Lessard-Sams Outdoor Heritage Council
Laws of Minnesota 2015 Accomplishment Plan

Date: October 16, 2014

Program or Project Title: Aquatic Habitat Protection, Restoration, and Enhancement - Phase VII

Funds Recommended: $ 4,540,000

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Legislative Citation:

Appropriation Language:

County Locations: Becker, Beltrami, Blue Earth, Cass, Clay, Crow Wing, Dakota, Douglas, Fairbault, Fillmore, Goodhue, Hubbard, Itasca, Jackson, Lake, Le Sueur, Lincoln, Marshall, Martin, Meeker, Mille Lacs, Morrison, Murray, Nobles, Otter Tail, Pine, Redwood, Scott, St. Louis, Todd, Washington, and Winona.

Regions in which work will take place:

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

Activity types:

- Enhance
- Protect in Easement
- Protect in Fee
- Restore

Priority resources addressed by activity:

- Forest
- Habitat
- Prairie

Abstract:

We will use a programmatic approach to achieve prioritized aquatic habitat protection, restoration, and enhancement of lakes and streams across all the LSOHC planning regions of Minnesota.

Design and scope of work:

Minnesota's lakes and rivers have been degraded and continue to be threatened by the loss of natural lands to agricultural, recreational, and urban development. These changes affect water quality and habitat that is critical for fish. This proposal addresses habitat needs at numerous locations around the state through acquisition of key parcels to protect high-quality lakes and rivers from

degradation, and enhancement/restoration projects that will contribute to improve fishing and benefit nongame species.

This proposal uses a programmatic approach to achieve prioritized aquatic habitat protection, restoration, and enhancement for lakes, trout streams, and rivers across Minnesota, building on the existing efforts and expertise in the Minnesota Department of Natural Resources (MN DNR). We propose to protect 7 miles of shoreline on lakes and streams, enhance 625 acres of land on Aquatic Management Areas (AMA's), repair flood damage on 6 acres along SE Minnesota trout streams, and conduct restoration and enhancement projects on 8 acres of river habitat. The benefits of the river restoration and enhancement projects are greatly understated by the acreage of the project footprints, especially in the case of restored or enhanced fish passage. Restoring passage allows fish access to habitat and increases reproductive potential for fish populations upstream and downstream of projects. For example, removal of a dam on the Pomme de Terre River allowed 9 species, including walleye and channel catfish formerly not found above the dam, to repopulate 45 miles of river. The area benefiting from work as proposed on 8 acres will be over 1,590 acres.

Aquatic habitat protection will occur within the AMA designation of the Outdoor Recreation System. AMA's have strong support from conservation groups and anglers because of the multiple benefits of habitat protection and recreational access they provide. The AMA program currently has more than 830 miles of shoreline in over 330 AMA's that provide permanent protection of riparian habitat, perpetuate fish and wildlife populations, safeguard water quality, and offer recreational access. Acquisition of AMA's will be a mix of fee title and conservation easements. We propose to focus acquisition for AMA's in Northeast Minnesota trout streams, Southeast Minnesota trout streams, and for lakes in LSOHC's Northern Forest Planning Region.

