

Lessard-Sams Outdoor Heritage Council

Living Shallow Lakes and Wetlands Enhancement & Restoration Initiative - Phase X Laws of Minnesota 2024 Accomplishment Plan

General Information

Date: 06/26/2024

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

Funds Recommended: \$7,867,000

Legislative Citation: ML 2024, Ch. 106, Art. 1, Sec. 2, Subd. 4(h)

Appropriation Language: \$7,867,000 the second year is to the commissioner of natural resources for an agreement with Ducks Unlimited to restore and enhance shallow lakes and wetlands on public lands and wetlands under permanent conservation easement for wildlife management.

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

Office Number: 3206932849 ext. 8 **Mobile Number:** 3202128018

Fax Number:

Website: www.ducks.org

Location Information

County Location(s): Carver, Murray, Otter Tail, Todd, Lac qui Parle, Washington, Lincoln, Big Stone, Hennepin, Sibley, Meeker, Renville, Sherburne, Pope, Grant, Douglas, Stevens, Swift, Traverse, Kandiyohi, Cottonwood, Redwood, Yellow Medicine, Morrison, Freeborn, Jackson, Watonwan, Steele, Le Sueur, Martin, Lyon, Brown, Scott, Nobles, Mahnomen, 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 1,325 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 1,325 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 plan 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 plan 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 plan 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 wetlandwildlife.

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 top 2 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 plan will uniquely address habitat resilience to climate change and its anticipated effects on game, fish & wildlife species utilizing the protected or restored/enhanced habitat this proposal targets.

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 program?

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

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.

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
2030	DNR Game & Fish	DNR Area Wildlife and	Every 3-8 years,	DNR assess ecological
	Account, OHF for DNR	Shallow Lakes	depending on wetland	conditions again
	Shallow Lakes	Program Staff will	conditions, water	following subsequent
	Program and DNR	assess shallow lake	control structures will	temporary water level
	Roving Crews	and wetland	be used to actively	draw-downs and
		conditions following	manage and enhance	refilling management
		initial water level	shallow lakes and	treatments, and
		draw-downs, and	wetlands via	communicate results
		document for	temporary water level	and questions or
		management	draw-down to remove	concerns to DU.
		consideration	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.	

Provide an assessment of how your program celebrates cultural diversity or reaches 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 program will meet all applicable criteria set forth in MS 97A.056?

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, either by the proposer or the end owner of the property, outside of the initial restoration of the land? No

Will insecticides or fungicides (including neonicotinoid and fungicide treated seed) be used within any activities of this program either in the process of restoration or use as food plots?

No

Timeline

Activity Name	Estimated Completion Date
Recon projects with DNR, FWS, and other partners and	June 2025
begin engineering survey and design of wetland restorations	
and shallow lake enhancements	
Complete remaining small wetland projects and larger	June 2029
shallow lake enhancement water control structure	
installations	
Complete some small wetland restorations and some larger	June 2027
shallow lake enhancements	

Date of Final Report Submission: 11/01/2029

Availability of Appropriation: Subd. 7.

Availability of Appropriation

- (a) Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. Money appropriated for fee title acquisition of land may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.
- (b) Money appropriated in this section is available as follows:
- (1) money appropriated for acquiring real property is available until June 30, 2028;
- (2) money appropriated for restoring and enhancing land acquired with an appropriation in this section is available for four years after the acquisition date with a maximum end date of June 30, 2032;
- (3) money appropriated for restoring or enhancing other land is available until June 30, 2029;
- (4) notwithstanding clauses (1) to (3), money appropriated for a project that receives at least 15 percent of its funding from federal funds is available until a date sufficient to match the availability of federal funding to a maximum of six years if the federal funding was confirmed and included in the original approved draft accomplishment plan; and(5) money appropriated for other projects is available until the end of the fiscal year in which it is appropriated.

