# Lessard-Sams Outdoor Heritage Council
# Fiscal Year 2017 / ML 2016 Request for Funding

**Date: June 04, 2015**

**Program or Project Title:** Floodplain Forest Enhancement - Mississippi River

**Funds Requested: $663,000**

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**County Locations:** Goodhue, Houston, Wabasha, and Winona.

**Regions in which work will take place:**

- Southeast Forest

**Activity types:**

- Enhance

**Priority resources addressed by activity:**

- Forest

## Abstract:

Reed canary grass is preventing natural regeneration of trees and threatening floodplain forests and wildlife along the Mississippi. This effort builds on previous LSOHC funding to control reed canary grass and plant trees as part of a long-term restoration strategy.

## Design and scope of work:

The Mississippi River from Hastings to the Iowa border contains some of the largest and most significant tracts of floodplain forest along the entire Upper Mississippi River. These forests and mixed wetlands cover tens of thousands of acres and are especially critical to many species of birds and other wildlife, including wood ducks which use these areas for nesting and feeding.

These forests are under threat. While historically diverse in the number, age, and size of tree species, much of the forest now consists of silver maple ranging from 50-70 years old. These trees are expected to live another 50-70 years, after which they will die-off and disappear. Unfortunately, when trees are removed through harvest or die naturally, reed canary grass and other invasive species move in and prevent natural regeneration. This is occurring at a number of locations within the project area, and without aggressive, long-term management these floodplain forests will be greatly reduced or in some locations disappear completely. Floodplain forest regeneration is a slow process taking decades to accomplish. By selectively controlling invasive species following harvest, blowdown, or other events and planting larger size trees the forest can be maintained long-term. Restoring forest at small sites within larger tracts will ensure that a diversity of tree species, sizes, and ages are present. This approach over time will maintain large contiguous blocks of forest and continue to provide habitat for many wildlife species, including rare species like ceruleuan warbler and red-shouldered hawk.

This proposal seeks funding to continue implementing floodplain forest restoration and enhancement projects throughout the project area. The number of sites needing enhancement or restoration is extensive and will take many years of consistent work to restore. Sites identified in this proposal range from 30-175 acres in size. All sites are located on public lands within Minnesota state forests, WMA's, Upper Mississippi River National Wildlife and Fish Refuge, or Corps of Engineers owned lands. Each site is threatened by invasive species and natural regeneration of floodplain forest trees is not expected without aggressive management. Funding will be used to control invasive species, especially reed canary grass, using a combination of prescribed burns, mowing or forestry mulching, and herbicide applications. Past efforts to plant seedlings have not been successful, so once invasive species are controlled larger-size trees suitable to each site will be planted. At some sites, timber stand improvement will be used to create small openings for

diversifying forest species and age structure. Deer protection will be provided for planted trees when needed. This combination will allow the trees to establish and over time develop a canopy that limits or prevents invasive species and maintains the overall diversity of the forest.

Priority sites were determined in conjunction with MN DNR, US Fish and Wildlife Service, and Corps of Engineers foresters and wildlife managers and are locations under serious threat of losing the floodplain forest. All of the sites are on public lands open to hunting and fishing. Two of the sites are listed with limited hunting access. These are within areas closed to waterfowl hunting on the Upper Mississippi River National Wildlife and Fish Refuge. They are open to all legal hunting during other times of the year. Audubon Minnesota will serve as the project manager and coordinate the work and associated contracts. Much of the work will be done through Conservation Corps Minnesota. Audubon will work closely with state and federal managers to ensure all projects meet required standards and are part of the overall management goals for the landscape area. This work will be done in conjunction with additional partners including the US Fish and Wildlife Service, US Army Corps of Engineers, Prairie Island Indian Community, and US Geological Survey.

