

Request for Funding

Lessard-Sams Outdoor Heritage Council Fiscal Year 2015 / ML 2014

Program or Project Title: MN DNR Aquatic Habitat Program - Phase 6

Funds Requested: \$5,450,000

Manager's Name: Brian Nerbonne

Title: Stream Habitat Consultant

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County Locations: Anoka, Becker, Beltrami, Carver, Cass, Clay, Clearwater, Dakota, Hennepin, Hubbard, Itasca, Lake, Mille Lacs, Morrison, Otter Tail, Ramsey, Scott, St. Louis, Todd, and Washington.

Ecological Planning Regions:

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

Activity Type:

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

Priority Resources Addressed by Activity:

- Habitat

Abstract:

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

Design and Scope of Work:

Minnesota's aquatic habitats have been degraded or threatened by over a century of land, hydrology, and human settlement-related alterations. The consequence has been reduced or degraded habitats for aquatic species, and fragmentation of formerly continuous habitats that served as corridors of movements. These impacts limit fish populations in many lakes and rivers throughout the state, including the game species (e.g. trout, walleye, bass, catfish, lake sturgeon) that anglers often pursue. Through this proposal MN DNR will address aquatic habitat needs at numerous locations, and in the process create better fishing for the angling public.

This proposal uses a programmatic approach to achieve prioritized aquatic habitat protection, restoration, and enhancement for lakes, trout streams, and rivers across Minnesota. We propose to: i) protect over 8.8 miles (154

acres) of shoreline on lakes, rivers and trout streams; ii) restore and enhance river and stream functions through in-channel reconstruction and fish barrier removal that will benefit over 112 river miles; iii) enhance 1500 feet of publically owned riparian shoreline in the Twin Cities metro, and v) enhance over 100 acres of riparian habitat on Aquatic Management Areas. The strategic approach and priority resources targeted in this proposal are supported by a number of internal and external conservation planning documents.

The DNR will implement this proposal through established and highly successful programs each having strong stakeholder support. Aquatic habitat protection work will occur within the AMA designation unit of the Outdoor Recreation System established by the Legislature in 1992. AMAs have strong support from conservation groups and anglers because of the multiple benefits of habitat protection and access that they provide. The AMA Program currently has an inventory of more than 830 miles of shoreline in over 330 AMAs, which provide permanent protection of critical riparian habitats, perpetuate fish and wildlife populations, safeguard water quality, and offer public recreational access opportunities. Acquisition will be a mixture of fee title purchases and stream angling easements.

Stream habitat restoration and enhancement will be based on proven methods and DNR experience with multiple projects. The DNR has worked on large-scale river and stream restoration projects since 1998 and has completed or assisted in design elements of over 100 stream projects addressing issues such as ditching, straightening, flood-damage, and loss of habitat complexity. Stream habitat projects reconstruct the stream's conditions and address the key components of a stream: wildlife and fish habitat, water quality, connectivity to the floodplain and upstream reaches, and hydrology. By drawing on accumulated scientific knowledge, the DNR strives to deliver the best possible restoration and enhancement projects using the best available science.

Providing fish passage at in-stream barriers such as low-head dams reconnects fish and other aquatic species to upstream habitats essential for spawning, juvenile life stages, and overall abundance and genetic diversity. Monitoring of past projects has revealed immediate and significant fish population changes when fish passage is restored. Dam removal, dam modification, and culvert replacement are all examples of fish passage projects previously completed by the DNR. Large projects such as dam removals can be expensive, but they can restore habitat over a huge length of stream miles or connected lakes once completed, creating benefits that justify the cost. All proposed fish passage projects have been determined not to increase the potential for invasive species infestation.

Shoreland habitat enhancement has been a long-standing program of the DNR, both in terms of projects completed by the department and for funds granted toward projects by outside groups. The DNR and its grantees utilize bioengineering methods, including planting of deep-rooted native plants, that will stabilize shorelines and enhance habitat for wildlife. By focusing a portion of this work on public parkland in the Twin Cities metro-area, the visibility of successful and beautiful projects with abundant wildlife may encourage private landowners to consider creating similar habitat on their own shorelines.

Projects will be prioritized based on the significance of benefit to aquatic habitat, urgency of the work, availability of leverage funding, geographic spread of projects, and agreement with relevant planning documents. All projects will be accessible to public angling.

