Lessard-Sams Outdoor Heritage Council
Fiscal Year 2017 / ML 2016 Request for Funding

Date: June 04, 2015

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

Funds Requested: $5,515,000

Manager's Name: Ricky Lien
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County Locations: Aitkin, Anoka, Becker, Norman, Mahnomen, Beltrami, Chippewa, Kandiyohi, Meeker, Freeborn, Isanti, Kittson, Lac Qui Parle, Mahnomen, Marshall, Meeker, Kandiyohi, Mille Lacs, Morrison, Todd, Nobles, Polk, Roseau, Todd, Wadena/Hubbard, Waseca, and Wright.

Regions in which work will take place:

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

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Wetlands

Abstract:

This proposal will accomplish shallow lake and wetland habitat work that will otherwise go unfunded. This work is called for in the Minnesota Prairie Conservation Plan, Long Range Duck Recovery Plan, and Shallow Lakes plan.

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. Throughout the state, remaining shallow lakes and wetlands provide the aforementioned critical habitat for each life stage of waterfowl and other wetland wildlife. Unfortunately these benefits are too often compromised by degraded habitat quality due to excessive runoff and invasive plants and fish. Additionally, wetlands continue to be lost or degraded by ongoing ditching and tiling from agriculture and other forces. In our remaining wetland habitat, only about one prairie wetland in five exhibits good quality vegetation while just under a third provide good habitat for invertebrates.

There are three components to this proposal, each intended to further shallow lake and wetland restoration and management.

ROVING HABITAT CREW - The Prairie Plan estimates over 150,000 acres of wetlands need management action just within the identified

prairie core areas. 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 Region 1 Roving Habitat Crew in northwest Minnesota and will allow them to accomplish wetland habitat work that will include, but not be limited to, managing water levels, maintaining fish barriers and other wetland infrastructure, inducing winterkill of fish, controlling invasive plants and fish, and encouraging native plant assemblages.

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 invasive species control, water level manipulation, and wild rice seeding. 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. Nine projects will target the management of dense monotypic stands of cattails that are negatively impacting the value of wetland for wildlife, two projects would seed wild rice to reestablish this valuable aquatic plant, eleven projects involve the replacement of failing wetland structures, one project will address a poorly functioning outlet channel for a 4700-acre shallow lake, two wetland restorations totalling 134 acres will be undertaken, and, finally, two moist soil projects will be constructed.

SHALLOW LAKES PROGRAM - The Minnesota Shallow Lakes Plan identified that the overall water quality and subsequent habitat condition of shallow lakes in our state is poor. This deteriorated quality has dramatically reduced wildlife use. The management of shallow lakes in Minnesota is an example of how dedicated staff working with sufficient resources can successfully implement a clear strategic plan. Where we have actively managed shallow lakes for wildlife habitat the response has been very positive, at times spectacular. Management success was limited until an investment was made in dedicated shallow lake specialists to support our area wildlife staff. This work includes conducting annual habitat evaluations on lakes across the state, guiding the formal designation of wildlife management lakes, waterfowl feeding and resting areas, refuges and sanctuaries, identifying lake management problems, recommending lake management strategies and developing management plans, and, alongside property managers, initiating shallow lake management. Past OHF funding made it possible to expand the number of shallow lake specialists available to assess, facilitate and implement shallow lake habitat work. This proposal would continue shallow lake program staff funding. New to this proposal, the Shallow Lakes Program looks to expand by one staff person in the prairie region of southwest Minnesota to better support objectives of the Minnesota Prairie Conservation Plan. Note that in the past year the Shallow Lakes Program has celebrated the designation of the 50th Wildlife Lake, designated a record number of shallow lakes in a one-year period, and been recognized with a DNR Commissioner's Award and a USFWS Blue-winged Teal Award for the quality and scope of its work.

Program managers may add, delete, and substitute projects on the approved 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.

Crops:

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

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.

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

Wetland restoration, along with effective management and maintenance of existing wetlands and shallow lakes is critical to provide habitat for wetland wildlife, plus the other benefits that accrue for healthy wetland ecosystems. These projects implement work identified in numerous conservation plans, including the recently produced Minnesota Prairie Conservation Plan.

