Lessard-Sams Outdoor Heritage Council

Floodplain and Upland Forest Enhancement - Mississippi River, Phase 5

Laws of Minnesota 2024 Accomplishment Plan

General Information

Date: 08/03/2026

Project Title: Floodplain and Upland Forest Enhancement - Mississippi River, Phase 5

Funds Recommended: $1,924,000

Legislative Citation: ML 2024, Ch. 106, Art. 1, Sec. 2, Subd. 3(f)

Appropriation Language: $1,924,000 the second year is to the commissioner of natural resources for an agreement with the National Audubon Society to restore and enhance floodplain and upland forest habitat for wildlife on public lands along the Mississippi River and Mississippi River tributaries.

Manager Information

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Location Information

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

Eco regions in which work will take place:

Southeast Forest

Activity types:

Enhance

Priority resources addressed by activity:

Forest

Narrative

Abstract

The Upper Mississippi River region provides critical forest habitat for hundreds of species of birds from waterfowl and other game birds to warblers and birds of prey. This proposal builds on four previous projects and will expand Audubon's forest conservation work on State and Federal Lands as well as projects on permanently protected private lands. Increased flooding and invasive species are limiting natural tree regeneration and threatening floodplain forests. This project continues our work to plant trees and conserve and maintain forest habitat in Important Bird Areas and two Conservation Focus areas.

Design and Scope of Work

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

The Mississippi River from Hastings, Minnesota to the Iowa border contains some of the largest and most significant tracts of floodplain and river bluff forest north of Saint Louis. 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 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 their value as wildlife habitat. 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 the Systemic Forest Stewardship Plan. Project work will include selectively controlling invasive plants like reed canary grass and buckthorn 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 existing forest canopies and in open areas where forests 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 higher quality habitat to wildlife.

Sites were collaboratively identified with MN DNR, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers. Projects will be accomplished using a variety of contractors, Conservation Corps Minnesota Crews, and in-house labor. In total 3,130 acres will be enhanced.

Explain how the plan addresses habitat protection, restoration, and/or enhancement for fish, game & wildlife, including threatened or endangered species conservation

Floodplain forests are rare habitats with many having been lost when the river was impounded in the 1930s. The floodplain/bluffland forest matrix is 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 Minnesota Species of Greatest Conservation Need 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 an increase in potential future bat roosting trees.

Among other benefits in the uplands and bottomlands, 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 in addition to the bottomlands allows Audubon to address the LSOHC Priority action of stream to bluff habitat enhancement as well as increase the overall size of impacted travel corridors.

What are the elements of this plan that are critical from a timing perspective?

Throughout the Upper Mississippi River large stands of trees are being lost due to increased flooding induced mortality. The existing floodplain forest is dying and not being replaced with new trees. Natural reproduction and bare root tree plantings grow slowly and cannot compete with annual flooding, reed canary grass, and other floodplain vegetation. Without management we risk seeing forest habitat converting to monocultures of reed canary grass. By planting larger container-grown trees, we hope to get the tree above the level of competing vegetation. If we can plant enough trees, in 15-20 years a closed forest canopy will help to shade out the undesirable reed canary grass. These projects need public funding to help prevent some of the last remaining floodplain/bluff land migratory corridors in the country from being lost to non-native brush and grass.

Describe how the plan expands habitat corridors or complexes and/or addresses habitat fragmentation:

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 identified as climate change refugia, 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 yielding a patchy forest with fewer large patches of habitat needed by some species. 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 top 2 Conservation Plans referenced in MS97A.056, subd. 3a are most applicable to this project?

Minnesota's Wildlife Action Plan 2015-2025

Other : Upper Mississippi Systemic Forest Stewardship Plan

Explain how this plan will uniquely address habitat resilience to climate change and its anticipated effects on game, fish & wildlife species utilizing the protected or restored/enhanced habitat this proposal targets.

