



Lessard-Sams Outdoor Heritage Council

Living Shallow Lakes & Wetlands Enhancement & Restoration Initiative - Phase XI
ML 2025 Request for Funding

General Information

Date: 06/03/2024

Proposal Title: Living Shallow Lakes & Wetlands Enhancement & Restoration Initiative - Phase XI

Funds Requested: \$14,975,000

Confirmed Leverage Funds: \$610,000

Is this proposal Scalable?: Yes

Manager Information

Manager's Name: John Lindstrom

Title: Regional Biologist

Organization: Ducks Unlimited, Inc.

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Location Information

County Location(s): Meeker, Kandiyohi, Rice, Yellow Medicine, Stearns, Grant, Polk, Clay, Becker, Otter Tail, Lyon, Douglas, Stevens, Traverse, Pope, Big Stone, Scott, Carver, Jackson, Faribault, Swift, Hennepin, Le Sueur, Nobles, Lincoln, Washington, Mahnomon, Martin, Cottonwood, Todd, Blue Earth, Murray, Redwood, Renville, Lac qui Parle, Freeborn, Wright, Marshall, Sibley, Watonwan, Steele and Sherburne.

Eco regions in which work will take place:

- Forest / Prairie Transition
- Prairie
- Metro / Urban

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Wetlands
- Prairie

Narrative**Abstract**

This Phase 11 request for Ducks Unlimited's Living Lakes program will enhance or restore 2,500 acres of wetlands and adjacent prairie grasslands for the U.S. Fish & Wildlife Service and Minnesota DNR on public lands and private lands under permanent easement. DU biologists and engineers will design wetland restorations to restore natural hydrology and water control structures for active management of shallow lakes and larger wetlands to enhance their ecology for wildlife and people in Minnesota's Prairie Pothole Region. While DU staff will design restoration and enhancement projects, DU will hire private contractors to conduct restoration and enhancement.

Design and Scope of Work

This Phase 11 of Ducks Unlimited's ongoing shallow lake enhancement and wetland restoration conservation program will enhance or restore at least 2,500 acres of shallow lakes, wetlands, and prairie grasslands, primarily in the Prairie Pothole Region of Minnesota. DU biologists work with U.S. Fish & Wildlife Service and Minnesota DNR field staff to restore and enhance wetlands on public land and under easement and DU engineers design water level control structures to enhance degraded shallow lakes and wetlands for DNR and other partners. Water control structures are used for temporary water level draw-downs to rejuvenate shallow lake ecology and productivity for wildlife. Small wetland enhancement and restoration work is completed using natural infrastructure and by removing sediment, removing tile, and removing trees. Adjacent grasslands may be enhanced with tree removal to benefit upland nesting waterfowl. Restoration work is done by private sector firms hired by DU.

Shallow lake enhancement and wetland restoration are top priority actions in all major conservation plans for Minnesota. Our work addresses the habitat goals identified in North American Waterfowl Management Plan, Minnesota's Prairie Conservation Plan, and Minnesota's Duck Recovery Plan which calls for the active management of 1,800 shallow lakes and restoring 64,000 wetlands to Minnesota's landscape. This work is time-sensitive because complex shallow lake enhancement projects take several years to design and implement, and because wetland restorations are critically needed for breeding waterfowl.

Healthy and abundant wetlands are required to sustain breeding and migrating waterfowl. Minnesota has lost approximately 90% of our prairie wetlands and 99% of native prairie grasslands. This has had a profound negative impact on breeding ducks and other prairie wetland wildlife here. Our remaining shallow lakes and wetlands are often those that were too deep to drain years ago and now function as the core of Minnesota's remaining waterfowl habitat complexes. Unfortunately, these remaining wetland basins now receive the excessive nutrient-laden water runoff from an intensively drained and interconnected landscape through which invasive fish such as carp have improved access. As a result, many of our remaining wetlands and shallow lakes are turbid and degraded due to drainage they receive and high, stabilized water levels in which nutrients collect and invasive fish proliferate. This results in stagnated aquatic wetland ecology and productivity and wetland basins with few aquatic plants and invertebrates for birds to eat. This is especially detrimental to diving ducks and other wetland-dependent species that rely exclusively on aquatic plant and invertebrate foods within wetlands and shallow lakes. These factors have caused a significant decline in both Minnesota's once diverse waterfowl population and rich waterfowling traditions.

This funding request will support DU staff biologists and engineers who survey, design, and manage construction

of shallow lake and wetland enhancement and restoration projects to improve public water shallow lakes and restore wetlands and grasslands. Funding will also support ongoing shallow lake technical assistance to assess, survey, and design future enhancement and wetland projects for implementation under future OHF appropriations for this program.

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

This proposal enhances shallow lakes and restores non-forested prairie wetlands, which are identified as critical habitats for many “Species of Greatest Conservation Need” listed in Minnesota’s “Tomorrow’s Habitat for the Wild & Rare: An Action Plan for Minnesota Wildlife.” Specific species listed in the Action Plan as requiring shallow lakes (page 273) include lesser scaup, northern pintail, common moorhen, least bittern, American bittern, marsh wren, and Virginia rail, along with being “important for many other species”. Specific species listed in the Action Plan as requiring emergent marshes (page 267) include least bittern, American bittern, marsh wren, and Virginia rail, and Forster’s terns are listed as requiring large deep-water marshes.

In addition to these specific wildlife species listed as SGCN examples in the Action Plan, shallow lakes and prairie wetlands will provide habitat of significant value for other species listed in Appendix B of the Action Plan too. Enhanced shallow lakes will provide habitat of significant value for other SGCN including: western grebe, black tern, northern harrier, trumpeter swan, common loon, bald eagle, Franklin’s gull, whimbrel, black-crowned night heron, American white pelican, horned grebe, red-necked grebe, eared grebe, and common tern. Restored prairie wetlands will provide habitat of significant value for other SGCN including: black tern, northern harrier, trumpeter swan, rusty blackbird and black-crowned night heron.

Frequently, our small wetland restoration and enhancement work is prioritized based on the USFWS “Thunderstorm Map” that estimates the density of breeding waterfowl across the prairie part of the state. During spring migration, waterfowl frequently return to areas near where they hatched looking to nest themselves. We target those areas that are already most attractive to breeding waterfowl, and maximize the attractiveness of small wetland basins on existing WPAs and WMAs, including removing invasive trees. This helps improve these existing complexes for wetland dependent wildlife and only makes them more attractive to waterfowl looking to nest. These wetlands are also used by waterfowl migrating through the area in the fall too.

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

Most prairie wetlands have already been drained and most shallow lakes degraded in southern Minnesota. Functioning wetland basins are the most important habitat variable for breeding ducks and the most limiting factor for ducks in the prairie region of Minnesota. Similarly, healthy and productive shallow lakes are the limiting habitat type for diving ducks and most other migrating waterfowl species as they pass through Minnesota in fall and spring. To improve wetland conditions for both breeding and migrating waterfowl in Minnesota, it is imperative that we restore wetlands and enhance shallow lakes, especially in the Prairie Pothole Region of SW Minnesota. Some of these larger shallow lake and wetland projects can take over a decade to come together. Given the importance of both small ponds and larger lakes and wetlands to waterfowl throughout their annual cycle, it is crucial that this work continue to be delivered in high-priority areas.

