



## Lessard-Sams Outdoor Heritage Council

Floodplain Forest Enhancement-Mississippi River, Phase 4

Laws of Minnesota 2021 Accomplishment Plan

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### General Information

**Date:** 09/07/2023

**Project Title:** Floodplain Forest Enhancement-Mississippi River, Phase 4

**Funds Recommended:** \$1,247,000

**Legislative Citation:** ML 2021, First Sp. Session, Ch. 1, Art. 1, Sec. 2, subd. 3(e)

**Appropriation Language:** \$1,247,000 the first year is to the commissioner of natural resources for an agreement with the National Audubon Society to restore and enhance floodplain forest habitat for wildlife on public lands along the Mississippi River and Mississippi River tributaries. A list of restorations and enhancements must be provided as part of the required accomplishment plan.

### Manager Information

**Manager's Name:** Jeffrey Butler

**Title:**

**Organization:** Audubon Minnesota

**Address:** N5727 County Road Z

**City:** Onalaska, WI 54650

**Email:** jeffrey.butler@audubon.org

**Office Number:** (608)-779-2230

**Mobile Number:** (419)270-9142

**Fax Number:**

**Website:**

### Location Information

**County Location(s):** Fillmore, Houston, Winona, Wabasha and Goodhue.

**Eco regions in which work will take place:**

- Southeast Forest

**Activity types:**

- Enhance

**Priority resources addressed by activity:**

- Forest

## Narrative

### Abstract

Reed canary grass and other invasive plants are preventing natural tree regeneration and threatening floodplain forests, upland forests, and wildlife alike. The Upper Mississippi River and its tributaries provide a critical habitat corridor for hundreds of species of birds from waterfowl and other game birds to warblers of special concern. This proposal builds on three previous and successful projects and will expand Audubon's work on State and Federal Lands as well as introduce projects on permanently protected private lands. Project work will serve to conserve and maintain forest habitat within State Important Bird Areas and two Conservation Focus Areas.

### Design and Scope of Work

The forests of Southeast Minnesota are currently poised to experience a shift in species cover and composition. Oak dominated upland forests are slowly converting to shade tolerant maple and invasive species. Floodplain forests are shifting away from native tree cover and towards invasive grass. While forests are never stagnant, these forests require intervention to ensure they remain a healthy and sustainable resource for the state of Minnesota.

From Hastings, Minnesota to the Iowa border, the Mississippi River and its major tributaries contain some of the largest and most significant tracts of floodplain and river bluff forest along the entire Upper Mississippi River. These forests and mixed wetlands cover thousands of acres and are especially critical to many species of birds and other wildlife, including Wood Ducks, Bald Eagles and multiple songbird species of conservation concern which use these areas for nesting and feeding. The upland forest adjacent to the Mississippi River and its tributaries provide excellent wildlife habitat and help support the greater river corridor migratory pathway. Special concern species such as the Cerulean Warbler are well known to use both floodplain forest and upland forest, even preferring habitats where they have access to both.

While historically diverse in the number, age, and size of tree species, much of the floodplain forest now consists of silver maple aged 50 - 70+ years old. These trees are expected to live another 50-70 years, after which they will die naturally. Unfortunately, when trees are lost, 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 cases disappear completely. Adjacent upland forests are beginning to shift away from their historical oak dominance and are becoming infested with invasive species. A lack of fire and increased maple dominance threatens wildlife and timber value within these upland forests. Without management both forest communities will continue to decline along with their ability to support wildlife.

Project locations and habitats were selected based on state level Conservation Focus Areas and Important Bird Areas. Project work will include selectively controlling invasive plants like buckthorn and reed canary grass across the habitat gradient. Forest stand improvements will be used to improve wildlife tree structure. Site preparations will create the appropriate conditions for natural and artificial tree regeneration. Trees will be planted underneath

poor forest canopies and in open areas where forest previously existed. Understory treatments like mowing and fire will be used to control unwanted vegetation and release desirable trees. As a result of this management floodplain forest habitat will expand while the adjacent upland forests will offer more resources to wildlife.