Budget

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

Totals

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	\$998,000	\$130,000	DU Private & federal	\$1,128,000
			NAWCA, MBCF, and	
			Circle of Flight	
Contracts	\$6,570,000	\$215,000	DU Private & federal	\$6,785,000
			NAWCA grants	
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	\$215,000	Federal USFWS	\$215,000
			Migratory Bird Con.	
			Fund	
Easement	-	-	-	-
Stewardship				
Travel	\$40,000	\$11,000	DU Private & federal	\$51,000
			NAWCA grants	
Professional Services	\$40,000	-	-	\$40,000
Direct Support	\$99,000	-	-	\$99,000
Services				
DNR Land Acquisition	-	-	-	-
Costs				
Capital Equipment	\$40,000	-	-	\$40,000
Other	\$40,000	-	-	\$40,000
Equipment/Tools				
Supplies/Materials	\$40,000	\$10,000	DU Private & federal	\$50,000
			NAWCA grants	
DNR IDP	-	-	-	-
Grand Total	\$7,867,000	\$581,000	-	\$8,448,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
Manager - Grant Administration & Program Coordination	0.33	3.0	\$90,000	-	-	\$90,000
Professional Engineers, Surveyors, Construction Managers, and Biologists to Design and Implement Projects	3.0	3.0	\$908,000	\$130,000	DU Private & federal NAWCA, MBCF, and Circle of Flight	\$1,038,000

Capital Equipment

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

construction		
management		

Amount of Request: \$7,867,000 **Amount of Leverage:** \$581,000

Leverage as a percent of the Request: 7.39%

DSS + Personnel: \$1,097,000

As a % of the total request: 13.94%

Easement Stewardship: -

As a % of the Easement Acquisition: -

How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?

The budget for this program is reduced approximately proportionally to the OHF funding recommended as compared to our original request. The capital equipment budget line item stayed the same as that is the approximate cost of a new machine.

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 (\$262,300 MBCF easement acquisition funds and in-kind staff support) and the Mille Lacs Band of Ojibwe (\$50,000 - Circle of Flight).

Does this project have the ability to be scalable?

Yes

If the project received 50% of the requested funding

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

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

Is Confirmation Document attached?

<u>Yes</u>

Cash: \$215,000In Kind: \$47,300

Output Tables

Acres by Resource Type (Table 1)

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	106	53	-	ı	159
Protect in Fee with State PILT Liability	-	ı	-	ı	-
Protect in Fee w/o State PILT Liability	-	ı	-	ı	-
Protect in Easement	-	ı	-	ı	-
Enhance	1,060	106	-	ı	1,166
Total	1,166	159	-	ı	1,325

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	\$1,120,000	\$53,000	-	ı	\$1,173,000
Protect in Fee with State PILT Liability	-	-	-	ı	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$6,588,000	\$106,000	-	-	\$6,694,000
Total	\$7,708,000	\$159,000	-	-	\$7,867,000

Acres within each Ecological Section (Table 3)

Туре	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	53	-	106	ı	159
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	53	106	-	954	53	1,166
Total	53	159	-	1,060	53	1,325

Total Requested Funding within each Ecological Section (Table 4)

Туре	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	\$397,000	-	\$776,000	-	\$1,173,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	\$265,000	\$662,000	-	\$5,502,000	\$265,000	\$6,694,000
Total	\$265,000	\$1,059,000	-	\$6,278,000	\$265,000	\$7,867,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	\$10,566	\$1,000	-	-
Protect in Fee with State PILT Liability	-	1	-	-
Protect in Fee w/o State PILT Liability	-	ı	-	-
Protect in Easement	-	1	-	-
Enhance	\$6,215	\$1,000	-	-

Average Cost per Acre by Ecological Section (Table 6)

Туре	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	\$7,490	-	\$7,320	-
Protect in Fee with State	-	-	-	-	-
PILT Liability					

Protect in Fee w/o State	-	-	-	-	-
PILT Liability					
Protect in Easement	-	-	-	-	-
Enhance	\$5,000	\$6,245	-	\$5,767	\$5,000

Target Lake/Stream/River Feet or Miles

Parcels

Parcel Information

Sign-up Criteria?

