



## Lessard-Sams Outdoor Heritage Council

Living Shallow Lakes and Wetlands Enhancement & Restoration Initiative - Phase X  
ML 2024 Request for Funding

---

### General Information

**Date:** 06/23/2023

**Proposal Title:** Living Shallow Lakes and Wetlands Enhancement & Restoration Initiative - Phase X

**Funds Requested:** \$14,900,000

**Confirmed Leverage Funds:** \$660,000

**Is this proposal Scalable?:** Yes

### Manager Information

**Manager's Name:** John Lindstrom

**Title:** Regional Biologist

**Organization:** Ducks Unlimited, Inc.

**Address:** c/o U.S. Fish & Wildlife Service Litchfield WMD Office 22274 615th Avenue

**City:** Litchfield, MN 55355

**Email:** jlindstrom@ducks.org

**Office Number:** 3206932849 ext. 8

**Mobile Number:** 3202128018

**Fax Number:**

**Website:** www.ducks.org

### Location Information

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

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

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

### Activity types:

- Restore

- Enhance

**Priority resources addressed by activity:**

- Wetlands
- Prairie

## Narrative

### Abstract

This Phase 10 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 and water control structures for active management of shallow lake water levels to enhance their ecology for ducks, other wildlife, and people, primarily in SW 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 10 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 SW Minnesota. DU biologists work with U.S. Fish & Wildlife Service (FWS) 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 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. Restoration work and structures are constructed by private sector firms hired by DU and are managed by FWS/DNR. Adjacent grasslands may be enhanced with tree removal.

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 around them. 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 received 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 to survive. These factors have caused a significant decline in Minnesota's once diverse waterfowl population, and as a result, in Minnesota's rich waterfowling traditions.

This funding request will support DU staff biologists and engineers who survey, design, and manage construction of shallow lake enhancement and wetland restoration projects to improve public water shallow lakes and restore wetlands and grasslands. Funding will also support ongoing shallow lake technical assistance from DU staff 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.

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

Most prairie wetlands have 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.

### **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 project 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 restorable 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 restored wetlands will provide additional habitat for birds throughout their annual cycle.

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

- Long Range Duck Recovery Plan
- Managing Minnesota's Shallow Lakes for Waterfowl and Wildlife

**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.

**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)

**Northern Forest**



- Restore and enhance habitat on existing protected properties, with preference to habitat for rare, endangered, or threatened species identified by the Minnesota County Biological Survey

## Prairie

- Protect, restore, and enhance shallow lakes

## 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 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 the northern forest region:

- Other ~ *DU will enhance shallow lakes and wetlands to make them more productive for waterfowl and other wetland-dependent wildlife, which is a statewide concern due to statewide wetland loss and degradation. Wildlife response to wetland project improvements will be monitored, measured, and evaluated by conservation agency partner biologists including Minnesota DNR, USFWS, and Tribal Department of Natural Resource staff biologists.*

**Programs in prairie region:**

- Enhanced shallow lake productivity ~ *Wetland and shallow lakes restored or enhanced via temporary water level draw-downs by DU-engineered and installed water control structures will be assessed by Minnesota DNR shallow lakes program surveys both before and after draw-downs 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 state and federal agency conservation partners on land under their state or federal 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.

**Actions to Maintain Project Outcomes**

Year	Source of Funds	Step 1	Step 2	Step 3
2025	DNR Game & Fish Account, OHF for DNR Shallow Lakes Program and DNR Roving Crews	DNR Area Wildlife and Shallow Lakes Program Staff will assess shallow lake and wetland conditions following initial water level draw-downs, 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 BIPOC 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. Generational wealth in BIPOC communities is compromised by a lack of natural infrastructure such as wetlands. BIPOC 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 numerous opportunities for fishing, hunting, canoeing, kayaking, birding, and outdoor education for BIPOC communities that may not otherwise have access to natural open spaces. 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 helps to support the health, resiliency, and well-being of BIPOC communities.

