients. Targeted areas for buffers are the riparian corridors and sinkholes. As the land transitions into the steeper, more forested landscape of the blufflands, more contour strips and hay acres are prevalent. This is also where many of the springs are found that feed some of the best trout streams in the region. The upland practices mentioned above that improve water infiltration and filter runoff into sinkholes are critical to maintaining base flow in the springs and trout streams. Streambanks were greatly impacted by the floods in 2007 and 2008 and many landowners have requested assistance with bank stabilization that could be paired with trout habitat work by DNR-Fisheries and Trout Unlimited. Forest management practices, especially in the stream corridors, will also benefit the health of the trout streams through temperature control and by providing habitat both for trout and other wildlife.

Due to the large amount of karst, this watershed, like most of the rest of the Root River and like other watersheds in southeast Minnesota, has few upland wetlands except in the very western, glaciated portion of the basin. The majority of the watershed's wetlands lie in the riparian bottomlands, the largest being closer to the confluence with the Mississippi River. For this reason, the focus for a WREP proposal for the Root River is in the lower reaches (HUC 070400080904) of the watershed where preliminary work by DNR and TNC have already identified as many as six willing landowners for wetland restorations and easements. Reductions in sediment transport into the Mississippi could be reduced by as much as 20-55% if flood waters can flow through these river bottom wetlands.

c) Description of partners' roles and responsibilities and capabilities:

Winona SWCD: Provide direction to the Watershed Coordinator and assist to cooperators with implementation of practices in the watershed.

Fillmore SWCD: Technical assistance for nutrient management and grazing management and feedlot fixes, bacteria monitoring

Root River SWCD: Technical assistance to cooperators with implementation of practices in the watershed

Land Stewardship Project: Recruitment of and assistance for beginning farmers

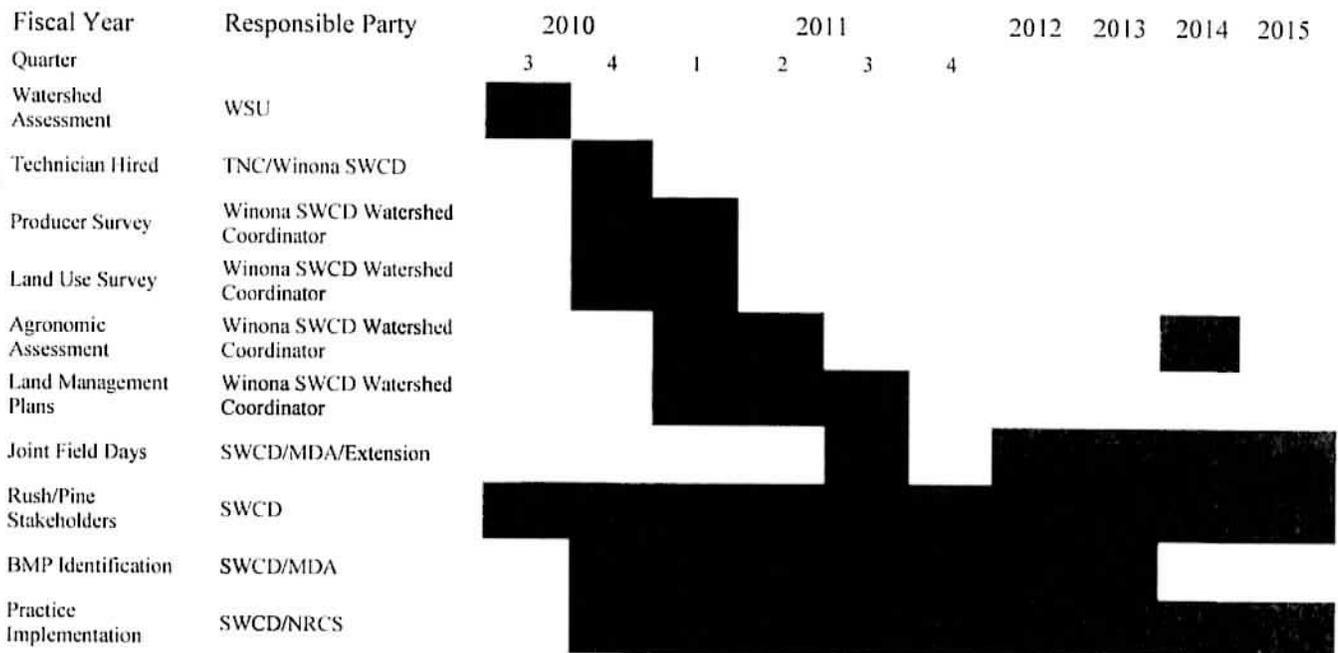
The Nature Conservancy: Technical Assistance for Rush-Pine watershed, water quality monitoring in Rush-Pine, financial assistance for cover crops and conservation TA for the Root River watershed for implementation of MRBI practices

