

# **Environment and Natural Resources Trust Fund**

## **2011-2012 Request for Proposals (RFP)**

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**LCCMR ID: 072-C1+2**

**Project Title:** Big Woods Heritage Forest Assessment and Restoration

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**Category:** C1+2. Protection, Restoration, and Enhancement

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**Total Project Budget:** \$ \$300,200

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

**Other Non-State Funds:** \$ 110,000

### **Summary:**

Three Rivers Park District will assess and restore a Big Woods Heritage Forest through invasive species control, native plantings, soil stabilization, and will promote results to landowners and public audiences.

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**Name:** Paul Kortebain

**Sponsoring Organization:** Three Rivers Park District

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### **Location**

**Region:** Metro

**Ecological Section:** Minnesota and NE Iowa Morainal (222M)

**County Name:** Hennepin

**City / Township:** Greenfield

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<input type="checkbox"/> Funding Priorities	<input type="checkbox"/> Multiple Benefits	<input type="checkbox"/> Outcomes	<input type="checkbox"/> Knowledge Base
<input type="checkbox"/> Extent of Impact	<input type="checkbox"/> Innovation	<input type="checkbox"/> Scientific/Tech Basis	<input type="checkbox"/> Urgency
<input type="checkbox"/> Capacity Readiness	<input type="checkbox"/> Leverage	<input type="checkbox"/> Employment	<input type="checkbox"/> TOTAL <u>%</u>

## **I. PROJECT STATEMENT:**

Reversing habitat degradation is a top priority for Minnesota in the Statewide Conservation and Preservation Plan, the LCCMR's Six-Year Strategic Plan and the State Wildlife Action Plan. Lake Rebecca Regional Park Reserve, which is located near the geographic center of the "Big Woods" ecological subsection and within a Metro Conservation Corridor, provides an ideal site for Three Rivers Park District to restore a remnant Big Woods Heritage Forest in one of the last and best examples of this forest type in this ecological area. Prior to European settlement, maple basswood forests covered 50 – 75 percent of this area; now, in Hennepin County, less than one percent of the original 154,000 acres of maple-basswood forest remains (Minnesota Department of Natural Resources). MN DNR designated this site a "Big Woods Heritage Forest" to recognize its rarity and intact tree canopy. Continued disturbances to the park; such as the recent expansion of a natural gas pipeline, the continuing establishment of invasive species, and the accelerated soil erosion due to increased storm water flow threaten the quality of this site and its ability to survive pending threats of climate change and new pests like Emerald Ash Borer.

To sustain the Big Woods ecotype in the face of these immediate threats, and build expertise among Big Woods stewards broadly, Three Rivers Park District will, in partnership with DNR and Minnesota Conservation Corps:

1. Complete a comprehensive land cover assessment for this 355-acre Big Woods Heritage Forest site, with the goal of identifying high priority areas for protection and management.
2. Implement management of the highest priority sites for the sustainable management of the Big Woods Heritage Forest.
3. Establish long-term monitoring of the project for other current or potential Big Woods Forest stewards, both public and private, in the state's high priority Big Woods subsection.
4. Reduce streambank erosion within Sarah Creek watershed to improve the ecological health of the Big Woods Heritage Forest.

This 355-acre project includes the entire designated Big Woods Heritage Forest, as well as a significant portion of the Sarah Creek watershed and Lake Rebecca, a premier muskellunge-rearing lake very popular for shore fishing. This project will help Minnesota protect and enhance our remnant Big Woods at this site, and through evaluation and dissemination, throughout this ecological subsection.

## **II. DESCRIPTION OF PROJECT Activities**

### **Activity 1: Complete Comprehensive Big Woods Forest Assessment: \$28,200**

Three Rivers Park District will:

1. Using the Minnesota Land Cover Classification System as a baseline the 355 acre Big Woods Heritage Forest will be intensively inventoried and the vegetative cover updated. (April – November 2011)
2. Within the 355-acre area, specific management concerns will be identified and prioritized with the goal of preserving the highest quality areas using the Restoration Prioritization and Prediction Model.
3. In consultation with the Department of Natural Resources' Forestry staff, science-based silvicultural prescriptions will be developed for specific high priority areas and the Big Woods Heritage Forest site in general. (November 2011 – March 2012)

