

**Environment and Natural Resources Trust Fund  
2018 Request for Proposals (RFP)**

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**Project Title:**

**ENRTF ID: 153-D**

Circle Lake Wild Rice Restoration and Carp Management

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**Category:** F. Methods to Protect or Restore Land, Water, and Habitat

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**Total Project Budget:** \$ 594,985

**Proposed Project Time Period for the Funding Requested:** 3 years, July 2018 to June 2021

**Summary:**

The Circle Lake Wild Rice Restoration and Carp Management Project will

- Provide a mechanism to restore wild rice to Circle Lake to increase waterfowl abundance and diversity and,
  - Mitigate the negative effects of carp on water quality and fishery habitat
  - Serve as a model for other lakes within
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**Web Address** www.riceswcd.org

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**Location**

**Region:** Southeast

**County Name:** Rice

**City / Township:** Forest Twp.

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**Alternate Text for Visual:**

Map of Circle Lake area

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ TOTAL	_____ %



**PROJECT TITLE: Circle Lake Wild Rice Restoration and Carp Management**

**I. PROJECT STATEMENT**

The Circle Lake Wild Rice Restoration and Carp Management Project will

- Provide a mechanism to restore wild rice to Circle Lake to increase waterfowl abundance and diversity and,
- Mitigate the negative effects of carp on water quality and fishery habitat
- Serve as a model for other lakes within the Middle Cannon Watershed that will benefit from sustainable carp management and be conducive to wild rice growth.

Circle Lake is an 837 acre shallow lake in the Middle Canon River Watershed near Northfield. The lake is currently impaired due to mercury in fish tissue and nutrients/eutrophication. The 2010 Circle Lake Management Plan, the 2011 Canon River Watershed Management Strategy, and the 2016 Canon River Watershed Restoration and Protection Strategies Report all list a variety of implementation activities to improve the water quality of Circle Lake; specifically, rough fish management to address internal loading.

This project needs to be implemented to address the issues of degraded water quality and reduced ecological integrity with respect to the lack of native aquatic vegetation. Initial work has been implemented to begin to develop baseline data and characterize the extent of the carp population through carp population and biomass estimates, carp biomass removals, and radio telemetry surveys. This initial work has been supported by the Circle Lake Association.

This project has two (2) main goals:

- Use the baseline data collected to date to implement invasive carp integrated pest management (IPM)
- Determine the feasibility of a full scale wild rice establishment in Circle Lake and connected wetlands

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1: Active management of common carp within Circle Lake and connected waters Budget: \$493,310**

*The Circle Lake Association commissioned a study to determine movement patterns of invasive common carp, identify aggregations of carp, and develop a population and biomass estimate. These activities were completed in Spring 2016 and initial results show that carp biomass exceeds 300 pounds/acre; roughly 3 times the biomass threshold identified in previous studies. The study also showed where carp aggregate in early summer and mid-winter. Funding through LCCMR will provide an opportunity to implement carp IPM to reduce carp biomass in a sustainable manner. Under this activity, we will increase the frequency of telemetry surveys to determine movement out of the system during high water events, develop a carp young of the year trap netting index in the outlet and in the Circle Lake basin, assess the existing carp and gamefish population to determine if carp can be biologically controlled, and remove a portion of the carp biomass.*

<b>Outcome</b>	<b>Completion Date</b>
1. Identify additional immigration routes from or into Circle Lake	6/2021
2. Modify 1 barrier site that is suspected of being breached by carp regularly during high water events	4/2021
3. Complete a mark recapture and electrofishing catch per unit effort (CPUE) annually to track reductions in carp biomass and calibrate existing electrofishing CPUE model for statewide application	6/2021
4. Determine if gamefish are present in sufficient numbers to act as biological control	10/2020
5. Reduce carp biomass through removals below published threshold values to improve water quality and ecological integrity	5/2021



**Activity 2: Wild rice enclosure study and full scale seeding**

**Budget: \$92,415**

*The physical habitat within Circle Lake (water depth, substrate composition, etc.) appears to be favorable to wild rice growth. To determine if full scale wild rice establishment may be possible, we propose to complete a feasibility study using methodology used with in previous studies with a slight modification. The study will incorporate the use of enclosure treatments in the lake and connected wetlands at 5 sites. There will be five (5) treatments at each site (unprotected seeded, unprotected unseeded, protected seeded, protected unseeded, and a partially protected treatment that disallows herbivory from waterfowl, but will allow carp to enter. Using carp population and biomass data from activity 1, we will develop a threshold value for wild rice establishment in lakes that support carp. This may be sued region wide for other restoration projects.*

<b>Outcome</b>	<b>Completion Date</b>
1. Determine if lake physical/chemical habitat supports rice growth	9/2019
2. Determine wild rice survivability in protected and unprotected treatments	9/2020
3. Develop carp biomass threshold value for wild rice survival	11/2020
4. Based on initial results, complete large scale seeding (8 acres)	4/2021