Restoring wetlands in the Mississippi River watershed benefits BIPOC 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 the Mille Lacs Band of Ojibwe, Three Rivers Park District, and U.S. Fish & Wildlife Service's Minnesota Valley National Wildlife Refuge to enhance shallow lakes and other wetlands near BIPOC communities. The Refuge connects the vibrant cultures of the Twin Cities metro with the diversity of wildlife and habitat along the Minnesota River. With more than 46 miles of trails and two visitor centers, the Refuge welcomes visitors to enjoy the variety of outdoor experiences offered. Established in 1976 by motivated residents, the Refuge preserved wildlife resources threatened by commercial and industrial development. Now, the Refuge enhances 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 the wilder stretches of the Minnesota River.

**Activity Details**

**Requirements**

**If funded, this proposal will meet all applicable criteria set forth in MS 97A.056?**

Yes

**Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?**

Yes

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

Yes

**Where does the activity take place?**

- WMA
- WPA
- Permanently Protected Conservation Easements

- Public Waters
- Refuge Lands
- Other : Tribal Lands
- County/Municipal

**Land Use**

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

No

**Will neonicotinoid pesticide products be used within any activities of this proposal?**

No

**Other OHF Appropriation Awards**

**Have you received OHF dollars in the past through LSOHC that are current OPEN appropriations?**

Yes

Approp Year	Funding Amount Received	Amount Spent to Date	Funding Remaining	% Spent to Date
2023	\$6,455,000	-	-	-
2022	\$5,155,000	\$702,624	\$4,452,376	13.63%
2021	\$3,960,000	\$3,258,048	\$701,952	82.27%
2018	\$3,740,000	\$3,739,274	\$726	99.98%
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	\$38,371,000	\$26,737,616	\$11,633,384	69.68%

**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 2025
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 2029

## Budget

### Totals

Item	Funding Request	Total Leverage	Leverage Source	Total
Personnel	\$1,950,000	\$300,000	DU Private & federal NAWCA, MBCF, and Circle of Flight	\$2,250,000
Contracts	\$12,400,000	\$500,000	DU Private & federal NAWCA grants	\$12,900,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	\$500,000	Federal USFWS Migratory Bird Con. Fund	\$500,000
Easement Stewardship	-	-	-	-
Travel	\$80,000	\$25,000	DU Private & federal NAWCA grants	\$105,000
Professional Services	\$75,000	-	-	\$75,000
Direct Support Services	\$195,000	-	-	\$195,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	\$40,000	-	-	\$40,000
Other Equipment/Tools	\$80,000	-	-	\$80,000
Supplies/Materials	\$80,000	\$25,000	DU Private & federal NAWCA grants	\$105,000
DNR IDP	-	-	-	-
<b>Grand Total</b>	<b>\$14,900,000</b>	<b>\$1,350,000</b>	-	<b>\$16,250,000</b>

### Personnel

Position	Annual FTE	Years Working	Funding Request	Total Leverage	Leverage Source	Total
Manager - Grant Administration & Program Coordination	0.5	3.0	\$150,000	-	-	\$150,000
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, MBCF, and Circle of Flight	\$2,100,000

### Capital Equipment

Item	Funding Request	Total Leverage	Leverage Source	Total
Tracked ATV for survey and construction management	\$40,000	-	-	\$40,000

**Amount of Request:** \$14,900,000  
**Amount of Leverage:** \$1,350,000  
**Leverage as a percent of the Request:** 9.06%  
**DSS + Personnel:** \$2,145,000  
**As a % of the total request:** 14.4%  
**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	\$660,000	48.89%	\$690,000	51.11%

**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 (\$610,000 MBCF easement acquisition funds and in-kind staff support) and the Mille Lacs Band of Ojibwe (\$50,000 - Circle of Flight).

