

Lessard-Sams Outdoor Heritage Council

Fiscal Year 2019 / ML 2018 Request for Funding



Date: May 22, 2017

Program or Project Title: Shallow Lakes and Wetland Enhancement - Phase 10

Funds Requested: \$6,900,000

Manager's Name: Ricky Lien

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County Locations: Aitkin, Anoka, Blue Earth, Cottonwood, Fillmore, Freeborn, Le Sueur, Lyon, Marshall, Marshall, Roseau, Murray, Nobles, Olmsted, Polk, Rice, St. Louis, Todd, Waseca, and Wright.

Regions in which work will take place:

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

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Wetlands

Abstract:

This proposal will accomplish 31,756 acres of shallow lake and wetland enhancement and restoration work throughout Minnesota, with a focus on the prairie region. The proposal is comprised of four components: (1) thirty projects to engineer and construct or renovate wetland infrastructure and to enhance wetlands; (2) funding to continue the existing Roving Habitat Crew in Region 4 and to add a new crew in this prairie region; (3) Shallow Lakes program specialists in Sauk Rapids and Marshall, and; (4) creation of a new Prairie Wetland Initiative to address unmet management needs of small wetlands in Minnesota prairies.

Design and scope of work:

Minnesota wetlands, besides being invaluable for waterfowl, also provide other desirable functions and values - habitat for a wide range of species, groundwater recharge, water purification, flood water storage, shoreline protection, and economic benefits. An estimated 90% of Minnesota's prairie wetlands have been lost, more than 50% of our statewide wetland resource. In remaining wetlands, benefits are too often compromised by degraded habitat quality due to excessive runoff and invasive plants and fish.

This proposal will accomplish 31,756 acres of enhancement and restoration work throughout Minnesota, with a focus on the prairie region.

ROVING HABITAT CREW - Numerous plans pertaining to wetlands and shallow lakes call for effective management to provide maximum benefits for wildlife. Past Outdoor Heritage Fund (OHF) moneys were used to establish regional Roving Habitat Crews to address needed upland and wetland habitat management work on state wildlife properties. We have seen remarkable recoveries of both habitat quality and wildlife use of wetlands when we have invested in active management. The funding requested in this proposal will be targeted to continuing the work of the existing Region 4 Roving Habitat Crew, plus will add a new Crew that will focus on prairie

work, also in Region 4. Crew work will include, but not be limited to, managing water levels, maintaining fish barriers and other wetland infrastructure, including winterkill of fish, and controlling invasive plants and fish. Purchase of an amphibious MarshTracker and a Swamp Devil for cattail control is proposed.

SHALLOW LAKES / WETLAND PROJECTS -The habitat quality of the shallow lakes and wetlands still on the landscape can be markedly improved by controlling invasive species and rough fish, installing fish barriers where needed and aggressively managing water levels to meet management objectives. This proposal seeks to engineer and construct wetland infrastructure such as dikes, water control structures, and fish barriers, and to implement management techniques such as prescribed burns, rough fish control and water level manipulation. The shallow lake and wetland projects identified in this proposal for enhancement were proposed and ranked by DNR Area Wildlife Supervisors through their respective Regional Wildlife Managers and were reviewed by the Wetland Habitat Team. Projects, as shown in the accompanying parcel list, include restoration of wetlands, engineering feasibility and design work, replacement/renovation of wetland infrastructure, and wetland enhancement.

SHALLOW LAKES PROGRAM - Shallow Lakes specialists perform critical roles in assessing shallow lakes and initiating needed management. Requested funding would allow the filling of shallow lake specialist positions in Sauk Rapids and Marshall. The Marshall position represents a new position to initiate shallow lakes work in far southwest Minnesota prairie shallow lakes. Purchase of data loggers

PRAIRIE WETLAND INITIATIVE - Only 1 of 5 Minnesota prairie wetlands is in good condition. While we have a highly successful Shallow Lakes program that assesses and initiates management on shallow lakes, similar attention is needed for smaller wetlands. This component of the proposal seeks funding to place two wetland specialists in the prairie to assess small wetlands and implement management.