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

Ducks Unlimited uses science-based targeting to evaluate shallow lake and prairie wetland restorations in the Prairie Region, especially small wetland restorations that help improve prairie-wetland complexes for breeding

ducks. Models such as the U.S. Fish & Wildlife Service (USFWS) “Thunderstorm Maps” and “Restorable Wetlands Inventory” help determine landscape importance for breeding waterfowl. We consider biological diversity and significance according to the Minnesota DNR County Biological Survey (MCBS). Several examples include:

Herschberger Wildlife Management Area is a 242-acre property managed by DNR in Lincoln County. The WMA surrounds two basins collectively referred to as Curtis Lake. The WMA has a moderate level of biodiversity significance. Curtis Lake is a lake of moderate biological significance as per the MCBS. Ducks Unlimited is working to survey these basins to inform engineering design of a replacement water level control structure to improve water quality in Curtis Lake by temporary water level drawdown. This will result in improved habitat for waterfowl and other wetland wildlife.

Hegg Lake is a 73-acre shallow lake in Douglas County, identified as having moderate biological significance. Surrounding Hegg Lake is Hegg Lake WMA which has moderate biodiversity significance. Both the WMA and the lake occur in a landscape that can currently support 40-60 breeding ducks per square mile. Ducks Unlimited is working on a new water-control structure here too.

Several federal Waterfowl Production Areas (WPA) in west-central Minnesota are located in landscapes with outstanding biodiversity significance in large complexes of fee-title and protected private lands under permanent easement. Key parts of this landscape currently support 40-60 breeding duck pairs per square mile, with the potential to support over 100 breeding duck pairs per square mile once wetlands are restored.

Big Stone National Wildlife Refuge Pool South Prairie 1, Southeast Prairie, and Yellow Bank South sites have over 50 acres of enhanceable wetlands in Lac qui Parle County. The refuge is home to several sites of outstanding, high, and moderate levels of biodiversity significance. The landscape is currently able to support 10-25 breeding duck pairs per square mile. These enhanced wetlands will provide additional habitat for birds throughout their annual cycle.

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

- Long Range Duck Recovery Plan
- North American Waterfowl Management Plan

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.

A large part of this program is building water-control structures that allow temporary water level drawdowns. These drawdowns consolidate bottom sediments, allow wetland plants to germinate, and induce winterkills of undesirable fish species like common carp. Warmer winters, driven by climate change, will reduce the frequency of natural winterkills on shallow lakes across the prairie part of the state. Additionally, heavier rainfall events are resulting in increased connectivity of wetland areas and flooding cycles that are inconsistent with historical flooding cycles. This increases nutrient inputs from surface and subsurface wetland drainage resulting in poorer water quality and poorer habitat. Having the ability to manage water levels with a water control structure will allow our partners to more frequently drawdown basins to combat effects of climate change to induce fish winterkill and reset the ecology of these shallow lake and wetland systems to benefit wetland dependent wildlife.

Which LSOHC section priorities are addressed in this proposal?

Forest / Prairie Transition

- Protect, enhance, and restore migratory habitat for waterfowl and related species, so as to increase migratory and breeding success

Metro / Urban

- Protect habitat corridors, with emphasis on the Minnesota, Mississippi, and St. Croix rivers (bluff to floodplain)

Prairie

- Protect, enhance, and restore migratory habitat for waterfowl and related species, so as to increase migratory and breeding success

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:

Ducks Unlimited professional engineers and biologists design and install robust steel and concrete water level control structures that provide long-lasting shallow lake enhancement and wetland restoration tools to Minnesota DNR, U.S. Fish & Wildlife Service, and other partner's field managers. These water control structures are essential to enhancing shallow lakes and controlling outflows, and must be engineered to a very high level in order to withstand time and environmental pressures while providing wildlife managers with the means to regularly conduct temporary water level draw-downs to enhance their aquatic ecology to ensure optimal ecological condition for ducks. Similarly, smaller wetland restorations often involve complex drainage systems that require professional engineering to survey, design, and restore without negatively affecting upstream and downstream private landowners. Since 1984, Ducks Unlimited has provided professional wetland engineering services to our state and federal wildlife conservation agency partners.

Outcomes

Programs in forest-prairie transition region:

- Wetland and upland complexes will consist of native prairies, restored prairies, quality grasslands, and restored shallow lakes and wetlands ~ *This program will restore and enhance wetlands and grasslands on federal Waterfowl Production Areas and USFWS Habitat easements, and similar wetlands for MNDNR, each of which will be selected strategically by USFWS and MNDNR to benefit existing wetland complexes and migratory birds for both breeding and migration habitat, and which will be monitored by USFWS and MNDNR.*

Programs in metropolitan urbanizing region:

- Game lakes are significant contributors of waterfowl, due to efforts to protect uplands adjacent to game lakes ~ *DU will enhance and restore shallow lakes and wetlands on the Three Rivers Park District, Sherburne NWR, and Minnesota Valley NWR and federal Waterfowl Production Areas perpetually protected, managed, monitored, and evaluated annually by highly-trained U.S. Fish & Wildlife Service wildlife biologists. Park and service staff will guide the enhancement and restoration work by DU, and will evaluate wetland habitat outcomes annually to guide future management actions.*

Programs in prairie region:

- Protected, restored, and enhanced shallow lakes and wetlands ~ *Wetland and shallow lakes restored or enhanced by DU will be assessed by Minnesota DNR and USFWS to document improvements in water clarity, abundance of aquatic plants, and overall improvements in the aquatic ecology of each basin. Minnesota DNR and U.S. Fish & Wildlife Service field staff also conduct periodic counts of waterfowl and other wildlife using these basins in both spring and fall, along with hunters, and thus wildlife and human use is also monitored on a more informative opportunistic basis.*

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

- N/A

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.

This funding requested, if approved, will supplement traditional funding for Ducks Unlimited's Living Lakes Initiative, and will not supplant or substitute for traditional funding previously used for this purpose by Ducks Unlimited.

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

Shallow lake enhancement water control structures and prairie wetland restorations are implemented for agency conservation partners on land under their state, federal, or municipal long-term control and management responsibility. Thus, all projects constructed will be sustained and maintained by conservation partners like the Minnesota DNR and U.S. Fish & Wildlife Service, which are the two primary wildlife habitat management agencies in Minnesota. Upland areas that are enhanced or restored under this program will be managed with intermittent fire to maintain the benefits of our work.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2031	DNR Game & Fish Account, OHF for DNR Shallow Lakes and Small Wetlands Program and DNR Roving Crews	DNR Area Wildlife and Program Staff will assess shallow lake and wetland conditions following initial water level draw-downs or restoration, and document for management consideration	Every 3-8 years, depending on wetland conditions, water control structures will be used to actively manage and enhance shallow lakes and wetlands via temporary water level draw-down to remove fish, stimulate aquatic plants, and rejuvenate their overall aquatic ecology, which includes stimulating aquatic invertebrate production. Some basins may need pumping via DNR pump purchased by DU via previous 2012 OHF grant.	DNR assess ecological conditions again following subsequent temporary water level draw-downs and refilling management treatments, and communicate results and questions or concerns to DU.