**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 7 by the end of 2023. We also anticipate a majority of Phase 8 being spent by the end of 2024. 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 : \$110,000

**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	2,000	200	0	0	2,200
<b>Total</b>	<b>2,200</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>2,500</b>

### 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	\$200,000	-	-	\$12,540,000
<b>Total</b>	<b>\$14,600,000</b>	<b>\$300,000</b>	<b>-</b>	<b>-</b>	<b>\$14,900,000</b>

### 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	200	0	1,800	100	2,200
<b>Total</b>	<b>100</b>	<b>300</b>	<b>0</b>	<b>2,000</b>	<b>100</b>	<b>2,500</b>

### 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	\$1,250,000	-	\$10,290,000	\$500,000	\$12,540,000
<b>Total</b>	<b>\$500,000</b>	<b>\$2,000,000</b>	<b>-</b>	<b>\$11,900,000</b>	<b>\$500,000</b>	<b>\$14,900,000</b>

### 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	\$6,170	\$1,000	-	-

### 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	\$6,250	-	\$5,716	\$5,000

**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
Hamden Slough NWR	Becker	13942202	3	\$25,000	Yes
Twin Lakes WPA	Big Stone	12246225	1	\$10,000	Yes
Kufrin WPA	Big Stone	12245221	3	\$25,000	Yes
Seidl WPA	Big Stone	12447225	5	\$125,000	Yes
USFWS Easement - Rolfsmeier Upland Enhancement	Big Stone	12044202	40	\$25,000	Yes
Lane WPA	Big Stone	12447227	2	\$135,000	Yes
Barry Lake WPA	Big Stone	12447204	3	\$20,000	Yes
Otre Lake WMA	Big Stone	12245222	55	\$200,000	Yes
Dismal Swamp WPA - Small Wetlands	Big Stone	12345214	4	\$70,000	Yes
Hillman WPA	Big Stone	12145215	1	\$10,000	Yes
Prairie WPA	Big Stone	12246236	2	\$15,000	Yes
Redhead Marsh WPA	Big Stone	12146211	3	\$15,000	Yes
Rothi WPA	Big Stone	12145202	3	\$25,000	Yes
Swenson Lake	Big Stone	12246203	314	\$500,000	Yes
Helgenson WPA	Big Stone	12145205	1	\$10,000	Yes
Karsky WPA	Big Stone	12346207	9	\$35,000	Yes
Boehnke WPA	Big Stone	12347211	3	\$55,000	Yes
Bentson Lake WPA	Big Stone	12245207	4	\$35,000	Yes
Bauman WPA	Big Stone	12346220	3	\$100,000	Yes
Eagle Lake	Blue Earth	10825207	617	\$1,000,000	Yes
Middle MN River WPA - Wetland Restoration	Brown	10931234	20	\$150,000	Yes
MN Valley NWR - Chaska Lake Enhancement	Carver	11523208	80	\$500,000	Yes
Three Rivers Park District - Lake 2 Enhancement	Carver	11624204	35	\$200,000	Yes
Cottonwood Lake WPA	Cottonwood	10535219	2	\$20,000	Yes
Watsonwan River WPA	Cottonwood	10636211	85	\$150,000	Yes
Wolf Lake WPA - Small wetland restorations	Cottonwood	10535231	5	\$20,000	Yes
Harder Lake WPA	Cottonwood	10636216	1	\$5,000	Yes
Rachel WPA	Douglas	12837211	5	\$55,000	Yes
Hudson WPA - Small Wetlands	Douglas	12737229	3	\$145,000	Yes
J.I. case WPA - Small Wetlands	Douglas	12840225	2	\$125,000	Yes
Klug WPA - Small Wetlands	Douglas	12840221	1	\$105,000	Yes
Hegg Lake WMA	Douglas	12740227	73	\$300,000	Yes
Forada WPA - Small Wetlands	Douglas	12737218	1	\$90,000	Yes

