



Lessard-Sams Outdoor Heritage Council

DNR Statewide Forest Enhancement and Restoration-Phase 5
ML 2025 Request for Funding

General Information

Date: 05/28/2024

Proposal Title: DNR Statewide Forest Enhancement and Restoration-Phase 5

Funds Requested: \$7,541,700

Confirmed Leverage Funds: -

Is this proposal Scalable?: Yes

Manager Information

Manager's Name: Ted Dick

Title: Forest Habitat Supervisor

Organization: DNR

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Location Information

County Location(s): Olmsted, Winona, Fillmore, Mille Lacs, Morrison, Todd, St. Louis, Cass, Itasca, Pine, Carlton, Aitkin, Marshall, Pennington, Lake of the Woods, Otter Tail, Dakota, Hubbard, Wadena, Crow Wing, Lake, Koochiching and Roseau.

Eco regions in which work will take place:

- Northern Forest
- Forest / Prairie Transition
- Metro / Urban
- Southeast Forest
- Prairie

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Wetlands
- Forest
- Habitat

Narrative**Abstract**

Forest and brushland habitats in Minnesota require enhancement and restoration work to expand their value to wildlife and fish species. Activities such as shearing, planting to increase species diversity, and invasive species treatment increase the quality of critical wildlife habitat (e.g., deer and moose thermal habitat). This project will also benefit water quality and outdoor recreation. The DNR Conservation Agenda, Wildlife Action Plan, Forest Action Plan, Scientific and Natural Areas (SNA) Strategic Land Protection Plan, and Fish Habitat Plan will guide habitat enhancements in this proposal to meet the objectives put forth in these plans.

Design and Scope of Work

Minnesota's forest habitats include many native plant communities in different growth stages. Forests include riparian areas along rivers and lakes, upland forests, wet forests, and conifer forests. Each of these habitats are home to a wide array of game and non-game species, including multiple Species of Greatest Conservation Need (SGCN). Forests provide outdoor recreation, timber products, and support to local communities. Forests protect water quality and sequester carbon. However, forests face increasing stress from invasive species, climate change, critical habitat loss, conversion to non-forest, and fragmentation. Beyond more traditional forest management activities, some sites require vital enhancements to maximize diversity of trees, shrubs, and ground vegetation for fish and wildlife. For example, a timber harvest can create a wildlife opening; however, follow-up management such as periodic mowing or inter-seeding may be needed to maintain the opening.

A healthy, diverse forest will increase water retention and filtration and store and sequester carbon. It will also be more resilient and provide other ecosystem services. We will accomplish strategic and targeted enhancements using contractors to conduct activities that support healthy, diverse, and resilient habitats. Activities may include:

- 1) Controlling invasive vegetation, woody vegetation removal, and prescribed fire
- 2) Assisting oak regeneration through seeding and tree planting to provide important mast for forage
- 3) Maintaining wet forest ecosystems by increasing tree species diversity ahead of emerald ash borer (EAB)
- 4) Enhancing spruce budworm-damaged forest habitat by planting balsam fir and other conifer species
- 5) Establishing and tending diverse, long-lived conifer stands to provide thermal cover

DNR land managers collaborate with other state, federal, and county agencies and many conservation organizations to take a landscape view of forests and manage across administrative units. For example, DNR managers are working together with U.S. Forest Service managers to maintain and enhance vegetation to provide forage and mast for a variety of wildlife. Traditional timber harvest is an important tool for improving habitat, but the activities proposed here are in addition to logging and often require different activities to achieve habitat improvements.

This request seeks funding to enhance 10,929 acres of habitat on public lands, primarily but not limited to, Wildlife Management Areas (WMA), Aquatic Management Areas (AMA), SNAs, state forests, and county lands. Strategic and targeted work will be accomplished through the added capacity of contractors hired to conduct activities that support healthy, diverse, and resilient habitats.