A couple of significant changes have been made for this year's request for aquatic habitat protection. In the Northern Forest, we will follow the framework of MN DNR's Fish Habitat Plan, which considers existing threats and levels of protection and puts resources where they have the most significant conservation potential. Prioritization of parcels for acquisition will be based on criteria including ecological value, fishery quality, and existing watershed protection. Watersheds that can reach a threshold of 75% of land in permanent protection have a greater likelihood of maintaining water quality and fish habitat. In north-central Minnesota development pressures are high, but many high-quality lakes have watersheds with existing public lands or conservation easements where additional protection could achieve the 75 % threshold. Prioritization will focus protection on lake watersheds where that threshold is attainable, helping to permanently maintain the best aquatic habitat in Minnesota. To accomplish the necessary level of watershed protection, we will expand the range of protection options to include the Forests for the Future program. This program purchases permanent conservation easements on private forest land that continues to function as working forest, subject to a management plan employing best management practices. We are taking this approach because an exclusive focus on riparian lands is not sufficient by itself to protect aquatic habitat from impacts in the watershed, and because easements are more cost-effective than outright purchase of land. This proposal requests funding for 2 years to continue support for acquisitions, including trout stream easements, Northern Forest AMA's, and Forests for the Future easements. Work will include development of stewardship plans and a prioritized parcel list for targeted watersheds. Local government units and non-governmental conservation organizations share an interest in conserving aquatic values in lakes of the Northern Forest Planning Region. All acquisition work will be coordinated with partners to ensure that this proposal complements rather than competes with other conservation efforts in the region.

Stream habitat restoration and enhancement will be based on proven methods and DNR experience with multiple projects. DNR has worked on large-scale river and stream restoration projects since 1998 and has completed or assisted in more than 100 projects to address issues including ditching, straightening, flood damage and loss of habitat complexity. Stream habitat projects address key components including fish and wildlife habitat, water quality, connectivity (to floodplain and to upstream/downstream reaches), and hydrology.

A key component of our stream habitat proposal is providing fish passage at in-stream barriers such as dams to reconnect fish and other aquatic species to habitats essential for spawning and other life stages. Monitoring past projects has documented immediate and significant population changes when passage is restored. For example, post-project monitoring on the Ottertail River documented 34 fish species moving upstream, from small minnows to a 48-inch musky. Dam removal, dam modification, and culvert replacement are examples of projects restoring passage. Although the per-acre cost based on project footprint is high, the benefits reach a far greater area and justify the investment. All proposed fish passage projects have been determined not to increase the potential for invasive species.

Trout streams in the Lanesboro area sustained damage in recent flooding. The funding request includes enhancement work to repair damage on 6 acres.

Enhancement projects on AMA's are based on a prioritized list generated by recent inventory and assessment. Previous LSOHC funding of roving crews to create management plans for AMA's has identified management needs. Projects will include invasive species removal, controlled burns on prairie parcels, establishing native plant species, and shore stabilization. We request continued funding of a half-time position for years focused on AMA enhancement work. All enhancement work will follow guidance on pollinators. AMA's have permanent protection and are open to recreational use as outlined in MR 6270. Project prioritization is based on management need.

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:

Acquisition of easements and fee title AMA's will target waters with high value fisheries. Trout streams in SE and NE Minnesota support important fisheries, and the riparian habitats protected support numerous wildlife species. Lakes in the north-central forest region support diverse fisheries including walleye, bass, northern pike, muskellunge and panfish. Lakes targeted for watershed protection may include coldwater fisheries (lake trout or cisco). Fishery quality is an important criterion in the prioritization process. High quality lakes in the region also support sensitive non-game fish species. Restoration of fish passage benefits multiple fish species by providing access to habitat for all life stages, including spawning areas and benefitting fisheries upstream and downstream of passage projects. Stream channel enhancement work stabilizes channels, providing habitat benefits including improved water quality for diverse fish communities.

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

Aquatic habitats in Minnesota are stressed by multiple factors on the landscape. Subdivision and development lead to direct impacts on riparian and littoral habitat, and to runoff that leads to increased nutrient, sediment, and contaminant inputs to state waters. Acquisition provides permanent protection to ecologically and economically important fisheries. Restoration and enhancement work provides habitat necessary for self-sustaining fish populations. Trout stream easements provide habitat protection, access for habitat improvement, and angler access.

Describe the science based planning and evaluation model used:

All proposed work is part of a programmatic approach to aquatic conservation in Minnesota. The prioritization framework for acquisition in the north central forested region of the state is described in the MN DNR Fish Habitat Plan. Trout stream easement acquisition is based on fishery quality and the potential to connect existing easements. Stream restoration and enhancement projects are prioritized by MN DNR EWR and FAW Division staff.