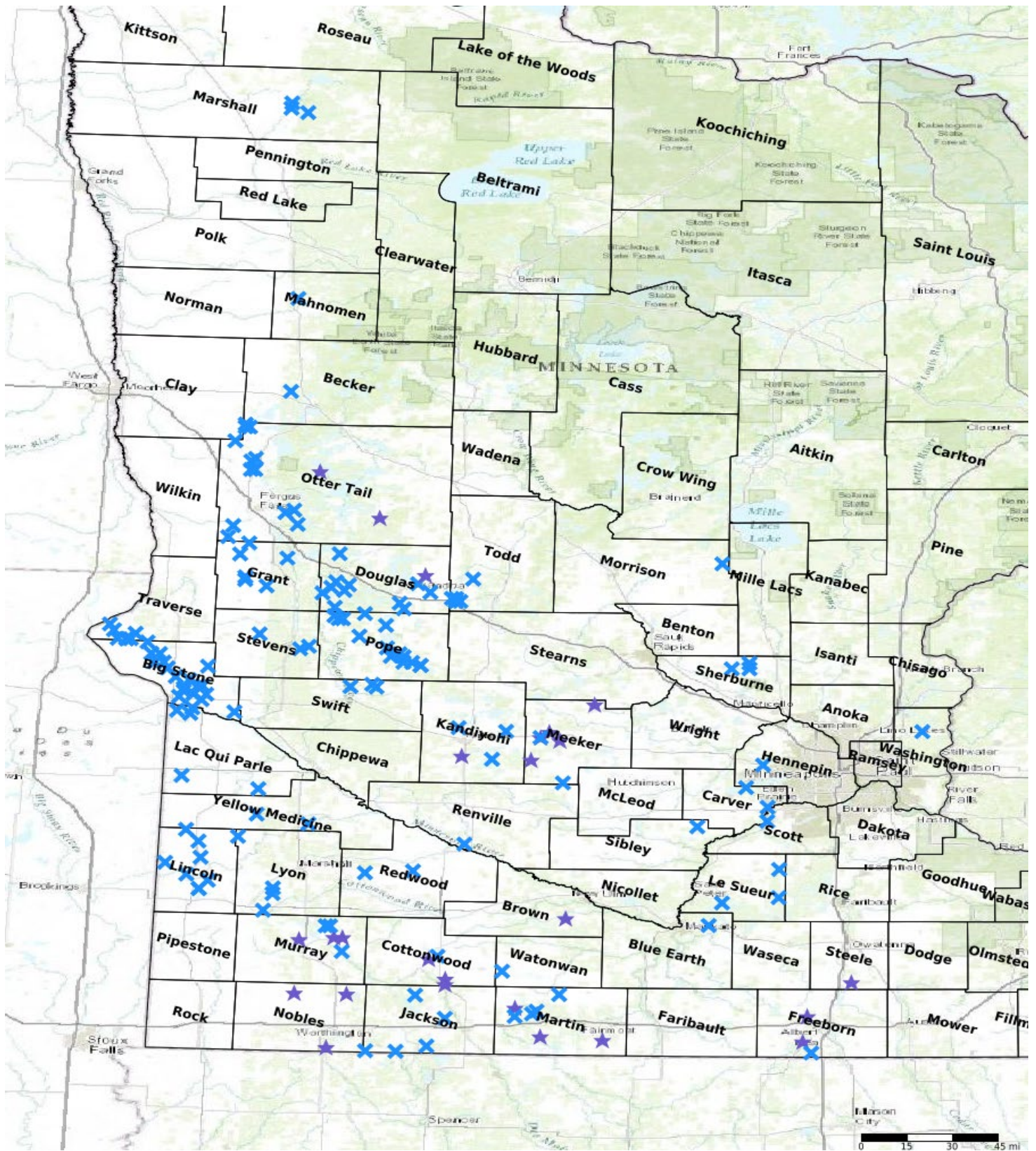
Banke Slough WPA - Small Wetlands	Douglas	12839218	1	\$90,000	Yes
Rolling Acres WPA	Douglas	12840231	6	\$155,000	Yes
USFWS Habitat Easement - Groth Restoration	Douglas	12936230	66	\$150,000	Yes
Urness WMA	Douglas	12840210	37	\$200,000	Yes
Petersen WPA	Douglas	12836229	3	\$145,000	Yes
Ernest Olson WPA	Douglas	13040223	2	\$115,000	Yes
Bhagyam WPA	Freeborn	10121230	15	\$20,000	Yes
Two Island WPA	Freeborn	10322224	4	\$20,000	Yes
Twin Lakes WPA	Freeborn	10122202	5	\$50,000	Yes
Green WPA	Grant	12843207	6	\$35,000	Yes
Bailey Slough WPA	Grant	12843206	8	\$30,000	Yes
Mud Lake WPA	Grant	13044225	4	\$125,000	Yes
Stony Brook WPA	Grant	13043205	6	\$25,000	Yes
Pomme de Terre WPA	Grant	13042235	4	\$175,000	Yes
Spink WPA	Grant	12843224	5	\$120,000	Yes
Lake Katrina Enhancement	Hennepin	11823230	485	\$500,000	Yes
Sangl WMA	Jackson	10136221	25	\$150,000	Yes
Iowa Lake Enhancement	Jackson	10138231	242	\$400,000	Yes
Minnesota WPA	Jackson	10137232	30	\$300,000	Yes
Timber Lake WPA	Jackson	10437224	21	\$40,000	Yes
Boot Lake	Jackson	10335231	155	\$500,000	Yes
Uncle Matt's WPA	Kandiyohi	12033232	10	\$100,000	Yes
Yarmon WPA	Kandiyohi	11834223	263	\$400,000	Yes
Whitefield WMA - Wetland Restorations	Kandiyohi	11835215	13	\$50,000	Yes
Weber WPA	Kandiyohi	12035228	79	\$300,000	Yes
Sweetwater WMA	Lac qui Parle	11746236	69	\$200,000	Yes
Big Stone NWR Pool 4/4A	Lac qui Parle	12145232	275	\$1,500,000	Yes
Big Stone NWR - South Prairie 1 Wetland Restoration	Lac qui Parle	12046203	35	\$100,000	Yes