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

All ages of forests require investment and management. Some sites, with heightened value to key wildlife and aquatic species, need additional efforts to maximize habitat benefits. Prescribed fire in mature forests helps clear underbrush and allows sunlight penetration to the ground to boost regeneration. Fire is especially important to both maintain and regenerate oak and pine forests. Shearing brushland helps create open lands that provide critical habitat for American woodcock, yellow rails, and sharp-tailed grouse, which are SGCN species. Planting conifers provides thermal cover for multiple wildlife species and creates shade and protects sources of ground water for native brook trout streams threatened by climate change. Shearing maintains brushlands for sharp-tailed grouse and provides small forest openings critical to many species of birds, including golden-winged warblers. Oak forests are important habitat and establishing and tending young oak forests will keep oak on the landscape into the future.

Each of the practices mentioned will benefit a wide range of game and non-game species, including mammals, birds, reptiles, and amphibians, as well as pollinating insects.

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

Pressures on Minnesota forests are increasing. It is more effective to enhance critical habitat for wildlife species and conserve SGCN species now rather than having to restore habitat in the future. Planting trees on acres affected by large spruce budworm infestations helps to diversify forests while providing habitat for wildlife. Diversifying balsam fir forests will make them more resilient to future spruce budworm and other insect outbreaks that are predicted to increase with a warming climate. Current DNR plans provide the opportunity to address these habitat needs, and funding will accelerate implementation of these plans. Increased management of brushland habitats is a particularly urgent need. Early detection and swift control of invasive species is more cost-effective than trying to manage established and widespread invasive species populations.

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

DNR's Conservation Agenda, Wildlife Action Plan, Forest Action Plan, SNA Strategic Land Protection Plan (along with specific site management plans), and Fish Habitat Plan, will guide activities. These plans incorporate the best information and science to identify goals and strategies. DNR strives to base all habitat management on science. Restoring and enhancing habitat expands corridors and complexes, reduces fragmentation, and directly applies research to on the ground projects. Habitat projects that occur on SNA will enhance critical habitats identified by Minnesota County Biological Survey (MCBS).

The habitat needs of many forest species, including mature forest species such as marten and fisher and young forest species like woodcock and golden-winged warblers, are well documented. Many wildlife species require mature forests during some point in their lives. Research conducted in Minnesota will be used to apply these funds to enhance and restore habitats in the forested areas of the state.

Which top 2 Conservation Plans referenced in MS97A.056, subd. 3a are most applicable to this project?

- Minnesota's Wildlife Action Plan 2015-2025
- Outdoor Heritage Fund: A 25 Year Framework

Explain how this proposal 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.

Diversifying ash forests builds resiliency in the forest by planting additional tree species that allows forest to be retained after EAB infests more forest throughout the state. Diversifying forests will make them more resilient to future spruce budworm and other insect outbreaks that are predicted to increase with a warming climate. Diversity builds resilience against both direct climate changes and the predicted increases in forest pests given changes in climate. Changes in climate are increasing invasive species in forests and degrading fish and wildlife habitat.

Which LSOHC section priorities are addressed in this proposal?

Forest / Prairie Transition

- Protect, restore, and enhance habitat for waterfowl, upland birds, and species of greatest conservation need

Metro / Urban

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

Northern Forest

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

Prairie

- Protect, enhance, and restore remnant native prairie, Big Woods forests, and oak savanna

Southeast Forest

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

Describe how this project/program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife, and if not permanent outcomes, why it is important to undertake at this time:

Forests are always maturing and changing; enhancement work, by its very nature, is not permanent. It is significant because the enhancements described above will make the forest more diverse and resilient and will increase wildlife abundance. This is all compatible with sustainable forest management and the ecosystem services these habitats provide. A healthy, diverse forest and ecosystem are a permanent legacy.

Outcomes

Programs in forest-prairie transition region:

- Protected, restored, and enhanced nesting and migratory habitat for waterfowl, upland birds, and species of greatest conservation need ~ *A number of species are tied to brushland and young aspen forests in these region, including elk, golden-winged warblers, and sharp-tailed grouse. Ongoing surveys and research on these species will allow the DNR to track local and regional responses to these and related efforts.*

Programs in metropolitan urbanizing region:

- A forest land base that contributes to the habitat picture ~ *These efforts will help manage forests in this region to benefit a range of wildlife species, both game and non-game. Ongoing surveys, especially among songbirds, will track long-term changes in bird populations in this region.*

Programs in the northern forest region:

- Healthy populations of endangered, threatened, and special concern species as well as more common species ~ *The DNR and partner agencies conduct a number of wildlife surveys, including moose, deer, ruffed grouse, sharp-tailed grouse, woodcock, and songbird surveys.*