Describe the science based planning and evaluation model used:

Shallow lakes in Minnesota are monitored and evaluated by area wildlife staff and dedicated shallow lake specialists who both identify shallow lakes needing management action and monitors the lakes post-management to assess effectiveness. The projects in this proposal were proposed by area wildlife and reviewed by regional and program specialists.

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

Which LSOHC section priorities are addressed in this proposal:

Prairie:

- Protect, enhance, and restore migratory habitat for waterfowl and related species, so as to increase migratory and breeding success
- Not Listed

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 from long-term or permanent endangerment from invasive species

Relationship to other funds:

- Not Listed

How does this proposal accelerate or supplement your current efforts in this area:

While existing funds such as waterfowl stamp or bonding are used where and when possible to implement wetland and shallow lake restoration, maintenance, and management projects, a backlog of unfunded projects exists. Habitat conservation plans such as the Minnesota Long Range Duck Recover Plan and the Minnesota shallow lake plan, and more recently the Minnesota Prairie Conservation Plan, identify needed work and call for accelerated and expanded efforts. Programmatic proposals such as this allow for progress towards wetland and shallow lake goals that would otherwise be unattainable.

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:

The management of enhanced wetlands and shallow lakes once construction is completed will fall on existing staff of the Department of Natural Resources. These staff are funded through license fees and legislative appropriations. 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.

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

Year	Source of Funds	Step 1	Step 2	Step 3
Ongoing	a variety of Game and Fish funding	Area wildlife staff and shallow lake specialists will review completed projects and management actiivities to determine level of success and the need for any followup 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 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, Public Waters, State Forests, no)**

Accomplishment Timeline:

Activity	Approximate Date Completed
Wetland Habitat Roving Crew enhancement work on wetlands	June 2020
Nine cattail control projects	September 2017
Two wild rice seeding projects	September 2017
Eleven design & construct structures/dikes	June 2020
Two construct moist soil management projects	June 2020
Restore two wetlands	June 2020
Shallow lakes management and assessments	June 2020

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:

- Wetland and upland complexes will consist of native prairies, restored prairies, quality grasslands, and restored 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.*

Programs in metropolitan urbanizing region:

- Protected habitats will hold wetlands and shallow lakes open to public recreation and hunting *Intensive wetland management and habitat infrastructure 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

Total Amount of Request: $5,515,000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	$1,535,000	$0		$1,535,000
Contracts	$2,415,000	$0		$2,415,000
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	$290,000	$0		$290,000
Professional Services	$418,000	$0		$418,000
Direct Support Services	$440,000	$0		$440,000
DNR Land Acquisition Costs	$0	$0		$0
Capital Equipment	$175,000	$0		$175,000
Other Equipment/Tools	$15,000	$0		$15,000
Supplies/Materials	$227,000	$0		$227,000
DNR IDP	$0	$0		$0
Total	$5,515,000	$0	-	$5,515,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Wetland roving crew laborers	2.00	4.00	$475,000	$0		$475,000
Shallow Lake Technicians	4.00	4.00	$1,060,000	$0		$1,060,000
Total	6.00	8.00	$1,535,000	$0	-	$1,535,000

Capital Equipment

Item Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
MarshTracker	$150,000	$0		$150,000
TerraTorch	$25,000	$0		$25,000
Total	$175,000	$0	-	$175,000

Amount of Request: $5,515,000

Amount of Leverage: $0

Leverage as a percent of the Request: 0.00%

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	136	0	0	0	136
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	11,520	0	0	0	11,520
Total	11,656	0	0	0	11,656

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	$418,400	$0	$0	$0	$418,400
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	$5,096,600	$0	$0	$0	$5,096,600
Total	$5,515,000	$0	$0	$0	$5,515,000

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	136	0	136
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	554	1,923	0	2,586	6,457	11,520
Total	554	1,923	0	2,722	6,457	11,656