Which sections of the Minnesota Statewide Conservation and Preservation Plan are applicable to this project:

- H4 Restore and protect shallow lakes
- H5 Restore land, wetlands and wetland-associated watersheds

Which other plans are addressed in this proposal:

- Long Range Duck Recovery Plan
- Minnesota Prairie Conservation Plan

Describe how your program will advance the indicators identified in the plans selected:

The first stated goal of the Long Range Duck Recovery Plan is to restore a breeding population of ducks averaging 1 million. The primary strategy for this goal is the restoration and protection of 2 million additional acres of habitat, of which 30% is wetland. The second goal of the Duck Plan is an increase in Minnesota's duck harvest. The primary strategy for this goal is the protection, enhancement, and management of 1800 shallow lakes in Minnesota. This OHF proposal directly contributes to these goals.

'Wetland' appears 233 times in the Minnesota Prairie Conservation Plan. Within Prairie Plan core areas, 83,169 acres of restored wetlands are needed. It also makes the assumption that high numbers of prairie wetlands will be actively managed. As noted by the MN Pollution Control Agency, only 1 in 5 prairie wetlands is in good condition. Restoration/enhancement of this proposal contribute to this plan.

Which LSOHC section priorities are addressed in this proposal:

Prairie:

- Protect, enhance, or restore existing wetland/upland complexes, or convert agricultural lands to new wetland/upland habitat complexes

Forest / Prairie Transition:

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

Northern Forest:

- Protect shoreland and restore or enhance critical habitat on wild rice lakes, shallow lakes, cold water lakes, streams and rivers, and spawning areas

Metro / Urban:

- Protect, enhance, and restore remnant native prairie, Big Woods forests, and oak savanna with an emphasis on areas with high biological diversity

Southeast Forest:

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

Describe how your program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife as indicated in the LSOHC priorities:

Three elements relate to this proposal's ability to produce a significant and permanent conservation legacy.

First, the scale of this proposal is significant - 31,756 acres. Projects of this size are able to produce results locally and statewide.

Second, the infrastructure (water control structures, dikes, fish barriers) projects proposed for construction or renovation will be worked on by DNR engineers who will design and oversee construction and renovation to achieve long-lasting results. A typical goal is to have constructed water control structures, dikes and fish barriers last a minimum of 30-40 years. These projects will be on public waters or publicly-owned or eased lands.

Third, the type of work being done through this proposal, Shallow lake enhancement and wetland restoration, are key components of all significant conservation plans for Minnesota affecting Minnesota. The work is needed to restore wetlands, 90% of which have been lost in the prairies and many of the remaining ones are degraded. Key state conservation plans such as Minnesota's Prairie Conservation Plan, Duck Recovery Plan, and Shallow Lake Plan call for the active management of shallow lakes and the restoration/management of wetlands to Minnesota's landscape.

Describe how the proposal uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:

Shallow Lakes staff provide standardized, rigorous assessments of shallow lakes to determine management needs and document habitat management effectiveness. Shallow lakes research has proven the effectiveness of management practices being employed

The Minnesota Duck Recovery Plan goals include boosting the state's breeding duck population. The most productive prairie waterfowl habitat is a mix of wetland and grassland as a habitat complex. A complex could be 4 - 9 square miles and should be comprised of 10% temporary/seasonal wetlands, 10% permanent wetlands, and 40% grasslands, with the remaining 40% available for crops. In addition to mixes of grasslands and healthy wetlands, The Duck Plan also called for accelerated efforts to restore 1,800 shallow lakes, including wild rice lakes.

The Minnesota Prairie Conservation Plan, which is a plan for both uplands and wetlands in the prairie region of Minnesota, outlines focal areas (Core Areas and Habitat Complexes) where we can build on an existing base of conservation lands and improve the habitat there. The Prairie Wetland Initiative component of this OHF grant would contribute to these identified Core Areas and Habitat Complexes by working to actively manage and improve small wetlands on public lands, especially on those lands contributing to the Minnesota Comprehensive Prairie Plan. The Status and Trends of Wetlands in Minnesota: Depressional Wetland Quality Assessment (2007 - 2012), produced by the Minnesota Pollution Control Agency, noted that while most wetlands in northern Minnesota are in good condition, the opposite is true in the central and former prairie regions of the state, where degraded vegetation communities are predominant. Vegetation communities in more than half of these depressional wetlands are in poor condition (56%), with only 17% in good condition, similar to the quality of all wetland types in the central hardwood and former prairie regions. Non-native invasive plants are having the greatest impact.