## Crops:

Will there be planting of corn or any crop on OHF land purchased or restored in this program - **No**

## How does the request address MN habitats that have: historical value to fish and wildlife, wildlife species of greatest conservation need, MN County Biological Survey data, and/or rare, threatened and endangered species inventories:

Floodplain forests are rare habitats compared to adjacent upland forests, often found in relatively narrow ribbons along river corridors and historically providing important travel routes for wildlife. Many floodplain forests along the Mississippi River and tributaries in Minnesota include areas of high biodiversity significance as identified in the MN County Biological Survey. Studies by the US Geological Survey along the Upper Mississippi River, a critical migration flyway for birds, have shown more species of songbirds use floodplain forests than adjacent upland forests. Species in greatest conservation need, including cerulean warbler and red-shouldered hawk, require large contiguous habitat blocks of floodplain forest for survival. This proposal will help ensure the long-term sustainability of floodplain forests along the Mississippi River.

## What is the nature of urgency and why it is necessary to spend public money for this work as soon as possible:

As trees age and die, canopy disappears and areas become invaded by reed canarygrass. This aggressive invasive species out-competes native plants and prevents trees from regenerating naturally. Unless action is taken now and continues over the next several decades, much of the floodplain forest could be lost.

## Describe the science based planning and evaluation model used:

The Upper Mississippi River Systemic Forest Stewardship plan prepared by the Corps of Engineers and other partners in 2012 was used to guide restoration and enhancement strategies. This plan outlines the problem, urgency, and recommended actions to regenerate trees and sustain quality floodplain forest habitats.

## Which sections of the Minnesota Statewide Conservation and Preservation Plan are applicable to this project:

- H5 Restore land, wetlands and wetland-associated watersheds
- LU8 Protect large blocks of forest land

## Which other plans are addressed in this proposal:

- National Audubon Society Top 20 Common Birds in Decline
- Upper Mississippi River Systemic Forest Stewardship Plan

## Which LSOHC section priorities are addressed in this proposal:

**Southeast Forest:**

- Protect from long-term or permanent endangerment from invasive species

## Relationship to other funds:

- Environmental and Natural Resource Trust Fund

A proposal was submitted to the LCCMR in May 2015 to fund research and monitoring to determine the most effective methods for controlling reed canary grass and regenerating trees. If approved, this funding source would compliment LSOHC funding and allow for both an implementation (LSOHC) and monitoring (LCCMR) component to this work.

## How does this proposal accelerate or supplement your current efforts in this area:

Audubon has hired two full time professional staff to implement floodplain forest restoration projects along the Mississippi River. Funding from private donors and non-state grants is available to fund most of the staff salaries with limited funding for project implementation. However, significant funding for restoration/enhancement on a scale needed to sustain quality floodplain forests over time is not available from these sources. Outdoor Heritage Funding was provided to Audubon for this work during 2014-2017 and will allow us to complete projects on 125 acres. This proposal will significantly expand that work providing opportunities to restore an additional 595 acres that would otherwise not be possible.

## Describe the source and amount of non-OHF money spent for this work in the past:

| Appropriation Year | Source | Amount |
|---|---|---|
| 2013 | Private donors and foundation grants | $20,000 |
| 2014 | Private donors, foundation grants, federal cost share | $30,000 |

## How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended:

Project sites will need to be monitored after trees are planted for evidence of weed competition and deer or rodent damage. In some cases follow up weed control or deer/mouse protection may be necessary. Audubon is committed to monitoring these sites and addressing any issues that arise using funding from a variety of sources including private donors, foundations, and non-state grants. Some maintenance is built into this OHF proposal for post treatment weed control in the latter years of the OHF appropriation.

## Explain the things you will do in the future to maintain project outcomes:

| Year | Source of Funds | Step 1 | Step 2 | Step 3 |
|---|---|---|---|---|
| 2017 | OHF, private donors, foundation grants | weed control | | |
| 2019 | private donors, foundation grants | weed control, replace dead trees | | |
| 2022 | private donors, foundation grants | weed control, replace dead trees | | |

## Activity Details:

If funded, this proposal will meet all applicable criteria set forth in MS 97A.056 - **Yes**

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program - **Yes**

Is the activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (WMA, Refuge Lands, State Forests)**