Table 4. Total Requested Funding within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	$0	$0	$0	$418,400	$0	$418,400
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	$622,700	$1,484,800	$0	$2,009,300	$979,800	$5,096,600
Total	$622,700	$1,484,800	$0	$2,427,700	$979,800	$5,515,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	$3,076	$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	$442	$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	$3,076	$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	$1,124	$772	$0	$777	$152

Target Lake/Stream/River Feet or Miles

0

Parcel List

Section 1 - Restore / Enhance Parcel List

Aitkin

Name	TRDS	Acres	Est Cost	Existing Protection?
Swamp Lake	04625226	276	$72,000	Yes

Anoka

Name	TRDS	Acres	Est Cost	Existing Protection?
Carlos Avery WMA	03222218	410	$155,000	Yes

Becker, Norman, Mahnomen

Name	TRDS	Acres	Est Cost	Existing Protection?
Detroit Lakes Cattail Spraying	14345224	100	$10,000	Yes

Beltrami

Name	TRDS	Acres	Est Cost	Existing Protection?
Puposky Lake	14933208	4,700	$60,000	Yes

Chippewa, Kandiyohi, Meeker

Name	TRDS	Acres	Est Cost	Existing Protection?
New London Area cattail control	11738215	300	$60,000	Yes

Freeborn

Name	TRDS	Acres	Est Cost	Existing Protection?
Carex Slough Wetland Restoration	10319214	22	$95,000	Yes

Isanti

Name	TRDS	Acres	Est Cost	Existing Protection?
Cranberry WMA	03724204	130	$180,000	Yes
Dalbo MSU	03725210	104	$410,000	Yes

Kittson

Name	TRDS	Acres	Est Cost	Existing Protection?
Twin Lakes WMA Cattail treatment	15945210	450	$14,000	Yes

Lac Qui Parle

Name	TRDS	Acres	Est Cost	Existing Protection?
Haydenville Control Structures	11845233	112	$207,000	Yes
Riverside Water Control Structure	11743234	23	$90,000	Yes

Mahnomen

Name	TRDS	Acres	Est Cost	Existing Protection?
Waubun Marsh Water control structure	14342234	20	$105,000	Yes

Marshall

Name	TRDS	Acres	Est Cost	Existing Protection?
Moose River Moist Soils Unit	15840219	26	$381,000	Yes
Thief Lake Cattail Control	15840219	45	$2,000	Yes

Meeker, Kandiyohi

Name	TRDS	Acres	Est Cost	Existing Protection?
New London Area Wild Rice Restoration	11932232	45	$5,000	Yes

Mille Lacs

Name	TRDS	Acres	Est Cost	Existing Protection?
Cattail Control Mille Lacs WMA	14125229	85	$12,000	Yes
Water Control Replacement (Mille Lacs-Jones & Rum River)	04026234	1,015	$175,000	Yes
Wild Rice Seeding	04026234	155	$17,000	Yes

Morrison, Todd

Name	TRDS	Acres	Est Cost	Existing Protection?
Little Falls Cattail Control	12735204	327	$65,000	Yes

Nobles

Name	TRDS	Acres	Est Cost	Existing Protection?
Lone Tree Water Control Structure	10440222	114	$290,000	Yes

Polk

Name	TRDS	Acres	Est Cost	Existing Protection?
Hovland Marsh Structure	14740227	75	$75,000	Yes

Roseau

Name	TRDS	Acres	Est Cost	Existing Protection?
RRWMA Pool Cattail Management	16343210	579	$37,000	Yes

Todd

Name	TRDS	Acres	Est Cost	Existing Protection?
Aurzada WMA Structure & Dike	12735208	10	$132,000	Yes
Ruff-Nik WMA (Paycer Pool) Wetland Enhancement	13132225	26	$162,000	Yes

Wadena/Hubbard

Name	TRDS	Acres	Est Cost	Existing Protection?
Huntersville/Kabekona Aerial Cattail Spraying	13833214	70	$7,000	Yes

Waseca

Name	TRDS	Acres	Est Cost	Existing Protection?
Silver Lake Dam and Fish Barrier	10621219	397	$162,000	Yes

Wright

Name	TRDS	Acres	Est Cost	Existing Protection?
Woodland WMA Cattail Control	11826201	40	$8,000	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

