



# Environment and Natural Resources Trust Fund

## 2021 Request for Proposal

### General Information

**Proposal ID:** 2021-328

**Proposal Title:** Restoring Oak Forests for Wildlife in Southeast Minnesota

### Project Manager Information

**Name:** Matt Weegman

**Organization:** National Wild Turkey Federation

**Office Telephone:** (218) 368-6313

**Email:** mweegman@nwtf.net

### Project Basic Information

**Project Summary:** We will use integrated restoration practices to enhance native oak forests throughout the Driftless Area and conduct forest inventory within the Upper Mississippi NWR.

**Funds Requested:** \$661,000

**Proposed Project Completion:** 2024-12-31

**LCCMR Funding Category:** Methods to Protect, Restore, and Enhance Land, Water, and Habitat (F)

### Project Location

**What is the best scale for describing where your work will take place?**

Region(s): SE

**What is the best scale to describe the area impacted by your work?**

Region(s): SE

**When will the work impact occur?**

During the Project

## Narrative

### **Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.**

Oak forests and savannas are an essential component of Southeast Minnesota's landscape. On upland sites oaks are adapted to the periodic fire that historically shaped the region's plant communities, as they produce highly nutritious mast and provide critical habitat for both endangered species and popular game animals like white-tailed deer and wild turkeys. In the Mississippi River Floodplain, swamp white oak stands provide longer-lived, flood tolerant communities essential to maintaining mature forest conditions for migratory songbirds and other animals in a volatile setting.

As oak-dominated stands age, the next generation of these habitats is threatened. In the last 100 years, the loss of fire disturbance, reduced active forest management, and an increase in non-native invasive species has degraded these communities. In forest understories, oaks are being replaced by shade-tolerant species like maple and basswood. The lack of fire has allowed undesirable brush to desecrate many oak savannas. Invasive shrubs like buckthorn and honeysuckle create an obstacle to native community regeneration. Reed canary grass represents a similar obstacle to swamp white oak in the Mississippi River Floodplain. Maintaining oak forests and savannas requires active management to control invasive species and create conditions that favor young oak regeneration.

### **What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.**

We are asking for resources to fill critical capacity needs for managing oak forests and savannas on permanently protected land in Southeast Minnesota. On floodplain sites within the Upper Mississippi River Refuge system, we will develop more robust forest inventory data in order to identify swamp white oak populations and design restoration projects. Increasing inventory collection will better inform investments in floodplain forest management by state and federal partners. On upland sites in the blufflands, invasive species control and prescribed fire will be integrated to restore critical conditions and processes that support the persistence of oak savannas and forests. LCCMR grant funds are a critical element of creating a unique management capacity capable of working at efficient and effective scales. We will use LCCMR grant funds to leverage these federal funds to increase capacity for conducting prescribed fire and habitat enhancement on state lands, thus creating an "all lands" approach to habitat management within the driftless area. This all lands approach would allow for restoration at a scale that is more resilient and cost-effective than siloed private or public efforts.

### **What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?**

By controlling invasive species and returning fire to the landscape, this project will result in 1,500 acres of oak forests, savannas, and related habitats with reduced impacts from invasive species and improved overall forest health and resilience. By focusing on areas where the improvements to habitat condition will make larger-scale prescribed burns possible, future management will be more effective and efficient. This will ensure oaks and fire dependent communities can be maintained for future generations. We will collect inventory data from 1000 Mississippi River floodplain sample points to provide key information to governmental and non-governmental partners.

## Activities and Milestones

### Activity 1: Prescribed fire/invasive species control will be used to enhance fire-dependent forests.

**Activity Budget:** \$546,780

#### Activity Description:

We will conduct prescribed fire in oak forest and savanna communities to control invasive species and improve understory conditions for oak regeneration. In stands where invasive species or over-abundance of shade-tolerant native species are an obstacle to prescribed fire, we will use mechanical and chemical tools to restore site conditions to a point where prescribed fire can more cost-effectively achieve and maintain desired forest conditions. Projects will be prioritized first by the degree to which they contribute to building landscape-scale management units where prescribed fires can effectively treat large acreages. Projects will also be prioritized by the risk of oak stand loss due to weak oak regeneration and impending mature tree mortality with stands at highest risk being targeted for restoration first. This will facilitate sustainable oak management by reducing future needs for invasive species control during harvest, and improve the likelihood of regeneration success. Restoration may be undertaken in adjacent non-oak ecosystems when the condition of the adjacent area impacts the ability of an oak forest to persist in a healthy condition over time.

