

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

Subd: 4j2e

Project Title: 2e - HCP 7 - Wild Rice/Waterfowl Habitat: Enhancement and Long-term Monitoring

Category: D. Land Acquisition for Habitat and Recreation

Total Project Budget: \$ 50,000

Proposed Project Time Period for the Funding Requested: 3 yrs, July 2011 - June 2014

Other Non-State Funds (secured): \$ 12,9980

Summary:

To enhance wild rice/waterfowl habitat on Leech Lake Reservation, we will monitor natural wild rice beds; regulate water levels; reseed restored habitat; and implement adaptive management based on long-term trends.

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Sponsoring Organization: Leech Lake Band of Ojibwe

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Location:

Region: NW, NE, Central

Ecological Section: No. Minnesota Drift and Lake Plains (212N)

County Name: Beltrami, Cass, Hubbard, Itasca

City / Township:

2011-2012 MAIN PROPOSAL

PROJECT TITLE:

HCP7-2E Wild Rice/Waterfowl Habitat: Enhancement and Long-term Monitoring

I. PROJECT STATEMENT

This project addresses losses or degradation of aquatic habitat that has historically supported abundant wild rice (*Zizania* L.) and waterfowl across the Leech Lake Reservation (LLR) in north-central Minnesota. Approximately 13,000 acres of natural wild rice in shallow lakes, marshes, and forested impoundments on the LLR provide food, refuge, and nesting opportunities for numerous species of waterfowl, fish, and other animals. Natural wild rice is a key element of Ojibwe culture and is highly valued by Leech Lake Band members spiritually, culturally, and economically. The high value of wild rice habitat for fish and wildlife is well-documented and has been long recognized by diverse stakeholders of Minnesota resources.

Natural wild rice in northern Minnesota faces numerous threats (2008 MNDNR Report to Legislature: Natural Wild Rice in Minnesota). Waterfowl production in this region has been negatively impacted in recent decades because of degraded brood habitat; uncontrolled fluctuations in water levels; competition from invasive species; and changing weather patterns. Management activities to improve habitat for natural wild rice and waterfowl include regulation of water levels; reseeded of wild rice in restored habitat; and long-term monitoring of wild rice productivity to inform adaptive management.

The overall goal of this project is to conserve and enhance natural *Zizania* habitat on the LLR and the native species of waterfowl, fish, and other wildlife that rely on it. This project builds on recent and current projects conducted by LLR Division of Resource Management (LLDRM) through which we developed and are refining methodology and technical capacity to enhance and monitor wild rice habitat across the LLR. With 2011-2012 ENRTF support, we will continue to regulate water levels in existing impoundments and waterways (approx. 600 acres); reseed restored habitat with local wild rice (approx. 200 additional acres); and acquire, digitize, and analyze aerial imagery for 2011 and 2012 acreage of natural wild rice on LLR (approx. 13,000 acres/yr). The specific goals of this project directly extend a current LLDRM project supported by *2010 ENRTF funding. Here we propose to implement our *refined methodology for interpreting wild rice on aerial imagery; to implement adaptive management based on our *trend analyses of wild rice and waterfowl abundance; and to work with MNDNR-led Wild Rice Working Groups to standardize region-wide monitoring and enhancement of wild rice/waterfowl habitat.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Waterfowl Habitat Enhancement and Management

Budget: \$ 5759

Description 1: Controlling and managing water levels on a subset of existing forested impoundments and waterways of the LLR to improve habitat for reproducing waterfowl. Tasks include beaver management, beaver dam removal, and periodic drawdown of water. Cass County sites include Bag Lake (17 acres); Highland Creek (48 acres); Cuba (44 acres); Sucker Bay (51 acres); Brush Lake (13 acres); Ketchum (38 acres); Middle Sucker (7); Ojibwe I (3 acres); Ojibwe II (4 acres); West Banks I (42 Acres); West Banks II (17 acres); Snake Brook (33 acres); Bear Brook (18 acres); and Six Mile (8 Acres). Itasca County sites include Upper Third River (28 acres); Amik Lake (68 acres); Pigeon River (53); and Ball Club (82 acres).