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

**Rice Soil and Water Conservation District Staff (Steve Pahs)**- Provide project management, water quality sampling, and survey of Wolf Creek (Barrier Site)-receiving LCCMR funds

**Circle Lake Association (Jason Wood)**-Financial contribution (cash \$10,000/year for 3 years, \$30,000 total))

**Contractor**- Complete wild rice feasibility study, implement carp IPM selected through RFP process (receiving LCCMR funds)

**Contractor**-Construction of improved carp barrier, selected through RFP process (receiving LCCMR Funds)

**B. Project Impact and Long-Term Strategy**

Implementing an integrated pest management scheme to control the population of common carp in Circle Lake and connecting wetlands is a critical piece of an overall water quality improvement strategy. Once biomass levels are reduced to be below a critical threshold that is known to be damaging, lake users are expected to see an improvement in water clarity that will promote the production of submergent vegetation, a beneficial aquatic habitat parameter. Improved habitat will promote a healthy assemblage of fish that will provide future generations with opportunities for outdoor recreation. Biomass of carp can be monitored periodically to determine if management/removal may be necessary to maintain the water quality benefits. Improvements to existing barriers will promote the longevity of proposed management activities. At the end of the project period, a plan will be in place that describes the frequency needed for monitoring.

The feasibility study for the establishment of wild rice and the potential establishment of wild rice stands will provide lake users with an increased aesthetic qualities and the potential for harvesting this historically important resource. Wild rice will also provide food and habitat for waterfowl and native aquatic species.

**C. Timeline Requirements**

LCCMR funding would provide three years of invasive carp management and feasibility study of wild rice establishment within Circle Lake and connecting waterbodies after which, management and funding will be provided by the Circle Lake Association.

## 2018 Detailed Project Budget

**Project Title:** *[Circle Lake Wild Rice Restoration and Carp Management]*

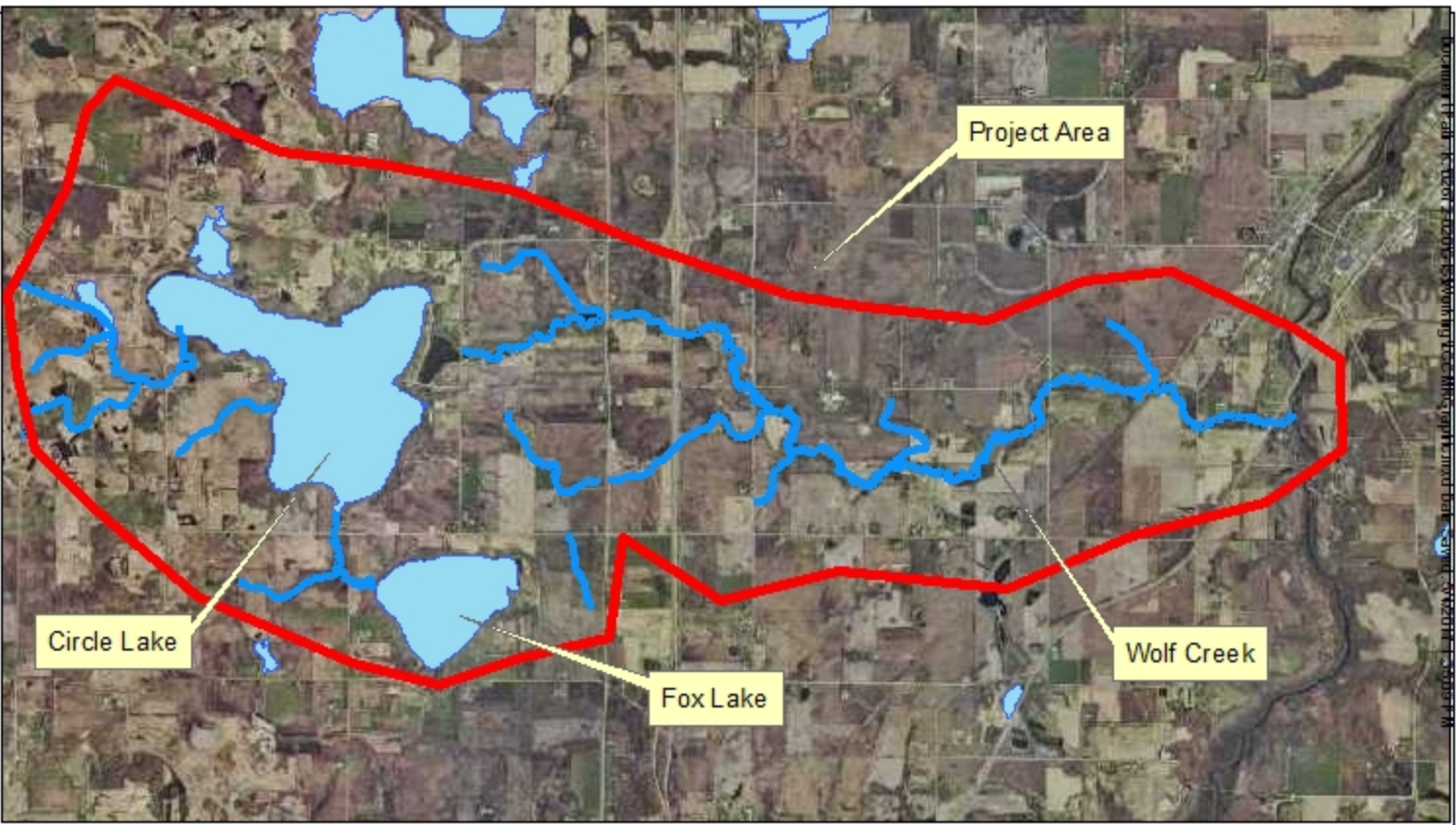
### IV. TOTAL ENRTF REQUEST BUDGET [3] years