## Accomplishment Timeline:

| Activity | Approximate Date Completed |
|---|---|
| site preparation including reed canary grass control | 2016, 2017 |
| tree planting | 2017, 2018, 2019 |
| post treatment weed control | 2018, 2019 |
| timber stand improvement | 2017, 2018, 2019 |

## Federal Funding:

Do you anticipate federal funds as a match for this program - **Yes**

Are the funds confirmed - **No**

What is the approximate date you anticipate receiving confirmation of the federal funds - **January 2016**

## Outcomes:

**Programs in southeast forest region:**

- Large corridors and complexes of biologically diverse wildlife habitat typical of the unglaciated region are restored and protected *This project will ensure floodplain forests remain intact within the corridor of the Mississippi River. Sustaining existing quantities of floodplain forest by diversifying age and size structure will be a successful outcome and can be measured by land cover information.*

# Budget Spreadsheet

**Total Amount of Request: $663,000**

## Budget and Cash Leverage

| Budget Name | LSOHC Request | Anticipated Leverage | Leverage Source | Total |
|---|---|---|---|---|
| Personnel | $80,000 | $77,000 | USFWS, private donors, foundation grants, private donors, foundation grants | $157,000 |
| Contracts | $289,000 | $0 | | $289,000 |
| Fee Acquisition w/ PILT | $0 | $0 | | $0 |
| Fee Acquisition w/o PILT | $0 | $0 | | $0 |
| Easement Acquisition | $0 | $0 | | $0 |
| Easement Stewardship | $0 | $0 | | $0 |
| Travel | $0 | $0 | | $0 |
| Professional Services | $0 | $0 | | $0 |
| Direct Support Services | $0 | $0 | | $0 |
| DNR Land Acquisition Costs | $0 | $0 | | $0 |
| Capital Equipment | $0 | $0 | | $0 |
| Other Equipment/Tools | $0 | $0 | | $0 |
| Supplies/Materials | $294,000 | $0 | | $294,000 |
| DNR IDP | $0 | $0 | | $0 |
| Total | $663,000 | $77,000 | - | $740,000 |

## Personnel

| Position | FTE | Over # of years | LSOHC Request | Anticipated Leverage | Leverage Source | Total |
|---|---|---|---|---|---|---|
| Forest Ecologist - Audubon | 0.20 | 3.00 | $32,000 | $32,000 | USFWS, private donors, foundation grants | $64,000 |
| Conservation Coordinator - Audubon | 0.20 | 3.00 | $45,000 | $45,000 | private donors, foundation grants | $90,000 |
| Administrative Assistant | 0.00 | 0.00 | $3,000 | $0 | | $3,000 |
| Total | 0.40 | 6.00 | $80,000 | $77,000 | - | $157,000 |

Amount of Request: $663,000

Amount of Leverage: $77,000

Leverage as a percent of the Request: 11.61%

# Output Tables

## Table 1a. Acres by Resource Type

| Type | Wetlands | Prairies | Forest | Habitats | Total |
|---|---|---|---|---|---|
| Restore | 0 | 0 | 0 | 0 | 0 |
| Protect in Fee with State PILT Liability | 0 | 0 | 0 | 0 | 0 |
| Protect in Fee W/O State PILT Liability | 0 | 0 | 0 | 0 | 0 |
| Protect in Easement | 0 | 0 | 0 | 0 | 0 |
| Enhance | 0 | 0 | 595 | 0 | 595 |
| Total | 0 | 0 | 595 | 0 | 595 |

## Table 2. Total Requested Funding by Resource Type

| Type | Wetlands | Prairies | Forest | Habitats | Total |
|---|---|---|---|---|---|
| Restore | $0 | $0 | $0 | $0 | $0 |
| Protect in Fee with State PILT Liability | $0 | $0 | $0 | $0 | $0 |
| Protect in Fee W/O State PILT Liability | $0 | $0 | $0 | $0 | $0 |
| Protect in Easement | $0 | $0 | $0 | $0 | $0 |
| Enhance | $0 | $0 | $663,000 | $0 | $663,000 |
| Total | $0 | $0 | $663,000 | $0 | $663,000 |