Programs in prairie region:

- Improved condition of habitat on public lands ~ *These efforts will help manage forests in this region to benefit a range of wildlife species, both game and non-game. Ongoing surveys, especially among songbirds, will track long-term changes in bird populations in this region.*

Programs in southeast forest region:

- Large corridors and complexes of biologically diverse wildlife habitat typical of the unglaciated region are restored and protected ~ *The non-game program is very active in this region with projects assessing wildlife populations. And there are the same ongoing wildlife surveys as in the other regions of the state.*

What other dedicated funds may collaborate with or contribute to this proposal?

- Arts and Cultural Heritage Fund

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.

These funds are for additional enhance/restoration work beyond what the DNR is already conducting. These funds are not supplanting or substituting any funds.

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

We will select and implement projects to achieve high quality and enduring benefits. Projects have variable lifespans depending on project type, weather, and other environmental conditions. Many of the projects are meant to endure for decades, at which point regular forest management activity can resume. DNR staff and staff from partner agencies/non-governmental organizations (NGOs) will monitor project sites to gauge habitat response and determine when additional enhancement may be needed. Work will be sustained through other DNR funds, forest management practices, and future requests from the OHF and related external funding.

Actions to Maintain Project Outcomes

| Year | Source of Funds | Step 1 | Step 2 | Step 3 |
|-----------------|--------------------------------------|---------------------|------------------|---|
| 2024 | listed above and future OHF requests | monitor results | document results | develop budget for additional work with internal and external funds |
| 2026 and beyond | listed above and future OHF requests | continue monitoring | adapt results | seek additional funding |

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

We have in the past and will continue to consult and coordinate with diverse communities and tribal partners into the project planning and work we do to enhance fish and wildlife habitats for all citizens of the state of Minnesota.

Activity Details

Requirements

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
- SNA
- AMA
- State Forests
- Other : national forest, County lands, Con-Con lands, school trust lands.
- County/Municipal

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 proposal either in the process of restoration or use as food plots?

No

Other OHF Appropriation Awards

Have you received OHF dollars through LSOHC in the past?

Yes

Are any of these past appropriations still OPEN?

Yes

| Approp Year | Funding Amount Received | Amount Spent to Date | Funding Remaining | % Spent to Date |
|-------------|-------------------------|----------------------|-------------------|-----------------|
| 2023 | \$1,496,000 | \$642,907 | \$853,093 | 42.98% |
| 2022 | \$2,172,000 | \$1,020,595 | \$1,151,405 | 46.99% |
| 2021 | \$1,338,000 | \$1,318,136 | \$19,864 | 98.52% |
| 2020 | \$1,000,000 | - | - | - |
| Totals | \$6,006,000 | \$2,981,638 | \$3,024,362 | 49.64% |

Timeline

| Activity Name | Estimated Completion Date |
|--|---------------------------|
| implement enhancements | spring 2029 |
| continued monitoring and follow-up management and enhancements | ongoing |

Budget

Totals

| Item | Funding Request | Total Leverage | Leverage Source | Total |
|----------------------------|--------------------|----------------|-----------------|--------------------|
| Personnel | \$100,000 | - | - | \$100,000 |
| Contracts | \$6,437,200 | - | - | \$6,437,200 |
| Fee Acquisition w/ PILT | - | - | - | - |
| Fee Acquisition w/o PILT | - | - | - | - |
| Easement Acquisition | - | - | - | - |
| Easement Stewardship | - | - | - | - |
| Travel | \$15,000 | - | - | \$15,000 |
| Professional Services | - | - | - | - |
| Direct Support Services | \$91,200 | - | - | \$91,200 |
| DNR Land Acquisition Costs | - | - | - | - |
| Capital Equipment | - | - | - | - |
| Other Equipment/Tools | \$5,000 | - | - | \$5,000 |
| Supplies/Materials | \$893,300 | - | - | \$893,300 |
| DNR IDP | - | - | - | - |
| Grand Total | \$7,541,700 | - | - | \$7,541,700 |

Personnel

| Position | Annual FTE | Years Working | Funding Request | Total Leverage | Leverage Source | Total |
|-----------------------|------------|---------------|-----------------|----------------|-----------------|-----------|
| Specialist/Technician | 0.6 | 2.0 | \$100,000 | - | - | \$100,000 |

Amount of Request: \$7,541,700

Amount of Leverage: -

Leverage as a percent of the Request: 0.0%

DSS + Personnel: \$191,200

As a % of the total request: 2.54%

Easement Stewardship: -

As a % of the Easement Acquisition: -

Does this proposal 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?
 fewer acres could be accomplished, the majority of these projects are scalable.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?

