Environment and Natural Resources Trust Fund
2011-2012 Request for Proposals (RFP)

Subd: 04t

Project Title: Northeast Minnesota White Cedar Plant Community Restoration

Category: C3+4. Technical Assistance and Community-Based Planning

Total Project Budget: $ $250,000

Proposed Project Time Period for the Funding Requested: 2 yrs, July 2011 - June 2013

Other Non-State Funds (secured): $ 0

Summary:

This project will address the decline of northern white cedar plant communities in northeast Minnesota. Project will prioritize cedar sites for restoration, train LGU staff on cedar restoration and protection.

Name: Dale Krystosek

Sponsoring Organization: Board of Water and Soil Resources

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Location:

Region: NE

Ecological Section: Northern Superior Uplands (212L), No. Minnesota and Ontario Peatlands (212M), No. Minnesota Drift and Lake Plains (212N)

County Name: Aitkin, Beltrami, Carlton, Cass, Clearwater, Cook, Crow Wing, Hubbard, Isanti, Itasca, Kanabec, Koochiching, Lake, Lake of the Woods, Mille Lacs, Pine, St. Louis, Wadena

City / Township:

2011-2012 MAIN PROPOSAL

PROJECT TITLE: Northeast Minnesota White Cedar Plant Community Restoration Project

I. PROJECT STATEMENT

Northern white cedar *(Thuja occidentalis)* wetland plant communities have been declining in Minnesota for decades. One of the goals of this project will be to reverse the decline of northern white cedar wetland plant communities in Minnesota through establishment of restoration and preservation demonstration projects and training local and state government land managers on restoration and protection techniques. Currently white cedar regeneration success is extremely rare in Minnesota due to seedling damage from deer, snow shoe hare and rodents and unsuitable seedbed conditions. Many mature white cedar stands have been lost in the state because the species is extremely susceptible to restricted soil aeration due to high water levels caused by poorly designed road crossings in wetlands. ***Northern White cedar provides unique wetland functions in Minnesota including:***

- **Thermal cover for white tailed deer and other wildlife during extreme winter conditions**
- **Critical habitat for pine marten, fisher, songbirds such as Parula and Blackburnian warblers**
- **Provide thermal buffering for cold water fisheries such as brook trout streams**

Project Goals:

The first goal of the project will be to reverse the decline of northern white cedar wetland plant communities in Minnesota. The project will achieve its goals by evaluating and prioritizing white cedar stands for restoration and preservation and through the establishment of demonstration restoration and preservation projects. The project will restore and preserve critical wildlife habitat and winter thermal cover for white tailed deer, black bear, fisher, marten and many songbirds in northeastern and north central Minnesota.

The second goal of the project will be to improve the quantity and quality of white cedar plant communities in northeast and north central Minnesota. The project will accomplish this by development of a training program for local government unit resource managers and local and state road authorities regarding:

- ***Restoration techniques for northern white cedar plant communities including comparison of site preparation and revegetation techniques and***
- ***Protecting white cedar from detrimental impacts to wetland hydrology by poorly designed wetland crossings for roads and trails.***

This project will help achieve the purpose of the Wetland Conservation Act (8420.0100 Subpart 1.B.) which states: ***"increase the quantity, quality and biological diversity of Minnesota's wetlands by restoring or enhancing diminished or drained wetlands."***

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Prioritize Northern White Cedar Sites for Restoration and Preservation and establish 5 Demonstration projects - Budget: $228,250

BWSR will contract with Soil and Water Conservation Districts in northeast and north central Minnesota to evaluate and prioritize northern white cedar for restoration and preservation. An interagency technical team will establish criteria for prioritizing these sites. This activity will would utilize findings and data from the Northeast Minnesota Wetland Inventory and Assessment Project. The inventory data would be used to target potential sites for restoration and high priority ecologically sensitive sites that would benefit from preservation. These easements will be perpetual and not used for mitigation purposes. Preservation easements will

be held by DNR. SWCDs would field check and prioritize potential sites within the region. The project will test several seedbed preparation treatments where regeneration has not occurred to determine the most effective white cedar restoration techniques. Design and management of restoration projects would involve DNR, BWSR, several county land departments and other local, state and federal agencies. Budget for this component would be for a ½ time BWSR Wetland Specialist to coordinate the effort for two years and also contracted assistance with SWCDs.