Sites were collaboratively identified with MN DNR, US Fish and Wildlife Service, and the US Army Corps of Engineers. Projects will be accomplished using a variety of contractors, Conservation Corps Minnesota Crews and in house labor. In total 3,445 acres will be enhanced.

**How does the plan address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species?**

Floodplain forests are rare habitats with many having been converted to agricultural land. The floodplain/bluffland forest matrix is often found in relatively narrow ribbons along river corridors and provides important travel routes for wildlife. The Mississippi River, a critical migration corridor for birds, provides some of the most significant tracts of this forest system in the United States.

In Minnesota, the Mississippi River and lower ends of tributaries include large areas of high biodiversity significance as identified in the Minnesota County Biological Survey. Studies by the US Geological Survey along the Upper Mississippi River have documented that songbirds use these floodplain forests extensively, with some species benefiting from access to lowlands and uplands in close proximity. Species in greatest conservation need, including Cerulean Warbler require large contiguous habitat to successfully breed.

The Whitewater Wildlife Management Area lists Cerulean Warbler, Prothonotary Warbler, Acadian Flycatcher, Red-shouldered Hawk, and the Louisiana Waterthrush as priority forest interior birds. All of these species will benefit from access to quality floodplain and adjacent upland forests. By restoring forest cover to deforested floodplains and working in the adjacent uplands, these priority species will see a major increase in quality habitat. Threatened species of bats are currently limited in their ability to use formerly forested floodplains, with the reintroduction of forests there will be a boom in potential future bat roosting trees.

Among other benefits in the uplands, this project work will help conserve an oak resource in decline. Oak trees provide an important food source for game, nongame, and the insects whom provide food to many bird species. Working in the bluff forests will allow Audubon to address the LSOHC Priority action of stream to bluff habitat enhancement as well as increase the overall size of impacted travel corridors.

**Describe how the plan uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:**

Much of this project work will take place on lands recognized by the Minnesota County Biological Survey as natural communities containing rare species. Project sites have additionally been selected within areas recognized as being resistant to climate change, Conservation Focus Areas, and Important Bird Areas. Audubon has partnered with the

Army Corps of Engineers to select project areas on the Upper Mississippi River within priority areas where management will be most effective and feasible.

The Upper Mississippi River Systemic Forest Stewardship plan prepared by the Corps of Engineers and other partners in 2012 is used to guide restoration and enhancement strategies along the Mississippi River while the Minnesota Wildlife Action Plan informs management within other river tributaries. Audubon has additionally engaged in re-forestation studies and regeneration surveys to determine the best species and planting methodologies for re-forestation projects.

Reed canary grass poses a major fragmentation threat to forests by preventing new trees from establishing within small openings. Over time reed canary grass can shift a forest environment to an open field type setting. Managing large reed canary dominated landscapes to encourage tree growth both reduces fragmentation and secures forest cover for the foreseeable future. This work greatly reduces fragmentation through reforesting areas that have been deforested during past logging practices, agricultural use, and subsequent invasive species infestation. The project further addresses fragmentation by bolstering forest health thus helping prevent their conversion to nonnative cover.

### **Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most applicable to this project?**

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

### **Which two other plans are addressed in this program?**

- Minnesota's Wildlife Action Plan 2015-2025
- Other : Upper Mississippi Systemic Forest Stewardship Plan

### **Which LSOHC section priorities are addressed in this program?**

#### **Southeast Forest**

- Restore forest-based wildlife habitat that has experienced substantial decline in area in recent decades

### **Outcomes**

#### **Programs in southeast forest region:**

- Large corridors and complexes of biologically diverse wildlife habitat typical of the unglaciated region are restored and protected ~ *Existing forests within the Mississippi River floodplain have been mapped, including location and tract size. Over time, forested land cover can be re-mapped to determine if forested locations and/or tract size has changed. In addition, forest inventory is being completed by Minnesota DNR, US Fish and Wildlife Service, and US Army Corps of Engineers to document forest cover, tree species, and size, regeneration, etc. These can be re-surveyed over time to document changes in these parameters.*