#### Activity Milestones:

Description	Completion Date
Assess oak restoration efforts and identify future management needs	2023-12-31
Oak forest and savanna enhancement through prescribed fire/invasive species control on 750 acres	2023-12-31
Assess oak restoration efforts and identify future management needs	2024-12-31
Oak forest and savanna enhancement through prescribed fire/invasive species control on 750 acres	2024-12-31

### Activity 2: Understanding Floodplain Forest Vegetation, Forest Inventory

**Activity Budget:** \$114,220

#### Activity Description:

The Upper Mississippi River holds the largest expanses of floodplain forest in Minnesota. Understanding and classifying these forest communities is vital in ensuring their conservation by better understanding current conditions and future management needs. Foresters are able to use forest inventory data to diagnose forest habitat needs and plan restoration efforts.

While the US Fish and Wildlife Service and the US Army Corps of Engineers both actively participate in a collaborative forest inventory effort, more resources are needed to collect all the data necessary to describe these forests. The US Army Corps of Engineers has fully inventoried the lands it manages on the Upper Mississippi River. The US Fish and Wildlife Service has completed thousands of inventory sample points, however collection is slow due to personnel constraints. Forest Inventory collected on the Upper Mississippi River Wildlife and Fish Refuge is utilized in practical land management applications, and also in various research and monitoring capacities. Data collected here will be utilized by the USFWS, USGS, USACOE and National Audubon Society. Forest inventory data allows land managers to quickly address forest health issues like invasive species and aging stands. These efforts help to ensure forests remain healthy for the next generation.

#### Activity Milestones:

Description	Completion Date
500 sample points collected	2022-10-31

Stand Mapping and Analyzing Forest Inventory Data	2023-03-31
500 sample points collected	2023-10-31
Stand Mapping and Analyzing Forest Inventory Data	2024-03-31

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Andrew Beebe	Audubon Minnesota	Managing forest inventory quality assurance and applied restoration efforts on the Upper Mississippi River National Wildlife and Fish Refuge.	Yes

## Long-Term Implementation and Funding

**Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?**

Forest Inventory data will be available for all partners to inform future forest management needs and practices. Where initial habitat enhancement work does not result in full restoration during the grant period, local partners (DNR, USFWS, TNC) will take future responsibility for necessary follow-up treatment/management. All partners have existing and sustained management capacity, that while insufficient to fulfill the high costs of initial restoration effort, is sufficient for follow-up and maintenance management. Management efficiency generated by large, more connected blocks of restored habitat will contribute to the ability to sustain restoration gains with existing resources.

## Project Manager and Organization Qualifications

**Project Manager Name:** Matt Weegman

**Job Title:** NWTF District Biologist for MN, WI, & IA

**Provide description of the project manager's qualifications to manage the proposed project.**

Matt Weegman is responsible for developing new conservation projects and managing all existing NWTF conservation projects in Minnesota, Wisconsin, and Iowa. He also manages the NWTF Super Fund dollars that are earmarked for habitat work, land acquisition, and equipment purchases in these three states. Matt grew up in Winona, MN, the heart of the MN Driftless Region, and attended South Dakota State University for a Bachelors of Science in Wildlife and Fisheries (2009) and Mississippi State University for a Masters of Science in Wildlife, Fisheries, and Aquaculture (2013). Past positions with The National Wild Turkey Federation, Minnesota DNR, Ducks Unlimited, Mississippi State University, the U.S. Fish and Wildlife Service, and South Dakota Game Fish and Parks have given him a wealth of experiences that qualify him to manage this project.

**Organization:** National Wild Turkey Federation

**Organization Description:**

The National Wild Turkey Federation was founded in 1973, there were about 1.3 million wild turkeys in North America. After decades of work, that number hit a historic high of almost 7 million turkeys. To succeed, the NWTF stood behind science-based conservation and hunters' rights while working diligently with partners to help restore wild turkeys across North America. Today, the NWTF is focused on the future of hunting and conservation through its 10-year initiative, Save the Habitat. Save the Hunt., a charge that mobilizes science, fundraising and devoted volunteers to conserve or enhance more than 4 million acres of essential wildlife habitat, recruit at least 1.5 million hunters and open access to 500,000 acres for hunting. The NWTF has conducted conservation work in the US & throughout 15 other countries. We currently manage 300+ grants/agreements across the US for a variety of partners. For more information, visit NWTF.org.