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

Ducks Unlimited conserves wetlands for waterfowl and people alike. Our habitat projects restore natural infrastructure, which helps to alleviate society's climate impacts and provide clean water for diverse communities, who are disproportionately impacted by the effects of wetland loss and climate change.

Wetlands recharge groundwater in aquifers that provide clean, dependable water supplies while removing pollutants and reducing downstream flooding. Community resiliency is enhanced by the function of wetlands and adjacent grassland habitats that clean water and help absorb impacts from severe weather events. Public waters also provide opportunities for fishing, hunting, canoeing, kayaking, birding, and outdoor education for diverse and low to moderate income communities that may not otherwise have access to natural open spaces. Frequently our work occurs in outstate Minnesota where there are more moderate and low income households, providing access to natural areas where they might not otherwise have access. Indigenous communities may benefit from DU wetland enhancements and restorations that create suitable conditions for wild rice to proliferate. Wetlands deliver a return on investment that supports the health, resiliency, and well-being of diverse communities.

Restoring wetlands in the Mississippi River watershed benefits the diverse communities who draw their water from the river such as Minneapolis, St. Paul, and St. Cloud. Minneapolis alone draws 21 billion gallons of water a year from the Mississippi River to produce 57 million gallons of drinking water each day.

DU works with Three Rivers Park District and U.S. Fish & Wildlife Service's Minnesota Valley National Wildlife Refuge to enhance shallow lakes and other wetlands near diverse communities. The Refuge and Park District both connect the vibrant cultures of the Twin Cities metro with the diversity of wildlife and habitat in the metro area. They enhance urban habitat while offering community programs, environmental education, and access to nature on the edge of the city as well as hunting, fishing and hiking in wilder areas across the metro.

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
- WPA
- Permanently Protected Conservation Easements
- Public Waters
- Refuge 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
2024	\$7,867,000	-	-	-
2023	\$6,455,000	\$322,270	\$6,132,730	4.99%
2022	\$5,155,000	\$3,937,575	\$1,217,425	76.38%
2021	\$3,960,000	\$3,783,148	\$176,852	95.53%
2018	\$3,740,000	\$3,739,999	\$1	100.0%
2017	\$4,716,000	\$4,714,370	\$1,630	99.97%
2014	\$4,910,000	\$4,888,300	\$21,700	99.56%
2012	\$4,490,000	\$4,490,000	-	100.0%
2010	\$2,417,000	\$2,417,000	-	100.0%
2009	\$2,528,000	\$2,528,000	-	100.0%
Totals	\$46,238,000	\$30,820,662	\$15,417,338	66.66%

Timeline

Activity Name	Estimated Completion Date
Recon projects with DNR, FWS, and other partners and begin engineering survey and design of wetland restorations and shallow lake enhancements	June 2026
Complete some small wetland restorations and some larger shallow lake enhancements	June 2027
Complete remaining small wetland projects and larger shallow lake enhancement water control structure installations	June 2030

Budget**Totals**

Item	Funding Request	Total Leverage	Leverage Source	Total
Personnel	\$1,950,000	\$300,000	DU Private, federal NAWCA, and USFWS IRA	\$2,250,000
Contracts	\$12,500,000	\$500,000	DU Private & federal NAWCA grants	\$13,000,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	\$500,000	Federal USFWS Migratory Bird Con. Fund	\$500,000
Easement Stewardship	-	-	-	-
Travel	\$75,000	\$25,000	DU Private & federal NAWCA grants	\$100,000
Professional Services	\$75,000	-	-	\$75,000
Direct Support Services	\$195,000	-	-	\$195,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$80,000	-	-	\$80,000
Supplies/Materials	\$100,000	\$25,000	DU Private & federal NAWCA grants	\$125,000
DNR IDP	-	-	-	-
Grand Total	\$14,975,000	\$1,350,000	-	\$16,325,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Total Leverage	Leverage Source	Total
Professional Engineers, Surveyors, Construction Managers, and Biologists to Design and Implement Projects	6.0	3.0	\$1,800,000	\$300,000	DU Private, federal NAWCA, and USFWS IRA	\$2,100,000
Manager - Grant Administration & Program Coordination	0.5	3.0	\$150,000	-	-	\$150,000

Amount of Request: \$14,975,000
Amount of Leverage: \$1,350,000
Leverage as a percent of the Request: 9.02%
DSS + Personnel: \$2,145,000
As a % of the total request: 14.32%
Easement Stewardship: -
As a % of the Easement Acquisition: -

Total Leverage (from above)	Amount Confirmed	% of Total Leverage	Amount Anticipated	% of Total Leverage
\$1,350,000	\$610,000	45.19%	\$740,000	54.81%

Detail leverage sources and confirmation of funds:

DU will leverage OHF grant funds with additional private support from individuals, foundations, and corporations and from federal NAWCA grants. Federal leverage will also come from USFWS (\$510,000 MBCF easement acquisition funds and in-kind staff support, plus \$100,000 from IRA).

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?

If reduced to 50% of the request, most of our acres/activities and budget would be scaled proportionately.

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

Because our work involves a team of DU biologists/engineers, including programmatic engineering feasibility work that often spans several years and multiple appropriations, budgets for personnel may not be reduced exactly proportionately but will be reduced as much as possible without jeopardizing staffing and progress to keep future projects viable.

If the project received 30% of the requested funding

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

If reduced to 30% of the request, most of our acres/activities and budget would be scaled proportionately.

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

Because our work involves a team of DU biologists/engineers, including programmatic engineering feasibility work that often spans several years and multiple appropriations, budgets for personnel may not be reduced exactly proportionately but will be reduced as much as possible without jeopardizing staffing and progress to keep future projects viable.

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?

DU strives to complete one phase of this program before starting the next, to minimize overlap. Currently, we anticipate completing Phase 8 by the end of 2024. We also anticipate a majority of Phase 9 being spent

by the end of 2025. Furthermore, DU assigns a unique project number code to each project, and staff charge time to these site-specific project codes as they work on multiple projects throughout the year. Despite DU staff working on multiple projects and grants throughout the year, charges are only billed to one OHF grant or another, and therefore staff charges throughout the year are incurred on multiple projects funded by multiple grants, and DU staff cost invoicing is both sites-specific and OHF grant-specific.

Contracts

What is included in the contracts line?

The contracts line is for shallow lake enhancement and wetland restoration work contracted to private sector construction firms specializing in earth moving and water control structure installation involving steel weirs, concrete culverts, etc.

Professional Services

What is included in the Professional Services line?

- Other : County Ditch Petitions and Outlet Fees, Soil Suitability Investigations

Travel

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

No

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging

None - DU travel costs consist of in-state mileage, food, and lodging only. Travel is primarily mileage and lodging for engineering field staff and biologists during project survey and construction management. DU has not typically invoiced for food or meals in the past, and likely won't do so in the future.