No

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

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.
Bauman WPA	Big Stone	12346220	3	\$100,000	Yes	Enhance small wetlands for USFWS.
Karsky WPA	Big Stone	12346207	9	\$35,000	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.
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.
Kufrin WPA	Big Stone	12245221	3	\$25,000	Yes	Enhance small wetlands for USFWS.
Dismal Swamp WPA - Small Wetlands	Big Stone	12345214	4	\$70,000	Yes	Enhance small wetlands for USFWS
Otrey Lake WMA	Big Stone	12245222	55	\$200,000	Yes	Engineer and install water control structure for DNR
Prairie WPA	Big Stone	12246236	2	\$15,000	Yes	Enhance small wetlands for USFWS.
Redhead Marsh WPA	Big Stone	12146211	3	\$15,000	Yes	Enhance small wetlands for USFWS.
Rothi WPA	Big Stone	12145202	3	\$25,000	Yes	Enhance small wetlands for USFWS.
Swenson Lake	Big Stone	12246203	314	\$500,000	Yes	Engineer and install water control structure for DNR
Twin Lakes WPA	Big Stone	12246225	1	\$10,000	Yes	Enhance small wetlands for USFWS
USFWS Easement - Rolfsmeier Upland Enhancement	Big Stone	12044202	40	\$25,000	Yes	Enhance upland habitat for USFWS.

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Seidl WPA	Big Stone	12447225	5	\$125,000	Yes	Enhance small wetlands for USFWS.
Lane WPA	Big Stone	12447227	2	\$135,000	Yes	Enhance small wetlands for USFWS.
Eagle Lake	Blue Earth	10825207	617	\$1,000,000	Yes	Engineer and install pump and water control structure for DNR
Middle MN River WPA - Wetland Restoration	Brown	10931234	20	\$150,000	Yes	Restore wetlands on WPA for USFWS.
Three Rivers Park District - Lake 2 Enhancement	Carver	11624204	35	\$200,000	Yes	Engineer and install water control structure for 3RPD
MN Valley NWR - Chaska Lake Enhancement	Carver	11523208	80	\$500,000	Yes	Engineer and install new water control structure for USFWS.
Cottonwood Lake WPA	Cottonwood	10535219	2	\$20,000	Yes	Restore small wetlands for USFWS
Wolf Lake WPA - Small wetland restorations	Cottonwood	10535231	5	\$20,000	Yes	Restore small wetlands for USFWS
Watonwan River WPA	Cottonwood	10636211	85	\$150,000	Yes	Enhance wetlands for USFWS
Harder Lake WPA	Cottonwood	10636216	1	\$5,000	Yes	Engineer and restore small wetlands for USFWS
Banke Slough WPA - Small Wetlands	Douglas	12839218	1	\$90,000	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.
Hudson WPA - Small Wetlands	Douglas	12737229	3	\$145,000	Yes	Enhance small wetlands for USFWS
Forada WPA - Small Wetlands	Douglas	12737218	1	\$90,000	Yes	Enhance small wetlands for USFWS
Urness WMA	Douglas	12840210	37	\$200,000	Yes	Engineer and install water control structure for DNR
Hegg Lake WMA	Douglas	12740227	73	\$300,000	Yes	Engineer and install water control structure for DNR
J.I. case WPA - Small Wetlands	Douglas	12840225	2	\$125,000	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.
Klug WPA - Small Wetlands	Douglas	12840221	1	\$105,000	Yes	Enhance small wetlands for USFWS
Petersen WPA	Douglas	12836229	3	\$145,000	Yes	Enhance small wetlands for USFWS.
Rachel WPA	Douglas	12837211	5	\$55,000	Yes	Enhance small wetlands for USFWS.
Bhagyam WPA	Freeborn	10121230	15	\$20,000	Yes	Enhance wetlands for USFWS
Twin Lakes WPA	Freeborn	10122202	5	\$50,000	Yes	Restore small wetlands for USFWS
Two Island WPA	Freeborn	10322224	4	\$20,000	Yes	Engineer and restore small wetlands for USFWS
Spink WPA	Grant	12843224	5	\$120,000	Yes	Enhance small wetlands for USFWS.
Stony Brook WPA	Grant	13043205	6	\$25,000	Yes	Enhance small wetlands for USFWS.
Pomme de Terre WPA	Grant	13042235	4	\$175,000	Yes	Enhance small wetlands

