

Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2018 Accomplishment Plan



Date: June 28, 2018

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

Funds Recommended: \$ 2,759,000

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Legislative Citation: ML 2018, Ch. 208, Art. 1, Sec. 2, subd 4(e)

Appropriation Language: \$2,759,000 the second year is to the commissioner of natural resources to enhance and restore shallow lakes and wetland habitat statewide. A list of proposed land restorations and enhancements must be provided as part of the required accomplishment plan.

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

Regions in which work will take place:

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

Activity types:

- Enhance
- Restore

Priority resources addressed by activity:

- Wetlands

Abstract:

This proposal will accomplish 25,000 acres of shallow lake and wetland enhancement and restoration work throughout Minnesota, with a focus on the prairie region. The proposal is comprised of three components: (1) twenty-seven projects to engineer and/or construct wetland infrastructure or to enhance wetlands and shallow lakes; (2) funding for the existing Roving Habitat Crew in Region 4 to continue wetland and shallow lake enhancement work, and; (3) funding to base a new Shallow Lakes program specialist in Windom to accelerate shallow lakes work in the prairie region of SW Minnesota

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 25,000 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 wetland enhancement work of the existing Region 4 Roving Habitat Crew. Crew work will include, but not be limited to, managing water levels, installing fish barriers and other wetland infrastructure, inducing winter-kill of fish, and controlling invasive plants and fish.

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 actively 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 largest project (20,000 acres) in this proposal will see prescribed fire used in wetlands using aerial ignition. 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. The parcel list associated with these projects may be modified, increased, or reduced as needed within the scope of this proposal.

SHALLOW LAKES PROGRAM - Shallow Lakes specialists perform critical roles in assessing shallow lakes and initiating needed management. Requested funding would allow the creation of a new shallow lake specialist position to be based in Windom, MN, to accelerate shallow lakes work in the prairie region of SW Minnesota. In addition to purchasing supplies and equipment needed for shallow lake assessment and management work, capital equipment in the form of a Trimble survey unit and a UTV upon which to mount it, and a boat, motor and trailer will be acquired, along with data loggers for water level monitoring.

How does the request address MN habitats that have: historical value to fish and wildlife, wildlife species of greatest conservation need, MN County Biological Survey data, and/or rare, threatened and endangered species inventories:

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.

Describe the science based planning and evaluation model used:

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.

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

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

Which other plans are addressed in this program:

- Long Range Duck Recovery Plan
- Minnesota Prairie Conservation Plan

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

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

Prairie:

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

Southeast Forest:

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

Relationship to other funds:

- Not Listed

Describe the relationship of the funds:

Not Listed

How does this program 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.

Per MS 97A.056, Subd. 24, Any state agency or organization requesting a direct appropriation from the OHF must inform the LSOHC at the time of the request for funding is made, 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 request supplements existing sources of funding by accomplishing work that would not have been implemented but for the appropriation, or accomplishing work at a level not attainable but for the appropriation.

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

Not Listed

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:

Year	Source of Funds	Step 1	Step 2	Step 3
Ongoing	Various: Game and Fish, OHF, NAWCA, etc.	Area wildlife staff and shallow lakes specialists will review completed projects and management activities to determine level of success and need for any follow-up actions.	Standardized shallow lake assessments will be conducted on appropriate shallow lakes to document physical results of projects or management activities.	

Activity Details:

If funded, this program will meet all applicable criteria set forth in MS 97A.056 - **Yes**

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

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, WPA, Refuge Lands, Public Waters, State Forests)**

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

Date of Final Report Submission: 10/31/2023

Federal Funding:

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

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.*

Budget Spreadsheet

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

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

Individual wetland projects were prioritized and some have been delayed to a future date. Hiring of two small prairie wetland specialists to establish a programs to assess and manage small wetlands has been postponed.