Continued habitat maintenance will be provided through a cooperative agreement between the LLBO and the USFS. Existing structures will be maintained and parts replaced as needed.

Outcome 1	Completion Date
1. Water level control and management on existing forested impoundments and waterways. Includes control of beaver activity, periodic	June 30, 2013

drawdown of waters, and parts replacement (approx. 600 acres).	
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Activity 2: Wild Rice Habitat Enhancement and Management

Budget: \$ 4333

Description 2: Reseeding 200 additional acres of restored habitat with local ecotypes of native wild rice (*Zizania* species) to improve wild rice production and to enhance cover and foraging opportunities for waterfowl on the LLR. Once established, and with continued management of water levels by LLBO and USFS, the wild rice should naturally reseed.

Outcome 2	Completion Date
1. Native wild rice reseeded on restored habitat (200 additional acres).	June 30, 2013

Activity 3: Long-term Monitoring and Analysis of Wild Rice Productivity **Budget: \$ 39908**

Description 3: Digitizing and interpreting 2011 and 2012 aerial imagery of wild rice on LLR (approx. 13,000 acres/yr); then analyzing against our 18-year-long dataset of wild rice and waterfowl abundance (being interpreted and analyzed with 2010 ENRTF funding). Tasks include implementing methodology for interpreting wild rice on aerial imagery (being refined with 2010 ENRTF funding); implementing adaptive management based on trend analyses (being conducted with 2010 ENRTF funding); and working with the MNDNR-led Wild Rice Working Groups to standardize region-wide monitoring and enhancement of wild rice/waterfowl habitat. We will also continue partnering with the USFWS, BIA, USFS, and other stakeholders to implement adaptive management of wild rice/waterfowl habitat based on long-term trends.

Outcome 3	Completion Date
1. Unique 20-yr-long dataset of natural wild rice acreage interpreted and analyzed (1993-2012; approx. 13,000 acres on the LLR). Adaptive management implemented based on wild rice and waterfowl abundance trends on and near LLR between 1993 and 2012.	June 30, 2013

III. PROJECT STRATEGY

A. Project Team/Partners

1. LLDRM Fish, Wildlife, and Plant Resources Department: Project Lead on Activities 1 and 2 - Steve Mortensen, LLDRM Wildlife Biologist; Project Lead on Activity 3 - Rebecca Knowles, PhD, LLDRM Plant Ecologist (LLDRM to receive entire funds budgeted except for up to \$3965 paid to acquire aerial imagery for 2011; to contribute \$12998 in-kind).
2. USFS Chippewa National Forest: Impoundment management, including water level and beaver control (USFS to receive no funds from this proposal; to contribute up to \$40000 through Cooperative Agreement).
3. BIA Circle of Flight Program: Waterfowl and wild rice habitat enhancement (BIA to receive no funds from this proposal; to contribute up to \$25000 for habitat management).

B. Timeline Requirements

With ENRTF support, Activities 1, 2, and 3 will begin July 2011. Field activities will occur until approximately November 1 each year of the project. Activity 3 will continue year-round throughout the full period of the project (July 2011 – June 2013).

C. Long-Term Strategy and Future Funding Needs

With ENRTF support, this project will provide continuation of previous and current management activities aimed at enhancing natural wild rice productivity and waterfowl nesting and brood habitat on LLR. The LLDRM has a strong record of grant awards from tribal, federal, state, and non-profit entities. We also have a strong record of active participation in technical committees, regional and nation-wide strategic planning teams, and academic research. Our efforts to obtain funding to conserve the natural resources of the LLR are continuous and ongoing.