Activity 2: Develop and deliver training for local government units and road authorities regarding maintaining natural hydrology for roads that bisect northern white cedar stands - Budget: $21,750. This activity would develop training materials and conduct training for local and state road authorities regarding minimizing impacts to natural hydrology where roads cross forested wetlands and site preparation and revegetation techniques for restoration of northern white cedar plant communities.

Outcome	Completion Date
1. **Identify High Priority White Cedar Restoration and Preservation Sites** *(Sites identified as part of Northeast Wetland Restoration Inventory and Assessment Project will be field checked, evaluated and prioritized)*	12/11
2. **Establish 5 white cedar restoration and preservation projects** *(A minimum of 5 projects will be established with a goal of 400 acres restored or preserved)*	1/12
3. **Develop and deliver training for at least 30 local & state land managers and road authority staff regarding northern white cedar plant community restoration and minimizing wetland impacts by roads and trails.** *(This training initiative will target road authority staff for improved design to reduce hydrologic impacts to forested wetland plant communities adjacent to road projects and land managers regarding site preparation and revegetation techniques for white cedar restoration)*	5/12

III. PROJECT STRATEGY

A. Project Team/Partners

The overall project will be managed by the Minnesota Board of Water and Soil Resources. Design and management of restoration projects would involve Natural Resource Research Institute (NRRI)**,** DNR, BWSR, several county land commissioners and other local, state and federal agencies. Technical oversight will be accomplished by a regional inter-agency Northeast Wetland Restoration Committee made up of technical staff of DNR, MPCA, BWSR, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and LGUs.

B. Timeline Requirements

The project will be completed within 24 months. Organization and working relationships of the partners have already been established through the Northeast Wetland Mitigation Inventory (NE Inventory) and Assessment Project. The partner agencies have been meeting regularly as part of that effort for over 4 years and have successfully completed the NE inventory project on time and on budget.

C. Long-Term Strategy and Future Funding Needs

This project is a natural continuation of, and will utilize findings and data from the NE Wetland Mitigation Inventory. The project will result in substantially improved northern white cedar wetland plant communities in the northeast and north central regions of Minnesota.