Total Amount of Request: \$ 2759000

Budget and Cash Leverage

BudgetName	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$718,000	\$0		\$718,000
Contracts	\$1,094,000	\$0		\$1,094,000
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	\$195,000	\$0		\$195,000
Professional Services	\$476,000	\$0		\$476,000
Direct Support Services	\$96,000	\$0		\$96,000
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$78,000	\$0		\$78,000
Other Equipment/Tools	\$36,000	\$0		\$36,000
Supplies/Materials	\$66,000	\$0		\$66,000
DNR IDP	\$0	\$0		\$0
Total	\$2,759,000	\$0		\$2,759,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Roving Habitat Crew - Region 4	2.00	3.00	\$385,000	\$0		\$385,000
Shallow Lakes Specialist - Windom	1.00	5.00	\$333,000	\$0		\$333,000
Total	3.00	8.00	\$718,000	\$0		\$718,000

Capital Equipment

Item Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Trimble survey unit	\$43,000	\$0		\$43,000
UTV (for mounting Trimble survey unit)	\$25,000	\$0		\$25,000
boat/trailer/motor for Shallow Lakes Specialist - Windom	\$10,000	\$0		\$10,000
Total	\$78,000	\$0		\$78,000

Amount of Request: \$2,759,000

Amount of Leverage: \$0

Leverage as a percent of the Request: 0.00%

DSS + Personnel: \$814,000

As a % of the total request: 29.50%

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

Direct Support Services is determined by a standard DNR process taking into account the amount of funding and the number of allocations made with that funding.

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

All the funding in the contract line of budget is for R/E work.

Describe and explain leverage source and confirmation of funds:

N/A

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	73	0	0	0	73
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	25,224	0	0	0	25,224
Total	25,297	0	0	0	25,297

Table 2. Total Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$160,600	\$0	\$0	\$0	\$160,600
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	\$2,598,400	\$0	\$0	\$0	\$2,598,400
Total	\$2,759,000	\$0	\$0	\$0	\$2,759,000

Table 3. Acres within each Ecological Section

Type	Metro Urban	ForestPrairie	SE Forest	Prairie	N Forest	Total
Restore	0	0	0	73	0	73
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	900	21,720	10	2,594	0	25,224
Total	900	21,720	10	2,667	0	25,297

Table 4. Total Funding within each Ecological Section

Type	Metro Urban	ForestPrairie	SE Forest	Prairie	N Forest	Total
Restore	\$0	\$0	\$0	\$160,600	\$0	\$160,600
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	\$590,500	\$246,600	\$51,800	\$1,688,800	\$20,700	\$2,598,400
Total	\$590,500	\$246,600	\$51,800	\$1,849,400	\$20,700	\$2,759,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	\$2200	\$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	\$103	\$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	\$2200	\$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	\$656	\$11	\$5180	\$651	\$0

Target Lake/Stream/River Feet or Miles

0

Parcel List

For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.

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

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	\$100,000	Yes

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?
Water Control Structure - Goethite WMA	10113231	10	\$35,000	Yes
Water Control Structure - Upper Iowa River WMA	10213223	10	\$35,000	Yes

Freeborn

Name	TRDS	Acres	Est Cost	Existing Protection?
Manchester WMA Water Control Structure	10322202	55	\$40,000	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	\$80,000	Yes
Scotch Lake Feasibility and Design	11025223	0	\$15,000	Yes

Lyon

Name	TRDS	Acres	Est Cost	Existing Protection?
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	\$37,000	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	\$55,000	Yes
Esler Marsh Water Control Structure	11221222	16	\$27,000	Yes
Paulson Marsh Water Control Structure and Dike Rehab	11121211	55	\$85,000	Yes

Todd

Name	TRDS	Acres	Est Cost	Existing Protection?
Grey Eagle Upper Impoundment Design	12733209	0	\$20,000	Yes
Staples Dike Rehabilitation Phase 3 Design	13333225	0	\$30,000	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	\$40,000	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