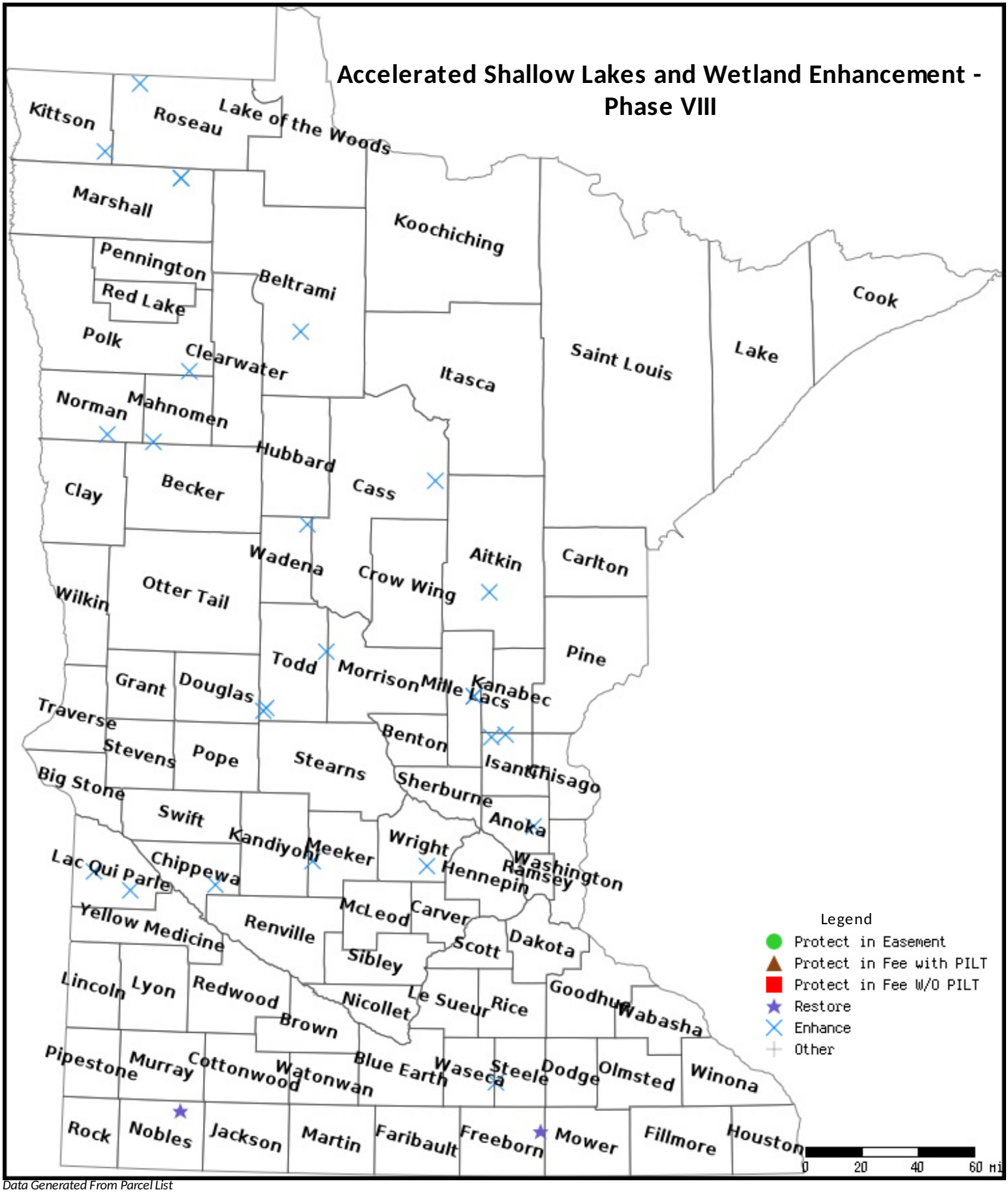
Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