### **Does this program include leveraged funding?**

Yes

## Explain the leverage:

Audubon has a long-standing partnership with the Upper Mississippi River National Wildlife and Fish Refuge to cost share an Audubon Forester position. 50% of that position will be funded by U.S. Fish and Wildlife Service. Furthermore Audubon has recently launched a new research initiative aimed at identifying the most critical bottomland forest areas for species of conservation concern supported by Upper Mississippi Joint Venture and private donor funds. These supporting funds allow us to focus LSOHC funding on implementing projects (contractors, tree purchase, etc.). Also, partners including U.S. Fish and Wildlife Service, The Army Corps of Engineers, Conservation Corps Minnesota and volunteers provide technical expertise and/or labor to assist with project design and implementation.

## Per MS 97A.056, Subd. 24, Please explain whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.

LSOHC funding is in addition to other funding sources, and does not supplant that work. Without LSOHC funding, Audubon MN would

not have resources to implement enhancement projects, and would have greater challenges in funding personnel salaries associated

with this work.

## Non-OHF Appropriations

Year	Source	Amount
2014	US Fish and Wildlife Service	\$80,000
2016	US Fish and Wildlife Service	\$35,000
2016	McKnight	\$40,000
2018	US Fish and Wildlife Service	\$84,000
2020	Minnesota DNR	\$15,000

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

Audubon is committed to monitoring project sites after OHF funds are expended. Audubon's Forester is responsible for managing these project sites and will work with our State and Federal partners to ensure management recommendations are understood and implemented as best possible. Audubon receives funding from the USFWS to monitor projects and maintain a presence on the ground. Audubon has a strong working relationship with the Army Corps of Engineers, US Fish and Wildlife Service and the MN DNR. Through this partnership Audubon has enhanced over 2000 acres of floodplain forest in the last 5 years. Additionally Audubon is actively collaborating with Federal partners to secure additional funding for floodplain forest work.

Forest management is a long term process and follow up management will likely be necessary once OHF funds have been expended. Much of this work is however intended to mimic natural processes and restore tree cover that once established should require little intervention.

## Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2022-2026	USFWS, LSOHC, MN DNR	Site recon, Prescription Development and	Conduct Site Management	Maintenance

		planning		
2027-2030	USFWS, MN DNR	Planning Amendments	Maintenance/Management	-

### Activity Details

#### Requirements

**If funded, this program 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 restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 or on lands to be acquired in this program?**

Yes

**Where does the activity take place?**

- WMA
- Permanently Protected Conservation Easements
- Refuge Lands
- State Forests

#### Land Use

**Will there be planting of any crop on OHF land purchased or restored in this program?**

No

### Timeline

Activity Name	Estimated Completion Date
Complete Site Precriptions	2024
Complete Site Preparations	2025
Planting and Maintenance	2026

**Date of Final Report Submission:** 10/30/2026

**Availability of Appropriation:** Subd. 7. Availability of Appropriation

Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. For acquiring real property, the amounts in this section are available until June 30, 2025. Money for restoration or enhancement is available until June 30, 2026. Money for restoration and enhancement of land acquired with an appropriation in this article is available for four years after the acquisition date with a maximum end date of June 30, 2029. If a project receives at least 15 percent of its funding from federal funds, the time of the appropriation may be extended to equal the availability of federal funding to a maximum of six years if the federal funding was confirmed and included in the original approved draft accomplishment plan. Money appropriated for acquiring land in fee title may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.



**Budget**

Budget reallocations up to 10% do not require an amendment to the Accomplishment Plan.

**Totals**

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	\$246,000	\$130,700	-	\$376,700
Contracts	\$907,900	-	-	\$907,900
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	-	-	-	-
Direct Support Services	\$33,100	\$48,500	Audubon	\$81,600
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	\$60,000	-	-	\$60,000
DNR IDP	-	-	-	-
<b>Grand Total</b>	<b>\$1,247,000</b>	<b>\$179,200</b>	-	<b>\$1,426,200</b>

**Personnel**

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
Grant Administrator	0.03	3.0	\$10,000	-	-	\$10,000
Forest Ecologist	0.75	3.0	\$107,300	\$100,700	USFWS	\$208,000
Conservation Manager	0.5	3.0	\$128,700	\$30,000	Audubon and Private	\$158,700

**Amount of Request:** \$1,247,000

**Amount of Leverage:** \$179,200

**Leverage as a percent of the Request:** 14.37%

**DSS + Personnel:** \$279,100

**As a % of the total request:** 22.38%

**Easement Stewardship:** -

**As a % of the Easement Acquisition:** -

**How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?**

We will reduce our target acres from 3445 to 1287.