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?

Minnesota DNR grants staff previously reviewed and approved DU accounting methodology for Direct Support Services, which are calculated and included in DU staff costs. DU Direct Support Services constitute approximately 10% of DU overall staff costs on average among all billable DU conservation staff categories. DU breaks out and invoices for Direct Support Service expenses approved by DNR for reimbursement separately from Personnel expenses.

Other Equipment/Tools

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

GPS survey equipment for performing engineering wetland restoration survey work and engineering surveys of shallow lake and large wetland enhancement projects, including survey equipment lease charges instead of actual outright equipment purchases to avoid buying equipment that becomes obsolete due to upgrades and advancements. Other equipment may include laptop and/or tablet computers, printers and other office equipment for biologists or engineers may be needed, along with hand tools and other field equipment as needs arise.

Federal Funds

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

Yes

Are the funds confirmed?

Yes

- Cash : \$500,000
- In Kind : \$10,000

Is Confirmation Document attached?

[Yes](#)

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

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	200	100	0	0	300
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	1,700	500	0	0	2,200
Total	1,900	600	0	0	2,500

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	\$2,260,000	\$100,000	-	-	\$2,360,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$12,340,000	\$275,000	-	-	\$12,615,000
Total	\$14,600,000	\$375,000	-	-	\$14,975,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	100	0	200	0	300
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	100	250	0	1,850	0	2,200
Total	100	350	0	2,050	0	2,500

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	\$750,000	-	\$1,610,000	-	\$2,360,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	\$500,000	\$1,500,000	-	\$10,615,000	-	\$12,615,000
Total	\$500,000	\$2,250,000	-	\$12,225,000	-	\$14,975,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	\$11,300	\$1,000	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	\$7,258	\$550	-	-

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	\$7,500	-	\$8,050	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$5,000	\$6,000	-	\$5,737	-

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:

Ducks Unlimited prioritizes prairie shallow lake enhancement and wetland restoration and enhancement opportunities that are located in landscapes most heavily used by migrating and breeding waterfowl, and which our DNR and USFWS agency partners have identified and prioritize for optimal waterfowl habitat. Due to the overall shortage of prairie wetlands for breeding ducks, and relatively few shallow lakes in optimal condition for migrating ducks in Minnesota, DU relies on our DNR and USFWS agency partner biologists with land management responsibility to determine shallow lake and wetland project opportunities on public land or under easement. From there, DU prioritizes wetland restorations within landscapes of higher predicted breeding duck use, and prioritizes enhancement of shallow lakes where management success is most probable due to basin depth, landscape and hydrology conditions, and the likelihood that invasive fish can be minimized.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection	Description
Hamden Slough NWR	Becker	13942202	3	\$25,000	Yes	Enhance small wetlands for USFWS.
Spring Marshes WPA	Becker	14042209	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Severson Lake WPA	Becker	13843202	20	\$200,000	Yes	Enhance small wetlands for USFWS.
Haverkamp WPA	Becker	14141205	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Lindsey Lake WPA	Becker	14242233	20	\$200,000	Yes	Enhance small wetlands for USFWS.
Barry Lake WPA	Big Stone	12447204	3	\$20,000	Yes	Enhance small wetlands for USFWS.
Helgenson WPA	Big Stone	12145205	1	\$10,000	Yes	Enhance small wetlands for USFWS.
Hillman WPA	Big Stone	12145215	1	\$10,000	Yes	Enhance small wetlands for USFWS.
Redhead Marsh WPA	Big Stone	12146211	3	\$15,000	Yes	Enhance small wetlands for USFWS.
Prairie WPA	Big Stone	12246236	2	\$15,000	Yes	Enhance small wetlands for USFWS.
Karsky WPA	Big Stone	12346207	9	\$35,000	Yes	Enhance small wetlands for USFWS.
Seidl WPA	Big Stone	12447225	5	\$125,000	Yes	Enhance small wetlands for USFWS.
Dismal Swamp WPA - Small Wetlands	Big Stone	12345214	4	\$125,000	Yes	Enhance small wetlands for USFWS.
Boehnke WPA	Big Stone	12347211	3	\$55,000	Yes	Enhance small wetlands for USFWS.
Bentson Lake WPA	Big Stone	12245207	4	\$35,000	Yes	Enhance small wetlands for USFWS.
Bauman WPA	Big Stone	12346220	3	\$100,000	Yes	Enhance small wetlands for USFWS.
Rothi WPA	Big Stone	12145202	3	\$25,000	Yes	Enhance small wetlands for USFWS.
Kufrin WPA	Big Stone	12245221	3	\$25,000	Yes	Enhance small wetlands for USFWS.

Lane WPA	Big Stone	12447227	2	\$135,000	Yes	Enhance small wetlands for USFWS.
USFWS Easement - Rolfsmeier Upland Enhancement	Big Stone	12044202	40	\$25,000	Yes	Enhance upland habitat for USFWS.
Twin Lakes WPA	Big Stone	12246225	1	\$10,000	Yes	Enhance small wetlands for USFWS
Swenson Lake	Big Stone	12246203	314	\$500,000	Yes	Engineer and install water control structure for DNR
Otre Lake WMA	Big Stone	12245222	55	\$200,000	Yes	Engineer and install water control structure for DNR
Eagle Lake	Blue Earth	10825207	617	\$1,000,000	Yes	Engineer and install pump and water control structure for DNR
MN Valley NWR - Chaska Lake Enhancement	Carver	11523208	80	\$500,000	Yes	Engineer and install new water control structure for USFWS.
Three Rivers Park District - Lake 2 Enhancement	Carver	11624204	35	\$200,000	Yes	Engineer and install water control structure for 3RPD
Korell WPA	Clay	14144215	30	\$200,000	Yes	Enhance small wetlands for USFWS.
Moe WPA	Clay	14144232	10	\$10,000	Yes	Enhance small wetlands for USFWS.
Bjornson WPA	Clay	13845209	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Eide WPA	Clay	14144221	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Harder Lake WPA	Cottonwood	10636216	1	\$5,000	Yes	Engineer and restore small wetlands for USFWS
Watonswan River WPA	Cottonwood	10636211	85	\$150,000	Yes	Enhance wetlands for USFWS
Wolf Lake WPA - Small wetland restorations	Cottonwood	10535231	5	\$20,000	Yes	Restore small wetlands for USFWS
Cottonwood Lake WPA	Cottonwood	10535219	2	\$20,000	Yes	Restore small wetlands for USFWS
Clear Lake WPA	Cottonwood	10538235	5	\$50,000	Yes	Enhance small wetlands for USFWS.
USFWS Habitat Easement - Groth Restoration	Douglas	12936230	66	\$150,000	Yes	Restore habitat easement on private land for USFWS.
Runestone WPA	Douglas	12740214	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Rachel WPA - Small Wetlands	Douglas	12837211	2	\$75,000	Yes	Enhance small wetlands for USFWS
Petersen WPA - Small Wetlands	Douglas	12836229	1	\$40,000	Yes	Enhance small wetlands for USFWS
Forada WPA - Small Wetlands	Douglas	12737218	1	\$40,000	Yes	Enhance small wetlands for USFWS
Hudson WPA - Small Wetlands	Douglas	12737229	3	\$90,000	Yes	Enhance small wetlands for USFWS
Banke Slough WPA - Small Wetlands	Douglas	12839218	1	\$90,000	Yes	Enhance small wetlands for USFWS
J.I. case WPA - Small Wetlands	Douglas	12840225	2	\$75,000	Yes	Enhance small wetlands for USFWS
Ernest Olson WPA	Douglas	13040223	2	\$115,000	Yes	Enhance small wetlands for USFWS.