2011-2012 Detailed Project Budget

Leech Lake Reservation

HCP7-2E - Wild Rice/Waterfowl Habitat: Enhancement and Long-term Monitoring

IV. TOTAL TRUST FUND REQUEST BUDGET (2 years)

BUDGET ITEM	AMOUNT
Personnel:	\$ -
Plant Ecologist (630 hrs, 15%FTE, 2yrs) @ \$23.25/hr + 30% fringe rate: Project oversight, staff supervision, analysis of data, ground-truthing (GPS, camera)	\$ 19,042
GIS Specialist (425 hours, 10%FTE, 2yrs) @ \$18.34/hr + 30% fringe rate: Aerial imagery interpretation, project database management	\$ 10,132
2 Field Technicians (320 hours total, 4%FTE x 2 techs, 2 yrs) @ \$15.07/ hr + 30% fringe rate: Ground-truthing (GPS) of rice beds to aid photo interpretation	\$ 6,269
2 Field Technicians (200 hours total, 2%FTE x 2 techs, 2 yrs) @ 15.40/hr. + 30% fringe rate: Wild rice seeding, water management (including beaver control)	\$ 4,004
Contract: High-resolution aerial imagery of LLR ripened wild rice stands, 1 yr, 13,000 acres (Pro-West, Inc., Applied Ecological Services, or comparable)	\$ 3,965
Equipment/Tools/Supplies: \$ 5588, [Clemson leveler kits (3@\$549), water control parts, hardware (\$541), gasoline (\$400), rice seed (1500lbs@\$2/lb)]	\$ 5,588
Travel: 2000 miles @ \$0.50/mi for travel to project sites	\$ 1,000
TOTAL ENVIRONMENT & NATURAL RESOURCES TRUST FUND \$ REQUEST	\$ 50,000

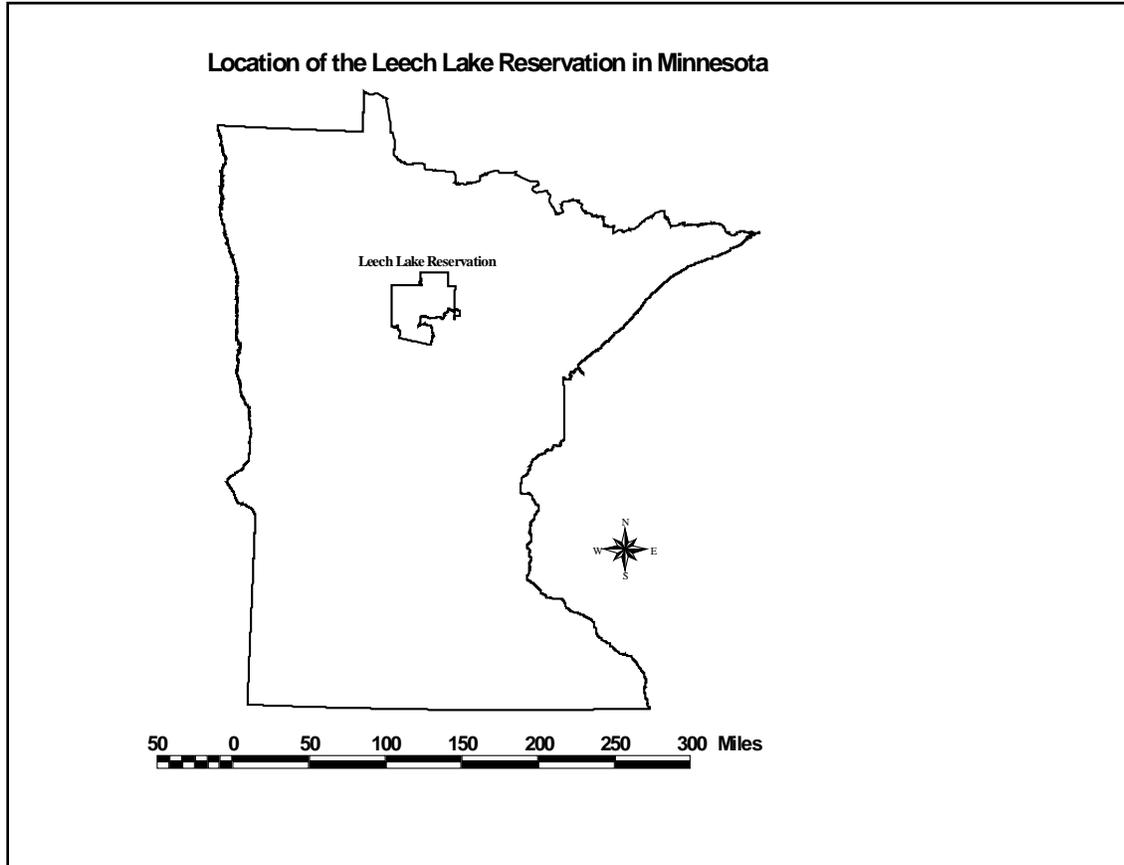
V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Applied to Project During Project Period: Tribal funding from BIA Circle of Flight Program to assist in fieldwork and project administration.	\$ 25,000	Pending
Other Non-State \$ Being Applied to Project During Project Period: USFS Cooperative Agreement funding to assist in water level management and rice restoration.	\$ 40,000	Pending
In-kind Services During Project Period: LLDRM assistance with wild rice survey (vehicles, GPS and GIS equipment, indirect costs) and overall project management.	\$ 12,998	Secured
Funding History		
ENRTF 2001 HCP Phase I	\$ 76,910	
ENRTF 2003 HCP Phase II	\$ 34,700	
ENRTF 2005 HCP Phase III	\$ 28,000	
ENRTF 2007 HCP Phase IV	\$ 30,000	
ENRTF 2008 HCP Phase V	\$ 30,000	
ENRTF 2010 HCP Phase VI Supplemental	\$ 50,000	