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						for USFWS.
Bailey Slough WPA	Grant	12843206	8	\$30,000	Yes	Enhance small wetlands for USFWS.
Green WPA	Grant	12843207	6	\$35,000	Yes	Enhance small wetlands for USFWS.
Mud Lake WPA	Grant	13044225	4	\$125,000	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
Minnesota WPA	Jackson	10137232	30	\$300,000	Yes	Enhance wetlands for USFWS
Timber Lake WPA	Jackson	10437224	21	\$40,000	Yes	Enhance wetlands for USFWS
Sangl WMA	Jackson	10136221	25	\$150,000	Yes	Enhance small wetlands for MNDNR.
Iowa Lake Enhancement	Jackson	10138231	242	\$400,000	Yes	Engineer and install water control structure for DNR
Uncle Matt's WPA	Kandiyohi	12033232	10	\$100,000	Yes	Enhance small wetlands for USFWS.
Weber WPA	Kandiyohi	12035228	79	\$300,000	Yes	Engineer and install new water control structures for USFWS
Whitefield WMA - Wetland Restorations	Kandiyohi	11835215	13	\$50,000	Yes	Restore small wetlands for MNDNR.
Yarmon WPA	Kandiyohi	11834223	263	\$400,000	Yes	Engineer and install new water control structure for USFWS
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 Pool 4/4A	Lac qui Parle	12145232	275	\$1,500,000	Yes	Engineer and install water control structures 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
Sweetwater WMA	Lac qui Parle	11746236	69	\$200,000	Yes	Engineer and install water control structure for DNR
Diamond Lake	Le Sueur	11023223	120	\$250,000	Yes	Engineer and install water control structure for DNR
Sanborn Lake WMA - Dietz Lake Enhancement	Le Sueur	11223235	73	\$300,000	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
Agribank WPA	Lincoln	11146205	25	\$150,000	Yes	Enhance small wetlands for USFWS
Knofczynski WPA	Lincoln	11245227	10	\$50,000	Yes	Enhance small wetlands for USFWS
Kontz WPA	Lincoln	11345206	20	\$100,000	Yes	Enhance small wetlands for USFWS
Fox WPA	Lincoln	11045222	20	\$100,000	Yes	Enhance small wetlands

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Weber WPA	Lincoln	11045222	11	\$50,000	Yes	for USFWS Enhance small wetlands
						for USFWS
Rook WPA	Lincoln	11345227	17	\$75,000	Yes	Enhance small wetlands for USFWS
Rochel WPA	Lincoln	11045201	15	\$50,000	Yes	Enhance small wetlands for USFWS
Herschberger WMA - Curtis Lake	Lincoln	11145230	176	\$500,000	Yes	Enhance shallow lake with
Enhancement						water control structure for MNDNR
Arends WPA	Lyon	11343218	5	\$20,000	Yes	Enhance small wetlands for USFWS
Peterson WPA	Lyon	10942230	5	\$20,000	Yes	Enhance small wetlands for USFWS
Lyons WMA - Brown Marsh	Lyon	11042228	70	\$300,000	Yes	Enhance shallow lake with
Enhancement						water control structure for MNDNR
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 - Mud Lake Main Agassiz Pool	Marshall	15641220	5,000	\$1,000,000	Yes	Enhance wetland management with berms.
Agassiz NWR - Madsen Pool	Marshall	15642215	100	\$50,000	Yes	Enhance wetland
						management with new water level control
						structures.
Agassiz NWR - Pool 8	Marshall	15642203	100	\$50,000	Yes	Enhance wetland
						management with new water level control
						structures.
Clam Lake	Martin	10332215	72	\$200,000	Yes	Engineer and install water
						control structure for MNDNR
East Chain WMA Wetland Restoration	Martin	10129206	10	\$75,000	Yes	Restore small wetlands for MNDNR
Holmes Lake Restoration	Martin	10232235	100	\$750,000	Yes	Engineer and install water control structure for
						USFWS
Caron WMA	Martin	10333226	37	\$550,000	Yes	Engineer and install new
						water control structures for MNDNR
Gleam WMA	Martin	10431216	15	\$150,000	Yes	Engineer and install water
						control structure for MNDNR
Rooney Run WMA - Round Lake	Martin	10332221	45	\$200,000	Yes	Engineer and install water
Enhancement						level control structure for MNDNR
Duck Lake Restoration	Martin	10333211	100	\$300,000	Yes	Restore shallow lake for USFWS
Clear Lake WPA	Meeker	12130210	10	\$75,000	Yes	Engineer and install new
						water control structure for USFWS.
USFWS Easement - Trebil	Meeker	12032236	40	\$200,000	Yes	Restore wetlands on
Wetland Restoration						private land easement for USFWS.
USFWS Easement - Butler Lake	Meeker	11932210	65	\$400,000	Yes	Engineer and restore large
Restoration	<u> </u>	1		<u> </u>		wetland for USFWS