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Grants Management		Grant Administrator			35%	0.18		\$18,000
District Biologist		Project Manager			35%	0.3		\$32,175
							<b>Sub Total</b>	<b>\$50,175</b>
<b>Contracts and Services</b>								
TBD	Professional or Technical Service Contract	Oak forests and savanna restoration using prescribed fire, invasive species control, and timber stand improvement				3.75		\$498,000
TBD	Professional or Technical Service Contract	Forest Inventory				1.5		\$100,000
Audubon	Sub award	Project bidding and quality assurance.				0.15		\$10,440
							<b>Sub Total</b>	<b>\$608,440</b>
<b>Equipment, Tools, and Supplies</b>								
							<b>Sub Total</b>	-
<b>Capital Expenditures</b>								
							<b>Sub Total</b>	-
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	-
<b>Travel In Minnesota</b>								

	Miles/ Meals/ Lodging	NWTF Personal vehicle mileage and meals	Partner meetings, site visits, and contractor quality control					\$2,385
							<b>Sub Total</b>	<b>\$2,385</b>
<b>Travel Outside Minnesota</b>								
							<b>Sub Total</b>	-
<b>Printing and Publication</b>								
							<b>Sub Total</b>	-
<b>Other Expenses</b>								
							<b>Sub Total</b>	-
							<b>Grand Total</b>	<b>\$661,000</b>

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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## Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
<b>State</b>				
Cash	Conservation Partners Legacy (CPL) dollars - Whitewater WMA Ag Field-Prairie Conservation	CPL grant to convert ag fields to prairie and treat invasive in buffer around the newly created prairie	Secured	\$37,000
			<b>State Sub Total</b>	<b>\$37,000</b>
<b>Non-State</b>				
Cash	NWTF Super Funds	The MN NWTF State Chapter has committed cash from the Super Fund to support this project	Secured	\$5,000
In-Kind	NWTF Indirect Rate	This is an unrecoverable indirect rate	Secured	\$109,181
Cash	NWTF Super Fund Dollars earmarked for Whitewater	Super Fund dollars to convert ag fields to prairie and treat invasive in buffer around them	Secured	\$3,700
In-Kind	Audubo - Forester time	Mapping and analyzing forest inventory stands/data	Secured	\$10,440
			<b>Non State Sub Total</b>	<b>\$128,321</b>
			<b>Funds Total</b>	<b>\$165,321</b>

## Acquisition and Restoration

### Parcel List

Name	County	Site Significance	Activity	Acres	Miles	Estimated Cost	Type of Landowner	Easement or Title Holder	Status of Work
Choice Wildlife Management Area	Fillmore	Broadleaf forest, bluff prairies, and remnant oak savanna in the ecologically important Root River Conservation Focus Area and Driftless Area of Minnesota	Restoration	80	-	\$32,000	Public		Has not begun
MLT Bear Creek	Fillmore	Private land with existing perpetual Minnesota Land Trust easement within the broadleaf forest ecosystem of the Root River Conservation Focus Area and Driftless Area	Restoration	80	-	\$24,000	Private		Has not begun
MLT North Branch Whitewater River	Wabasha	Private land with existing perpetual Minnesota Land Trust easement within the broadleaf forest ecosystem of the Whitewater Conservation Focus Area and Driftless Area	Restoration	74	-	\$22,200	Private		Has not begun
Richard J. Dorer Memorial Hardwoods State Forest	Houston	Broadleaf forest, bluff prairies, and remnant oak savanna in the ecologically important Root River Conservation Focus Area and Driftless Area of Minnesota	Restoration	866	-	\$259,800	Public		Has not begun
Rush Creek Woods WMA	Houston	Broadleaf forest, bluff prairies, and remnant oak savanna in the ecologically important Root River Conservation Focus Area and Driftless Area of Minnesota	Restoration	200	-	\$80,000	Public		Has not begun
Upper Mississippi River National Wildlife Refuge - La Crosse District	Houston	This site encompasses the forested floodplain of the Upper Mississippi River within the Root River Conservation Focus Area. Forested floodplain here is some of the last remaining large river floodplain in the US.	Restoration	1,250	-	\$50,000	Public		Has not begun
Upper Mississippi River National Wildlife Refuge - Winona District	Wabasha	This site encompasses the forested floodplain of the Upper Mississippi River within the Whitewater Conservation Focus Area. Forested floodplain here is	Restoration	1,250	-	\$50,000	Public		Has not begun

		some of the last remaining large river floodplain in the US.							
Whitewater Wildlife Management Area	Winona	Broadleaf forest, bluff prairies, and remnant oak savanna in the ecologically important Whitewater Conservation Focus Area and Driftless Area of Minnesota	Restoration	100	-	\$40,000	Public		Has not begun
Yucatan WMA	Houston	Broadleaf forest, bluff prairies, and remnant oak savanna in the ecologically important Root River Conservation Focus Area and Driftless Area of Minnesota	Restoration	100	-	\$40,000	Public		Has not begun
<b>Totals</b>				<b>4,000</b>	<b>0</b>	<b>\$598,000</b>			

## Restoration

### **1. Provide a statement confirming that all restoration activities completed with these funds will occur on land permanently protected by a conservation easement or public ownership.**

All work described herein will take place on land in public ownership or permanently protected by a conservation easement.