The floodplain forests found in the Mississippi River Valley are not producing enough offspring to replace the existing standing trees. This is a result of multiple factors including competition with reed canary grass and other native vegetation, increasing water levels and flood duration in the Mississippi River and its tributaries. Audubon hopes to increase reproductive success by planting early successional species like willow and cottonwood, planting larger stock (3 gallon trees), and expanding the species list to include Cottonwood, Black Willow, Hackberry, Kentucky Coffee Tree, Pin Oak, Swamp White Oak, and Sycamore. We hope that these species will cover the spectrum of conditions that could occur through climate change helping the floodplain forests to persist in future climate scenarios.

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.*

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.

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 forest ecologist 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, the MN DNR, and the Redwing Wildlife League. Through these partnerships, Audubon has enhanced over 2200 acres of floodplain and upland forest in the first 4 phases. Additionally, Audubon is actively collaborating with federal and state partners to secure additional funding for floodplain and riparian forest enhancement.

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 enhance natural regeneration through 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, Audubon	Site recon, prescription development, planning	Conduct Site Management	Maintenance
2029-2033	USFWS, MN DNR, Audubon	Planning Amendments	Maintenance/Management	-

Provide an assessment of how your program celebrates cultural diversity or reaches diverse communities in Minnesota, including reaching low- and moderate-income households:

The Upper Mississippi region was once all land of the Mdewakanto Oyate (people) of Eastern Dakota Sioux. The five hundred-plus acres of Prairie Island Indian Community reservation is all that remains directly under Dakota stewardship on the Mississippi River. One of the ways we can celebrate their cultural heritage and historic stewardship of the river is by managing the river and the land in alignment with the Native American philosophy of wise stewardship for land that we do not own. Audubon is working with the Prairie Island Indian Community to survey their birds so that the foreknowledge of their bird community can influence their land management decisions. We are humbly learning about the role of the river and its surrounding forests and prairies in forming their culture in hopes that it can similarly influence ours.

The Dakota Sioux people, and all people who come to the river, benefit from the opportunity to hunt, fish, and experience the river and the wildlife it sustains in a healthy condition. These forests provide numerous ecosystem services including recreational opportunities for local communities, carbon sequestration, mitigating nutrient runoff, sediment management, and flood water storage in addition to providing habitat for wildlife. Investing in these environments helps achieve Minnesota's commitment to its own cultural heritage by serving the people, and wildlife, that choose to call it home.

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

AMA

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program, either by the proposer or the end owner of the property, outside of the initial restoration of the land?
No

Will insecticides or fungicides (including neonicotinoid and fungicide treated seed) be used within any activities of this program either in the process of restoration or use as food plots?
No

Timeline

Activity Name	Estimated Completion Date
Planting and Maintenance	2028
Compete Site Presecriptions	2026
Complete Site Preparations	2027

Date of Final Report Submission: 11/01/2028

Availability of Appropriation: Subd. 7.
Availability of Appropriation
(a) 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. Money appropriated for fee title acquisition of land 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.

(b) Money appropriated in this section is available as follows:
(1) money appropriated for acquiring real property is available until June 30, 2028;
(2) money appropriated for restoring and enhancing land acquired with an appropriation in this section is available for four years after the acquisition date with a maximum end date of June 30, 2032;
(3) money appropriated for restoring or enhancing other land is available until June 30, 2029;
(4) notwithstanding clauses (1) to (3), money appropriated for a project that receives at least 15 percent of its funding from federal funds is available until a date sufficient to match 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; and(5) money appropriated for other projects is available until the end of the fiscal year in which it is appropriated.

Budget

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

Totals

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	$269,500	$86,400	USFWS	$355,900
Contracts	$1,404,000	-	-	$1,404,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	$2,100	$500	AUDUBON	$2,600
Professional Services	-	-	-	-
Direct Support Services	$59,000	$91,500	AUDUBON	$150,500
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	$189,400	-	-	$189,400
DNR IDP	-	-	-	-
Grand Total	**$1,924,000**	**$178,400**	**-**	**$2,102,400**

Personnel

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
Conservation Director	0.15	4.0	$85,000	-	-	$85,000
Forest Ecologist	0.5	4.0	$176,000	$86,400	USFWS	$262,400
Grant Administrator	0.02	4.0	$8,500	-	-	$8,500

Amount of Request: $1,924,000
Amount of Leverage: $178,400
Leverage as a percent of the Request: 9.27%
DSS + Personnel: $328,500
As a % of the total request: 17.07%
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 the target acres from 3130 to 1395

Detail leverage sources and confirmation of funds:
Audubon has a cooperative agreement with USFWS and has renewed as recently as 8/2/2023. This agreement has secured funding through 2027 and will be used as leverage.