The projects and initiatives called for in this OHF proposal will directly contribute to expanded and healthy wetland complexes and increased shallow lakes work. Work will renovate existing wetland infrastructure and establish new management, especially in the critical prairie region of Minnesota.

How does the proposal address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species:

Minnesota has lost almost half of its original presettlement wetlands, with some regions of the state having lost more than 90% of their original wetlands. A statewide review of Species of Greatest Conservation Need (SGCN) found that wetlands are one of the three habitat types (along with prairies and rivers) most used by these species. This request includes wetland management actions identified to support SGCN: prevention of wetland degradation, wetland restoration, and control of invasives. In the Minnesota County Biological Survey description of the marsh community, special attention is given to two issues faced in Minnesota marshes - stable high water levels that reduce species diversity, often to a point at which a monotypic system evolves, and the "invasion of marshes by the non-native species narrow-leaved cattail" and its hybrids. Both of these issues will be addressed by projects named within this proposal.

Nationwide, 43% of threatened or endangered plants and animals live in or depend on wetlands.

Shallow lakes and non-forested prairie wetlands 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.” Species listed in the Action Plan as requiring shallow lakes 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 are the least bittern, American bittern, marsh wren, and Virginia rail. Forster’s terns are listed as requiring large deep-water marshes.

A MN County Biological Survey database search of endangered and threatened birds and amphibians is provided in the proposal attachments.

Identify indicator species and associated quantities this habitat will typically support:

Mallards are a commonly used indicator species for numerous waterfowl plans due to (1) extensive research that has occurred with this species on many aspects of its life history, habitat requirement and response to management, and (2) the fact that it is representative of the “typical” upland nesting duck. Both Joint Venture waterfowl plans that cover Minnesota – the Prairie Pothole Joint Venture and the Upper Mississippi River and Great Lakes Region Joint Venture (UMRG LRJV) – use the mallard as a focal species. The biological model used in the UMRG LRJV to estimate habitat needs to support mallard population growth uses a simple but accepted rate of 1 mallard pair per hectare (1 pair per 2.47 acres) of wetland habitat (noting that upland habitat for nesting is also obviously needed). Trumpeter swans could also be used as an indicator species relative to assessing wetland habitat work. Trumpeter swans are a recognizable feature on wetlands and their restoration is a modern wildlife management success story. Trumpeter swans are strictly territorial on their breeding areas with shoreline complexity and food availability being factors in defining the area being defended. Though reported territories can range in size from 1.5 - >100 hectares, a reasonable expectation is that one additional trumpeter swan pair would be supported by each 50 acres of wetlands protected, restored, or enhanced.

Outcomes:

Programs in the northern forest region:

- Improved availability and improved condition of habitats that have experienced substantial decline *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in forest-prairie transition region:

- Protected, restored, and enhanced nesting and migratory habitat for waterfowl, upland birds, and species of greatest conservation need *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in metropolitan urbanizing region:

- Game lakes are significant contributors of waterfowl, due to efforts to protect uplands adjacent to game lakes *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in southeast forest region:

- Healthier populations of endangered, threatened, and special concern species as well as more common species *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in prairie region:

- Protected, restored, and enhanced shallow lakes and wetlands *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

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

DNR engineers design and oversee construction and renovation of infrastructure to achieve long-lasting results. A typical goal is to

have constructed water control structures, dikes and fish barriers last a minimum of 30-40 years. The management of completed infrastructure projects will fall on existing staff of the Department of Natural Resources. Periodic enhancements such as invasive species removal, supplemental vegetation planting, or water control structure installation, maintenance, or replacement, will be accomplished through annual funding requests to a variety of funding sources including, but not limited to, the Game and Fish Fund, bonding, gifts, the Environmental and Natural Resources Trust Fund, the Outdoor Heritage Fund, and federal sources such as North American Wetlands Conservation Act grants. Wetland enhancement projects such as cattail control, prescribed burns, rough fish management and the like are implemented to achieve quality, long-lasting habitat benefits lasting benefits, realistically they have variable lifespans due to conditions imposed by climate, physical factors, etc. Monitoring by area wildlife staff and shallow lakes specialists will ensure that followup management is employed as needed.