Trout Unlimited: Financial (LCCMR funds) and technical assistance with trout stream habitat restoration and stream bank stabilization, through the Driftless Area Restoration Effort (DARE), supported in part by the USFWS National Fish Habitat Restoration Plan and the Partners for Fish and Wildlife Program

MDA: assist with research and evaluation of the effectiveness of BMPs, i.e. cover crops, no till; assist with nutrient monitoring in springs and streams; wellhead protection
 MN DNR: *Division of Fisheries*: stream habitat restoration, stream bank stabilization
Division of Waters: spring shed mapping, stream bank stabilization
Division of Wildlife: wildlife habitat, stream bank stabilization
 MN Pollution Control Agency: assistance with water quality monitoring
 SE SWCD Technical Joint Powers Board: engineering assistance for feedlot fixes and manure storage facilities
 University of Minnesota Extension: education and outreach
 Winona State University: water quality monitoring, lysimeter deployment and monitoring in cooperation with MDA and MPCA

- d) Description of project duration, plan of action and implementation schedule: The duration of this project is five years. A final report will be completed in 2015 after practices have been implemented and monitoring data can be compiled and analyzed.

Potential cooperators have already been identified in the watershed for feedlot fixes (over 40), 26 nutrient management plans, and 8 grazing management plans. The watershed coordinator will be working one-on-one with producers in the watershed to identify future needs, some of which may be funded through this proposal.



- e) Description of financial and technical assistance resources requested from EQIP, WHIP and CSP and non federal resources provided by partners: incl. edge of field monitoring,

Year	Requested Resources		Leveraged Funds (Non-Federal Resources)					
	EQIP	WHIP	Fillmore SWCD ¹	TNC ^{1,2}	BWSR ¹	Trout Unlimited ^{1,3}	DAI ^{1,4}	In-Kind
2010	\$1,068,719	\$59,760	\$12,000	\$122,000	\$37,500		1000	\$10,000
2011	\$1,000,000	\$59,760	\$12,000	\$100,000	\$37,500	\$202,000	1000	\$10,000
2012	\$1,000,000	10,000	\$12,000	\$50,000	TBD		1000	\$10,000
2013	\$1,000,000	10,000	\$12,000	TBD			1000	\$10,000
2014			\$12,000				1000	\$10,000

Totals	4068719	\$139520	\$60,000	\$272,000	\$75,000	\$202,000	\$5,000	\$50,000
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¹ Cash match for Technical Assistance to implement practices(secured)

² Anticipated TNC contribution

³ Financial Assistance (secured)

⁴ Outreach workshops

f) A description of the plan for monitoring, evaluating, and reporting on progress made toward achieving the objectives of the agreement.

Tier 1 - Edge of Field: Phosphorous Index and Soil Conditioning Index will be calculated on 70 farms to assess the risk of phosphorous and sediment delivery. Indices will be recalculated to evaluate effectiveness of BMPs. Terrain analysis and stream power index is also used on the farm and field level to identify erosion areas acting as nutrient conduits. Detailed information from the watershed and farm assessments will be used to implement precision conservation, placing practices where there is a documented resource concern. Implementation efforts will also be informed by the edge of field and small watershed monitoring taking place in a nearby watershed that is a component to this watershed effort.