All costs including contracts/supplies/materials for the majority of the projects can be proportionally reduced.

If the project received 30% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?

Number of projects and acres accomplished can be reduced accordingly to meet a 30% funding level. Fund smaller projects that do not need to be scaled down to meet funding.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?

All costs including contracts/supplies/materials etc. for the majority of the projects can be proportionally reduced.

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?

Consistent with approved work plans for previous OHF appropriations that include the SNA program, this funding will be used to pay project-associated costs for classified and unclassified staff paid almost exclusively with special project funds. These positions would not exist, but for special project funding received through the OHF and other funds. Each year these positions are assigned work based on the particular combination of soft funding available to address priority SNA Program activities.

Contracts

What is included in the contracts line?

This line includes contracts for restoration and enhancement work that the DNR or Roving Crews don't have the specialized equipment or staff to conduct. Contracts increase our capacity to impact acres beyond what staff alone are capable of.

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

Most of the costs will be mileage, food, and lodging. However, there is the possibility a project could use rental vehicles.

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?

We used the standard DNR calculator for proposals to the OHF and ENRTF.

Other Equipment/Tools

Give examples of the types of Equipment and Tools that will be purchased?

Materials & supplies may include parts, tools, repair costs, and related supplies for restoration, invasives treatment, prescribed burning, etc. (primarily chainsaws, pump cans, drip torches, fire racks, pulaskis, other handtools, backpack sprayers, portable pumps & hose, personal protective equipment, herbicides, spreading oils, flagging, stakes, etc.).

Federal Funds

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

No

Output Tables

Acres by Resource Type (Table 1)

| Type | Wetland | Prairie | Forest | Habitat | Total Acres |
|--|----------|----------|---------------|----------|---------------|
| 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 | 10,929 | 0 | 10,929 |
| Total | 0 | 0 | 10,929 | 0 | 10,929 |

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 | - | - | \$7,541,700 | - | \$7,541,700 |
| Total | - | - | \$7,541,700 | - | \$7,541,700 |

Acres within each Ecological Section (Table 3)

| Type | Metro/Urban | Forest/Prairie | SE Forest | Prairie | N. Forest | Total Acres |
|--|-------------|----------------|------------|----------|--------------|---------------|
| 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 | 1,109 | 765 | 0 | 9,055 | 10,929 |
| Total | 0 | 1,109 | 765 | 0 | 9,055 | 10,929 |

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 | - | \$1,797,500 | \$986,500 | - | \$4,757,700 | \$7,541,700 |
| Total | - | \$1,797,500 | \$986,500 | - | \$4,757,700 | \$7,541,700 |

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 | - | - | \$690 | - |

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 | - | \$1,620 | \$1,289 | - | \$525 |

Target Lake/Stream/River Feet or Miles

Parcels

Sign-up Criteria?