Explain the things you will do in the future to maintain project outcomes:

Not Listed

What is the degree of timing/opportunistic urgency and why it is necessary to spend public money for this work as soon as possible:

Half of Minnesota's wetlands have been drained and many remaining wetlands and shallow lakes are in a degraded condition. Waterfowl and other wetland species have been negatively impacted.

Three factors speak to the urgency of this proposal. First, in a 2014 USFWS publication, between 1997 and 2009, Minnesota ranked highest among 5 Upper Midwest/Great Plains states for wetland loss. Habitat conversion and degradation continues. Second, projects to construct, renovate, or replace wetland infrastructure such as dikes, water control structures, and fish barriers are requested by DNR managers in response to urgent needs to replace aging structures or as needed to implement habitat management activities such as shallow lake drawdowns. Finally, numerous strategic plans such as the Minnesota Duck Recovery Plan, Minnesota Shallow Lakes Plan, and the Minnesota Prairie Conservation Plan all document the need to implement aggressive and focused habitat management to lost and degraded habitat to restore wildlife.

How does this proposal include leverage in funds or other effort to supplement any OHF appropriation:

Ducks Stamp revenue, federal grants, other state funding, and NGO partner dollars are spent extensively on shallow lake and wetland projects around the state. However, our ability to track these expenditures and directly tie them to specific OHF projects precludes us from listing specific leverage amounts. Despite our ability to account for them, the aforementioned funding sources are leveraged extensively within critical wetland and shallow lakes habitats identified in strategic conservation plans.

Relationship to other funds:

- Not Listed

Describe the relationship of the funds:

Not Listed

Describe the source and amount of non-OHF money spent for this work in the past:

Not Listed

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 activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (WMA, Refuge Lands, Public Waters)**

Do you anticipate federal funds as a match for this program - **No**

Land Use:

Will there be planting of corn or any crop on OHF land purchased or restored in this program - **No**

Accomplishment Timeline

Activity	Approximate Date Completed
Feasibility and Engineering projects	July 2023
Infrastructure Construction/Renovation projects	July 2023
Roving Habitat Crew Wetland Enhancement Work	June 2022
Shallow Lakes Assessments	June 2022
Prairie Wetland Specialists Wetland Enhancement Work	June 2022

Budget Spreadsheet

Total Amount of Request: \$6,900,000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$1,734,000	\$0		\$1,734,000
Contracts	\$2,852,000	\$0		\$2,852,000
Fee Acquisition w/ PILT	\$0	\$0		\$0
Fee Acquisition w/o PILT	\$0	\$0		\$0
Easement Acquisition	\$0	\$0		\$0
Easement Stewardship	\$0	\$0		\$0
Travel	\$576,000	\$0		\$576,000
Professional Services	\$644,000	\$0		\$644,000
Direct Support Services	\$260,000	\$0		\$260,000
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$666,000	\$0		\$666,000
Other Equipment/Tools	\$33,000	\$0		\$33,000
Supplies/Materials	\$135,000	\$0		\$135,000
DNR IDP	\$0	\$0		\$0
Total	\$6,900,000	\$0	-	\$6,900,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Natural Resource Specialists (Roving Habitat Crew)	4.00	4.00	\$1,010,000	\$0		\$1,010,000
Natural Resource Specialists (Shallow Lake Specialists0)	2.00	4.00	\$362,000	\$0		\$362,000
Natural Resource Specialists	2.00	4.00	\$362,000	\$0		\$362,000
Total	8.00	12.00	\$1,734,000	\$0	-	\$1,734,000

Capital Equipment

Item Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Trimble survey-grade GPS and UTV (utility terrain vehicle)	\$61,000	\$0		\$61,000
Data loggers	\$25,000	\$0		\$25,000
Boat/motor/trailer (2) for newly funded shallow lakes positions	\$20,000	\$0		\$20,000
Swamp Devil	\$400,000	\$0		\$400,000
MarshTracker	\$160,000	\$0		\$160,000
Total	\$666,000	\$0	-	\$666,000

Amount of Request: \$6,900,000
 Amount of Leverage: \$0
 Leverage as a percent of the Request: 0.00%
 DSS + Personnel: \$1,994,000
 As a % of the total request: 28.90%
 Easement Stewardship: \$0
 As a % of the Easement Acquisition: -%

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program:

DNR calculates direct support services costs that are directly related to and necessary for each request based on the type of work being done and which division it's being done by.

Does the amount in the contract line include R/E work?