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

- H2 Protect critical shoreland of streams and lakes
- H6 Protect and restore critical in-water habitat of lakes and streams

Which other plans are addressed in this proposal:

- Minnesota DNR AMA Acquisition Plan
- Minnesota DNR Fish Habitat Plan

Which LSOHC section priorities are addressed in this proposal:

Forest / Prairie Transition:

- Protect, enhance, and restore wild rice wetlands, shallow lakes, wetland/grassland complexes, aspen parklands, and shoreland that provide critical habitat for game and nongame wildlife

Metro / Urban:

- Protect, enhance, and restore riparian and littoral habitats on lakes to benefit game and nongame fish species

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:

- Restore or enhance habitat on public lands

Southeast Forest:

- Protect, enhance, and restore habitat for fish, game, and nongame wildlife in rivers, cold-water streams, and associated upland habitat

Relationship to other funds:

- Not Listed

Work funded by LSOHC and by the Clean Water Fund (CWF) protects and restores aquatic habitat. Clean water is a component of fish habitat. Water quality variables such as oxygen determine suitability for fish. Sedimentation directly changes substrate composition, and determines aquatic plant species composition and extent of growth. Section of Fisheries involvement in the CWF Watershed Restoration and Protection Strategies (WRAPS) process helps identify projects eligible for CWF. CWF supports DNR Section of Fisheries monitoring using biological indicators, which are used to track condition of aquatic communities and are part of the evaluation for success of LSOHC funded projects. CWF supported projects restore connectivity, enhance stream channel stability, and restore natural hydrographs. Both funds contribute to sustainable fisheries. CWF complements, but does not directly leverage this proposal.

This proposal does not identify other funding sources as leverage; state agencies cannot commit funds prior to legislative appropriation. Historically, Outdoor Heritage appropriations for acquisition by DNR have been matched by donations, Reinvest in Minnesota and Surcharge at approximately 25% (1 dollar of match to 4 dollars of OHF).

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

MN DNR conducts habitat protection, restoration, and enhancement projects for aquatic habitats. Limitations of staffing and funding limit the amount of habitat work that can be accomplished. Other program priorities include monitoring, regulations, stocking, and outreach. LSOHC funded projects have increased capacity and allowed acceleration of habitat work. The work funded by LSOHC would be unlikely to be completed without this funding. With LSOHC funding, potential projects continue to exceed available resources.

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

Appropriation Year	Source	Amount
FY 2009	Acquisition, all sources except LSOHC	$1,740,000
FY 2012	Acquisition, all sources except LSOHC	$230,000
FY 2012	Shoreland restoration and lake habitat, all sources except LSOHC	$1,133,000
FY 2012	Stream habitat projects, all sources except LSOHC	$678,000
FY 2013	Acquisition, all sources except LSOHC	$456,000
FY 2013	Shoreland restoration and lake habitat, all sources except LSOHC	$2,147,000
FY 2013	Stream habitat projects, all sources except LSOHC	$705,000
FY 2009	Shoreland restoration and lake habitat, all sources except LSOHC	$1,020,000
FY 2009	Stream habitat projects, all sources except LSOHC	$762,000
FY 2010	Acquisition, all sources except LSOHC	$264,000
FY 2010	Shoreland restoration and lake habitat, all sources except LSOHC	$991,000
FY 2010	Stream habitat projects, all sources except LSOHC	$545,000
FY 2011	Acquisition, all sources except LSOHC	$602,000
FY 2011	Shoreland restoration and lake habitat, all sources except LSOHC	$855,000
FY 2011	Stream habitat projects, all sources except LSOHC	$217,000

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

Conservation easements will be monitored by DNR staff. Standards for easement monitoring will follow MN DNR Operation Order 128, which specifies dates for completion of baseline surveys, schedule for subsequent monitoring, and procedures for developing guidance for stewardship and enforcement. Fee title AMA's will be periodically inventoried by Section of Fisheries Staff to determine management needs. Stream channel work will follow principals of natural channel design, allowing long-term sustainability of projects.