No

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

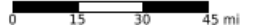
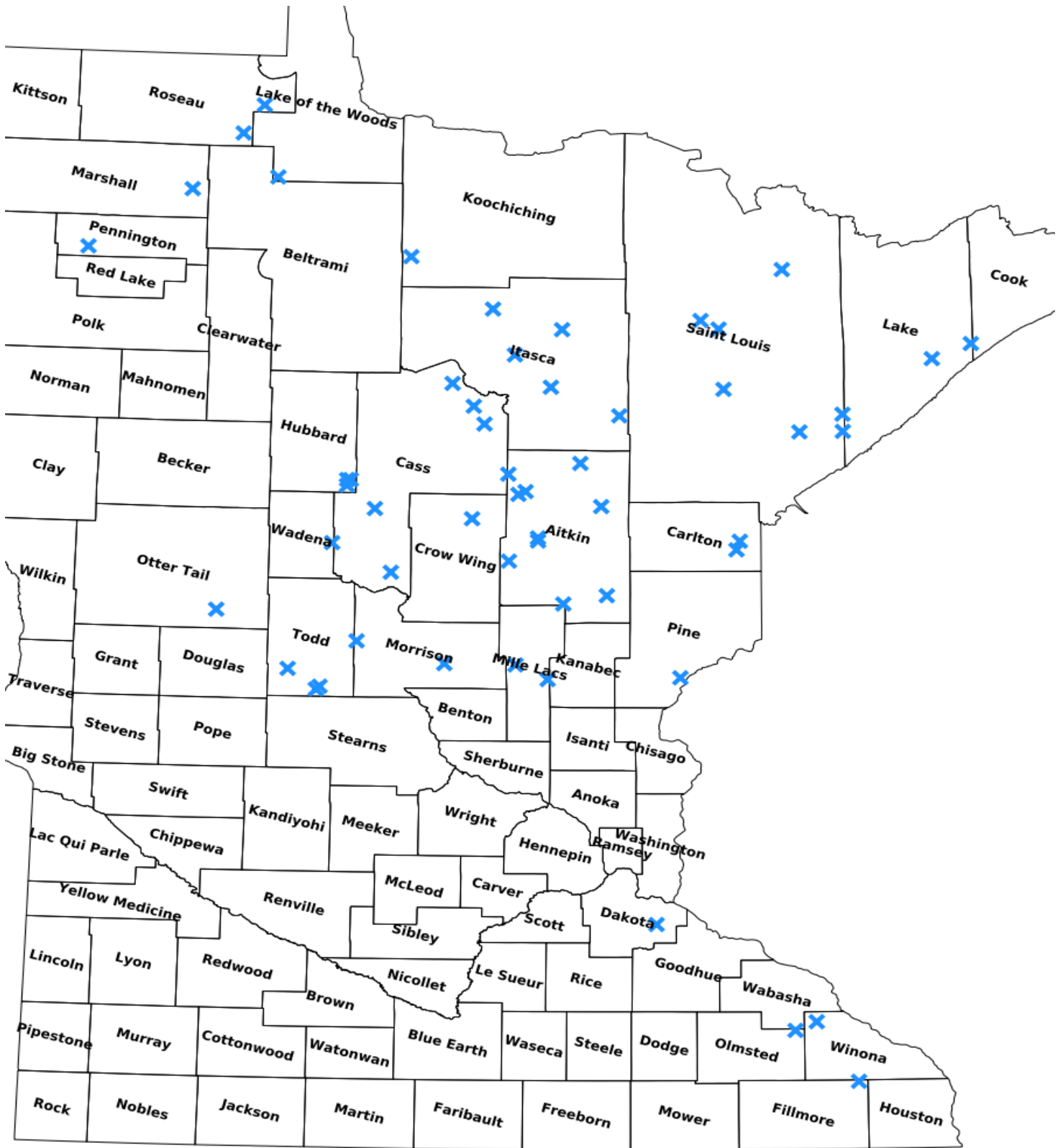
We evaluated forest habitat needs not funded through other sources, considering staff capacity from DNR Fish and Wildlife/Forestry divisions to implement and complete within grant timeline.