The entire amount shown in the Contract line of the budget will be used for R/E work.

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

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

\$576,000 is shown in the Travel line of the budget. In addition to traditional travel costs of mileage, food, and lodging, this funding will be used to cover DNR fleet costs associated with equipment used by DNR staff funded through this appropriation. Such equipment could include ATV's, UTV's, MarshMasters, tractors, trailers, and other equipment needed for critical habitat management activities.

Describe and explain leverage source and confirmation of funds:

Ducks Stamp, federal grants, other state funding, and NGO partner dollars are spent extensively on shallow lake and wetland projects around the state. However, our ability to track these expenditures and directly tie them to specific OHF projects precludes us from listing specific leverage amounts.

Does this proposal have the ability to be scalable? - Yes

Tell us how this project would be scaled and how administrative costs are affected, describe the "economy of scale" and how outputs would change with reduced funding, if applicable:

The project can be scaled, though a reduced number of habitat acres will result. Reduced funding will result in a prioritization process to select projects that best meet LSOHC and DNR strategic plans, produce quality habitat results, and address emergency needs. Statewide experts, NGO partners, and regional experts would be consulted.

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	83	0	0	0	83
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	31,673	0	0	0	31,673
Total	31,756	0	0	0	31,756

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$213,000	\$0	\$0	\$0	\$213,000
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	\$6,687,000	\$0	\$0	\$0	\$6,687,000
Total	\$6,900,000	\$0	\$0	\$0	\$6,900,000

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	83	0	83
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	1,000	22,320	10	7,599	744	31,673
Total	1,000	22,320	10	7,682	744	31,756

Table 4. Total Requested Funding within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	\$0	\$0	\$0	\$213,000	\$0	\$213,000
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	\$1,089,600	\$1,559,800	\$49,300	\$3,091,000	\$897,300	\$6,687,000
Total	\$1,089,600	\$1,559,800	\$49,300	\$3,304,000	\$897,300	\$6,900,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	\$2,566	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$0
Enhance	\$211	\$0	\$0	\$0

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	\$0	\$0	\$0	\$2,566	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$0	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$0	\$0
Enhance	\$1,090	\$70	\$4,930	\$407	\$1,206

Target Lake/Stream/River Feet or Miles

0

I have read and understand Section 15 of the Constitution of the State of Minnesota, Minnesota Statute 97A.056, and the Call for Funding Request. I certify I am authorized to submit this proposal and to the best of my knowledge the information provided is true and accurate.

Parcel List

Explain the process used to select, rank and prioritize the parcels:

Project proposals are submitted by Area wildlife managers and receive reviews by regional and central office DNR staff for suitability. The project list is shared with Ducks Unlimited for coordination purposes. Prioritization of projects includes assessment of need (failing or compromised infrastructure), cost, feasibility, and priorities of pertinent strategic plans (Minnesota Prairie Plan, Duck Recovery Plan, Shallow Lakes Plan). As with previous OHF grants, parcels may be changed, added, or deleted as needed and in keeping with the scope of the project proposal.

Section 1 - Restore / Enhance Parcel List

Aitkin

Name	TRDS	Acres	Est Cost	Existing Protection?
White Elk Lake enhancement engineering	05027213	0	\$20,000	Yes

Anoka

Name	TRDS	Acres	Est Cost	Existing Protection?
Carlos Avery Water Control Structure Replacements	03322228	400	\$200,000	Yes

Blue Earth

Name	TRDS	Acres	Est Cost	Existing Protection?
Pick Feasibility & Design	10525216	0	\$17,500	Yes

Cottonwood

Name	TRDS	Acres	Est Cost	Existing Protection?
Ancil C. Budolfson WMA Wetland Restoration Feasibility Slayton	10738230	0	\$15,000	Yes
Windom - String Lake WMA Wetland Restorations	10535231	50	\$95,000	Yes

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?
Water Control Structure - Goethite WMA	10113231	10	\$32,500	Yes
Water Control Structure - Upper Iowa River WMA	10213223	10	\$32,500	Yes

Freeborn

Name	TRDS	Acres	Est Cost	Existing Protection?
Manchester WMA Water Control Structure	10322202	55	\$42,500	Yes