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Butler Lake FWS PL Easement	Meeker	11932210	65	\$400,000	Yes	Engineer and restore large wetland for USFWS
Rodewald WMA - Wetland Restoration	Meeker	11832220	25	\$300,000	Yes	Engineer and install new water control structure for MNDNR.
East Hanson Lake Restoration	Meeker	11931217	100	\$500,000	Yes	Engineer and install new water control structure for USFWS
Two Island Wetland Project - Mille Lacs Band Ojibwe	Morrison	04128214	100	\$230,000	Yes	Enhance wetland management with new water level control structure.
Shetek WMA - Round Lake Enhancement	Murray	10840221	171	\$200,000	Yes	Engineer and install new water control structure for MNDNR.
Buffalo Lake WMA Wetland Restoration	Murray	10739207	10	\$50,000	Yes	Restore small wetlands for MNDNR.
Mason WPA - Wetland Restoration	Murray	10741216	15	\$150,000	Yes	Restore wetlands on WPA for USFWS.
Devils Run WPA	Murray	10639206	28	\$200,000	Yes	Engineer and install new water control structure for USFWS
Slaughter Slough WPA	Murray	10740211	20	\$125,000	Yes	Engineer and restore small wetlands for USFWS
Shetek WMA - Robbins Slough Enhancement	Murray	10840222	245	\$350,000	Yes	Engineer and install water control structure for MNDNR
Graham Lake WPA	Nobles	10439220	14	\$70,000	Yes	Engineer and restore small wetlands for USFWS
Lake Bella WPA	Nobles	10140227	1	\$5,000	Yes	Engineer and restore small wetlands for USFWS
Bloom WPA	Nobles	10441220	4	\$20,000	Yes	Engineer and restore 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.
USFWS Easement -Misegades Restoration	Otter Tail	13238217	27	\$200,000	Yes	Restore habitat easement on private land for USFWS.
USFWS Habitat Easement - Stoering Restoration	Otter Tail	13541225	50	\$100,000	Yes	Restore habitat easement on private land for USFWS.
Pelican Valley WPA	Otter Tail	13543204	3	\$20,000	Yes	Enhance small wetlands for USFWS.
Jorgenson WPA	Otter Tail	13144203	6	\$15,000	Yes	Enhance small wetlands for USFWS.
Headquarters WPA - Small Wetlands	Otter Tail	13242201	1	\$5,000	Yes	Enhance small wetlands for USFWS
Stang Lake WPA	Otter Tail	13242210	5	\$50,000	Yes	Enhance small wetlands for USFWS.
Nelson WPA	Otter Tail	13743206	1	\$30,000	Yes	Enhance small wetlands for USFWS.
PCA WPA	Otter Tail	13241231	3	\$155,000	Yes	Enhance small wetlands for USFWS.
Knobel Lake WPA - Small Wetlands	Otter Tail	13543229	1	\$145,000	Yes	Enhance small wetlands for USFWS
Backstrom WPA - Small	Otter Tail	13543208	3	\$40,000	Yes	Enhance small wetlands