#### **Deliverable:**

#### **Completion date**

A detailed Big Woods Heritage Forest Management Assessment for Lake Rebecca Regional Park Reserve, with documentation sufficient for replication in other Big Woods forests. **March 2012**

### **Activity 2: Native Species Planting and Big Woods Restoration: \$218,400**

Three Rivers Park District staff and a supervised crew from the Minnesota Conservation Corps will implement the plan, including unit-specific prescriptions, with the highest priority management plan objectives completed within 16 months, from March 2013 – June 2014. Practices include invasive species removal and the planting of native trees and shrubs. All plant material will be of local ecotype raised at the Three Rivers Park District's nursery from seed collected within

the Big Woods ecological subsection. Three Rivers Park District staff will initiate monitoring for long-term evaluation and summarize the project for other current or potential Big Woods Forest stewards, both public and private, in the state's high priority Big Woods forest subsection. Staff will provide information and contribute to partner site visits for peer land stewards, in coordination with partner agencies like the Department of Natural Resources and associations, throughout the ecoregion.

<b>Deliverables:</b>	<b>Completion date</b>
Identification and restoration of high priority sites within the 355-acre Big Woods Heritage Forest	
<b>June 2014</b>	

Big Woods Management prioritization summary and site visit materials

#### **Activity 3: Restore Healthy Stream Environment in Big Woods: \$60,000**

Apply stream bank soil bio-engineering and soil stabilization techniques to improve riparian habitat on approximately 1,000 linear feet in the Sarah Creek watershed.

<b>Deliverable:</b>	<b>Completion date</b>
Soil bio-engineering to reduce erosion and improve riparian habitat in Sarah Creek watershed	
	<b>October 2013</b>

### **III. PROJECT STRATEGY**

#### **A. Project Team/Partners**

- 1. Three Rivers Park District:**
  - a. **Forestry Manager, Paul Kortebain:** **project management;** coordinate the planning, development, and implementation of the Big Woods management plan; supervise technicians; consult with DNR regional foresters.
  - b. **Natural Resources Technicians (to be hired):** map, inventory activities, collect data for Big Woods plan; implement high priority strategies in plan.
- 2. Minnesota Conservation Corps:** Five-person crew to carry out the removal of invasive vegetation, the re-forestation, and the restoration of Big Woods.
- 3. MN DNR – Regional Foresters, Alan Olson:** consult during planning to ensure consistency with forest stewardship guidelines in the Big Woods Heritage Forest program.

#### **B. Timeline Requirements**

For maximum effectiveness, thirty-six months is needed for this project. One full growing season is required to complete a management plan based on data collected from spring to fall: Spring – Fall 2012. Implementation of high priority activities can start immediately after finalizing the plan; peak restoration activity usually occurs from early summer through late winter: Fall/Winter 2012 – June 2014. Management plan implementation activities such as reforestation will continue beyond the grant term, with support from other funding sources. Evaluation and training of other land stewards can occur throughout and beyond the grant term.

#### **C. Long-Term Strategy and Future Funding Needs**

As a major forest landowner in the target Big Woods subsection of Minnesota's forests, Three Rivers Park District can help lead a much broader effort to restore this rare, threatened ecotype. Three Rivers Park District's commitment to Big Woods forest management will carry forward for several years at this site; fully implementing the management plan and creating the conditions suitable for a successful restoration effort could require an additional 3 – 5 years. This project will help Three Rivers Park District improve and expand Big Woods forest management on other Three Rivers properties as well, while sharing that expertise with other land stewards. Long term, Three Rivers Park District is interested in expanding Big Woods enhancement and restoration within its 27,000 acres and strengthening restoration expertise among Big Woods forest landowners in this ecotype area. This project will help broader restoration efforts be more effective and efficient, and provide conservation education and training close to population centers.