Le Sueur

Name	TRDS	Acres	Est Cost	Existing Protection?
Dora Lake Wetland Restoration Projects	11023211	23	\$55,000	Yes
Earl Swain WMA Wetland Enhancement	10924222	30	\$77,500	Yes
Scotch Lake Feasibility and Design	11025223	0	\$17,500	Yes

Lyon

Name	TRDS	Acres	Est Cost	Existing Protection?
Grandview Wetland Feasibility/Restoration	11242218	10	\$55,000	Yes
Jacobson Wetland WCS design	11041219	0	\$15,000	Yes

Marshall

Name	TRDS	Acres	Est Cost	Existing Protection?
East Park Impoundment: Structure and dike repair	15844220	1,720	\$151,000	Yes

Marshall, Roseau

Name	TRDS	Acres	Est Cost	Existing Protection?
Wetland Aerial Ignition	15542201	20,000	\$36,000	Yes

Murray

Name	TRDS	Acres	Est Cost	Existing Protection?
Chandler WMA Moon Slough Water Control Feasibility Slayton	10642230	0	\$15,000	Yes
Plum Creek WMA Wetland Restoration Feasibility Slayton	10839215	0	\$15,000	Yes

Nobles

Name	TRDS	Acres	Est Cost	Existing Protection?
Wachter WMA Wetland Enhancement Feasibility Slayton	10140223	0	\$15,000	Yes

Olmsted

Name	TRDS	Acres	Est Cost	Existing Protection?
Eastside WMA Water Control Structure Replacement	10613204	0	\$15,000	Yes

Polk

Name	TRDS	Acres	Est Cost	Existing Protection?
Kroening Marsh	14741225	17	\$90,000	Yes

Rice

Name	TRDS	Acres	Est Cost	Existing Protection?
Circle Lake Wetland Dike Rehab	11121216	46	\$52,500	Yes
Esker Marsh Water Control Structure	11221222	16	\$27,000	Yes
Paulson Marsh Water Control Structure and Dike Rehab	11121211	55	\$85,000	Yes

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Darwin S. Myers WMA Dike and Water Control Structure Reconstruction	06015235	744	\$765,000	Yes

Todd

Name	TRDS	Acres	Est Cost	Existing Protection?
Grey Eagle Upper Impoundment Design	12733209	0	\$20,000	Yes
Staples Dike Rehabilitation Phase 3	13333225	600	\$1,137,000	Yes

Waseca

Name	TRDS	Acres	Est Cost	Existing Protection?
Goose Lake fish barrier design	10722211	0	\$15,000	Yes
Mott Lake Fish Treatment	10624226	115	\$27,500	Yes

Wright

Name	TRDS	Acres	Est Cost	Existing Protection?
Albion WMA Willima Lake Water Control Structure Enhancement	12027208	300	\$220,000	Yes
Shakopee Lake Fish Barrier Lake Enhancement	11828233	200	\$150,000	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