Big Stone NWR - Southeast Prairie and Yellow Bank South Wetland Restoration	Lac qui Parle	12045207	20	\$75,000	Yes
Wild Wings WMA	Lac qui Parle	11643223	73	\$250,000	Yes
Sanborn Lake WMA - Dietz Lake Enhancement	Le Sueur	11223235	73	\$300,000	Yes
Diamond Lake	Le Sueur	11023223	120	\$250,000	Yes
Lake Henry Enhancement	Le Sueur	11025234	396	\$100,000	Yes
Weber WPA	Lincoln	11045222	11	\$50,000	Yes
Fox WPA	Lincoln	11045222	20	\$100,000	Yes
Agribank WPA	Lincoln	11146205	25	\$150,000	Yes
Rook WPA	Lincoln	11345227	17	\$75,000	Yes
Rochel WPA	Lincoln	11045201	15	\$50,000	Yes
Kontz WPA	Lincoln	11345206	20	\$100,000	Yes
Knofczynski WPA	Lincoln	11245227	10	\$50,000	Yes
Herschberger WMA - Curtis Lake Enhancement	Lincoln	11145230	176	\$500,000	Yes
Arends WPA	Lyon	11343218	5	\$20,000	Yes
Peterson WPA	Lyon	10942230	5	\$20,000	Yes
Lyons WMA - Brown Marsh Enhancement	Lyon	11042228	70	\$300,000	Yes
Black Rush Lake WPA	Lyon	11042216	30	\$125,000	Yes
Jason Barker WPA East	Mahnomen	14542224	3	\$20,000	Yes
Agassiz NWR - Madsen Pool	Marshall	15642215	100	\$50,000	Yes
Agassiz NWR - Pool 8	Marshall	15642203	100	\$50,000	Yes
Agassiz NWR - Mud Lake Main Agassiz Pool	Marshall	15641220	5,000	\$1,000,000	Yes
Caron WMA	Martin	10333226	37	\$550,000	Yes
Holmes Lake Restoration	Martin	10232235	100	\$750,000	Yes
Rooney Run WMA - Round Lake Enhancement	Martin	10332221	45	\$200,000	Yes
East Chain WMA Wetland Restoration	Martin	10129206	10	\$75,000	Yes
Duck Lake Restoration	Martin	10333211	100	\$300,000	Yes