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

Year	Source of Funds	Step 1	Step 2	Step 3
First year post-project	Game and Fish Fund, LSOHF, or Heritage Enhancement Account	Control invasive plants to allow plantings to establish. This may involve mowing, herbicide treatment, or hand-pulling. If seedlings are planted, periodic watering may be needed.	Assess whether structural elements (weirs, in-stream habitat structures, erosion control) are functioning properly.	Make adjustments or maintain projects using DNR staff or contracting outside organizations/companies.
Second year post-project	Game and Fish Fund, LSOHF, or Heritage Enhancement Account	Control invasive plants to allow plantings to establish. This may involve mowing, herbicide treatment, or hand-pulling.	Assess whether structural elements (weirs, in-stream habitat structures, erosion control) are functioning properly.	Make adjustments or maintain projects using DNR staff or contracting outside organizations/companies.
Third year post-project	Game and Fish Fund, LSOHF, or Heritage Enhancement Account	Control invasive plants to allow plantings to establish. This may involve mowing, herbicide treatment, or hand-pulling.	Assess whether structural elements (weirs, in-stream habitat structures, erosion control) are functioning properly.	Make adjustments or maintain projects using DNR staff or contracting outside organizations/companies.
Fourth year-post project	Game and Fish Fund, LSOHF, or Heritage Enhancement Account	For grassland vegetation projects, a prescribed burn may be needed to control woody encroachment.	Once stream habitat projects have become vegetated, they should be self-sustaining and require no further maintenance.	

Activity Details:

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

Will local government approval be sought prior to acquisition - **No**

> The DNR is not required to seek local government approval when acquiring land for Aquatic Management Areas (AMA). The DNR will inform the County Board in writing when an AMA parcel is acquired. Local government approval is not required for Forests for the Future easements.

Is the land you plan to acquire free of any other permanent protection - **Yes**

Is this land currently open for hunting and fishing - **No**

Will the land be open for hunting and fishing after completion - **Yes**

> Use of AMA's follows Minnesota Rules Chapter 6270.0200. AMA parcels acquired in fee will be open to fishing, and are generally open to hunting unless otherwise restricted by local ordinance. Easement AMA's are open to fishing. Private forest conservation easements (Forests for the Future) will not be open to public use.

Will the eased land be open for public use - **Yes**

> Trout stream conservation easement AMA's are open to fishing. Fee title AMA's are open to recreational uses. Private forest conservation easements are not open to public use.

Is the land you plan to acquire free of any other permanent protection - **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 (AMA, Public Waters, no)**

Accomplishment Timeline:

Activity	Approximate Date Completed
Acquire conservation easements on SE Minnesota trout streams	June 30, 2018
Acquire conservation easements on NE Minnesota trout streams	June 30, 2018
Acquire AMA parcels on lakes in Northern Forest Planning region	June 30, 2018
Acquire Forests for the Future conservation easements	June 20, 2018
Enhancement projects on AMAs	June 30, 2020
Enhancement of Lanesboro area trout streams with flood damage	June 30, 2020
Stream restoration projects	June 30, 2020
Stream enhancement projects	June 30, 2020

Date of Final Report Submission: 7/31/2020

Federal Funding:

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

Outcomes:

Programs in the northern forest region:

- Protection of aquatic habitat in lakes with high quality fisheries. Fisheries surveys and biological indicators based on fish and aquatic plant communities are monitored by MN DNR, and provide an assessment of lake condition.

Programs in forest-prairie transition region:

- Enhancement of aquatic management areas improves riparian habitat and water quality/aquatic habitat. Fisheries and fish communities are monitored by DNR Section of Fisheries.