Section 2a - Protect Parcel with Bldgs

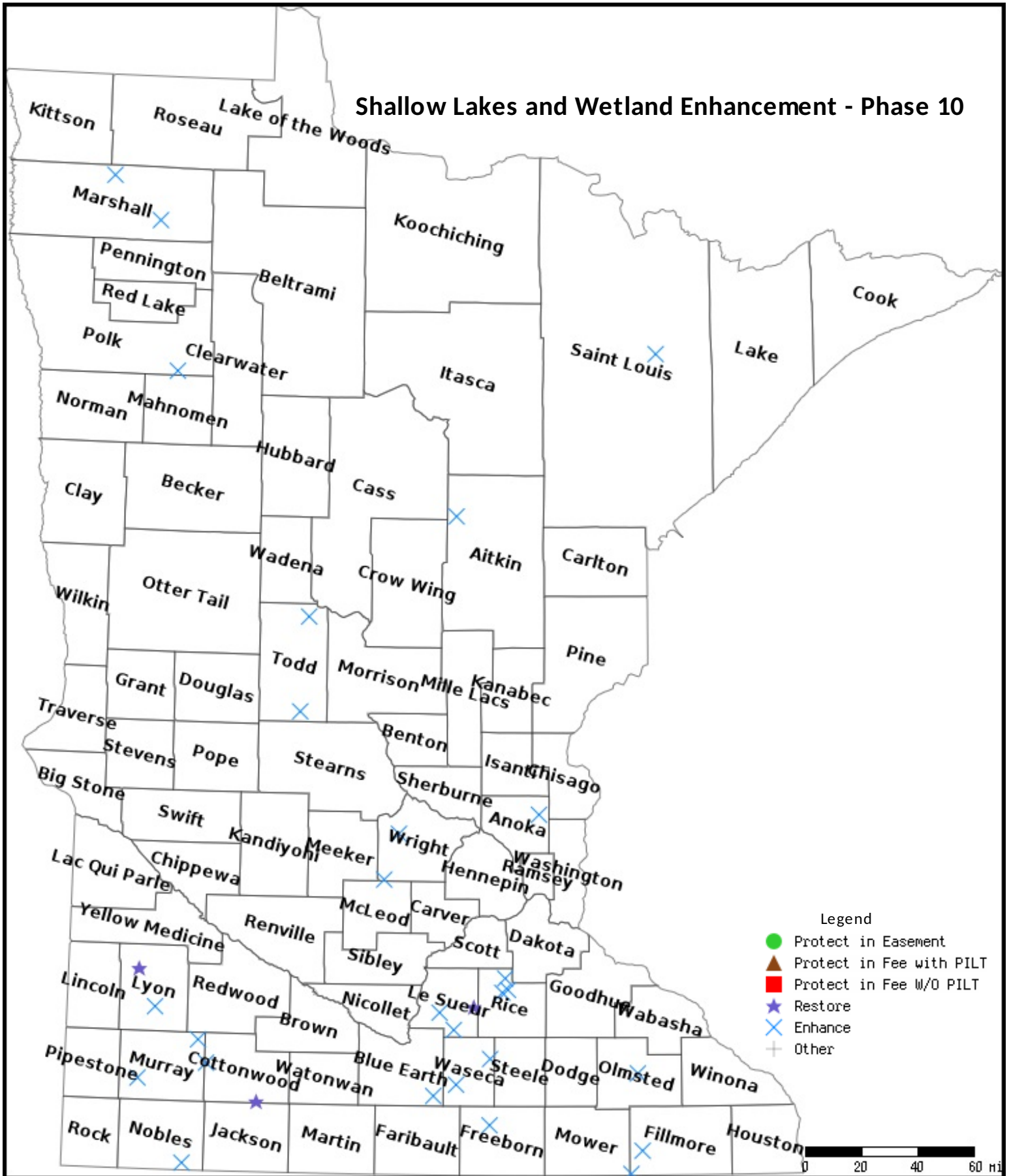
No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map

Shallow Lakes and Wetland Enhancement - Phase 10



Data Generated From Parcel List

ML2018 Shallow Lakes and Wetland Enhancement Phase 10 – Four Components

1. Roving Habitat Crews (Region 4) – *Highly trained, equipped, and focused staff to manage public wildlife habitat.*

Requested funding is for Region 4 and would continue the existing Roving Habitat Crew, plus it would create a new Roving Habitat Crew.



Beaver dam removal



MarshTracker

Cattail burning – *before and after*



Wildlife Manager comment after cattail burning at Waterbury WMA – “The burn at Waterbury last summer provided lots of open water this spring. It’s the first time I can remember shorebirds using it, and it had better than usual waterfowl use also.”

2. Shallow Lakes / Wetland Projects – *addressing wetland habitat infrastructure and management needs around the state.*

OHF funding would restore wetlands, provide engineering feasibility and design work, replace/renovate wetland infrastructure, and enhance wetlands through active enhancement.



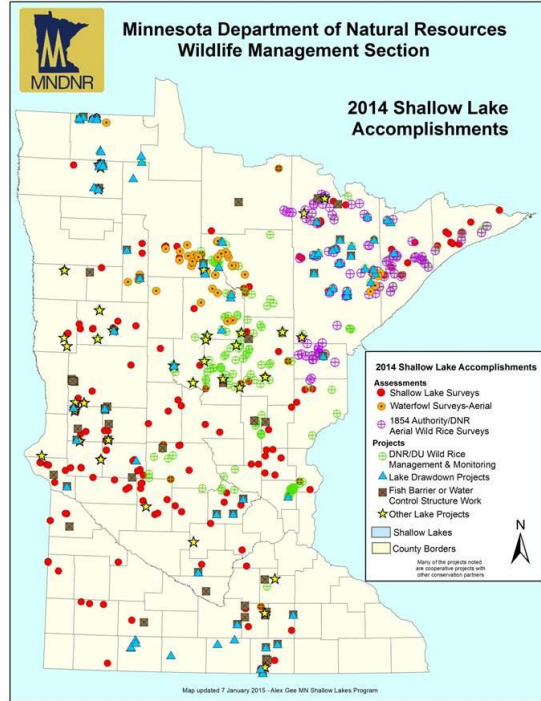
Examples of wetland infrastructure projects