Gleam WMA	Martin	10431216	15	\$150,000	Yes
Clam Lake	Martin	10332215	72	\$200,000	Yes
Clear Lake WPA	Meeker	12130210	10	\$75,000	Yes
Butler Lake FWS PL Easement	Meeker	11932210	65	\$400,000	Yes
East Hanson Lake Restoration	Meeker	11931217	100	\$500,000	No
USFWS Easement - Trebil Wetland Restoration	Meeker	12032236	40	\$200,000	Yes
Rodewald WMA - Wetland Restoration	Meeker	11832220	25	\$300,000	Yes
USFWS Easement - Butler Lake Restoration	Meeker	11932210	65	\$400,000	Yes
Two Island Wetland Project - Mille Lacs Band Ojibwe	Morrison	04128214	100	\$230,000	Yes
Slaughter Slough WPA	Murray	10740211	20	\$125,000	Yes
Buffalo Lake WMA Wetland Restoration	Murray	10739207	10	\$50,000	Yes
Shetek WMA - Round Lake Enhancement	Murray	10840221	171	\$200,000	Yes
Mason WPA - Wetland Restoration	Murray	10741216	15	\$150,000	Yes
Devils Run WPA	Murray	10639206	28	\$200,000	Yes
Shetek WMA - Robbins Slough Enhancement	Murray	10840222	245	\$350,000	Yes
Graham Lake WPA	Nobles	10439220	14	\$70,000	Yes
Lake Bella WPA	Nobles	10140227	1	\$5,000	Yes
Bloom WPA	Nobles	10441220	4	\$20,000	Yes
Fitzgerald WPA	Otter Tail	13743208	2	\$40,000	Yes
PCA WPA	Otter Tail	13241231	3	\$155,000	Yes
Stang Lake WPA	Otter Tail	13242210	5	\$50,000	Yes
Grady Mann WPA	Otter Tail	13144228	3	\$140,000	Yes
Backstrom WPA - Small Wetlands	Otter Tail	13543208	3	\$40,000	Yes
Nelson WPA	Otter Tail	13743206	1	\$30,000	Yes
USFWS Habitat Easement - Stoering Restoration	Otter Tail	13541225	50	\$100,000	Yes
Jorgenson WPA	Otter Tail	13144203	6	\$15,000	Yes
USFWS Easement - Misegades Restoration	Otter Tail	13238217	27	\$200,000	Yes
Gardner WPA	Otter Tail	13644203	1	\$15,000	Yes
Tweeton WPA	Otter Tail	13743207	1	\$35,000	Yes
Pelican Valley WPA	Otter Tail	13543204	3	\$20,000	Yes
Headquarters WPA - Small Wetlands	Otter Tail	13242201	1	\$5,000	Yes
Erhard's Grove WPA - Small Wetlands	Otter Tail	13543228	2	\$140,000	Yes
Knobel Lake WPA - Small Wetlands	Otter Tail	13543229	1	\$145,000	Yes
Mattson WPA	Pope	12640210	7	\$50,000	Yes
Moen WPA	Pope	12640214	4	\$70,000	Yes
Jorgenson WPA	Pope	12639202	10	\$10,000	Yes
Rosby Lake WPA	Pope	12640213	6	\$65,000	Yes
Wall WPA	Pope	12437218	9	\$90,000	Yes
Ann Lake WPA	Pope	12638227	4	\$135,000	Yes
Stenson Lake WPA	Pope	12438223	4	\$115,000	Yes
Stenerson Lake WPA	Pope	12438203	13	\$15,000	Yes
Ouren WPA	Pope	12437232	5	\$160,000	Yes
Overby WPA	Pope	12437234	13	\$170,000	Yes
Nelson Lake WPA	Pope	12337201	8	\$5,000	Yes
USFWS Easement - Sievers Upland Enhancement	Pope	12337201	63	\$35,000	Yes
USFWS Easement - BBB Farms Upland Enhancement	Pope	12437220	60	\$35,000	Yes
Stewart WPA	Pope	12539215	15	\$100,000	Yes
Daubs Lake Enhancement	Redwood	11137211	175	\$250,000	Yes
Westline WMA	Redwood	11139213	200	\$200,000	Yes
Boon Lake Enhancement	Renville	11731233	858	\$500,000	Yes
Beaver Falls WMA - Wetland Enhancement	Renville	11335223	30	\$250,000	Yes
MN Valley NWR - Louisville Swamp Enhancement	Scott	11423205	75	\$500,000	Yes