With the proposed level of funding in this request, we will:

- Protect 70 acres of riparian habitat through fee title purchase of AMA and 7 linear miles of stream through angling easements
- Restore or enhance stream habitat at 3 project sites, benefitting a total of 9075 feet of streams
- Restore fish passage at two sites, reconnecting a total of 16 lakes totaling 27,500 acres and 110 miles of stream which will restore access to historic spawning areas and reconnect fish to their historic range;
- Enhance upland and riparian habitat on 100 acres of AMA units and , which will improve native vegetative cover and wildlife habitat and protect water quality;
- Enhance 1500 feet of shoreland habitat on public park land in the Twin Cities Metro area (Ramsey, Washington, Anoka, Chisago, Isanti, Dakota, Goodhue, Hennepin, Scott Counties)

Three salary positions are included in this proposal to facilitate completion of OHF projects:

1. A stream easement acquisition position previously funded by the OHF will be extended for additional years two years. To date this position has been responsible for the protection of 24 parcels on southeast Minnesota trout streams totaling 10.6 miles of easement
2. Two additional years of funding is proposed to continue an existing stream habitat project coordinator position that will provide project oversight of major DNR stream habitat and fish passage projects.
3. A position responsible for contracting habitat enhancement work on AMA parcels will fill a key role that

existing staffing is unable to fulfill.

Accomplishments to date from prior appropriations include: 37 miles (over 2000 acres) of priority riparian habitat protected; barriers at 3 locations have been removed or modified to allow fish passage; 5.3 miles of stream habitat enhanced. Many additional protection, restoration, and enhancement projects are in various stages nearing completion.

Planning

MN State-wide Conservation Plan Priorities:

- H2 Protect critical shoreland of streams and lakes
- H3 Improve connectivity and access to recreation
- H6 Protect and restore critical in-water habitat of lakes and streams
- H7 Keep water on the landscape

Plans Addressed:

- Driftless Area Restoration Effort
- Long Range Plan for Fisheries Management
- Midwest Glacial Lakes Partnership
- Minnesota DNR AMA Acquisition Plan
- Minnesota DNR Nongame Wildlife Plans
- Minnesota DNR Strategic Conservation Agenda
- Minnesota Sustainability Framework
- National Fish Habitat Action Plan
- Outdoor Heritage Fund: A 25 Year Framework
- Red River of the North Fisheries Management Plan
- State Comprehensive Outdoor Recreation Plan
- Strategic Plan for Coldwater Resources Management in Southeastern Minnesota
- Tomorrow's Habitat for the Wild and Rare
- U.S. Fish and Wildlife Service Strategic Habitat Conservation Model

LSOHC Statewide Priorities:

- Address Minnesota landscapes that have historical value to fish and wildlife, wildlife species of greatest conservation need, Minnesota County Biological Survey data, and rare, threatened and endangered species inventories in land and water decisions, as well as long-term or permanent solutions to aquatic invasive species
- Are ongoing, successful, transparent and accountable programs addressing actions and targets of one or more of the ecological sections
- Attempts to ensure conservation benefits are broadly distributed across the LSOHC sections
- Ensures activities for "protecting, restoring and enhancing" are coordinated among agencies, non profits and others while doing this important work; provides the most cost-effective use of financial resources; and where possible takes into consideration the value of local outreach, education, and community engagement to sustain project outcomes
- Leverage effort and/or other funds to supplement any OHF appropriation
- Produce multiple enduring conservation benefits
- Provide Minnesotans with greater public access to outdoor environments with hunting, fishing and other outdoor recreation opportunities
- Restore or enhance habitat on permanently protected land
- Use a science-based strategic planning and evaluation model to guide protection, restoration and enhancement, similar to the United States Fish and Wildlife Service's Strategic Habitat Conservation model

LSOHC Prairie Section Priorities:

- Protect, enhance, and restore remnant native prairie, Big Woods forests, and oak savanna
- Restore or enhance habitat on public lands

LSOHC Forest Prairie Transition Section Priorities:

- 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

LSOHC Northern Forest Section Priorities:

- Protect shoreland and restore or enhance critical habitat on wild rice lakes, shallow lakes, cold water lakes, streams and rivers, and spawning areas
- Restore and enhance habitat on existing protected properties, with preference to habitat for rare, endangered, or threatened species identified by the Minnesota County Biological Survey

LSOHC Metro Urban Section Priorities:

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

LSOHC Southeast Forest Section Priorities:

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

Relationship to Other Constitutional Funds:

- Clean Water Fund

The protection, restoration, and enhancement of aquatic and riparian habitat will mesh with efforts to maintain or improve water quality. Although Clean Water Funds (CWF) are not targeted to our proposed projects, outcomes will support the goals that the CWF seeks to attain.