## Big Woods Heritage Forest Restoration - Project Budget

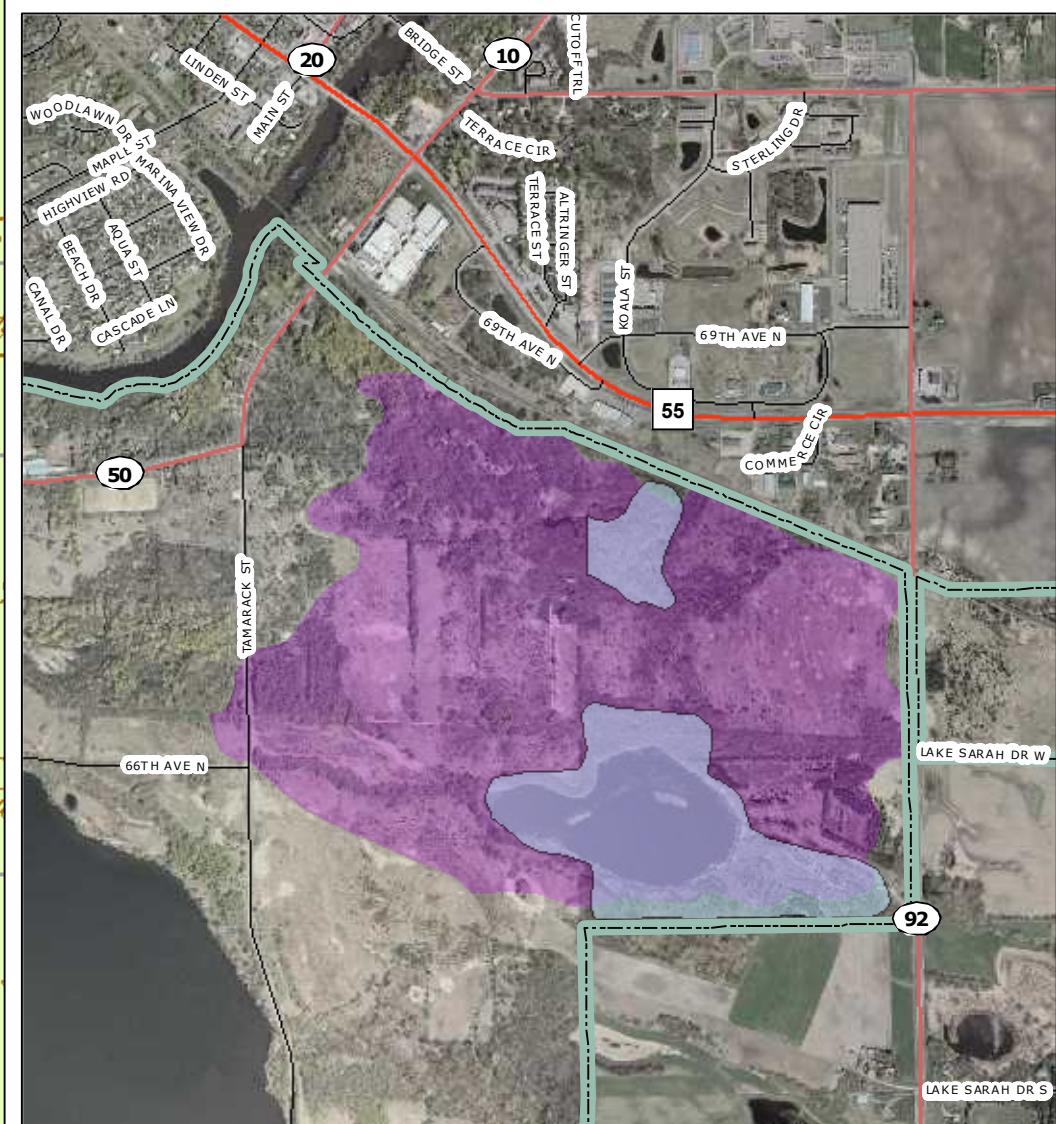