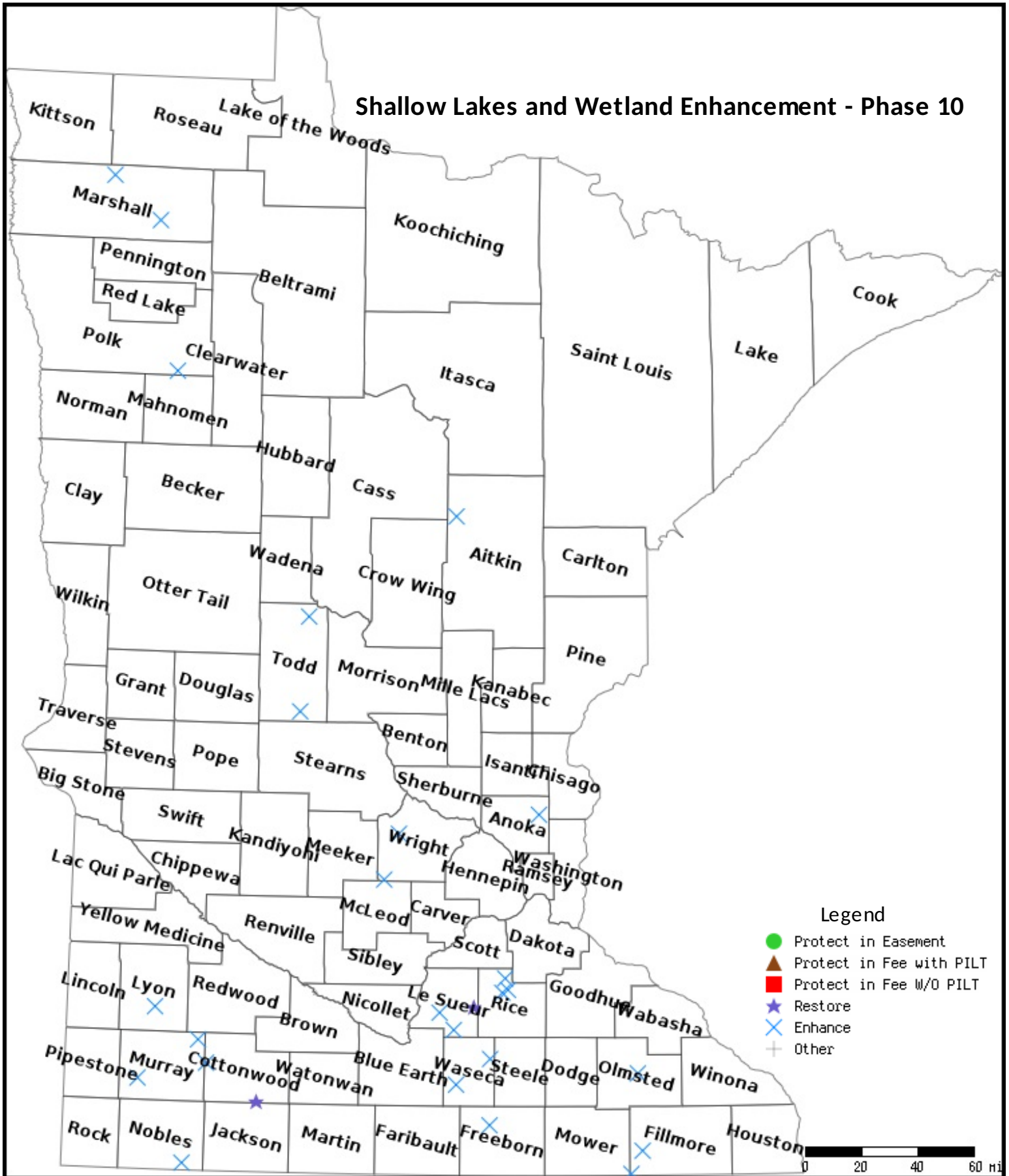
No parcels with an activity type protect and has buildings.

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