Accelerates or Supplements Current Efforts:

MN DNR has been conducting large-scale habitat protection, restoration, and enhancement of aquatic habitat for a number of years, but our efforts have been limited by both staffing and financial constraints due to other activities required to manage lakes and rivers (e.g. monitoring, stocking, regulations, etc.). The OHF has allowed us to accelerate our habitat work, significantly increasing our capacity. Even with OHF funding we have received, potential projects has far exceeded our available resources. If projects are not funded by OHF it is unlikely they will be completed.

Sustainability and Maintenance:

MN DNR has existing monitoring programs that assess habitat and key fish populations to evaluate the success of habitat work. We will tap existing Game and Fish Funds from fishing license sales as well as future grant opportunities (e.g. OHF, Natural Resource Trust Fund) to maintain habitat work as needed. Design work for projects will use a style that creates conditions where habitat is self-sustaining, working with rather than against natural processes that form habitat.

Government Approval:

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

By law, the Department of Natural Resources (DNR) is not required to seek local government approval when acquiring Aquatic Management Areas (AMA). The DNR instead will inform the county board in writing when an AMA parcel is acquired.

Permanent Protection:

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

Hunting and Fishing Plan:

Is this land open for hunting and fishing? - **Yes**

AMA parcels acquired in fee are generally open to hunting, although some AMAs are acquired in residential areas where hunting is not allowed or limited; angling will be premitted on all AMA parcels.

Public Use:

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

DNR angling easements are open to public fishing.

Permanent Protection:

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

Permanent Protection:

Is the activity on permanently protected land and/or public waters per MS 103G.005, Subd. 15? - **Yes (AMA, County/Municipal, Public Waters, US Forest Service)**

Accomplishment Timeline

Activity	Approximate Date Completed
Acquire priority fee title AMA parcels -- 1.8 shoreline miles	June 30, 2018
Acquire trout stream angling easements -- 7 shoreline miles	June 30, 2018
Enhance habitat on AMA parcels -- 100 acres	June 30, 2020
Enhance shoreland habitat on public land in 7-county metro -- 2500 linear feet	June 30, 2020
Restore fish passage at two locations -- 9000 lake acres benefitted	June 30, 2020
Restore or enhance stream habitat at three locations -- 9000 linear feet	June 30, 2020

Outcomes

Programs in the northern forest region:

- Healthy populations of endangered, threatened, and special concern species as well as more common species *Routine lake or stream surveys that monitor populations on waterbodies with restoration or enhancement projects.*
- Improved aquatic habitat indicators *Monitoring for lack of erosion, health of native riparian vegetation, and water quality. Miles of stream restored or enhanced.*
- Increased availability and improved condition of riparian forests and other habitat corridors *Number of miles of shoreland protected or enhanced.*
- Greater public access for wildlife and outdoors-related recreation *Number of additional lake and stream miles added for public use.*

- Improved availability and improved condition of habitats that have experienced substantial decline *Miles of riparian shoreline protected or enhanced.*

Programs in forest-prairie transition region:

- Improved aquatic habitat vegetation *Miles of riparian vegetation enhanced, with evaluation of health of native plant community.*
- Protected, restored, and enhanced aspen parklands and riparian areas *Acres of riparian areas protected, restored, or enhanced.*
- Rivers and streams provide corridors of habitat including intact areas of forest cover in the east and large wetland/upland complexes in the west *Miles of reconnected river, or acres of reconnected lakes created by fish passage projects.*

Programs in metropolitan urbanizing region:

- A network of natural land and riparian habitats will connect corridors for wildlife and species in greatest conservation need *Miles of riparian area restored or enhanced.*
- Improved aquatic habitat indicators *Miles of shoreland where a native riparian plant community is restored or enhanced.*

Programs in southeast forest region:

- Healthier populations of endangered, threatened, and special concern species as well as more common species *Routine stream fish surveys will monitor changes in fish populations.*
- High priority riparian lands, forestlands, and savannas are protected from parcelization and fragmentation *Miles of stream protected under easement.*
- Stream to bluff habitat restoration and enhancement will keep water on the land to slow runoff and degradation of aquatic habitat *Acres of riparian area protected as a buffer for streams from agricultural land use.*