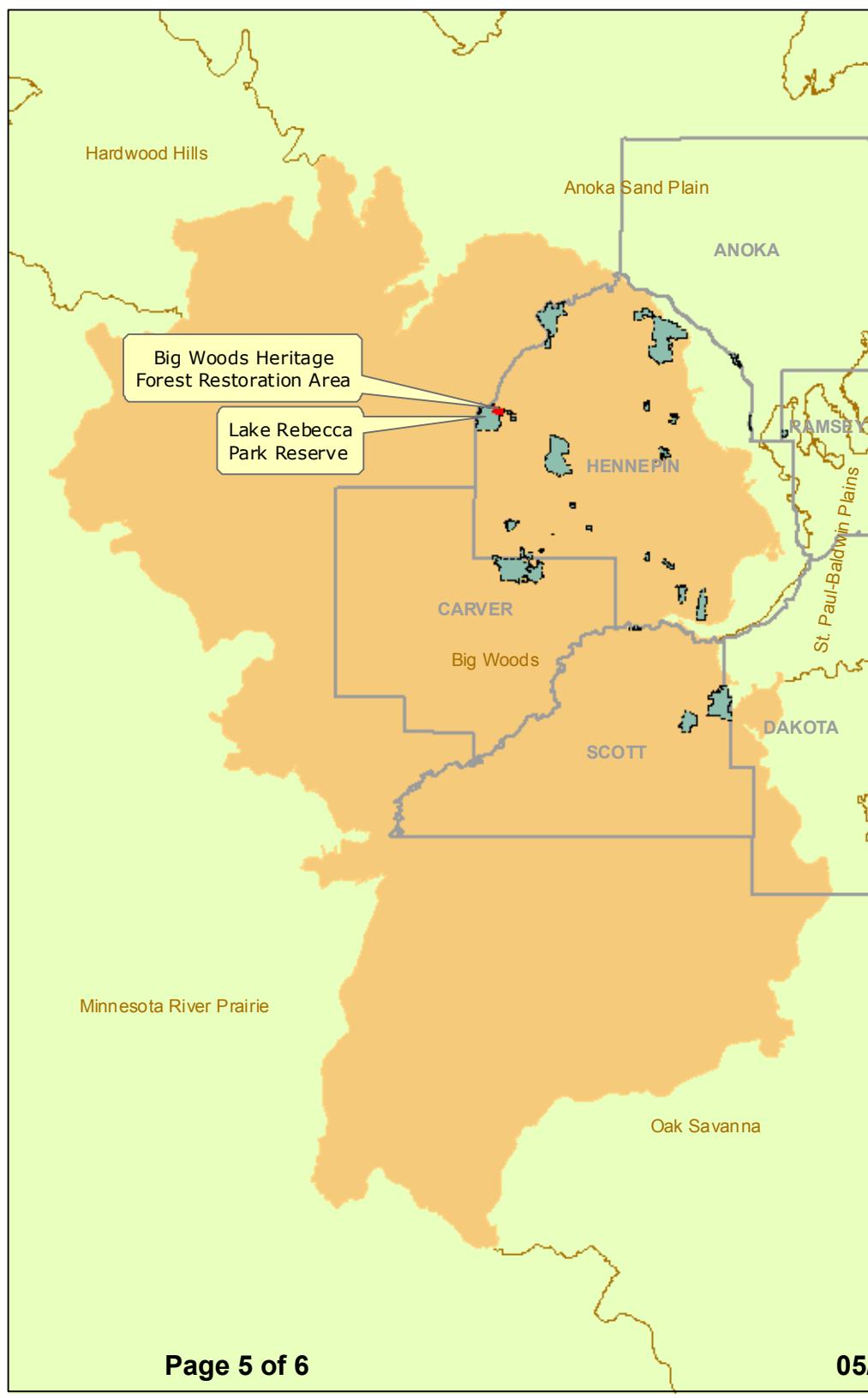
### **IV. TOTAL PROJECT REQUEST BUDGET (Three years)**