<b>BUDGET ITEM</b> (See "Guidance on Allowable Expenses", p. 13)	<b>AMOUNT</b>
<b>Personnel: Technician to sample water quality of lake for three years, and survey Wolf creek cross sections .</b> <b>Rate: Technician at \$44/hr X 135 hrs= \$5940</b>	\$ 5,940
<b>Professional/Technical/Service Contracts:</b>	
Carp Management Contract; solicited through RFP	\$ 363,120
Commercial fishing Contract, required to offer to permitted commercial fisherman for area 21	\$ 30,000
Construction of carp barrier; solicited through RFP	\$ 115,000
Labs for water quality samples	\$ 600
<b>Equipment/Tools/Supplies:</b>	\$ -
Seine net	\$ 24,000
Radio tags and surgical equipment	\$ 11,500
Pit Tag stations and supplies	\$ 12,000
Trap and gill nets	\$ 9,625
Wild rice seed	\$ 1,200
Stormwater Pond Barrier Supplies	\$ 20,000
Sampling Watercraft	\$ 2,000
<b>Acquisition (Fee Title or Permanent Easements):</b> <i>In this column, indicate proposed number of acres and name of organization or entity who will hold title.</i>	NA
<b>Travel:</b> <i>Be specific. Generally, only in-state travel essential to completing project activities can be included.</i>	NA
<b>Additional Budget Items:</b> <i>In this column, list any additional budget items that do not fit above categories. List by item(s) or item type(s) and explain how number was determined One row per type/category.</i>	NA
<b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>	<b>\$ 594,985</b>

### V. OTHER FUNDS (This entire section must be filled out. Do not delete rows. Indicate "N/A" if row is not applicable.)

<b>SOURCE OF FUNDS</b>	<b>AMOUNT</b>	<b>Status</b>
<b>Other Non-State \$ To Be Applied To Project During Project Period:</b> <i>The Circle Lake Association will be contributing \$10,000 per year for 3 years pending approval of the LCCMR proposal. If the Rice SWCD is successful, the Circle Lake board will consider a motion to provide funding as specified.</i>	\$30,000	Pending
<b>Other State \$ To Be Applied To Project During Project Period:</b> <i>Indicate any additional state cash dollars (e.g., bonding, other grants) secured or applied for to be spent on the project during the funding period. For each individual sum, list out the source of the funds, the amount, and indicate whether the funds are secured or pending approval.</i>	NA	Indicate: Secured or Pending
<b>In-kind Services To Be Applied To Project During Project Period:</b> <i>Indicate any additional in-kind service(s) secured or applied for to be spent on the project during the funding period. For each type of service, list type of service(s), estimated value, and indicate whether it is secured or pending. In-kind services listed must be specific to the project.</i>	NA	Indicate: Secured or Pending
<b>Past and Current ENRTF Appropriation:</b> <i>Specify dollar amount and year of appropriation from any current ENRTF appropriation for any directly related project of the project manager or organization that remains unspent or not yet legally obligated at the time of proposal submission. Be as specific as possible. Indicate the status of the funds.</i>	NA	Indicate: Unspent? Legally Obligated? Other?
<b>Other Funding History:</b> <i>Indicate funding secured but to be expended prior to July 1, 2018, for activities directly relevant to this specific funding request. State specific source(s) of funds and dollar amount.</i>	NA	





# 2018 LCCMR Circle Lake Wild Rice Feasibility and Carp Management Project

Rice Soil and Water Conservation District  
the Circle Lake Association





## Rice Soil and Water Conservation District

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### Project Manager Qualifications and Organization Description

Project Manager will be Steven Pahs, District Manager of the Rice SWCD. Mr. Pahs has nearly 14 years experience as manager, and has been the grant manager of dozens of grants through the Board of Water and Soil Resources in that time. All prior grants were successfully processed and closed out satisfactorily.

The Rice SWCD has a long history of implementing conservation practices on the land. We have been very successful in applying for and receiving state and federal funds for conservation in Rice County. We have an excellent accounting system and conduct financial audits every year.