Restore / Enhance Parcels

| Name | County | TRDS | Acres | Est Cost | Existing Protection | Description |
|---------------------------------|-----------|----------|-------|-----------|---------------------|---|
| Solana State Forest | Aitkin | 04627216 | 7 | \$5,175 | Yes | Establishing and Protecting natural origin red pine |
| Aitkin WMA | Aitkin | 04726202 | 65 | \$97,500 | Yes | Forest Stand Improvement |
| Solana State Forest | Aitkin | 04423213 | 30 | \$22,500 | Yes | Increasing diversity of ash dominated wet forest |
| Aitkin WMA | Aitkin | 04726211 | 1,000 | \$276,000 | Yes | Forest Opening Improvement |
| Savanna State Forest | Aitkin | 05224226 | 23 | \$17,250 | Yes | Increasing diversity of ash dominated wet forest |
| Hill River State Forest | Aitkin | 05026217 | 143 | \$107,175 | Yes | Enhance Oak |
| Savanna State Forest | Aitkin | 04923211 | 64 | \$48,000 | Yes | Enhance Oak |
| Land O' Lakes State Forest | Aitkin | 05127216 | 19 | \$14,549 | Yes | Enhance Oak |
| Hill River State Forest | Aitkin | 05027224 | 35 | \$26,250 | Yes | Increasing diversity of ash dominated wet forest |
| Solana State Forest | Aitkin | 04425236 | 77 | \$57,750 | Yes | Enhance Oak |
| Wrenshall WMA | Carlton | 04716207 | 13 | \$44,000 | Yes | Forest Stand Improvement |
| Blackhoof River WMA | Carlton | 04717225 | 85 | \$18,190 | Yes | Forest Opening Improvement |
| Bowstring State Forest | Cass | 14527221 | 142 | \$99,163 | Yes | Establishing and Protecting natural origin red pine |
| Pillsbury State Forest | Cass | 13430222 | 28 | \$21,225 | Yes | Enhancing threatened or endangered species habitat |
| Bowstring State Forest | Cass | 14326236 | 59 | \$44,249 | Yes | Enhance Oak |
| Foot Hills State Forest | Cass | 13831236 | 28 | \$21,300 | Yes | Enhancing threatened or endangered species habitat |
| Mud Goose WMA | Cass | 14426233 | 100 | \$25,000 | Yes | Forest Stand Improvement |
| Crow Wing State Forest | Crow Wing | 13726216 | 29 | \$21,675 | Yes | Enhancing threatened or endangered species habitat |
| Chimney Rock SNA | Dakota | 11417231 | 90 | \$185,000 | Yes | Woody Removal/Prescribed Burn |
| Schueler WMA | Fillmore | 10408203 | 50 | \$65,000 | Yes | Forest Stand Improvement |
| Badoura State Forest | Hubbard | 13932222 | 21 | \$15,525 | Yes | Enhancing threatened or endangered species habitat |
| Badoura Jack Pine Woodland SNA | Hubbard | 13932211 | 50 | \$100,000 | Yes | Woody Removal/Prescribed Burn |
| Badoura Jack Pine Woodland SNA | Hubbard | 13932210 | 20 | \$40,000 | Yes | Invasive Species Control |
| Bowstring State Forest | Itasca | 05827214 | 168 | \$125,774 | Yes | Increasing diversity of ash dominated wet forest |
| Golden Anniversary State Forest | Itasca | 05522234 | 134 | \$100,440 | Yes | Enhance Oak |
| Prairie Lake Deer Yard WMA | Itasca | 05625209 | 150 | \$48,000 | Yes | Forest Stand Improvement |