Tier 2 – 12 Digit HUC: Turbidity sampling will take place at 7 stream water quality stations within the project area. The MPCA has a bacteria monitoring site just upstream from the confluence of Rush Creek and the Main Branch of the Root River. This site is part of their Intensive Watershed Monitoring (IWM) design, and is sampled on a ten year cycle. Also included in the IWM design are biological monitoring sites that monitor fish, invertebrates, habitat, flow, and water quality. There are ten of these sites in the Rush-Pine Watershed. Measurements such as transparency tube (t-tube) have also been collected as part of the Citizen Stream Monitoring Program (CSMP). The MN DNR has fish, habitat, and Coldwater Index of Biotic Integrity (IBI) data at several sites within the watershed.

Tier 3 – 8 Digit HUC: Turbidity and Total Phosphorous sampling will continue near the mouth of the Root River as part of the TMDL. This will be used to calculate nitrate-nitrogen loads and changes.

All the past, current, and future monitoring in the Rush-Pine Watershed provides baseline data that will help with the evaluation of conservation practices and changes in water quality. The Root River small watershed project (Root River: From Field to Watershed), Root River Turbidity TMDL, and Root River Watershed Comprehensive Strategy Development will also play a role in evaluation. The MDA is the lead on a new small watershed study looking at quantifying the effects of Best Management Practices (BMPs) on water quality in three small watersheds (< 5,000 acres) within the Root River Watershed. This project includes both edge of field and in-stream monitoring, and should aid in practice selection and evaluation. Although the watersheds being monitored are outside the Rush-Pine Watershed, there are similarities that should allow for extrapolation. This project design is comparable to the small watershed component of the Rush-Pine Creek Implementation project. Results from both small watershed monitoring pieces will not only help with implementation and evaluation at the edge of field and 12-digit HUC scale, but at the 8-digit HUC scale as well. Sediment and nutrient data from the Root River Turbidity TMDL and Root River Watershed Comprehensive Strategy Development projects will also supplement data gaps through extrapolation. In addition, Fillmore SWCD was recently certified to test for Total Coliform and E. Coli bacteria and plans to use their services to assist with monitoring and evaluation.

Annual reports will be developed to document the practices planned, practices implemented and expect reduction in pollutants. Water quality data from each of the three tiers will be analyzed and summarized.

Potential criteria to be used by NRCS to prioritize and rank producer applications in project area: Based on the outcomes from EQIP Local Work Group meetings, a systems approach will be used so that those applications that combine practices will rank higher. Ag waste storage combined with nutrient management planning and filter strips around all sensitive areas where manure is applied. National and state ranking criteria will be used in conjunction with those developed by the EQIP Local Work Group. The following Local Work Group criteria will be used to rank each producer application based on the environmental objectives for this watershed:

Ranking Criteria	Points
Installation of practices that will reduce soil loss to Tolerable Soil Loss Limits, and these practices are located within a DNR designated trout stream watershed, or are placed on Class IIIe or greater soils.	40
Installation of manure storage for dairy or beef which will alleviate winter manure application concerns as defined by MPCA regulations, and documented in a manure management plan.	30
Installation of manure storage for dairy or beef where the operation has been cited by MPCA for manure spreading violations	10
Implementation of either no-till or nutrient management	10
Implementation of both no-till and nutrient management	50
Installation of prescribed grazing systems	10
Installation of prescribed grazing systems where livestock access to a DNR designated trout stream will be controlled.	25
Implementation of nutrient management within 300 feet of a perennial stream or karst feature	25
Installation of buffers along streams and around sinkholes to meet NRCS standards and DNR shore land regulations	20
Installation of buffers along streams and around sinkholes to meet NRCS standards and DNR shore land regulations and cover crops are planted on low residue crops with > 4% slopes.	30
Implementation of practices to address critical area identified by phosphorous or soil condition index	20
Implementation of practices to address critical area identified by terrain analysis	20

g) Estimated percentage of producers expected to participate:

Based on past experience, the level of participation by landowners in the watershed is expected to be in the 25-30% range at a minimum. Due to the amount of interest already in the Rush-Pine watershed, a civic engagement process will be used here to encourage better participation in the watershed management process.