## Table 3. Acres within each Ecological Section

| Type | Metro/Urban | Forest/Prairie | SE Forest | Prairie | Northern Forest | Total |
|---|---|---|---|---|---|---|
| Restore | 0 | 0 | 0 | 0 | 0 | 0 |
| Protect in Fee with State PILT Liability | 0 | 0 | 0 | 0 | 0 | 0 |
| Protect in Fee W/O State PILT Liability | 0 | 0 | 0 | 0 | 0 | 0 |
| Protect in Easement | 0 | 0 | 0 | 0 | 0 | 0 |
| Enhance | 0 | 0 | 595 | 0 | 0 | 595 |
| Total | 0 | 0 | 595 | 0 | 0 | 595 |

## Table 4. Total Requested Funding within each Ecological Section

| Type | Metro/Urban | Forest/Prairie | SE Forest | Prairie | Northern Forest | Total |
|---|---|---|---|---|---|---|
| Restore | $0 | $0 | $0 | $0 | $0 | $0 |
| Protect in Fee with State PILT Liability | $0 | $0 | $0 | $0 | $0 | $0 |
| Protect in Fee W/O State PILT Liability | $0 | $0 | $0 | $0 | $0 | $0 |
| Protect in Easement | $0 | $0 | $0 | $0 | $0 | $0 |
| Enhance | $0 | $0 | $663,000 | $0 | $0 | $663,000 |
| Total | $0 | $0 | $663,000 | $0 | $0 | $663,000 |

## Table 5. Average Cost per Acre by Resource Type

| Type | Wetlands | Prairies | Forest | Habitats |
|---|---|---|---|---|
| Restore | $0 | $0 | $0 | $0 |
| Protect in Fee with State PILT Liability | $0 | $0 | $0 | $0 |
| Protect in Fee W/O State PILT Liability | $0 | $0 | $0 | $0 |
| Protect in Easement | $0 | $0 | $0 | $0 |
| Enhance | $0 | $0 | $1,114 | $0 |

## Table 6. Average Cost per Acre by Ecological Section

| Type | Metro/Urban | Forest/Prairie | SE Forest | Prairie | Northern Forest |
|---|---|---|---|---|---|
| Restore | $0 | $0 | $0 | $0 | $0 |
| Protect in Fee with State PILT Liability | $0 | $0 | $0 | $0 | $0 |
| Protect in Fee W/O State PILT Liability | $0 | $0 | $0 | $0 | $0 |
| Protect in Easement | $0 | $0 | $0 | $0 | $0 |
| Enhance | $0 | $0 | $1,114 | $0 | $0 |

## Target Lake/Stream/River Feet or Miles

0

# Parcel List

## Section 1 - Restore / Enhance Parcel List

### Goodhue

| Name | TRDS | Acres | Est Cost | Existing Protection? |
|---|---|---|---|---|
| Gores WMA | 11416210 | 30 | $66,000 | Yes |

### Houston

| Name | TRDS | Acres | Est Cost | Existing Protection? |
|---|---|---|---|---|
| Lower Root River | 10404236 | 175 | $231,000 | Yes |
| Whalen Tract | 10104235 | 60 | $132,000 | Yes |

### Wabasha

| Name | TRDS | Acres | Est Cost | Existing Protection? |
|---|---|---|---|---|
| East Indian Creek Delta | 10909219 | 105 | $66,000 | Yes |
| Wabasha Prairie Bottoms | 11009230 | 75 | $11,000 | Yes |
| Whitewater River Delta | 10909229 | 40 | $28,000 | Yes |

### Winona

| Name | TRDS | Acres | Est Cost | Existing Protection? |
|---|---|---|---|---|
| Garvin Brook MN City Boat Club area | 10708202 | 110 | $37,000 | Yes |

## Section 2 - Protect Parcel List

No parcels with an activity type protect.