| | | | | | | |
|---------------------------------|-------------------|----------|-------|-----------|-----|---|
| Big Fork State Forest | Itasca | 14925208 | 15 | \$10,545 | Yes | Establishing and Protecting natural origin red pine |
| Golden Anniversary State Forest | Itasca | 06025236 | 712 | \$533,779 | Yes | Establishing and Protecting natural origin red pine |
| Pine Island State Forest | Koochiching | 15229209 | 38 | \$28,477 | Yes | Increasing diversity of ash dominated wet forest |
| Finland State Forest | Lake | 05906236 | 190 | \$142,500 | Yes | Enhance Oak |
| Finland State Forest | Lake | 05807230 | 1,078 | \$916,512 | Yes | Enhancing spruce budworm damaged forest habitat |
| Cloquet Valley State Forest | Lake | 05512236 | 30 | \$22,500 | Yes | Increasing diversity of ash dominated wet forest |
| Red Lake WMA | Lake of the Woods | 15735229 | 2,000 | \$400,000 | Yes | Brushland Management |
| Valley WMA | Marshall | 15639220 | 60 | \$96,000 | Yes | Forest Stand Improvement |
| Groundhouse WMA | Mille Lacs | 03926213 | 50 | \$65,000 | Yes | Forest Stand Improvement |
| Four Brooks WMA | Mille Lacs | 04027221 | 200 | \$75,000 | Yes | Forest Stand Improvement |
| Little Elk WMA | Morrison | 13031219 | 231 | \$555,000 | Yes | Forest Stand Improvement |
| Rice-Skunk WMA | Morrison | 04030219 | 42 | \$60,000 | Yes | Forest Stand Burns |
| Whitewater WMA | Olmsted | 10711203 | 400 | \$500,000 | Yes | Forest Stand Improvement |
| Folden Woods Marsh WMA | Otter Tail | 13238234 | 58 | \$82,000 | Yes | Forest Stand Improvement |
| Higinbotham WMA | Pennington | 15244204 | 100 | \$110,000 | Yes | Forest Stand Improvement |
| Chengwatana State Forest | Pine | 03919207 | 750 | \$355,775 | Yes | Forest Stand Improvement |
| Beltrami Island State Forest | Roseau | 16136222 | 18 | \$23,000 | Yes | woody invasives treatment |
| Beltrami Island State Forest | Roseau | 15937210 | 32 | \$27,000 | Yes | woody invasives treatment |
| Sturgeon River State Forest | St. Louis | 06018216 | 21 | \$16,049 | Yes | Enhance Oak |
| Cloquet Valley State Forest | St. Louis | 05414236 | 650 | \$275,525 | Yes | Forest Stand Improvement |
| Sturgeon River State Forest | St. Louis | 06017232 | 70 | \$52,500 | Yes | Establishing and Protecting natural origin red pine |
| Burntside State Forest | St. Louis | 06314217 | 400 | \$100,000 | Yes | Forest/Non-DNR Public Lands |
| Cloquet Valley State Forest | St. Louis | 05617216 | 20 | \$14,000 | Yes | Establishing and Protecting natural origin red pine |
| Cloquet Valley State Forest | St. Louis | 05412236 | 268 | \$228,139 | Yes | Enhancing spruce budworm damaged forest habitat |
| Owen-Hinz WMA | Todd | 12835212 | 27 | \$21,600 | Yes | Brushland Management |
| Grey Eagle WMA | Todd | 12733209 | 482 | \$780,000 | Yes | Forest Stand Improvement |
| Elgin Woods WMA | Todd | 12733217 | 109 | \$71,000 | Yes | Forest Stand Burns |
| Lyons State Forest | Wadena | 13633236 | 22 | \$16,875 | Yes | Enhancing threatened or endangered species habitat |
| Whitewater WMA | Winona | 10810222 | 225 | \$225,000 | Yes | Forest Stand Improvement |

Parcel Map

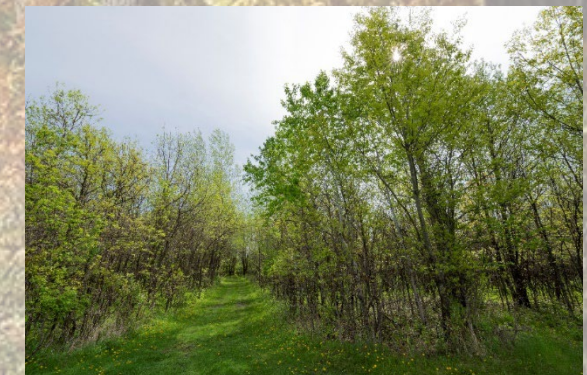


- Protect in Easement
- ▲ Protect in Fee with PILT
- Protect in Fee W/O PILT
- ★ Restore
- ✕ Enhance
- ⊕ Other

DNR Statewide Forest Enhancement and Restoration- Phase 5

This project will:

- **Proactively enhance 10,929 acres of forest habitat on public lands open to hunting or fishing; primarily Wildlife Management Areas and State Forests.**
- **Hire contractors to increase capacity to achieve large scale habitat improvements, such as tree planting and seeding; threatened/endangered species habitat improvement; invasive species control; prescribed burns; regenerating brushlands; and enhancing habitat affected by forest pests.**
- **Sustain and grow healthy, diverse, and resilient habitats for Minnesota's future, benefitting wildlife populations and citizens.**



Habitat management activities will:

- Address stressors in our forest such as impacts from invasive species, forest pests such as emerald ash borer and spruce budworm, climate change, loss of oak and winter cover, and lack of management.
- Enhance habitat for threatened or endangered species.
- Focus on larger projects that require unique equipment, and/or are more cost effective for contractors to conduct.
- Benefit an array of native fish and wildlife, including game and non-game, and several species in greatest conservation need.