Because a full time technical assistance and outreach person will be dedicated specifically to the Rush/Pine MRBI watershed, participation is expected to increase as the project matures. Several producers, landowners and community leaders are active in the watershed group and have pledged to assist with outreach to neighbors.

h) Statement describing participation by beginning farmers, socially disadvantaged farmers, and limited resource farmers: Land Stewardship Project (LSP) has an office located in Lewiston, MN, which is in Rush-Pine Creek watershed. LSP has had a successful Beginning Farmer for 14 years with over 400 graduates from the program. Their next recruitment campaign will be in the area surrounding Winona, MN, which includes this watershed. They are very supportive of working in Rush-Pine watershed and focusing their efforts there for this project.

i) Listing and description of conservation practices, plans, enhancements to be implemented:

Core Practices			
Practice Name	Practice Code	Amount Planned	Cost share Requested
Avoiding			
Conservation Crop Rotation	328	1000 acres	0
Cover Crop	340	500 acres	20000
Prescribed Grazing	528	200 acres	7400
Nutrient Management	590	1000 acres	8540
Nutrient Management Initiative	590a	10 contracts	12,000
Controlling			
Residue & Tillage Management	329/345	3500 acres	80500
Contour Farming	330	400 acres	4000
Grassed Waterway	412	15.6 acres	26500
Pasture & Hayland Planting	512	10 acres	890
Restoration & Management of Declining habitats	643	10 ac	3690
Upland Habitat Management	645	150 acres	22000
Strip Cropping	585	100 acres	3900
Trapping			
Contour Buffer Strips	332	100 acres	20400
Filter Strip	393	10 acres	1910

Supporting Practices			
Practice Name	Practice Code	Amount Planned	Cost share
Avoiding			
Waste Storage Facility	313	2 no.	500000
Fence	382	10,000 ft	8900
Access Control	472	1 no.	33
Pipeline	516	28000 ft	58240
Roof Runoff Structure	558	400 ft	2756
Watering Facility	614	44 no.	13200
Heavy Use Area Protection	561	4000 sqft.	9000
Controlling			
Critical Area Planting	342	25 acres	3325
Diversion	362	800 ft	2152
Field Border	386	1 acres	160
Grade Stabilization Structure	410	2 No.	40500
Sediment & Water control Structure	638	3 No.	13500
Conservation Activity Plans	102	4 No.	5400

Additional Practices			
Practice Name	Practice Code	Amount Planned	Cost share
Stream bank and Shoreline Protection	580	52800 sqft	200000
Forest Stand Improvement	666	150 ac	13350

- j) Description of amount of funds needed annually for producer contracts or agreements by program (EQIP, WHIP.):

Program	2010	2011	2012	2013	Financial Needs
EQIP	1,068,719	1,000,000	1,000,000	1,000,000	4,068,719
WHIP	59,760	59,760	10,000	10,000	139,520
Total	1,130,489	1,061,771	1,012,012	1,012,013	4,208,239

- k) Description of any requested policy, procedure, and technical adjustments by program needed to achieve objectives: Stream banks are a significant contributor to sediment and phosphorous bound to sediment, up to 85% of the total load in some Driftless Area streams. Stream bank stabilization will trap sediment and phosphorous, preventing it from being delivered downstream, improving aquatic habitat and increasing the attenuation of nitrates within the riparian corridor. Stream bank stabilization (Practice Code 580) has been identified as a need in the Rush-Pine watershed, especially after the devastating floods in 2007. Numerous sites have been identified by landowners and agency staff in need of repairs to reduce the amount of erosion coming from stream banks. Trout Unlimited has funding from a grant from the Legislative Citizens' Commission on Minnesota Resources (LCCMR) to assist with stream bank projects, and they have committed to using some of those funds in this watershed.

There are very few wetlands to trap and utilize excess nutrients in Southeast Minnesota. However, the hundreds of miles of stream corridors in the Rush/Pine watershed have the potential to attenuate excess nitrates if a modest floodplain is reestablished and stable banks are reintroduced. Stream restoration within other agricultural areas have reduced nitrate delivery by 20%, total phosphorous by 30% and turbidity by 30%, by restoring stream function and increasing surface area of vegetation. Extensive stream restoration proposed with this program amendment will have a significant impact on nutrient reduction within the Rush/Pine watershed and demonstrate this as a practice for nutrient reduction and habitat improvement.

We request a contribution agreement with NRCS to increase the delivery of EQIP Practices planned and applied.