2011-2012 MAIN PROPOSAL MAP

PROJECT TITLE:

HCP7-2E Wild Rice/Waterfowl Habitat: Enhancement and Long-term Monitoring



Project Manager Qualifications

The Project Manager for Phase VII of the Habitat Conservation Partnership project proposed by the Leech Lake Band of Ojibwe is Steve A Mortensen. Steve received his BS in Biology from Bemidji State University in 1982. He was employed by the MN DNR for several years before accepting a position with the Leech Lake Reservation Division of Resources Management in 1984. He worked as a biologist for the Band until 2009, at which time; he was promoted to the Fish, Wildlife, and Plant Resources Program Director/Biologist. This program provides comprehensive fish, wildlife, and plant resources management aimed at species and habitats of importance to members of the Leech Lake Band. As such he has been involved in the development of programs for the reservation that protect, enhance, and manage human utilization of plant and animal resources on the reservation. Wildlife habitat and wild rice are both critical components of our management. He has also been involved in the oversight and implementation of numerous grants that work with wildlife and plants. Steve oversees a staff of 9 full time employees with an annual budget exceeding \$700,000.

The LLBO Fish, Wildlife, and Plants Resources Program were an original member of the LCCMR Habitat Conservation Partnership in 2001 and have been an active partner over the first five phases. As a partner, the Leech Lake FW&P Department has successfully managed \$199,000 in previous HCP grant projects.

Organization Description

The Leech Lake Fish, Wildlife and Plant Resources Program is an integral program of the Leech Lake Band of Ojibwe, Division of Resources Management (DRM). The Leech Lake DRM provides comprehensive natural resources management in many areas in addition to Fish, Wildlife and Plant Management including Conservation Enforcement with four Conservation Officers cross-deputized with the State of Minnesota, Forest Management, Land Management, Water Resources Management, and Wildland Firefighting, as well as a whole host of Environmental Service programs designed to protect and enhance the lands and natural resources within the boundaries of the Leech Lake Reservation. A detailed description of our programs and mission is available on our website at www.lldrm.org.