Rolling Acres WPA	Douglas	12840231	6	\$155,000	Yes	Enhance small wetlands for USFWS.
Kensington WPA	Douglas	12740233	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Hegg Lake WMA	Douglas	12740227	73	\$300,000	Yes	Engineer and install water control structure for DNR
Klug WPA - Small Wetlands	Douglas	12840221	1	\$25,000	Yes	Enhance small wetlands for USFWS
Urness WMA	Douglas	12840210	37	\$200,000	Yes	Engineer and install water control structure for DNR
Maple River WPA	Faribault	10426210	50	\$500,000	Yes	Enhance shallow lake for USFWS.
Twin Lakes WPA	Freeborn	10122202	5	\$50,000	Yes	Enhance small wetlands for USFWS
Two Island WPA	Freeborn	10322224	4	\$20,000	Yes	Engineer and restore small wetlands for USFWS
Bhagyam WPA	Freeborn	10121230	15	\$20,000	Yes	Enhance wetlands for USFWS
Stony Brook WPA	Grant	13043205	6	\$25,000	Yes	Enhance small wetlands for USFWS.
Spink WPA	Grant	12843224	5	\$120,000	Yes	Enhance small wetlands for USFWS.
Cheney Trust WPA	Grant	12744235	94	\$200,000	Yes	Engineer and install water control structure for USFWS
Evavold WPA	Grant	13041204	2	\$20,000	Yes	Enhance small wetlands for USFWS.
Frikken WPA	Grant	13042203	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Pomme de Terre WPA	Grant	13042235	4	\$175,000	Yes	Enhance small wetlands for USFWS.
Mud Lake WPA	Grant	13044225	4	\$125,000	Yes	Enhance small wetlands for USFWS.
Green WPA	Grant	12843207	6	\$35,000	Yes	Enhance small wetlands for USFWS.
Bailey Slough WPA	Grant	12843206	8	\$30,000	Yes	Enhance small wetlands for USFWS.
Lake Katrina Enhancement	Hennepin	11823230	485	\$500,000	Yes	Engineer and install new water control structure for Three Rivers Park District.
Boot Lake	Jackson	10335231	155	\$500,000	Yes	Engineer and install new water control structures for MNDNR
Sangl WMA	Jackson	10136221	25	\$150,000	Yes	Enhance small wetlands for MNDNR.
Little Sioux WPA	Jackson	10136230	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Minnesota WPA	Jackson	10137232	30	\$300,000	Yes	Enhance wetlands for USFWS
Sioux Forks WPA	Jackson	10136218	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Iowa Lake Enhancement	Jackson	10138231	242	\$400,000	Yes	Engineer and install water control structure for DNR
Timber Lake WPA	Jackson	10437224	21	\$40,000	Yes	Enhance wetlands for

						USFWS
Yarmon WPA	Kandiyohi	11834223	263	\$400,000	Yes	Engineer and install new water control structure for USFWS
Burr Oak Lake	Kandiyohi	12034233	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Irving	Kandiyohi	12133202	5	\$50,000	Yes	Enhance small wetlands for USFWS.
VJ Carlson	Kandiyohi	12035205	2	\$20,000	Yes	Enhance small wetlands for USFWS.
Florida Slough WPA	Kandiyohi	12135227	17	\$170,000	Yes	Enhance small wetlands for USFWS.
Weber WPA	Kandiyohi	12035228	79	\$300,000	Yes	Engineer and install new water control structures for USFWS
New London WPA	Kandiyohi	12134204	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Hanson WPA	Kandiyohi	11836214	8	\$80,000	Yes	Enhance small wetlands for USFWS.
Century WPA	Kandiyohi	12136211	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Randall WPA	Kandiyohi	12236209	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Big Kandiyohi Lake WPA	Kandiyohi	11734203	40	\$400,000	Yes	Enhance small wetlands for USFWS.
Henjum Lake WPA	Kandiyohi	12136222	15	\$150,000	Yes	Enhance small wetlands for USFWS.
Brenner Lake WPA	Kandiyohi	12236206	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Dengerud WPA	Kandiyohi	12135221	4	\$40,000	Yes	Enhance small wetlands for USFWS.
Weber WPA - small wetlands	Kandiyohi	12035221	10	\$10,000	Yes	Enhance small wetlands for USFWS.
Carlson Lake WPA	Kandiyohi	12034204	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Uncle Matt's WPA	Kandiyohi	12033232	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Raymond WPA	Kandiyohi	11836206	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Arctander	Kandiyohi	12136202	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Swan Lake WPA	Kandiyohi	12036202	40	\$400,000	Yes	Enhance small wetlands for USFWS.
Sweetwater WMA	Lac qui Parle	11746236	69	\$200,000	Yes	Engineer and install water control structure for DNR
Ten-Well WMA Enhancement	Lac qui Parle	11642206	130	\$250,000	Yes	Enhance shallow lake for MNDNR.
Wild Wings WMA	Lac qui Parle	11643223	73	\$250,000	Yes	Engineer and install water control structure for DNR
Big Stone NWR - South Prairie 1 Wetland Restoration	Lac qui Parle	12046203	35	\$100,000	Yes	Enhance small wetlands for USFWS
Big Stone NWR - Southeast Prairie and Yellow Bank South Wetland Restoration	Lac qui Parle	12045207	20	\$75,000	Yes	Enhance small wetlands for USFWS
Big Stone NWR Pool 4/4A	Lac qui Parle	12145232	275	\$1,500,000	Yes	Engineer and install water control structures