Does this project have the ability to be scalable?
Yes

If the project received 50% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?
This project is scalable and the number of acres could be reduced proportionally.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?
As before, personnel and DSS costs are more difficult to scale although they could be reduced still further.

Personnel

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

Contracts

What is included in the contracts line?
The contract line item is directed to enhancement and restoration projects. We will use Minnesota-based contractors for aspects of project work, including heavy equipment work, tree planting, site prep, selective herbicide use for invasive species and seedings.

Travel

Does the amount in the travel line include equipment/vehicle rental?
Yes

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging
Audubon Minnesota staff may rent vehicles for grant-related purposes as needed.

I understand and agree that lodging, meals, and mileage must comply with the current MMB Commissioner Plan:
Yes

Direct Support Services

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?
DSS was calculated on 10% of all costs except contracts.

Federal Funds

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?
8/31/2023

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	-	-	1,395	-	1,395
Total	**-**	**-**	**1,395**	**-**	**1,395**

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	-	-	$1,924,000	-	$1,924,000
Total	**-**	**-**	**$1,924,000**	**-**	**$1,924,000**

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	-	-	1,395	-	-	1,395
Total	**-**	**-**	**1,395**	**-**	**-**	**1,395**

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	-	-	$1,924,000	-	-	$1,924,000
Total	**-**	**-**	**$1,924,000**	**-**	**-**	**$1,924,000**