2011-2012 Detailed Project Budget

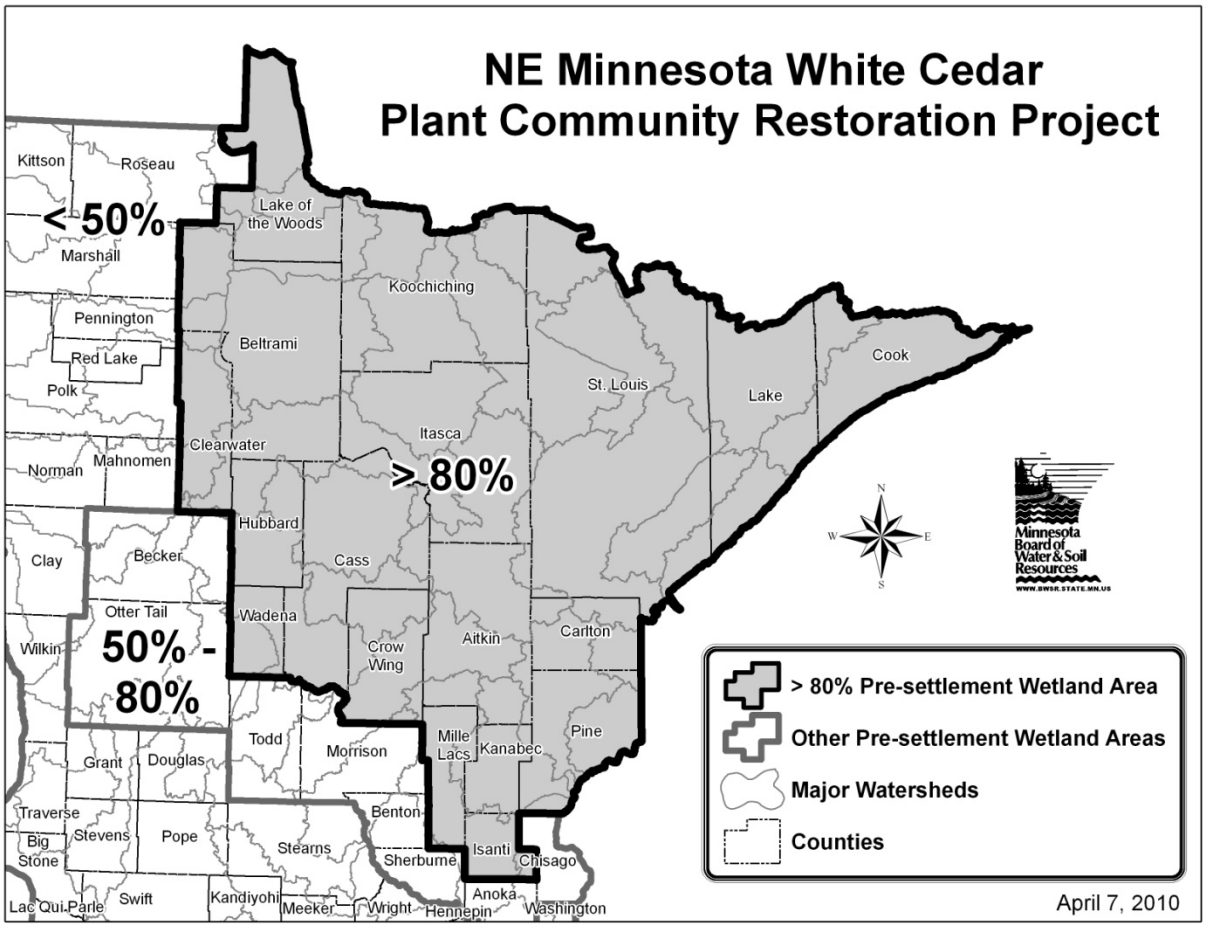
IV. TOTAL TRUST FUND REQUEST BUDGET *[Insert # of years for project]* **years**

BUDGET ITEM *(See list of Eligible & Non-Eligible Costs, p. 13)*	**AMOUNT**
Personnel: Unclassified (50% time) Wetland Specialist (Board of Water and Soil Resources for 2 years) Salary - 74% Benefits - 26%	$ 74,250
Contracts: Soil and Water Conservation Districts ($30,000) Up to 12 contracts with SWCDs based on criteria, priorities and targeted areas established by the interagency technical team. This field work would be to to complete field investigations and prioritization of white cedar sites for restoration and preservation.This work will include inspection of a minimum of 100 potential sites. **Natural Resource Research Institute ($45,000)** to provide technical expertise in designing white cedar restoration projects. This work will include literature reviews, field data collection and project design. This contract will also include development and delivery of training on white cedar restoration. **County Land Departments ($61,500)** - Up to 5 contracts with county land departments based on selection of highest priority sites by the interagency technical team for demonstration of white cedar plant community restoration. These contracts would be to develop a minimum of 5 demonstration white cedar restoration or preservation projects totaling a minimum of 400 acres. This work will include site preparation of demonstration sites, tree planting, installation of deer brouse protection, and management of site during project duration (2 years).	$137,500
Equipment/Tools/Supplies: Field supplies including costs for field demonstration of restoration techniques (fencing, plant materials, deer repellants, tree protection devices).	$ 29,250
Acquisition (Fee Title or Permanent Easements):	$ -
Travel: This budget item is to cover BWSR staff costs for Interagency coordination meetings, field site visits and training. For example: a) travel from Bemidji BWSR office to Duluth for interagency technical team meetings, b) travel costs for BWSR Wetland Specialists from office (Duluth) to field and demonstration sites within 18 county project area, c) Travel for BWSR staff to training sessions (Grand Rapids, Duluth, International Falls, etc.)	$ 9,000
TOTAL ENVIRONMENT & NATURAL RESOURCES TRUST FUND $ REQUEST	$ 250,000