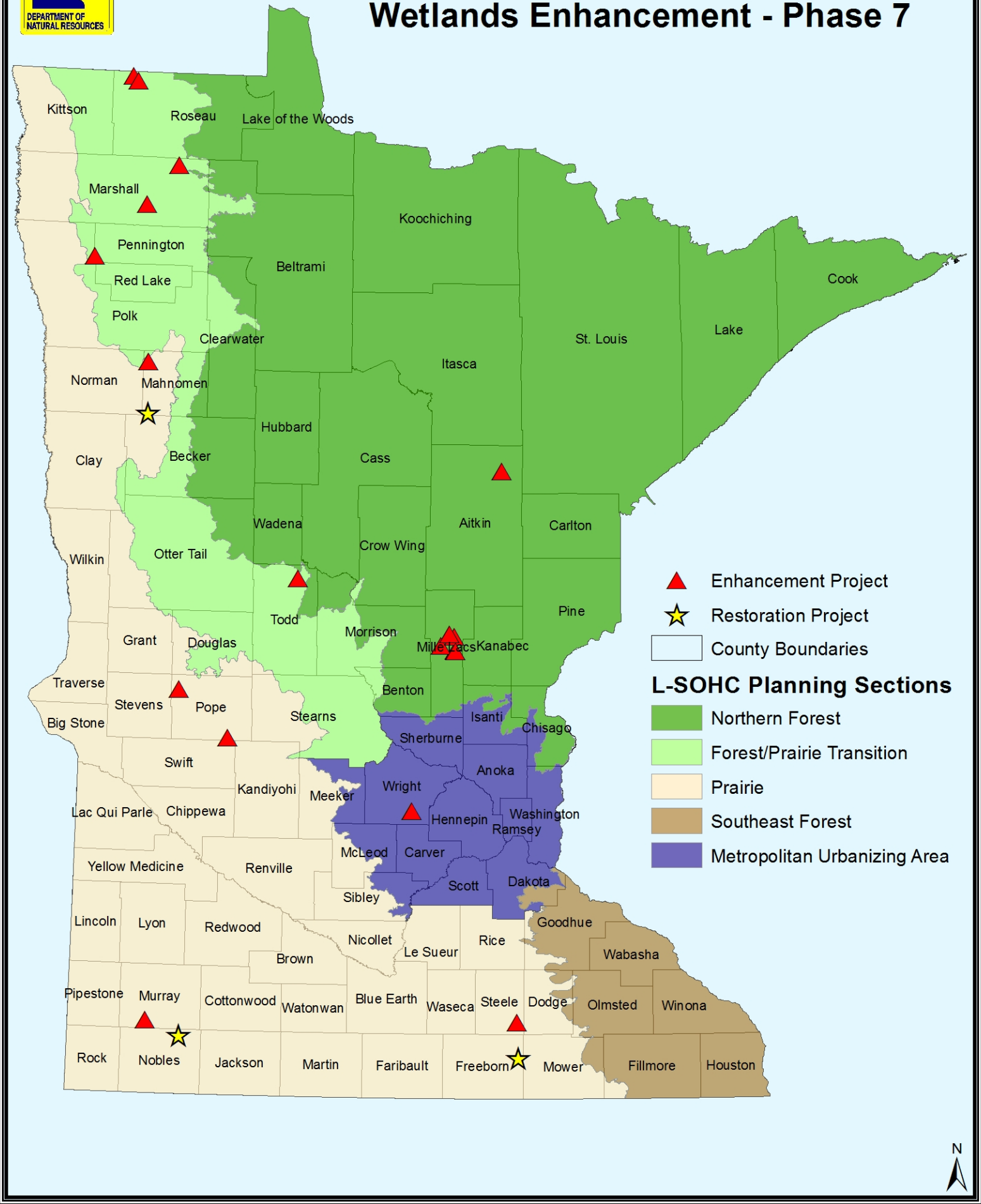
No parcels with an other activity type.