Sherburne NWR - Pool 31 Enhancement	Sherburne	03527228	30	\$250,000	Yes
Sherburne NWR - West Carpenter Pool Enhancement	Sherburne	03528226	70	\$300,000	Yes
Sherburne NWR - Iron Pool Enhancement	Sherburne	03527216	25	\$250,000	Yes
Washington Lake Enhancement	Sibley	11426215	600	\$500,000	Yes
Straight River Marsh WPA	Steele	10520222	50	\$500,000	Yes
Long Lake WPA	Stevens	12441203	3	\$15,000	Yes
Edwards WPA - Small Wetlands	Stevens	12441208	1	\$40,000	Yes
Pepperton WPA	Stevens	12543214	1	\$10,000	Yes
Loen WPA - Small Wetlands	Swift	12238207	3	\$15,000	Yes
Johnson Lake Enhancement	Swift	12239217	179	\$500,000	Yes
Svor WPA	Swift	12238217	5	\$85,000	Yes
West Union WMA	Todd	12735209	30	\$250,000	Yes
Faber WPA - Small Wetlands	Todd	12735206	1	\$30,000	Yes
Geroy WPA - Small Wetlands	Todd	12935236	1	\$180,000	Yes
Sogge WPA	Todd	12735205	5	\$25,000	Yes
Terfehr WPA	Todd	12735208	3	\$40,000	Yes
Aurzada Prairie WMA	Todd	12735208	5	\$50,000	Yes
Diekmann WPA	Traverse	12548235	5	\$175,000	Yes
Lawrence WPA	Traverse	12547219	8	\$95,000	Yes
Murphy WPA	Traverse	12548236	1	\$180,000	Yes
Pederson WPA	Traverse	12548206	3	\$30,000	Yes
Gibson WPA - Small Wetlands	Traverse	12548233	1	\$165,000	Yes
Diekmann WPA - Small Wetlands	Traverse	12548235	2	\$75,000	Yes
Jenk WPA - Small Wetlands	Traverse	12548235	1	\$175,000	Yes
Robinhood WPA	Traverse	12548217	15	\$85,000	Yes
Keystone Woods WMA - Wetland Enhancement	Washington	03120218	125	\$750,000	No
Sulem WMA	Watsonwan	10533205	226	\$500,000	Yes
USFWS Easement - Coover Wetland Enhancement	Yellow Medicine	11443202	10	\$15,000	Yes
Spellman WMA - Miedd Lake	Yellow Medicine	11441223	50	\$100,000	Yes