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	-	-	$1,379	-

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	-	-	$1,379	-	-

Target Lake/Stream/River Feet or Miles

Parcels

Parcel Information

Sign-up Criteria?
No

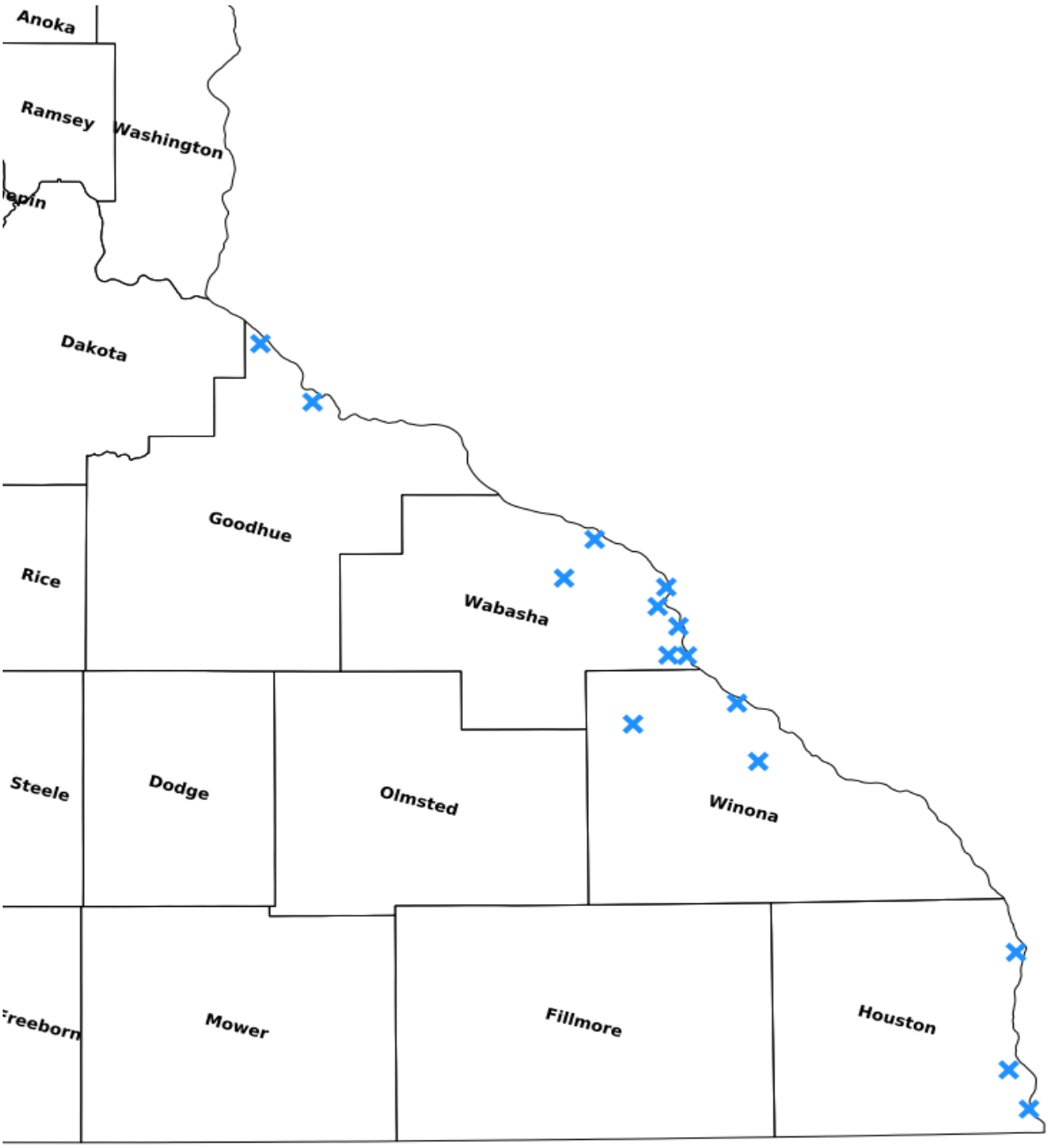
Explain the process used to identify, prioritize, and select the parcels on your list:
Audubon collaborates with the MN DNR, US Fish and Wildlife Service and US Army Corps of Engineers to identify priority parcels for enhancement projects. LiDar imagery is used to identify areas that can be enhanced 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	Description
Gores South USACE	Goodhue	11416214	180	$162,000	Yes	site preparation, invasive species management, tree planting
Red Wing Wildlife League	Goodhue	11315215	50	$45,000	Yes	site preparation, invasive species management, tree planting
Hayshore Lake	Houston	10103219	50	$60,000	Yes	site preparation, invasive species management, tree planting
Reno Bottoms	Houston	10204235	100	$90,000	Yes	site preparation, invasive species management, tree planting
Root River	Houston	10404236	230	$276,000	Yes	site preparation, invasive species management, tree planting
Riverview Cemetery	Wabasha	11110230	100	$90,000	Yes	site preparation, invasive species management, tree planting
Wabasha Bottoms	Wabasha	11009220	75	$75,000	Yes	site preparation, invasive species management, tree planting
Weaver Channel Islands	Wabasha	10909227	30	$36,000	Yes	site preparation, invasive species management, tree planting
West Newton /Zumbro River	Wabasha	11009231	75	$67,500	Yes	site preparation, invasive species management, tree planting
Whitewater Delta	Wabasha	10909229	45	$45,000	Yes	site preparation, invasive species management, tree planting.
Winona District EAB Mitigation	Wabasha	10909209	75	$90,000	Yes	site preparation, invasive species management, tree planting.
Zumbro Bottoms MNDNR	Wabasha	11011215	50	$50,000	Yes	site preparation, invasive species management, tree planting
Bronk State Forest	Winona	10708223	155	$155,000	Yes	site preparation, Invasive species management, tree planting
Horseshoe Bend	Winona	10808221	75	$67,500	Yes	site preparation, invasive species management, tree planting

Whitewater WMA MNDNR	Winona	10810235	100	$100,000	Yes	site preparation, invasive species management, tree planting

Parcel Map


Anoka
Ramsey
Washington
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Goodhue
Rice
Wabasha
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