						for USFWS
Diamond Lake	Le Sueur	11023223	120	\$250,000	Yes	Engineer and install water control structure for DNR
Lake Henry Enhancement	Le Sueur	11025234	396	\$100,000	Yes	Enhance shallow lake with water control structure for MNDNR
Sanborn Lake WMA - Dietz Lake Enhancement	Le Sueur	11223235	73	\$300,000	Yes	Engineer and install water control structure for DNR
Rook WPA	Lincoln	11345227	17	\$75,000	Yes	Enhance small wetlands for USFWS
Agribank WPA	Lincoln	11146205	25	\$150,000	Yes	Enhance small wetlands for USFWS
Rochel WPA	Lincoln	11045201	15	\$50,000	Yes	Enhance small wetlands for USFWS
Herschberger WMA - Curtis Lake Enhancement	Lincoln	11145230	176	\$500,000	Yes	Enhance shallow lake with water control structure for MNDNR
Knofczynski WPA	Lincoln	11245227	10	\$50,000	Yes	Enhance small wetlands for USFWS
Fox WPA	Lincoln	11045222	20	\$100,000	Yes	Enhance small wetlands for USFWS
Kontz WPA	Lincoln	11345206	20	\$100,000	Yes	Enhance small wetlands for USFWS
Weber WPA	Lincoln	11045222	11	\$50,000	Yes	Enhance small wetlands for USFWS
Peterson WPA	Lyon	10942230	5	\$20,000	Yes	Enhance small wetlands for USFWS
Lyons WMA - Brown Marsh Enhancement	Lyon	11042228	70	\$300,000	Yes	Enhance shallow lake with water control structure for MNDNR
Arends WPA	Lyon	11343218	5	\$20,000	Yes	Enhance small wetlands for USFWS
Black Rush Lake WPA	Lyon	11042216	30	\$125,000	Yes	Enhance small wetlands for USFWS
Jason Barker WPA East	Mahnomen	14542224	3	\$20,000	Yes	Enhance small wetlands for USFWS
Agassiz NWR - Madsen Pool	Marshall	15642215	100	\$50,000	Yes	Enhance wetland management with new water level control structures.
Agassiz NWR - Mud Lake Main Agassiz Pool	Marshall	15641220	5,000	\$1,000,000	Yes	Enhance wetland management with berms.
Agassiz NWR - Pool 8	Marshall	15642203	100	\$50,000	Yes	Enhance wetland management with new water level control structures.
Duck Lake Restoration	Martin	10333211	100	\$300,000	Yes	Restore shallow lake for USFWS
Holmes Lake Restoration	Martin	10232235	100	\$750,000	Yes	Engineer and install water control structure for USFWS
East Chain WMA Wetland Restoration	Martin	10129206	10	\$75,000	Yes	Restore small wetlands for MNDNR
Clam Lake	Martin	10332215	72	\$200,000	Yes	Engineer and install water control structure for MNDNR

Rooney Run WMA - Round Lake Enhancement	Martin	10332221	45	\$200,000	Yes	Engineer and install water level control structure for MNDNR
Meeker Easement 162X	Meeker	12029213	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Hanson Lake WPA	Meeker	11931207	21	\$210,000	Yes	Enhance small wetlands for USFWS.
Harvey WPA	Meeker	12031231	40	\$400,000	Yes	Enhance small wetlands for USFWS.
Tyrone Flats WPA	Meeker	12131213	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Forest City WPA	Meeker	12030220	6	\$60,000	Yes	Enhance small wetlands for USFWS.
Meeker Easement 107X	Meeker	11930204	25	\$250,000	Yes	Enhance wetland for USFWS with new water control structure.
East Hanson Lake Restoration	Meeker	11931217	100	\$500,000	Yes	Engineer and install new water control structure for USFWS
Litchfield WPA	Meeker	11931236	20	\$200,000	Yes	Restore wetlands for USFWS.
Rodewald WMA - Wetland Restoration	Meeker	11832220	25	\$300,000	Yes	Engineer and install new water control structure for MNDNR.
Devils Run WPA	Murray	10639206	28	\$200,000	Yes	Engineer and install new water control structure for USFWS
Shetek WMA - Robbins Slough Enhancement	Murray	10840222	245	\$350,000	Yes	Engineer and install water control structure for MNDNR
Shetek WMA - Round Lake Enhancement	Murray	10840221	171	\$200,000	Yes	Engineer and install new water control structure for MNDNR.
Slaughter Slough WPA	Murray	10740211	20	\$125,000	Yes	Engineer and restore small wetlands for USFWS
Buffalo Lake WMA Wetland Restoration	Murray	10739207	10	\$50,000	Yes	Restore small wetlands for MNDNR.
Graham Lake WPA	Nobles	10439220	14	\$70,000	Yes	Engineer and restore small wetlands for USFWS
Bloom WPA	Nobles	10441220	4	\$20,000	Yes	Engineer and restore small wetlands for USFWS
Lake Bella WPA	Nobles	10140227	1	\$5,000	Yes	Engineer and restore small wetlands for USFWS
Worthington WPA	Nobles	10240224	2	\$20,000	Yes	Enhance small wetlands for USFWS.
Backstrom WPA - Small Wetlands	Otter Tail	13543208	3	\$40,000	Yes	Enhance small wetlands for USFWS
USFWS Habitat Easement - Stoering Restoration	Otter Tail	13541225	50	\$100,000	Yes	Restore habitat easement on private land for USFWS.
Duenow WPA	Otter Tail	13442233	3	\$20,000	Yes	Enhance small wetlands for USFWS
Rokes WPA	Otter Tail	13337220	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Erhard's Grove WPA - Small Wetlands	Otter Tail	13543228	2	\$75,000	Yes	Enhance small wetlands for USFWS
Fitzgerald WPA	Otter Tail	13743208	2	\$40,000	Yes	Enhance small wetlands for USFWS.