Programs in metropolitan urbanizing region:

- Enhancement of aquatic management areas improves riparian habitat and water quality/aquatic habitat. Fisheries and fish communities are monitored by DNR Section of Fisheries.

Programs in southeast forest region:

- Rivers, streams, and surrounding vegetation provide corridors of habitat *Stream corridors protected by trout stream easements will be monitored by MN DNR. Trout fisheries are sampled by MN DNR Section of Fisheries.*

Programs in prairie region:

- Enhancement of aquatic management areas and restoration/enhancement of streams improves riparian habitat and water quality/aquatic habitat. Fisheries and fish communities are monitored by DNR Section of Fisheries.

Budget Spreadsheet

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

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

All programs were reduced to focus on prioritized projects. The North Central Forest habitat protection was maintained at a disproportionally higher level of funding needed to achieve program goals in targeted watersheds. This required disproportionally larger cuts in other programs (stream habitat enhancement, stream easement acquisition). One position was eliminated.

Total Amount of Request: $ 4540000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	$75,000	$0		$75,000
Contracts	$2,170,000	$0		$2,170,000
Fee Acquisition w/ PILT	$290,000	$0		$290,000
Fee Acquisition w/o PILT	$0	$0		$0
Easement Acquisition	$1,230,000	$0		$1,230,000
Easement Stewardship	$130,000	$0		$130,000
Travel	$10,000	$0		$10,000
Professional Services	$213,000	$0		$213,000
Direct Support Services	$182,000	$0		$182,000
DNR Land Acquisition Costs	$0	$0		$0
Capital Equipment	$0	$0		$0
Other Equipment/Tools	$0	$0		$0
Supplies/Materials	$240,000	$0		$240,000
DNR IDP	$0	$0		$0
Total	$4,540,000	$0		$4,540,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
AMA enhancement contracting	0.50	2.00	$75,000	$0		$75,000
Total	0.50	2.00	$75,000	$0		$75,000

Amount of Request: $4,540,000

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	0	0	0	8	8
Protect in Fee with State PILT Liability	0	0	0	34	34
Protect in Fee W/O State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	490	82	572
Enhance	0	200	0	437	637
Total	0	200	490	561	1,251

Table 1b. How many of these Prairie acres are Native Prairie?

Type	Native Prairie
Restore	0
Protect in Fee with State PILT Liability	0
Protect in Fee W/O State PILT Liability	0
Protect in Easement	0
Enhance	0
Total	0

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	$0	$0	$0	$1,824,000	$1,824,000
Protect in Fee with State PILT Liability	$0	$0	$0	$347,000	$347,000
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$936,000	$625,000	$1,561,000
Enhance	$0	$83,000	$0	$725,000	$808,000
Total	$0	$83,000	$936,000	$3,521,000	$4,540,000

Table 3. Acres within each Ecological Section

Type	Metro Urban	Forest Prairie	SE Forest	Prairie	N Forest	Total
Restore	0	0	0	1	7	8
Protect in Fee with State PILT Liability	0	0	0	0	34	34
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	42	0	530	572
Enhance	65	125	52	240	155	637
Total	65	125	94	241	726	1,251

Table 4. Total Requested Funding within each Ecological Section

Type	Metro Urban	Forest Prairie	SE Forest	Prairie	N Forest	Total
Restore	$0	$0	$0	$1,282,000	$542,000	$1,824,000
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$347,000	$347,000
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$335,000	$0	$1,226,000	$1,561,000
Enhance	$35,000	$68,000	$135,000	$129,000	$441,000	$808,000
Total	$35,000	$68,000	$470,000	$1,411,000	$2,556,000	$4,540,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	$0	$0	$0	$228000
Protect in Fee with State PILT Liability	$0	$0	$0	$10206
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0
Protect in Easement	$0	$0	$1910	$7622
Enhance	$0	$415	$0	$1659

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	$0	$0	$0	$1282000	$77429
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$10206
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$7976	$0	$2313
Enhance	$538	$544	$2596	$538	$2845