April 21, 2010

Jennifer Heglund, Acting MN State Conservationist
Minnesota Natural Resources Conservation Service
375 Jackson Street, Suite 600
St. Paul, MN 55101-1854

Dear Ms. Heglund:

I am writing on behalf of the Minnesota Board of Water and Soil Resources (BWSR), Minnesota's state conservation agency, in regard to the Mississippi River Basin Healthy Watersheds Initiative (MRBI).

Minnesota is pleased to have four 8-digit HUC areas under consideration for this program: Middle Minnesota River, Root River, Sauk River, and the Upper Cedar River (multi-state with Iowa). SWCDs, watershed districts, other local units of government, partnering agencies, supporting civic groups and residents in all four of the focus areas have proven track records of success in implementing conservation through targeted efforts that result in real conservation outcomes.

In order to help ensure the success of the Minnesota projects selected for the MRBI, BWSR is committed to providing up to \$300,000 of technical assistance funds in state fiscal year 2011 beginning July 1, 2010 for a two-year grant period to eligible organizations. The funding will be distributed equally among selected proposals, with a maximum contribution of \$150,000 in technical assistance funding per proposal. These state funds will supplement or match federal technical assistance available for the selected project areas. Future funding cannot be guaranteed, because these funds are legislatively appropriated on a biennial basis. However, BWSR is committed to continue to help successful MRBI partnership projects as funding and priorities permit.

BWSR looks forward to providing assistance to all successful proposals. Please do not hesitate to contact me if you need additional information or have questions regarding this letter of support and commitment.

Sincerely,

John Jaschke
Executive Director

cc: Don Baloun, incoming MN State Conservationist

Benifji

701 Minnesota Ave.,
Suite 214
St. Paul, MN 56101
(612) 441-8024

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1601 Minnesota
Drive
Brainerd, MN 56601
(218) 838-2351

Duluth

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Duluth, MN 55812
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Fergus Falls

1000 E. Lincoln
Fergus Falls, MN 56505
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Marshall

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Marshall, MN 56258
(507) 537-2226

Mankato

1000 E. Lincoln
Mankato, MN 56001
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New Ulm

2000 E. Lincoln
New Ulm, MN 56001
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Rochester

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St. Paul, MN 55101

Phone: (612) 441-8024

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www.bwsr.state.mn.us

TTY: (612) 441-8024

An equal opportunity employer

April 26, 2010

Don Baloun, State Conservationist
USDA Natural Resources Conservation Service
375 Jackson Street, Suite 600
St. Paul, MN 55101-1854

Dear Mr. Baloun:

I am writing to express the Minnesota Department of Agriculture (MDA)'s support for the Mississippi River Basin Healthy Watersheds Initiative (MRBI) in all four of Minnesota's MRBI 8-digit HUC focus areas – the Middle Minnesota River, Root River, Sauk River, and Upper Cedar River watersheds.

To help locally led MRBI projects succeed, MDA is committed to offering guidance as needed, and as time and resources allow, in one or more of the following areas of expertise:

- **Edge Of Field Monitoring** setup, QA/QC, data analysis, interpretation and reporting , and/or developing sampling protocols
- **Nutrient Management Initiative** demonstrations/evaluations
- **Rainfall Simulator** setup, QA/QC, data analysis, interpretation and reporting
- **Drainage Water Management** systems and monitoring/evaluation
- **Cover Crop** systems and monitoring/evaluation
- **Prescribed Grazing** planning and monitoring/evaluation
- **Digital Terrain Analysis** to identify, map and prioritize critical areas for practice implementation
- **Farm Nutrient Management Assessment Program (FANMAP)** surveys to determine existing practices
- **General Technical Support** in designing and evaluating field-scale projects
- **Education and Outreach**

MDA looks forward to collaborating with other partners to support all Minnesota MRBI projects, as needed, to the extent practicable.

Attached for reference is the list of federal and state agency contacts developed following a January 2010 interagency meeting that MDA convened to discuss coordinated assistance for locally led MRBI projects. The list has been distributed to MRBI stakeholders in each of the four watershed focus areas. MDA will continue to assist with statewide MRBI stakeholder communications as needed.