V. OTHER FUNDS

SOURCE OF FUNDS	**AMOUNT**	**Status**
Other Non-State $ Being Applied to Project During Project Period:	$ -	
Other State $ Being Applied to Project During Project Period: Public road mitigation program funds *(source: bonding)* encumbered for white cedar preservation project in St. Louis County.	$ 232,128	Secured
In-kind Services During Project Period: BWSR Senior Wetland Specialist 25% staff time in-kind for two years	$ 50,000	
Remaining $ from Current ENRTF Appropriation (if applicable):	$ -	
Funding History: 2007 Legislative appropriation for Northeast Wetland Mitigation Inventory (project completed)		

The Northeast Minnesota White Cedar Plant Community Restoration Project is the 18 counties in northeast and north central Minnesota with greater than 80% of pre-settlement wetlands remaining as defined in Minn. Rules 8420 *(area shown below in gray)*



Project Manager Qualifications and Organization Description

Project Manager: Dale E. Krystosek, Senior Wetland Specialist, Minnesota Board of Water and Soil Resources.
Dale has been employed by BWSR for 18 years and is currently lead staff in implementing the Wetland Conservation Act for the BWSR North Region *(40 counties*). He is responsible for providing leadership in coordination and resolution of wetland issues with counties, soil and water conservation districts, cities, DNR and the U.S. Army Corps of Engineers in northern Minnesota.

CAREER ACCOMPLISHMENTS

- **Lead BWSR staff in developing the Northeast Wetland Mitigation Strategy, a $375,000 project** to inventory wetland mitigation opportunities in 18 county area of northeast and north central Minnesota**.** Project was completed on time and on budget.
- **Member of MnRAM *(Minnesota Routine Assessment Methodology for Evaluating Wetland Functions*) Interagency Technical Committee** for 10 years. This interagency committee of BWSR, DNR, MPCA and Corps of Engineers is responsible for development and updating Minnesota's primary wetland functional assessment methodology.
- **Coordinator and chief author of the Lake Bemidji Watershed Diagnostic Study & Watershed Management Plan,** which resulted in nearly $1,000,000 in federal and state funding for watershed protection projects in the 632 square mile watershed at the headwaters of the Mississippi River.
- **Lead BWSR staff in resolving largest WCA court ordered restitution in Minnesota**, the $130,000 Ruther penalty in Otter Tail County, resulting in restoration of 28.4 acres of wetlands and the establishment of the Couyer WMA in cooperation with Pheasants Forever, U.S. Fish and Wildlife Service and DNR Wildlife.
- **Local Project Coordinator for the Bemidji-Bagley Groundwater Study**, **a $230,000 project** conducted in cooperation with the U.S. Geological Survey, DNR Division of Waters, and Clearwater, Cass, Hubbard and Beltrami SWCD.
- **Lead BWSR staff in developing agency policy** for Exceptional Natural Resource Value Project Guidance, Forestry Exemption Guidance, and Guidance for Management of Forested Wetland Mitigation Sites including interagency coordination, BWSR Board review and approval.
- Assisted Cass County **with the development of the first non-metro Local Wetland Management Plan in Minnesota** in 1996 and development of local wetland plans in Hermantown, Lake of the Woods County and International Falls.
- **Lead staff in developing and completing the Beltrami County Local Water Plan,** which was among the first 3 approved in Minnesota.

EDUCATION:

- **University of Minnesota, St. Paul, B.S. Wildlife Management with Distinction, 1978 (3.45 GPA).**
- **Bemidji State University, - coursework in bio-chemistry (4.0 GPA) and continuing education in communication skills, human relations and botany (1990- 2007).**
- **University of Minnesota - continuing education in vegetation management and Wetland Delineation Certification (1997 – 2010).**