Target Lake/Stream/River Feet or Miles

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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

Becker

Name	TRDS	Acres	Est Cost	Existing Protection?
Bog Lake AMA	14036235	10	$4,000	Yes
Bucks Mill AMA	13842236	15	$6,000	Yes
Long Lake AMA	13941231	10	$4,000	Yes
Straight River AMA	14036235	50	$20,000	Yes
Upper Cormorant AMA	13843205	5	$2,000	Yes

Beltrami

Name	TRDS	Acres	Est Cost	Existing Protection?
Balm Lake AMA	15035222	54	$21,600	Yes
Big Turtle Lake AMA	14833222	10	$4,000	Yes
Blackduck Lake AMA	14931210	5	$2,000	Yes
Knutson Dam	14630221	2	$450,000	Yes
Turtle River Lake AMA	14832233	10	$4,000	Yes

Blue Earth

Name	TRDS	Acres	Est Cost	Existing Protection?
Ida Lake AMA	10528212	40	$16,000	Yes

Cass

Name	TRDS	Acres	Est Cost	Existing Protection?
Pine River Dam modification	13829231	1	$850,000	Yes

Clay

Name	TRDS	Acres	Est Cost	Existing Protection?
Whisky Creek fish bypass	13745230	1	$370,000	Yes

Crow Wing

Name	TRDS	Acres	Est Cost	Existing Protection?
Cayuna AMA	13826231	5	$20,000	Yes
White Sand AMA	13329201	9	$3,400	Yes

Dakota

Name	TRDS	Acres	Est Cost	Existing Protection?
Vermillion River AMA	11418220	40	$16,000	Yes

Douglas

Name	TRDS	Acres	Est Cost	Existing Protection?
Geneva Lake AMA	12837216	10	$4,000	Yes

Fairbault

Name	TRDS	Acres	Est Cost	Existing Protection?
Blue Earth River AMA	10428221	100	$40,000	Yes

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?
Etna Creek AMA	10213236	30	$12,000	Yes

Goodhue

Name	TRDS	Acres	Est Cost	Existing Protection?
Gemini AMA	11217207	40	$16,000	Yes
Hay Creek AMA	11215226	10	$4,000	Yes

Hubbard

Name	TRDS	Acres	Est Cost	Existing Protection?
Grace Lake AMA	14532205	4	$1,700	Yes

Itasca

Name	TRDS	Acres	Est Cost	Existing Protection?
Deer Creek Dam modification	06224217	1	$210,000	Yes

Jackson

Name	TRDS	Acres	Est Cost	Existing Protection?
Loon Lake AMA	10136225	4	$20,000	Yes

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
Stewart River Restoration	05311215	7	$500,000	Yes

Le Sueur

Name	TRDS	Acres	Est Cost	Existing Protection?
Horseshoe Lake AMA	10923212	75	$30,000	Yes

Lincoln

Name	TRDS	Acres	Est Cost	Existing Protection?
Stay Lake AMA	11144229	25	$18,800	Yes

Marshall

Name	TRDS	Acres	Est Cost	Existing Protection?
Frank Rose AMA	15750230	54	$21,600	Yes

Martin

Name	TRDS	Acres	Est Cost	Existing Protection?
Clam Lake AMA	10332210	7	$5,100	Yes

Meeker

Name	TRDS	Acres	Est Cost	Existing Protection?
Jennie Lake AMA	11829233	6	$4,400	Yes
Minniebelle Lake AMA	11831212	16	$11,700	Yes
N Fork Crow River AMA	12132235	10	$4,000	Yes
Thompson Lake AMA	11732217	10	$4,000	Yes

Mille Lacs

Name	TRDS	Acres	Est Cost	Existing Protection?
Chuck Davis AMA	03626203	10	$4,000	Yes