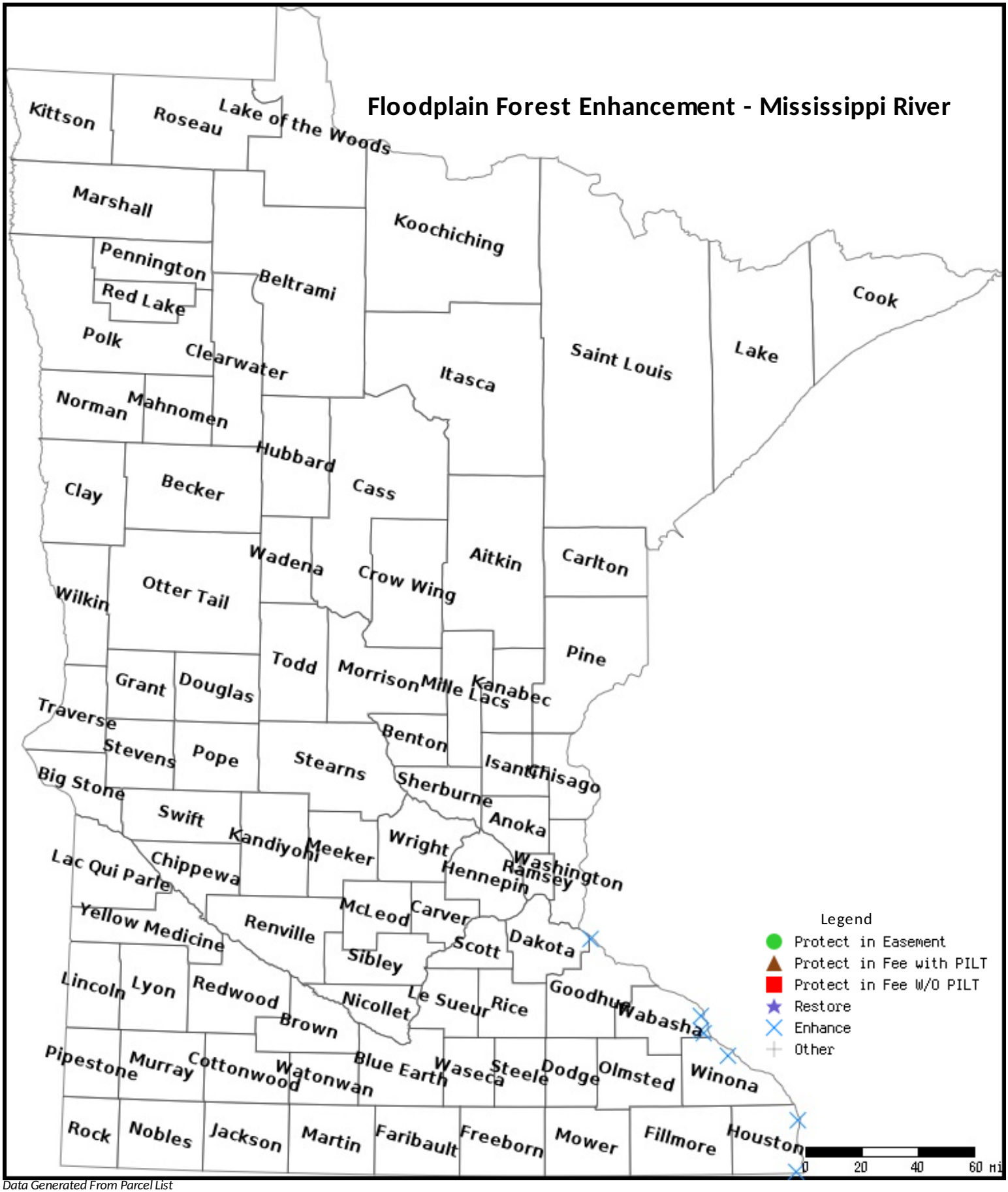
## Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