**Describe and explain leverage source and confirmation of funds:**

Audubon has a cooperative agreement with USFWS and has renewed as recently as 8/17/2020. This agreement has secured funding through 2023 and will be used as leverage.



## Personnel

**Has funding for these positions been requested in the past?**

Yes

**Please explain the overlap of past and future staffing and position levels previously received and how that is coordinated over multiple years?**

Funding for staff is utilized on a per Phase basis. Each Phase is executed independently and staff time is allocated accordingly.

## Contracts

**What is included in the contracts line?**

Forest enhancement services such as planting, seeding, chemical herbicide control and cutting as well as other treatments.

## Direct Support Services

**How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?**

We used 40% of our actual federal rate in an effort to be conservative.

## Federal Funds

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

Yes

**Are the funds confirmed?**

Yes

**Is Confirmation Document attached?**

[Yes](#)

- Cash : \$100,700

Output Tables**Acres by Resource Type (Table 1)**

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	1,287	-	1,287
<b>Total</b>	-	-	<b>1,287</b>	-	<b>1,287</b>

**Total Requested Funding by Resource Type (Table 2)**

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	\$1,247,000	-	\$1,247,000
<b>Total</b>	-	-	<b>\$1,247,000</b>	-	<b>\$1,247,000</b>

**Acres within each Ecological Section (Table 3)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	1,287	-	-	1,287
<b>Total</b>	-	-	<b>1,287</b>	-	-	<b>1,287</b>

**Total Requested Funding within each Ecological Section (Table 4)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	\$1,247,000	-	-	\$1,247,000
<b>Total</b>	-	-	<b>\$1,247,000</b>	-	-	<b>\$1,247,000</b>