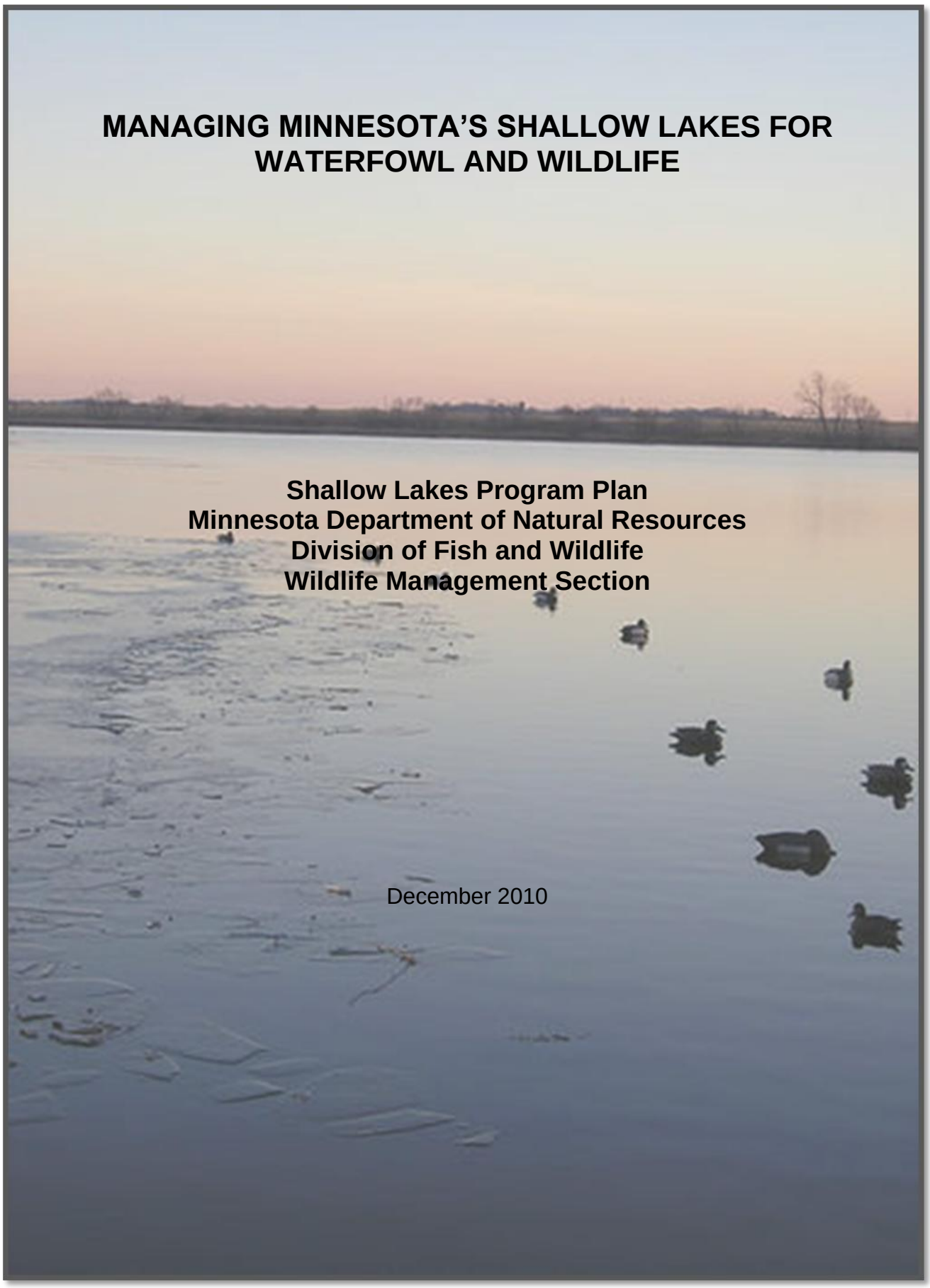
Parcel Map



Data Generated From Parcel List

Accelerated Shallow Lakes and Wetlands Enhancement - Phase 7





MANAGING MINNESOTA'S SHALLOW LAKES FOR WATERFOWL AND WILDLIFE

Shallow Lakes Program Plan
Minnesota Department of Natural Resources
Division of Fish and Wildlife
Wildlife Management Section

December 2010

*Note: This 56 page plan will be made available upon request