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>Personnel:</b>	
<b>Natural Resources Technician, Forestry</b> - 0.91 FTE, 1 person for 47 weeks, 92.35% salary, 7.65% fringe	\$ 28,200
<b>Natural Resources Technician, Forestry</b> - 0.91 FTE, 1 person for 40 weeks, 92.35% salary, 7.65% fringe	\$ 25,600
<b>Contracts:</b>	
<b>Minnesota Conservation Corps</b> - 5 person crew for 56 weeks (2 seasons)	\$ 218,400
<b>Equipment/Tools/Supplies:</b>	
<b>Miscellaneous tools/ power equipment</b> (saws and hand tools necessary for implementing the project)	\$ 3,000
<b>Equipment Rental</b> for riparian corridor improvement (excavating equipment necessary for the project which the park district does not own)	\$ 5,000
<b>Additional Budget Items:</b>	
<b>Supplies</b> (plant material, herbicide, erosion control fabric, and materials for installing stream bank stabilization)	\$ 20,000
<b>TOTAL PROJECT BUDGET REQUEST TO LCCMR</b>	<b>\$ 300,200</b>

### **V. OTHER FUNDS**

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>Other Non-State \$ Being Applied to Project During Project Period:</b>		
Forest Forever funds (donations designated for forest enhancement)	\$ 20,000	secured
Park District Capital Improvement Funds	\$ 90,000	secured
<b>In-kind Services During Project Period:</b>		
Approximately 50,000 native tree and shrub seedlings @ \$1.00/ plant.	\$ 50,000	secured
Technical support and supervision from existing staff	\$ 56,000	secured
<b>TOTAL IN-KIND &amp; OTHER NON-STATE FUNDS</b>	<b>\$ 216,000</b>	<b>secured</b>

## Lake Rebacca Park Reserve Big Woods Heritage Forest Restoration



### Legend

- [Orange Box] Big Woods Subsection
- [Light Blue Box] MCBS Significant Biodiversity Sites
- [Purple Box] Project Area
- [Yellow Box] Ecological Subsections MN
- [Light Green Box] County Lines
- [White Box with Black Border] Park Boundary



## **Project Manager Qualifications:**

### **Paul Kortebain:**

Paul has extensive experience managing many forest restoration projects. After earning his graduate degree in Forestry, he served as project manager for eight years on forest restoration projects in New York City, where he supervised a \$550,000 New York State Clean Water/ Clean Air Bond Act project. In that project, Paul identified and designed appropriate upland and riparian restorations throughout the 5,000+ acres of natural area parkland in New York City. Emphasis was placed on watershed protection, species diversity enhancement, and parkland preservation via the promotion of appropriate native species plantings.

As Natural Lands Manager for Milwaukee County Parks, Paul was responsible for the overall direction and management of approximately 8,000 acres of natural area within a 15,000 acre park system. Responsibilities included the overall operation and smooth functioning of the natural areas crew, including project oversight, procurement, purchasing, and planning. All of his restoration efforts have included science-based methods, with a variety of data collection and monitoring techniques aimed at evaluating the efficacy of the project. Paul is also experienced in evaluating and sharing results; he has presented at international conferences such as the Society for Ecological Restoration.

## **Organizational Description:**

Three Rivers Park District is a natural resources-based park system located in the suburban Minneapolis/St. Paul metro area of Minnesota that manages nearly 27,000 acres of park reserves, regional parks, regional trails and special-use facilities. As an independent, special park district established by the Minnesota Legislature in 1957, the Park District is charged with the responsibilities of acquisition, development and maintenance of large park reserves, regional parks and regional trails for the benefit and use of the citizens of the metropolitan area and the State of Minnesota. Three Rivers Park District is governed by an independent, seven-member Board of Commissioners. Five members of the Board are elected from districts in suburban Hennepin County, and two members are appointed by the Hennepin County Board of Commissioners. Each of the Park District's facilities is located within watersheds that flow into three rivers: the **Mississippi, Minnesota and Crow**.

The mission of Three Rivers Park District is to promote environmental stewardship through recreation and education in a natural resources-based park system. Three Rivers' policy for planning and management of natural resources has distinguished it from other park and recreation agencies in Minnesota. The policy specifies that no more than 20 percent of a park reserve may be developed for active use, and that at least 80 percent of a park reserve shall be restored to and retained in a natural state. As a result, the Park District has been actively involved in the preservation and restoration of wildlife and plant species. Once-rare osprey, bald eagles, sandhill cranes and trumpeter swans are now nesting in the park reserves. Woodland and prairie restorations have been accomplished using native wildflowers, shrubs and trees produced from seed collected in the park reserves.

Park visitors are offered abundant opportunities to view and learn about these natural resources. Careful routing of bike, hike and ski trails provides intimate views of woodlands, wetlands and prairie, as well as the wildlife that inhabit them. Outdoor education staff offer an array of programs that foster a better understanding of our environment.