Morrison

Name	TRDS	Acres	Est Cost	Existing Protection?
McDougall AMA	03932229	10	$4,000	Yes
Platte River Dam removal	04229207	1	$50,000	Yes
Shamineau AMA	13231216	10	$4,000	Yes

Murray

Name	TRDS	Acres	Est Cost	Existing Protection?
Buttermilk Run AMA	10840233	20	$15,000	Yes

Nobles

Name	TRDS	Acres	Est Cost	Existing Protection?
Adrian Dam modification	10243213	1	$310,000	Yes

Otter Tail

Name	TRDS	Acres	Est Cost	Existing Protection?
Dead River-Walker Lake AMA	13440202	20	$8,000	Yes
Eagle Lake AMA	13140215	3	$1,200	Yes
Phelps Mill fish bypass	13441235	1	$300,000	Yes

Pine

Name	TRDS	Acres	Est Cost	Existing Protection?
Grindstone R. dam modification	04121224	1	$350,000	Yes

Redwood

Name	TRDS	Acres	Est Cost	Existing Protection?
Cottonwood R. Dam removals	10936226	1	$900,000	Yes
Riverside AMA	11335212	75	$30,000	Yes
Sanborn AMA	03627228	10	$4,000	Yes
Whispering Ridge AMA	11436230	75	$30,000	Yes

Scott

Name	TRDS	Acres	Est Cost	Existing Protection?
Eagle Creek AMA	11521218	20	$8,000	Yes

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Chester Creek Dam removal	05014215	9	$411,000	Yes
Mission Creek restoration	04815208	12	$2,000,000	Yes
Tischer Creek dam removal	05014202	49	$1,000,000	Yes

Todd

Name	TRDS	Acres	Est Cost	Existing Protection?
Little Birch AMA	12733224	10	$4,000	Yes

Washington

Name	TRDS	Acres	Est Cost	Existing Protection?
Trout Brook Channel restoration	02720203	8	$240,000	Yes

Winona

Name	TRDS	Acres	Est Cost	Existing Protection?
Coolridge AMA	10509223	20	$8,000	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