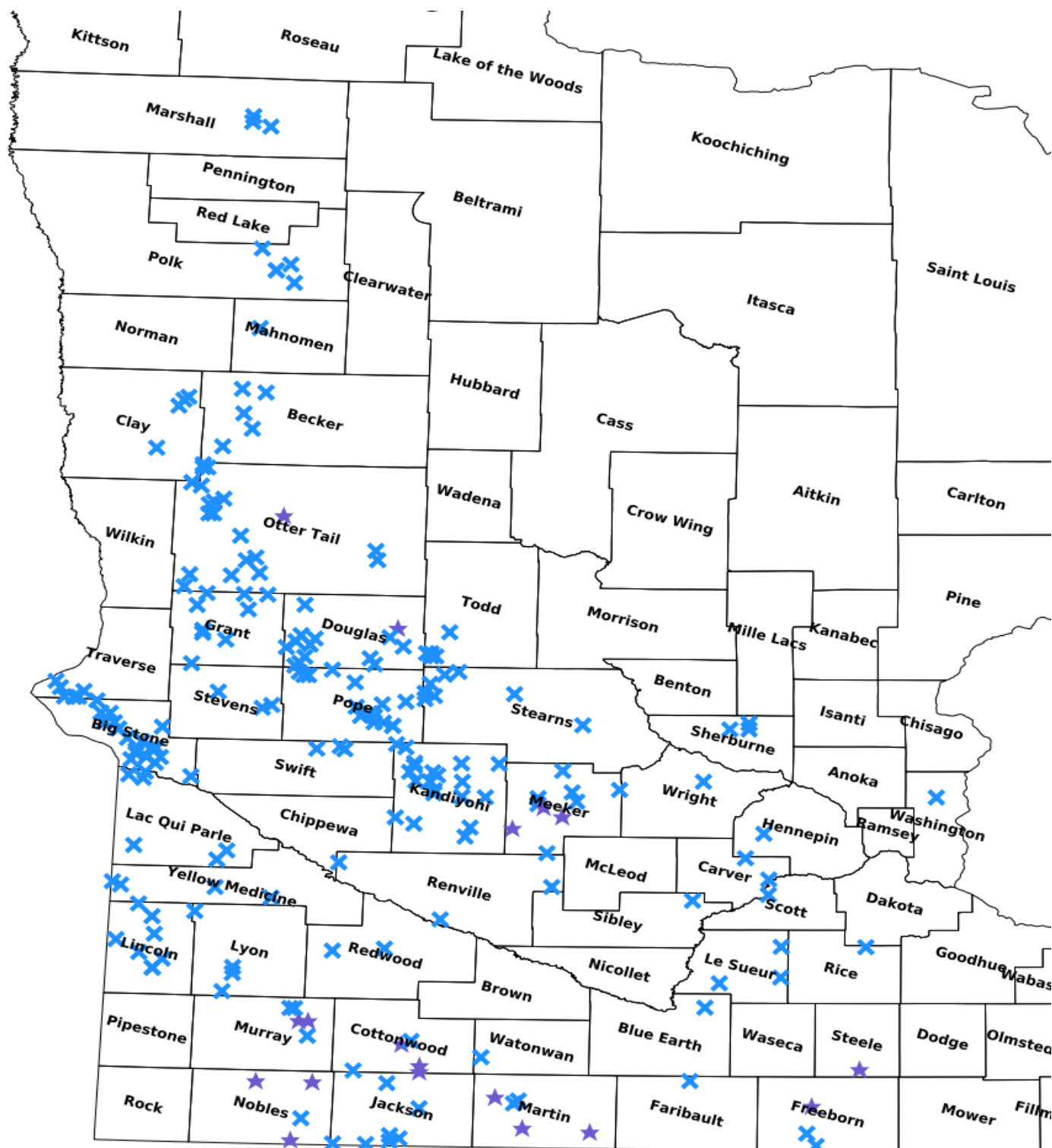
Gardner WPA	Otter Tail	13644203	1	\$15,000	Yes	Enhance small wetlands for USFWS.
Gardner WPA	Otter Tail	13644203	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Pelican Valley WPA - Small Wetlands	Otter Tail	13543204	1	\$40,000	Yes	Enhance small wetlands for USFWS
Grady Mann WPA	Otter Tail	13144228	3	\$140,000	Yes	Enhance small wetlands for USFWS.
Haiby WPA	Otter Tail	13644212	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Simpson WPA	Otter Tail	13643235	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Headquarters WPA - Small Wetlands	Otter Tail	13242201	1	\$25,000	Yes	Enhance small wetlands for USFWS
PCA WPA	Otter Tail	13241231	3	\$155,000	Yes	Enhance small wetlands for USFWS.
Baumann WPA	Otter Tail	13237205	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Jorgenson WPA	Otter Tail	13144203	6	\$15,000	Yes	Enhance small wetlands for USFWS.
Nicoholson WPA - Shallow Lake Enhancement	Otter Tail	13142206	100	\$250,000	Yes	Enhance shallow lake with water control structure for USFWS
Knobel Lake WPA - Small Wetlands	Otter Tail	13543229	1	\$40,000	Yes	Enhance small wetlands for USFWS
Nelson WPA	Otter Tail	13743206	1	\$30,000	Yes	Enhance small wetlands for USFWS.
Tweeton WPA	Otter Tail	13743207	1	\$35,000	Yes	Enhance small wetlands for USFWS.
Stange Lake WPA - Small Wetlands	Otter Tail	13242210	2	\$75,000	Yes	Enhance small wetlands for USFWS
Hill River WPA	Polk	14841201	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Clarke WPA	Polk	14941207	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Mcintosh WPA	Polk	14841216	1	\$10,000	Yes	Enhance small wetlands for USFWS.
Lepier WPA	Polk	14740206	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Mcintosh WPA	Polk	14841216	1	\$10,000	Yes	Enhance small wetlands for USFWS.
Ann Lake WPA	Pope	12638227	4	\$135,000	Yes	Enhance small wetlands for USFWS.
Glenwood WPA	Pope	12537234	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Grove Lake WPA	Pope	12536228	50	\$250,000	Yes	Enhance small wetlands for USFWS.
Jorgenson WPA	Pope	12639202	10	\$10,000	Yes	Enhance small wetlands for USFWS.
Wall WPA	Pope	12437218	9	\$90,000	Yes	Enhance small wetlands for USFWS.
USFWS Easement - Sievers Upland Enhancement	Pope	12337201	63	\$35,000	Yes	Enhance upland habitat for USFWS.
USFWS Easement - BBB Farms Upland Enhancement	Pope	12437220	60	\$35,000	Yes	Enhance upland habitat for USFWS.
Mattson WPA	Pope	12640210	7	\$50,000	Yes	Enhance small wetlands for USFWS.
Moen WPA	Pope	12640214	4	\$70,000	Yes	Enhance small wetlands

						for USFWS.
Nelson Lake WPA - Small Wetlands	Pope	12337201	3	\$100,000	Yes	Enhance small wetlands for USFWS
Ouren WPA	Pope	12437232	5	\$160,000	Yes	Enhance small wetlands for USFWS.
Overby WPA	Pope	12437234	13	\$170,000	Yes	Enhance small wetlands for USFWS.
Stenson Lake WPA	Pope	12438223	4	\$115,000	Yes	Enhance small wetlands for USFWS.
Stenerson Lake WPA	Pope	12438203	13	\$15,000	Yes	Enhance small wetlands for USFWS.
Rosby Lake WPA	Pope	12640213	6	\$65,000	Yes	Enhance small wetlands for USFWS.
Westline WMA	Redwood	11139213	200	\$200,000	Yes	Engineer and install water level control structure for MNDNR
Daubs Lake Enhancement	Redwood	11137211	175	\$250,000	Yes	Engineer and install water control structure for DNR
Preston Lake WPA	Renville	11531227	7	\$70,000	Yes	Enhance small wetlands for USFWS.
Wang WPA	Renville	11638219	4	\$40,000	Yes	Enhance small wetlands for USFWS.
Boon Lake Enhancement	Renville	11731233	858	\$500,000	Yes	Engineer and install a water control structure and permanent pump for MNDNR
Beaver Falls WMA - Wetland Enhancement	Renville	11335223	30	\$250,000	Yes	Engineer and install new water control structure for MNDNR.
St Olaf College - Big Pond	Rice	11220235	15,000	\$100,000	Yes	Enhance wetland for USFWS with new water control structure.
MN Valley NWR - Louisville Swamp Enhancement	Scott	11423205	75	\$500,000	Yes	Engineer and install new water control structure for USFWS.
Sherburne NWR - Pool 31 Enhancement	Sherburne	03527228	30	\$250,000	Yes	Engineer and install new water control structure for USFWS.
Sherburne NWR - West Carpenter Pool Enhancement	Sherburne	03528226	70	\$300,000	Yes	Engineer and install new water control structure for USFWS.
Sherburne NWR - Iron Pool Enhancement	Sherburne	03527216	25	\$250,000	Yes	Engineer and install new water control structure for USFWS.
Washington Lake Enhancement	Sibley	11426215	600	\$500,000	Yes	Engineer and install new water control structure for MNDNR.
Uhlenkolts Lake WPA	Stearns	12532208	2	\$20,000	Yes	Enhance small wetlands for USFWS.
Whitney WPA	Stearns	12635211	20	\$200,000	Yes	Enhance small wetlands for USFWS.
Zehrer WPA	Stearns	12634205	2	\$20,000	Yes	Enhance small wetlands for USFWS.
Padua WPA	Stearns	12535216	10	\$10,000	Yes	Enhance small wetlands for USFWS.
Collegeville WPA	Stearns	12430234	3	\$30,000	Yes	Enhance small wetlands for USFWS.