ML2018 Shallow Lakes and Wetland Enhancement Phase 10 – Four Components

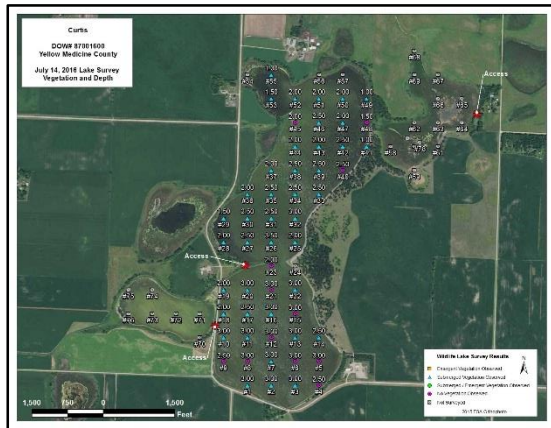
3. Shallow Lakes Program – *a unique program aimed at improving shallow lake habitats for wildlife and waterfowl*

Funding would be used to fill two Shallow Lake Specialist positions, one in Sauk Rapids and one in the prairie region of southwest Minnesota. These specialists help identify and implement shallow lakes enhancement projects.

Right – A typical year of accomplishments for the Shallow Lakes Program.



Left – A shallow lake assessment produced by Shallow Lakes Program staff. Assessments such as this determine the need for management and document results when management is implemented.



4. Prairie Wetland Enhancement Initiative - *bringing needed management to Minnesota's small prairie wetlands*

Only 1 of 5 depressional wetlands in Minnesota's prairies is in good condition. OHF funding would be used to manage small prairie wetlands with identified problems to improve habitat conditions.

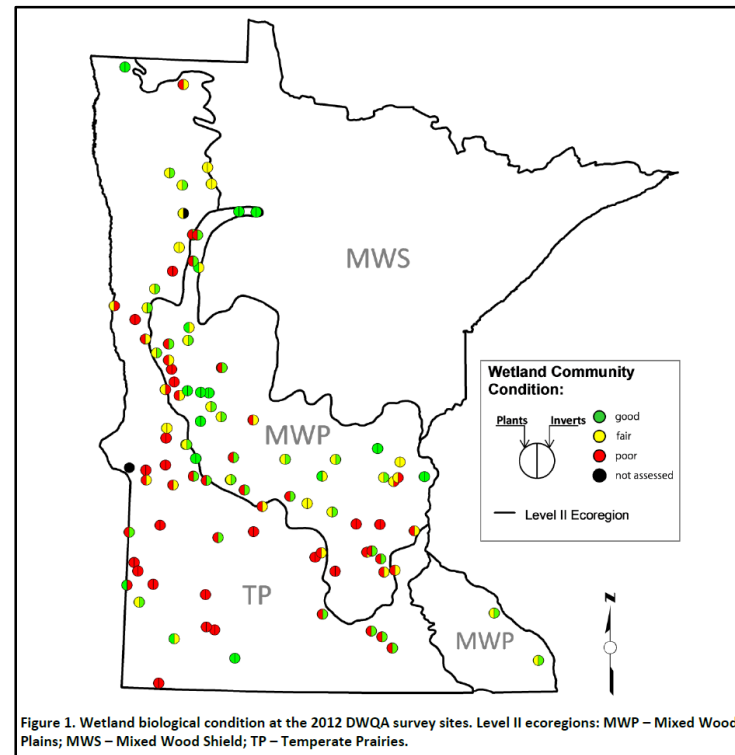


Figure 1. Wetland biological condition at the 2012 DWQA survey sites. Level II ecoregions: MWP – Mixed Wood Plains; MWS – Mixed Wood Shield; TP – Temperate Prairies.

Figure from “Status and Trends of Wetlands in Minnesota” MPCA 2015, Document number: wq-bwm1-08



Unmanaged wetland



Managed wetland