## Section 3 - Other Parcel Activity

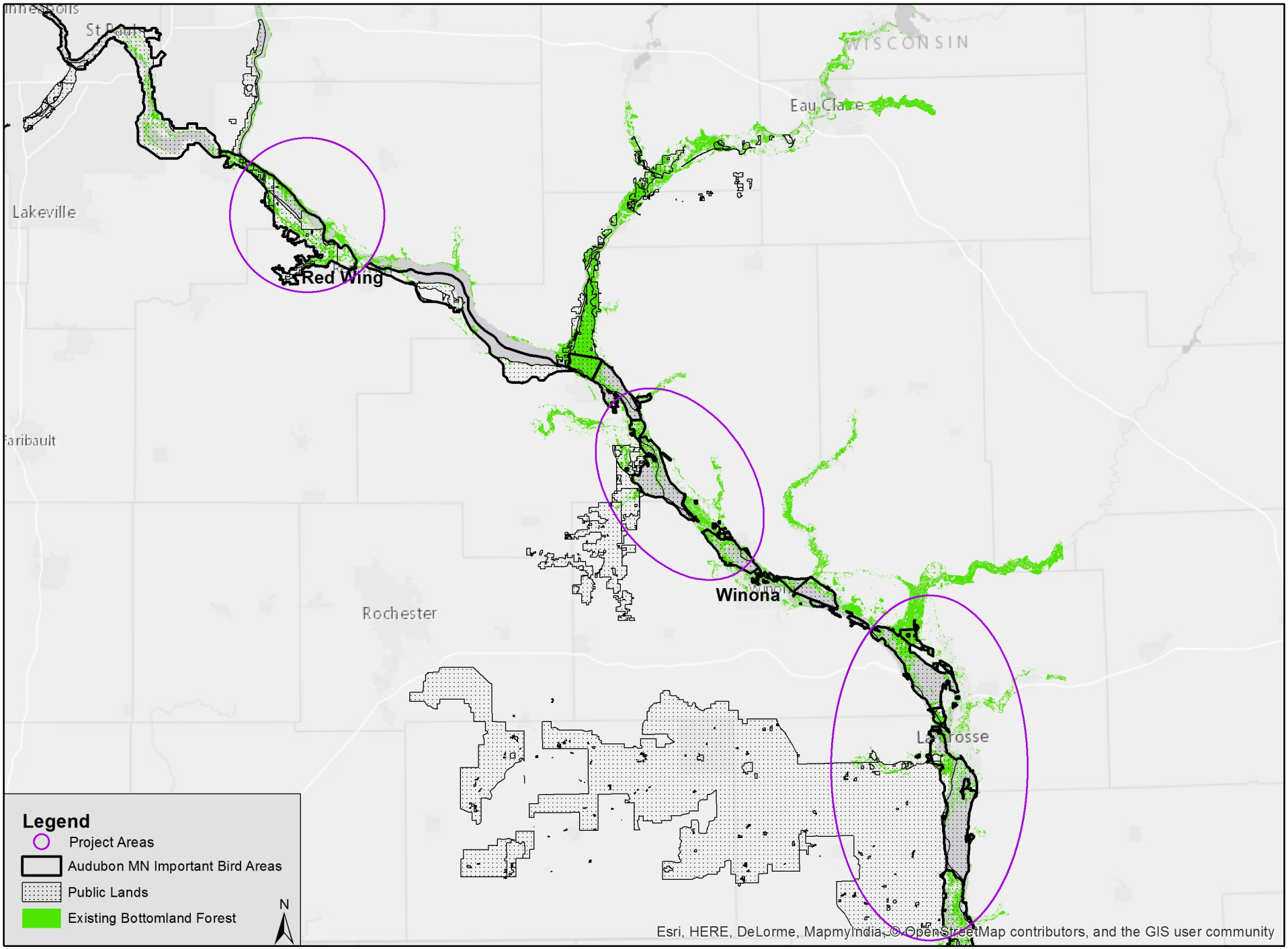
No parcels with an other activity type.

# Parcel Map




*Data Generated From Parcel List*

# Mississippi River Floodplain Forests and Audubon MN Project Areas




Bottomland Forest Cover Type information from Upper Mississippi Forest Partnership