**Average Cost per Acre by Resource Type (Table 5)**

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	\$968

**Average Cost per Acre by Ecological Section (Table 6)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	\$968	-	-

**Target Lake/Stream/River Feet or Miles**

## Parcels

*For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.*

### Parcel Information

#### Sign-up Criteria?

No

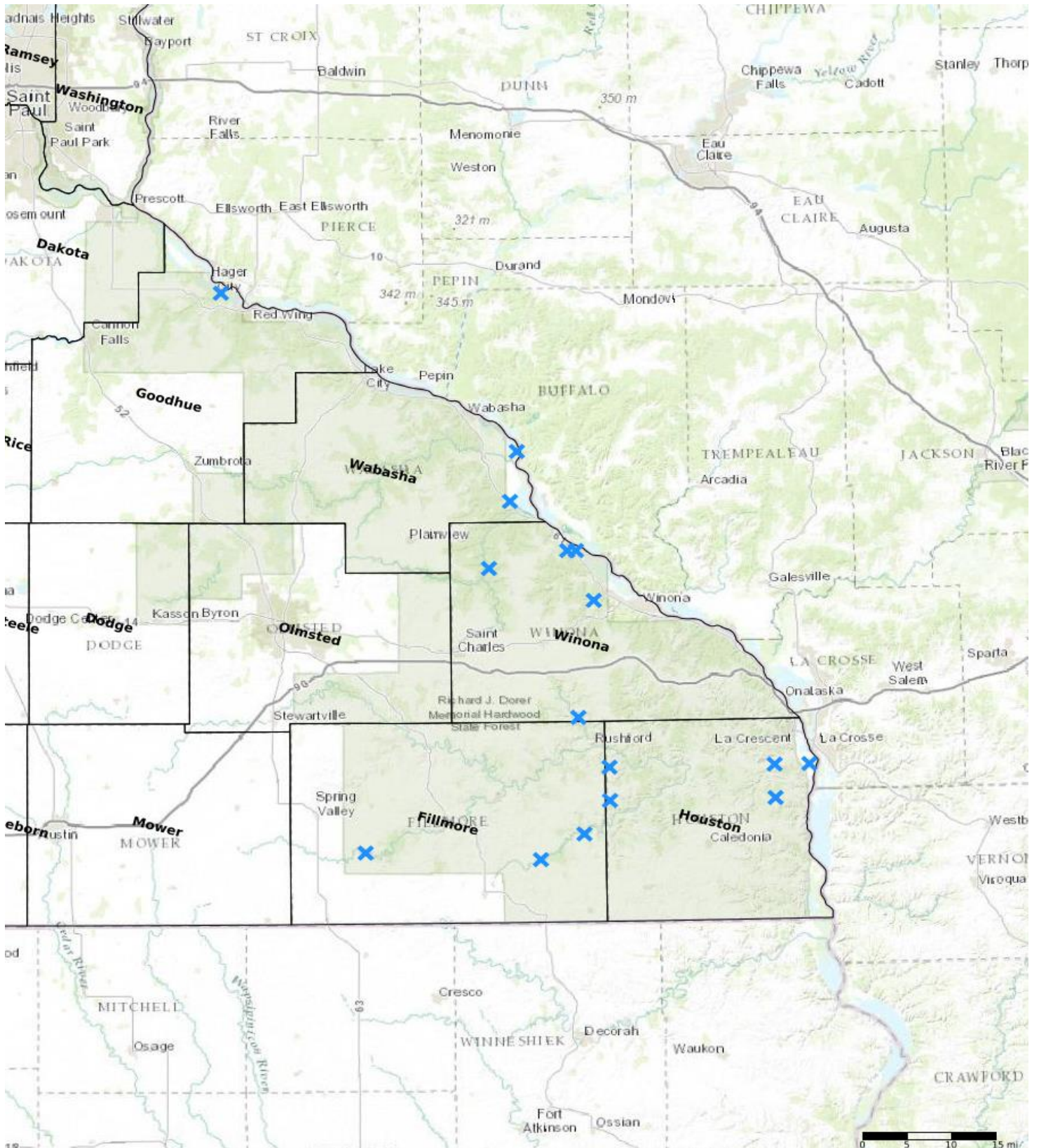
#### Explain the process used to identify, prioritize, and select the parcels on your list:

Audubon collaborates with the MN DNR, US Fish and Wildlife Service and US Army Corps of Engineers to identify priority parcels for enhancement projects. LiDar imagery is used to identify areas that can be enhanced and are not excessively wet. Forests with major threats of loss are prioritized first.

### Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Seven Springs WMA	Fillmore	10212221	40	\$12,000	Yes
Hvoslef WMA	Fillmore	10209226	25	\$7,500	Yes
Choice WMA	Fillmore	10208210	48	\$14,400	Yes
Red Wing Wildlife League	Goodhue	11315215	300	\$264,000	Yes
USFWS Root River	Houston	10404236	400	\$598,400	Yes
Ferndale Ridge WMA	Houston	10407231	156	\$46,800	Yes
Yucatan WMA	Houston	10307219	48	\$14,400	Yes
Niebeling Tract	Houston	10404232	100	\$88,000	Yes
Root River Easement	Houston	10304220	25	\$22,000	Yes
Wabasha Bottoms	Wabasha	11009220	390	\$343,000	Yes
East Indian Creek	Wabasha	10909219	13	\$11,400	Yes
Whitewater WMA	Winona	10810235	1,000	\$880,000	Yes
Schueler WMA	Winona	10508233	152	\$45,600	Yes
Thorpe WMA	Winona	10808220	105	\$31,500	Yes
Bronk State Forest	Winona	10708223	800	\$704,000	Yes
Horseshoe Bend	Winona	10808221	137	\$120,600	Yes

### Parcel Map



- Protect in Easement
- ▲ Protect in Fee with PILT
- Protect in Fee W/O PILT
- ★ Restore
- ✕ Enhance
- ⊕ Other