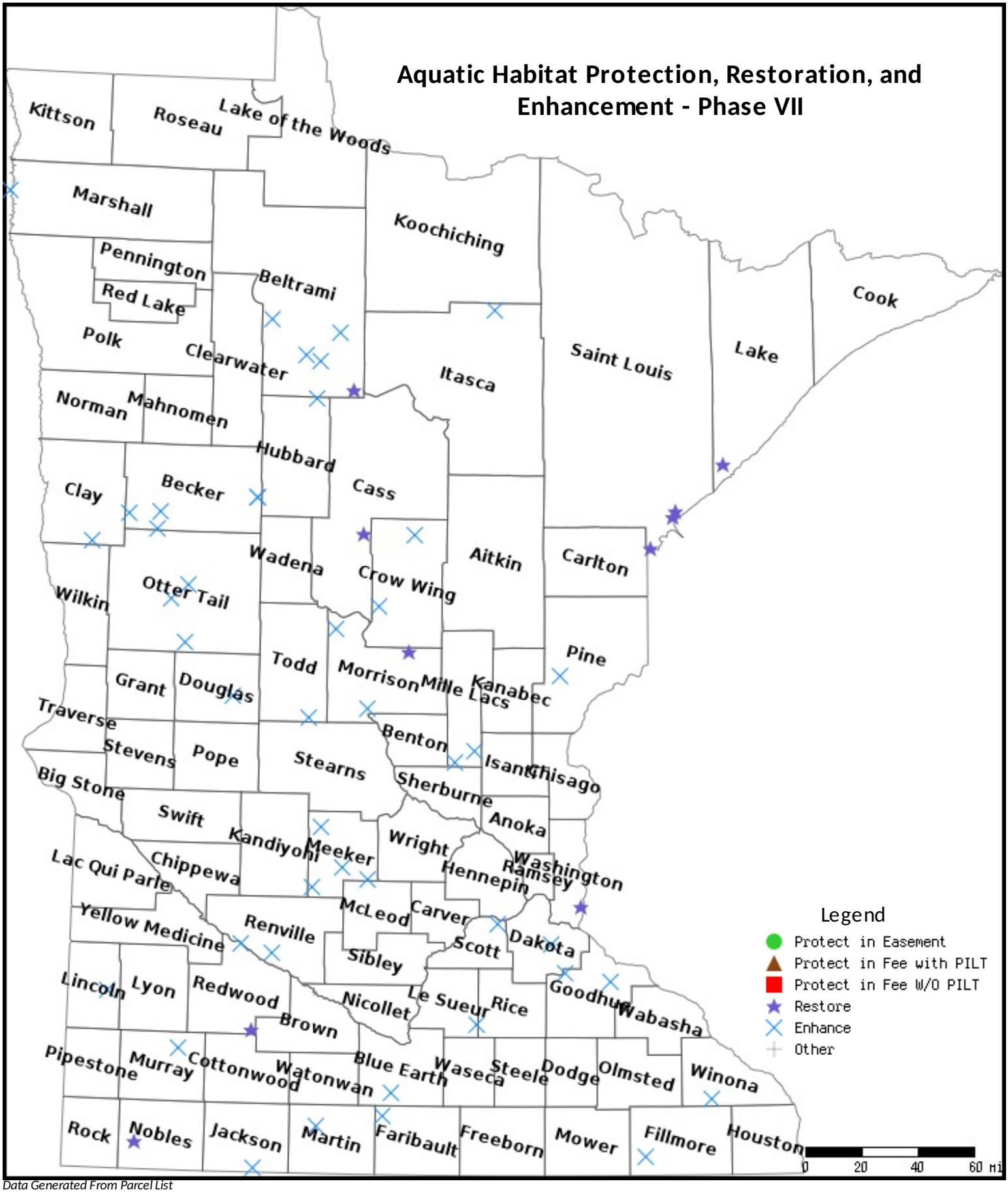
Section 2a - Protect Parcel with Bldgs

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

Aquatic Habitat Protection, Restoration, and Enhancement, Phase 7.

Minnesota Department of Natural Resources

Criteria for selection of parcels for protection.

Trout stream conservation easement acquisition is proposed for Northeast Minnesota and Southeast Minnesota. Trout stream conservation easement acquisition will continue the successful approach of strategic landowner contacts supported by previous LSOHC funding. The parcel list will be developed by contacting willing landowners of parcels meeting criteria of high quality trout fisheries and undeveloped riparian areas, with a priority placed on expanding and/or connecting existing conservation easements. This approach of strategic landowner contacts has protected trout streams in Minnesota, provided access for anglers, and provided access for restoration and enhancement work. Counties in which strategic landowner contacts will be made include Cook, Lake, St. Louis, and Carlton in Northeast Minnesota, and Houston, Fillmore, Winona, Olmsted, Wabasha, and Goodhue Counties in Southeast Minnesota.

In North-Central Minnesota, changing land use and development continue to threaten fish habitat in lakes and rivers. Past protection efforts have focused on riparian lands, but impacts throughout the watershed continue to degrade water quality and fish habitat. A focus on riparian protection will not be sufficient by itself to achieve long-term protection of fish habitat. This proposal takes a more comprehensive approach to protection, combining acquisition of high quality riparian land with watershed protection through conservation easements on private forest. The Forests for the Future program offers a cost-effective approach to watershed protection while maintaining privately owned working forests. Furthering the successful approach of strategic landowner contacts employed with trout stream easements, we will target parcels in watersheds meeting the criteria of high-quality fisheries, good water quality, and the potential to reach a threshold of 75% protected land in the watershed. This target is a level that provides an excellent chance of permanently maintaining good water quality and fish habitat. The target area for this approach includes Hubbard, Cass, Itasca, Wadena, and Crow Wing Counties.