Please do not hesitate to contact me if you have questions or would like additional information regarding MDA's support for the MRBI.

Sincerely,



Joe Martin
Assistant Commissioner



MINNESOTA, NORTH DAKOTA, AND SOUTH DAKOTA
1101 West River Parkway Suite 200
MINNEAPOLIS, MN 55415-1291

Tel (612) 331-0700
Fax (612) 331-0770

nature.org

April 23, 2010

Hiawatha Valley RC&D
Attn. Jeffery Koster, RC&D Coordinator
1485 Industrial Drive NW Rm 104
Rochester, MN 55901-0750

Re: NRCS Mississippi River Basin Initiative

Dear Mr. Koster:

The Nature Conservancy is pleased to continue working with Hiawatha Valley RC&D, agriculture producers and conservation partners within the Rush/Pine Creek Watershed. TNC and our partners in agriculture support your efforts to deliver precision conservation within the watershed. We have obligated \$250,000 toward a technical assistance and outreach position dedicated to working within the MRBI project area. This technician will work one on one with producers in the watershed to deliver conservation practices based on interviews, terrain analysis and agronomic assessments for phosphorous index and basal cornstalk nitrate sampling. Merging the technical assistance support from TNC to the EQIP and WHIP practice implementation funding from MRBI is an ideal conservation partnership.

Addressing identified conservation concerns and evaluating effectiveness is essential to TNC's science based approach. TNC has invested \$8,000 in a terrain analysis and stream power index for this watershed conducted by Winona State University (WSU) using LiDAR data. TNC has also signed a contract with WSU for \$14,000 to monitor water quality at 8 locations within the project area where MRBI funds will be used.

The Nature Conservancy will also help with project coordination and promotion of practices. TNC will continue to work with our agriculture partners in the area to pair interested landowners with sound conservation practices.

TNC will continue to seek additional funds and expand our partnership to continue this and other working lands conservation efforts in the future and we look forward to working with you.

Sincerely,

A handwritten signature in black ink that reads "Peggy Ladner". The signature is fluid and cursive.

Peggy Ladner
State Director



"Dedicated to scientific inquiry into the natural and hydrological resources of the southeastern Minnesota region."

April 28, 2010

Hiawatha Valley RC&D
Attn. Jeffery Koster, RC&D Coordinator
1485 Industrial Drive NW, Room 104
Rochester, MN 55901-0750

Re: NRCS Mississippi River Basin Initiative

Dear Mr. Koster:

The Southeastern Minnesota Water Resources Center (SEMWRC) at Winona State University is eager to support the MRBI proposal you have prepared entitled "Rush-Pine Creek Watershed Initiative for the Root River Healthy Watershed Initiative".

Currently, we are finalizing a watershed assessment and scoping plan for the Rush-Pine Creek Watershed. The resulting report provides a framework for identifying and addressing conservation and water quality issues in the watershed. The Nature Conservancy commissioned this document with the hope that it will guide and benefit future work in the watershed, including projects such as the one you proposed.

SEMWRC is also conducting a multi-scale digital terrain analysis of the watershed using high-resolution digital elevation models. The results of the terrain analysis work will provide an overview of the areas in the watershed that are most susceptible to overland runoff, soil erosion, and soil and groundwater contamination. Furthermore, our final product, which will be delivered to The Nature Conservancy in the very near future, includes the datasets, tools, and validation procedures that conservation professionals working in the watershed can use to implement additional terrain analyses investigations in support of specific projects.

The Nature Conservancy has also provided SEMWRC with funding to deploy and maintain a high-resolution multiparameter water quality-monitoring network in the Rush-Pine Creek Watershed. This project will characterize hydrologic and water quality variations in all the significant streams in the watershed. This network will be operational in May 2010. These data will provide a baseline for assessing the impact of conservation work occurring in the upland areas of the watershed.



April 21, 2010

Jennifer Heglund, Acting MN State Conservationist
Minnesota Natural Resources Conservation Service
375 Jackson Street, Suite 600
St. Paul, MN 55101-1854

Dear Ms. Heglund:

I am writing on behalf of the Minnesota Board of Water and Soil Resources (BWSR), Minnesota's state conservation agency, in regard to the Mississippi River Basin Healthy Watersheds Initiative (MRBI).