Ashley WPA	Stearns	12635229	20	\$200,000	Yes	Enhance small wetlands for USFWS.
Prairie Storm WPA	Stearns	12535219	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Pope WPA	Stearns	12535207	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Straight River Marsh WPA	Steele	10520222	50	\$500,000	Yes	Engineer and restore wetlands and prairie for USFWS
Pepperton WPA	Stevens	12543214	1	\$10,000	Yes	Enhance small wetlands for USFWS
Long Lake WPA - Small Wetlands	Stevens	12441203	1	\$40,000	Yes	Enhance small wetlands for USFWS
Edwards WPA - Small Wetlands	Stevens	12441208	1	\$40,000	Yes	Enhance small wetlands for USFWS
Loen WPA - Small Wetlands	Swift	12238207	3	\$15,000	Yes	Enhance small wetlands for USFWS.
Svor WPA - Small Wetlands	Swift	12238217	2	\$75,000	Yes	Enhance small wetlands for USFWS
Johnson Lake Enhancement	Swift	12239217	179	\$500,000	Yes	Enhance shallow lake with water control structure for MNDNR
Terfehr WPA - Small Wetland Restoration	Todd	12735208	1	\$40,000	Yes	Enhance small wetlands for USFWS
Faber WPA - Small Wetlands	Todd	12735206	1	\$40,000	Yes	Enhance small wetlands for USFWS
Geroy WPA - Small Wetlands	Todd	12935236	1	\$40,000	Yes	Enhance small wetlands for USFWS
Sogge WPA - Small Wetlands	Todd	12735205	2	\$75,000	Yes	Enhance small wetlands for USFWS
West Union WMA	Todd	12735209	30	\$250,000	Yes	Engineer and install water control structure for DNR
Aurzada Prairie WMA	Todd	12735208	5	\$50,000	Yes	Engineer and install water control structure for DNR
Diekmann WPA - Small Wetlands	Traverse	12548235	2	\$75,000	Yes	Enhance small wetlands for USFWS
Murphy WPA - Small Wetlands	Traverse	12548236	1	\$15,000	Yes	Enhance small wetlands for USFWS
Robinhood WPA - Small Wetlands	Traverse	12548217	6	\$175,000	Yes	Enhance small wetlands for USFWS
Jenk WPA - Small Wetlands	Traverse	12548235	1	\$20,000	Yes	Enhance small wetlands for USFWS
Pederson WPA - Small Wetlands	Traverse	12548206	1	\$40,000	Yes	Enhance small wetlands for USFWS
Gibson WPA - Small Wetlands	Traverse	12548233	1	\$15,000	Yes	Enhance small wetlands for USFWS
Lawrence WPA - Small Wetlands	Traverse	12547219	3	\$100,000	Yes	Enhance small wetlands for USFWS
Keystone Woods WMA - Wetland Enhancement	Washington	03120218	100	\$500,000	Yes	Enhance small wetlands on the Keystone Woods WMA.
Sulem WMA	Watsonwan	10533205	226	\$500,000	Yes	Engineer and install water level control structure for MNDNR
Angus Lake WPA	Wright	12126236	22	\$220,000	Yes	Enhance small wetlands for USFWS.

USFWS Easement - Coover Wetland Enhancement	Yellow Medicine	11443202	10	\$15,000	Yes	Enhance wetland habitat for USFWS.
Dakota WPA	Yellow Medicine	11446204	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Spellman WMA - Miedd Lake	Yellow Medicine	11441223	50	\$100,000	Yes	Engineer and install water control structure for MN DNR
Kontz WPA	Yellow Medicine	11546231	2	\$20,000	Yes	Enhance small wetlands for USFWS.

Parcel Map



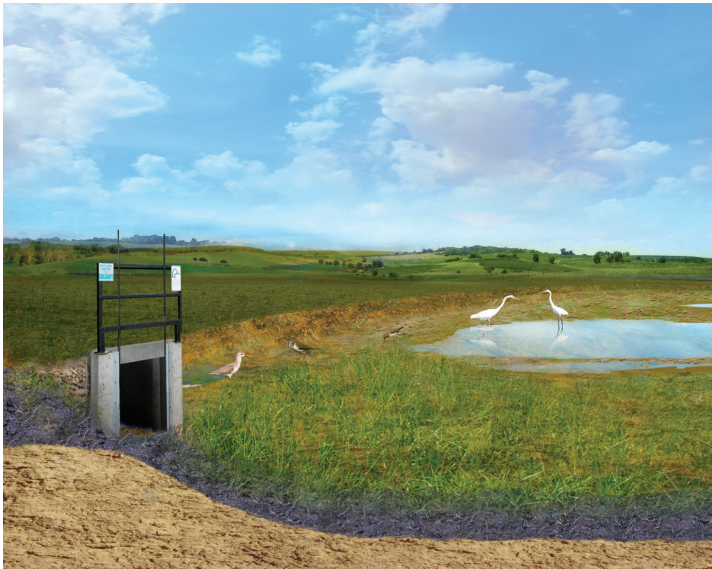
0 15 30 45 mi

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



STAGE 1

Pre-enhancement turbid water state typical of many shallow lakes located in the prairie and transition zones of Minnesota and Iowa. Note the lack of rooted aquatic plants resulting from stagnant high water levels, as well as the presence of undesirable fish and lack of upland perennial cover creating both internal and external nutrient loading. This condition is exacerbated by above-average precipitation patterns, increased drainage, and connectivity within the watershed. Lakes in this turbid water condition provide poor waterfowl and wildlife habitat and impaired water quality.



STAGE 2

Once the physical and legal means are in place, a drawdown is a common management practice used to shift shallow lakes from a turbid water state to a clear water state. Note sediment consolidation and the re-growth of rooted aquatic plants from the natural seed bank. Drawdown also helps control undesirable fish populations. A DU designed and constructed water control structure, such as the one illustrated above, will allow agency managers to manipulate water levels to enhance water quality and wildlife habitat. Upland restoration also helps improve habitat and sustain water quality improvements.



STAGE 3

Post management drawdown clear water state typical of a healthy shallow lake system. Note the restored water levels and water quality, abundance of rooted aquatic plants, invertebrate response, and overall wildlife habitat improvement. When conditions in a managed shallow lake deteriorate over time, the water control structure, such as the one illustrated above, can be managed in accordance with a lake specific comprehensive management plan to help maintain and improve habitat conditions and water quality.

SPECIAL NOTE: A managed drawdown mimics natural water level fluctuation such as temporary drought conditions, which are necessary for a healthy shallow lake much like fire is to native prairie.