### Parcel Map



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





LIVING LAKES

# LIVING SHALLOW LAKE ENHANCEMENT & WETLAND RESTORATION INITIATIVE PHASE X

**Proposal Request:** \$14,900,000

**Proposal Abstract:** This Phase 10 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 USFWS easement. Where required, DU engineers will design water control structures to restore wetland hydrology and allow active management of shallow lake water levels to enhance their ecology for ducks, other wildlife, and people, primarily in Minnesota's Prairie Pothole Region. While DU staff design restoration and enhancement projects, DU hires private contractors to implement enhancement and restoration activities.

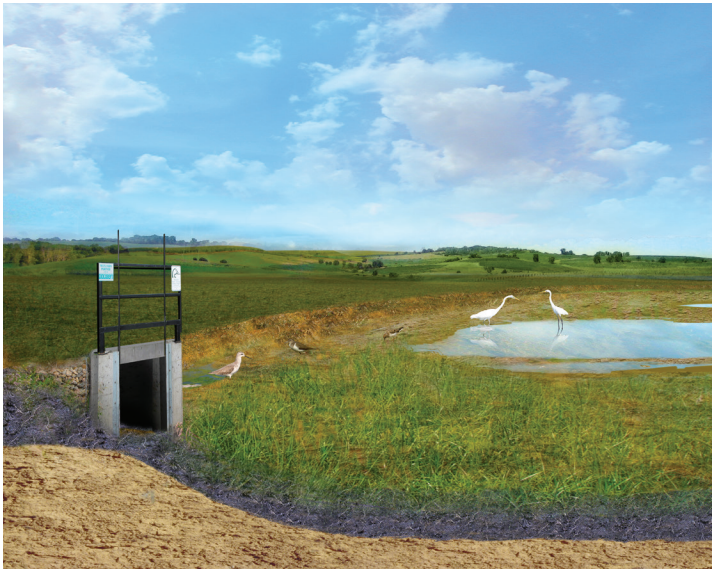






## STAGE 1

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.



MILLE LACS BAND OF OJIBWE  
DEPARTMENT OF NATURAL RESOURCES



Mr. Jon Schneider  
Manager of Conservation Programs – Minnesota  
Ducks Unlimited, Inc.  
311 East Lake Geneva Road  
Alexandria, Minnesota 56308

*Boozhoo Jon,*

Both I and the staff here at the Mille Lacs Band of Ojibwe (Band) Department of Natural Resources are excited to be partnering with Ducks Unlimited regarding the *Niizh-minis Waabashkiki* (Two-Island Wetland) Project in Morrison County. We would like to offer our full support for your proposal and application of funding through the Lessard-Sams Outdoor Heritage Council for habitat enhancement. The outcomes of this project directly address some of the goals as established in our Department's 2021 Integrated Resource Management Plan (IRMP): restore and enhance wild areas; protect critical habitats; preserve culturally important species; and provide protection for sensitive species.

The Band currently has dedicated, cost-sharing funds for this project in the amount of \$50,000 through the Bureau of Indian Affairs' (BIA) *Bizhibayaash* Circle of Flight program with the focus on wetland restoration, waterfowl habitat enhancement, and management of *manoomin* (wild rice) on tribal lands and ceded territories. In addition to the financial commitment, our staff will also commit their time in project management.

We look forward to this collaborative effort with Ducks Unlimited on the *Niizh-minis Waabashkiki* Project and other potential future projects and continue the long-term management of native wildlife populations and wetland habitat in our ancestral lands.

*Miigwech,*

A handwritten signature in cursive script that reads "Kelly Applegate".

Kelly Applegate  
Commissioner of Natural Resources  
Mille Lacs Band of Ojibwe

**DISTRICT I**

43408 Oodena Drive • Onamia, MN 56359  
(320) 532-7439 • Fax (320) 532-7514

**DISTRICT III**

45749 Grace Lake Road • Sandstone, MN 55072  
(218) 768-3311 • Fax (320) 384-6190

**DISTRICT II**

36666 State Highway 65 • McGregor, MN 55760  
(320) 384-6240 • Fax (218) 768-3903

**URBAN OFFICE**

1404 E. Franklin Avenue • Minneapolis, MN 55404  
(612) 872-1424 • Fax (612) 872-1257