Minnesota is pleased to have four 8-digit HUC areas under consideration for this program: Middle Minnesota River, Root River, Sauk River, and the Upper Cedar River (multi-state with Iowa). SWCDs, watershed districts, other local units of government, partnering agencies, supporting civic groups and residents in all four of the focus areas have proven track records of success in implementing conservation through targeted efforts that result in real conservation outcomes.

In order to help ensure the success of the Minnesota projects selected for the MRBI, BWSR is committed to providing up to \$300,000 of technical assistance funds in state fiscal year 2011 beginning July 1, 2010 for a two-year grant period to eligible organizations. The funding will be distributed equally among selected proposals, with a maximum contribution of \$150,000 in technical assistance funding per proposal. These state funds will supplement or match federal technical assistance available for the selected project areas. Future funding cannot be guaranteed, because these funds are legislatively appropriated on a biennial basis. However, BWSR is committed to continue to help successful MRBI partnership projects as funding and priorities permit.

BWSR looks forward to providing assistance to all successful proposals. Please do not hesitate to contact me if you need additional information or have questions regarding this letter of support and commitment.

Sincerely,

John Jaschke
Executive Director

cc: Don Baloun, incoming MN State Conservationist

Bemidji 701 Minnesota Ave., Suite 214 Bemidji, MN 56601 (858) 444-8024	Brainerd 1601 Minnesota Drive Brainerd, MN 56601 (858) 838-7384	Duluth 215 S. Ashland Ave. Rm. 30101 Duluth, MN 55802 (218) 724-4747	Fergus Falls 1000 E. Lincoln Fergus Falls, MN 56547 (858) 752-3044	Marshall 1100 E. Lincoln Rm. 307 Marshall, MN 56258 (218) 437-4000	Mankato Thompson Center, 50 South Mankato, MN 56001 (507) 938-6962	New Ulm 501 E. 13th St. New Ulm, MN 56073 (507) 439-6977	Reduska 1000 E. Lincoln Reduska, MN 56258 (858) 752-3044
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**LAND
STEWARDSHIP
PROJECT**

LEWISTON OFFICE
180 E Main Street, Box 130
Lewiston, MN 55952
Phone: 507-523-3366

Hiawatha Valley RC&D
1485 industrial Drive NW
Rochester, MN 55952

Dear Jeff,

The prevailing natural resource issues in the Rush-Pine watershed are well mitigated by farming practices that form the core of our beginning farmer training program. Attention to perennial vegetation, pastured livestock, and an eye on the environment along with financial and social goals mark Land Stewardship Project's Farm Beginnings course, which begins its 15th year this fall in Winona. Our track record for educating stewardship farmers will serve the Mississippi River Basin Initiative as it attempts to get a handle on the health of an important watershed in SE Minnesota. As an organization committed to more farmers raising crops and livestock with a land ethic, we support the initiative and pledge to do our part as a leading farmer education group in the region.

Please call our office in Lewiston as needed as you consider the application entitled, "Rush-Pine Creek Watershed Initiative for the Root River Healthy Watershed Initiative (Mississippi River Basin Initiative (MRBI))."

Sincerely,

Caroline van Schaik
Program organizer

Land Stewardship Project
180 E. Main St.
Lewiston, MN. 55952
507-523-3366



Root River Soil and Water Conservation District

Minnesota Soil and Water Conservation Districts
805 N. Hwy. 44/76
Agricultural Service Center
Caledonia, MN 55921
(507) 724-5261 Ext. 3

April 29, 2010

Donna Rasmussen
Fillmore SWCD
900 Washington St. NW
Preston, MN 55965

Dear Donna,

Thank you for the opportunity to partner with you on your Mississippi River Basin Initiative (MRBI) for the Rush-Pine Watershed near Rushford, Minnesota (Root River Healthy Watershed Initiative).

We would be glad to commit our support to the proposal and provide technical assistance as set forth in the proposal.

Thank you for your efforts to conserve natural resources in the Root River Watershed.