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Wetlands						for USFWS
Tweeton WPA	Otter Tail	13743207	1	\$35,000	Yes	Enhance small wetlands for USFWS.
Erhard's Grove WPA - Small Wetlands	Otter Tail	13543228	2	\$140,000	Yes	Enhance small wetlands for USFWS
Grady Mann WPA	Otter Tail	13144228	3	\$140,000	Yes	Enhance small wetlands for USFWS.
Mattson WPA	Pope	12640210	7	\$50,000	Yes	Enhance small wetlands for USFWS.
Rosby Lake WPA	Pope	12640213	6	\$65,000	Yes	Enhance small wetlands for USFWS.
USFWS Easement - BBB Farms Upland Enhancement	Pope	12437220	60	\$35,000	Yes	Enhance upland habitat for USFWS.
Jorgenson WPA	Pope	12639202	10	\$10,000	Yes	Enhance small wetlands for USFWS.
Ann Lake WPA	Pope	12638227	4	\$135,000	Yes	Enhance small wetlands for USFWS.
Moen WPA	Pope	12640214	4	\$70,000	Yes	Enhance small wetlands for USFWS.
USFWS Easement - Sievers Upland Enhancement	Pope	12337201	63	\$35,000	Yes	Enhance upland habitat for USFWS.
Stenson Lake WPA	Pope	12438223	4	\$115,000	Yes	Enhance small wetlands for USFWS.
Stewart WPA	Pope	12539215	15	\$100,000	Yes	Engineer and install new water control structure for USFWS.
Wall WPA	Pope	12437218	9	\$90,000	Yes	Enhance small wetlands for USFWS.
Stenerson Lake WPA	Pope	12438203	13	\$15,000	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.
Nelson Lake WPA	Pope	12337201	8	\$5,000	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
Boon Lake Enhancement	Renville	11631205	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.
MN Valley NWR - Louisville Swamp Enhancement	Scott	11423205	75	\$500,000	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 - Pool 31 Enhancement	Sherburne	03527228	30	\$250,000	Yes	Engineer and install new water control structure for USFWS.
Sherburne NWR - Iron Pool	Sherburne	03527216	25	\$250,000	Yes	Engineer and install new

	ı	1	1		1	Project #: WREU4
Enhancement						water control structure for USFWS.
Washington Lake Enhancement	Sibley	11426215	600	\$500,000	Yes	Engineer and install new water control structure for MNDNR.
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
Edwards WPA - Small Wetlands	Stevens	12441208	1	\$40,000	Yes	Enhance small wetlands for USFWS
Long Lake WPA	Stevens	12441203	3	\$15,000	Yes	Enhance small wetlands for USFWS.
Johnson Lake Enhancement	Swift	12239217	179	\$500,000	Yes	Enhance shallow lake with water control structure for MNDNR
Loen WPA - Small Wetlands	Swift	12238207	3	\$15,000	Yes	Enhance small wetlands for USFWS.
Svor WPA	Swift	12238217	5	\$85,000	Yes	Enhance small wetlands for USFWS.
Geroy WPA - Small Wetlands	Todd	12935236	1	\$180,000	Yes	Enhance small wetlands for USFWS
West Union WMA	Todd	12735209	30	\$250,000	Yes	Engineer and install water control structure for DNR
Sogge WPA	Todd	12735205	5	\$25,000	Yes	Enhance small wetlands for USFWS.
Terfehr WPA	Todd	12735208	3	\$40,000	Yes	Enhance small wetlands for USFWS.
Faber WPA - Small Wetlands	Todd	12735206	1	\$30,000	Yes	Enhance small wetlands for USFWS
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	Traverse	12548236	1	\$180,000	Yes	Enhance small wetlands for USFWS.
Lawrence WPA	Traverse	12547219	8	\$95,000	Yes	Enhance small wetlands for USFWS.
Diekmann WPA	Traverse	12548235	5	\$175,000	Yes	Enhance small wetlands for USFWS.
Gibson WPA - Small Wetlands	Traverse	12548233	1	\$165,000	Yes	Enhance small wetlands for USFWS
Robinhood WPA	Traverse	12548217	15	\$85,000	Yes	Enhance small wetlands for USFWS.
Jenk WPA - Small Wetlands	Traverse	12548235	1	\$175,000	Yes	Enhance small wetlands for USFWS
Pederson WPA	Traverse	12548206	3	\$30,000	Yes	Enhance small wetlands for USFWS.
Keystone Woods WMA - Wetland Enhancement	Washington	03120218	125	\$750,000	Yes	Wetland enhancement for DNR on Keystone Woods WMA after purchase by TPL.
Sulem WMA	Watonwan	10533205	226	\$500,000	Yes	Engineer and install water level control structure for MNDNR
USFWS Easement - Coover Wetland Enhancement	Yellow Medicine	11443202	10	\$15,000	Yes	Enhance wetland habitat for USFWS.

Spellman WMA - Miedd Lake	Yellow	11441223	50	\$100,000	Yes	Engineer and install water
	Medicine					control structure for MN
						DNR