### **2. Summarize the components and expected outcomes of restoration and management plans for the parcels to be restored by your organization, how these plans are kept on file by your organization, and overall strategies for long-term plan implementation.**

Management will reduce invasive plant populations and increase oak regeneration on state, federal and permanently protected lands. Management activities will be implemented based on management plans and recommendations from each site's respective lead land manager, using the most current and best management practices. Records of management activities will be kept on file with the respective land managers and also uploaded to Audubon's management actions database. Management activities will be evaluated after implementation and the proper adjustments will be made to individual management plans.

### **3. Describe how restoration efforts will utilize and follow the Board of Soil and Water Resources "Native Vegetation Establishment and Enhancement Guidelines" in order to ensure ecological integrity and pollinator enhancement.**

Restoration will be done in accordance with the Native Vegetation Establishment and Enhancement Guidelines. Efforts will focus on restoring resilient and functional landscapes while maintaining ecological diversity through management of invasive plants and re-introducing fire into forested ecosystems.

Plants identified on the Minnesota Department of Natural Resources Plant Checklist as invasive species will be managed on project sites through the use of herbicide as well as utilizing mechanical techniques according to current best management practices. As a result of managing invasive species, more growing space and healthier soil conditions will be available for native plants to further occupy the sites.

The use of fire will greatly aid in enhancing native ecosystem function by improving soil health and nutrient cycling as well as creating younger more resilient plant growth. Fire will additionally aid in managing invasive species thus allowing for improved native plant growing conditions and wildlife habitat. Burn unit designs will incorporate refugia areas to aid in wildlife survival and mimic natural variability.

By managing invasive plants through traditional chemical and mechanical treatments as well as re-introducing fire, management will address multiple ecosystem functions. Forest systems dominated by native vegetation are better able to provide wildlife habitat, exhibit increased plant diversity, slow stormwater erosion, and improve soil health and carbon sequestration. Management utilizing fire also greatly benefits oak regeneration and allows managers to naturally grow new oak trees.

### **4. Describe how the long-term maintenance and management needs of the parcel being restored with these funds will be met and financed into the future.**

Management prescriptions will be drafted or amended for project areas managed as part of this proposal. The Minnesota DNR and US Fish and Wildlife service will utilize these management guidelines to carry out long term maintenance efforts.

### **5. Describe how consideration will be given to contracting with Conservation Corps of Minnesota for any restoration activities.**

Where contracting opportunities are available as part of this grant, Conservation Corps of Minnesota will be provided opportunity to partner in this habitat enhancement work through the use of CCM field crews. Habitat enhancement

crews may at times be a blend of hired staff and CCM crews. Conservation Corps of Minnesota will be notified during the hiring process for stewardship crew members to encourage CCM alumni to apply for positions.

**6. Provide a statement indicating that evaluations will be completed on parcels where activities were implemented both 1) initially after activity completion and 2) three years later as a follow-up. Evaluations should analyze improvements to the parcel and whether goals have been met, identify any problems with the implementation, and identify any findings that can be used to improve implementation of future restoration efforts at the site or elsewhere.**

Adaptive management will be employed in all phases of habitat enhancement work. Site evaluations will be completed to assess efficacy immediately post-treatment, and again 3 years after initial treatment to help inform the adaptive management process. The Minnesota DNR and US Fish and Wildlife Service will continuously monitor managed sites to determine treatment efficacy and gather data needed for future management design.

## Attachments

### Required Attachments

#### *Map*

File: [dfe15dad-0e8.pdf](#)

#### *Alternate Text for Map*

This attachment is a map showing the proposed work area in southeast Minnesota.