Sincerely,



Ralph Tuck
District Manager
Root River SWCD

UNIVERSITY OF MINNESOTA

EXTENSION

**Fillmore
County**

902 Houston St. NW
Suite #3
Preston, MN 55965-1080

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(507) 765-3896

FAX
(507) 765-4512

E-MAIL
fillmore@extension.umn.edu

WEB
<http://www.extension.umn.edu>

April 30, 2010

Donna Rasmussen
Fillmore Soil and Water Conservation District
900 Washington Street
Preston MN 55965

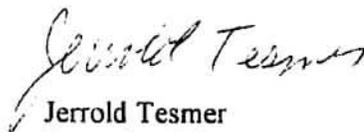
RE: Root River Healthy Watershed Initiative

It is with great pleasure the University of Minnesota Extension of Fillmore, Houston, and Winona Counties join with the collaborating partners in the Upper South Fork Root River Watershed Initiative, the Watson Creek Watershed Initiative, and the Rush-Pine Creek Watershed Initiative for the Root River Healthy Watershed Initiative of the Mississippi River Basin Initiative.

We have a long history of collaboration in matters related to education and outreach on many water quality topics through the Water Plan in each of the three counties. Extension Educator Tom van der Linden serves Winona County while Extension Educator Jerrold Tesmer serves Houston and Fillmore Counties in Agriculture Production Systems.

The current focus on nutrient management, grazing, and cover crop education and outreach continues this relationship with the local Soil and Water Conservation Districts, the Natural Resources Conservation Service, and the Hiawatha Valley RC&D. With the Root River being the major watershed in these counties, any positive actions will not only benefit the local water quality, but contribute to water quality downstream.

Sincerely,



Jerrold Tesmer
Extension Educator
Fillmore/Houston Counties

UNIVERSITY OF MINNESOTA

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**Fillmore
County**

902 Houston St. NW
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April 30, 2010

Donna Rasmussen
Fillmore Soil and Water Conservation District
900 Washington Street
Preston MN 55965

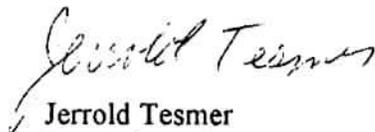
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Sincerely,



Jerrold Tesmer
Extension Educator
Fillmore/Houston Counties

April 23, 2010

Jeff Koster
Hiawatha Valley RC&D
1485 Industrial Drive NW
Rm 104
Rochester, MN 55901
Phone: (507) 281-1959

RE: USDA Mississippi River Basin Initiative for the Root River Watershed

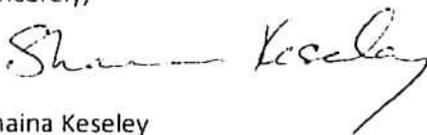
Dear Mr. Koster,

The Minnesota Pollution Control Agency strongly supports applications for the funding of small watershed restoration projects within the Root River watershed as part of the Mississippi River Basin Healthy Watershed Initiative. The Root River is richly endowed with high-value trout streams that are often impaired by excessive levels of nitrates, turbidity and e-coli bacteria. The larger cool- and warm-water tributaries also have a high potential for diverse fish and other aquatic life that is not being realized because of excessive runoff.

The Root River watershed has become a priority site for a variety of resource investigation and restoration efforts. Collectively, state agencies and local governmental units have gathered excellent baseline monitoring data at several sites against which future progress can be measured. The Minnesota Department of Agriculture has set up several intensive, state-of-the-art small watershed monitoring stations for measuring the effect of alternative land uses. The MPCA has worked and will continue to work closely with all parties involved so that the best possible information is used to develop comprehensive watershed plans for resource protection and restoration. The funding of priority watersheds under the MRBI will provide an excellent opportunity to see how intensive implementation efforts within a small area can make a difference to water quality and broader ecosystem indicators. Such results are needed to improve the selection of BMPs to address erosion and water quality concerns in the challenging terrain of southeast Minnesota.

The MPCA is currently involved in a turbidity TMDL study on the Root River that includes many water quality monitoring stations. If previously collected data can be of help to this project, it can be summarized and provided as needed. Also, if there is a need for further monitoring with current equipment and staffing capabilities, that support is available. The MPCA can also be of assistance with identification of critical areas, project selection, and overall project planning.

Sincerely,



Shaina Keseley