#### *Financial Capacity*

File: [3b0b6261-06a.pdf](#)

#### *Board Resolution or Letter*

Title	File
Board Resolution	<a href="#">5e37e9c2-963.pdf</a>

### Optional Attachments

#### *Support Letter or Other*

Title	File
Letter of Support: The Nature Conservancy	<a href="#">7973cb21-0b7.pdf</a>
One-Page Project Summary Graphic	<a href="#">0b0631d9-f70.pdf</a>

## Administrative Use

**Does your project include restoration or acquisition of land rights?**

Yes: Restoration,

**Does your project have patent, royalties, or revenue potential?**

No

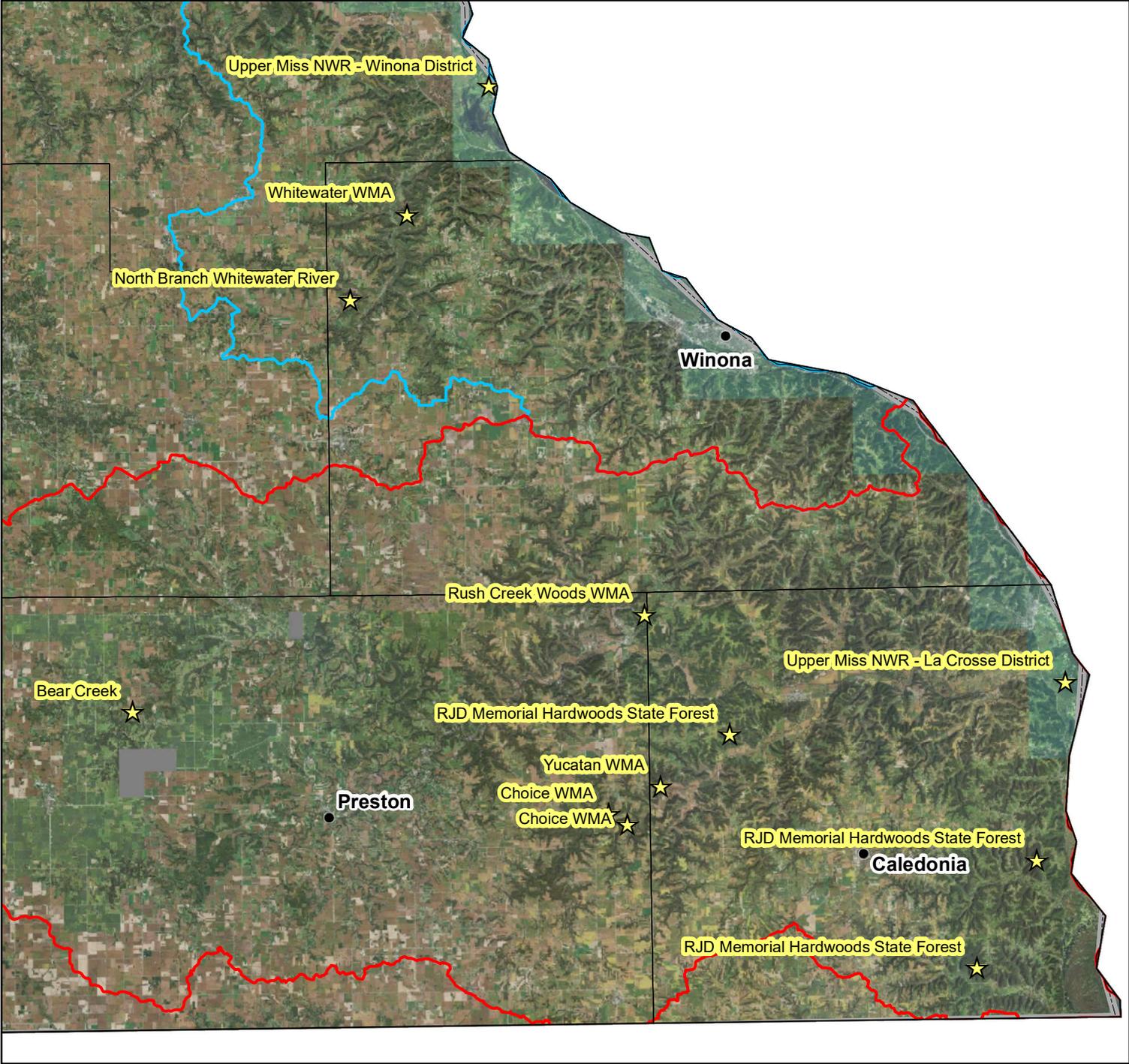
**Does your project include research?**

No

**Does the organization have a fiscal agent for this project?**

No

# Locations of Project Work



- ★ Project Sites
- Whitwater Conservation Focus Area
- Root River Conservation Focus Area