Programs in prairie region:

- Improved condition of habitat on public lands *Acres of Aquatic Management Area restored or enhanced.*
- Restored and enhanced upland habitats *Acres of upland vegetation restored or enhanced.*

Budget Spreadsheet

Total Amount of Request: \$5,450,000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$446,000	\$0		\$446,000
Contracts	\$2,011,000	\$600,000	Private Source	\$2,611,000
Fee Acquisition w/ PILT	\$1,660,000	\$350,000	Rim and Private Source	\$2,010,000
Fee Acquisition w/o PILT	\$0	\$0		\$0
Easement Acquisition	\$800,000	\$0		\$800,000
Easement Stewardship	\$40,000	\$0		\$40,000
Travel	\$43,000	\$0		\$43,000
Professional Services	\$200,000	\$0		\$200,000
Direct Support Services	\$250,000	\$0		\$250,000
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$0	\$0		\$0
Supplies/Materials	\$0	\$0		\$0
DNR IDP	\$0	\$0		\$0
Total	\$5,450,000	\$950,000	-	\$6,400,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Stream Habitat Coordination	1.00	2.00	\$188,000	\$0		\$188,000
Stream Angling Easement Acquisition	1.00	2.00	\$174,000	\$0		\$174,000
AMA Enhancement Contraction	0.50	2.00	\$84,000	\$0		\$84,000
Total	2.50	6.00	\$446,000	\$0	-	\$446,000

Output Tables

Table 1. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	0	0	0	9,000	9,000
Protect in Fee with State PILT Liability	0	0	0	70	70
Protect in Fee W/O State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	84	84
Enhance	0	0	0	123	123
Total	0	0	0	9,277	9,277

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$0	\$0	\$0	\$695,000	\$695,000
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$1,860,000	\$1,860,000
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$840,000	\$840,000
Enhance	\$0	\$0	\$0	\$2,055,000	\$2,055,000
Total	\$0	\$0	\$0	\$5,450,000	\$5,450,000

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	0	9,000	9,000
Protect in Fee with State PILT Liability	0	35	0	0	35	70
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	84	0	0	84
Enhance	13	40	20	20	30	123
Total	13	75	104	20	9,065	9,277

Table 4. Total Requested Funding within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	\$0	\$0	\$0	\$0	\$695,000	\$695,000
Protect in Fee with State PILT Liability	\$0	\$930,000	\$0	\$0	\$930,000	\$1,860,000
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$840,000	\$0	\$0	\$840,000
Enhance	\$260,000	\$155,000	\$800,000	\$185,000	\$655,000	\$2,055,000
Total	\$260,000	\$1,085,000	\$1,640,000	\$185,000	\$2,280,000	\$5,450,000

Table 5. Target Lake/Stream/River Miles

13 miles

Parcel List

Section 1 - Restore / Enhance Parcel List

Anoka

Name	TRDS	Acres	Est Cost	Existing Protection?
Ham Lake AMA	03223221	19	\$8,000	Yes
Linwood Lake AMA	03322217	46	\$30,000	Yes

Becker

Name	TRDS	Acres	Est Cost	Existing Protection?
Bog Lake AMA	14036217	20	\$15,000	Yes
Straight River AMA	14036205	80	\$40,000	Yes
Straight River AMA	14036236	80	\$40,000	Yes

Beltrami

Name	TRDS	Acres	Est Cost	Existing Protection?
Balm Lake AMA	15035223	150	\$15,000	Yes
Big Turtle Lake AMA	14833227	28	\$30,000	Yes
Blackduck Lake AMA	14931209	15	\$15,000	Yes
Knutson Dam	14630221	26,000	\$600,000	Yes
Turtle River Lake AMA	14732212	3	\$5,000	Yes

Carver

Name	TRDS	Acres	Est Cost	Existing Protection?
Bavaria Lake AMA	11623219	6	\$5,000	Yes
Eagle Lake AMA	11526203	1	\$5,000	Yes
Lotus Lake AMA	11623211	9	\$8,000	Yes
Zumbra Lake AMA	11624201	3	\$5,000	Yes

Cass

Name	TRDS	Acres	Est Cost	Existing Protection?
Ah Gwah Ching AMA	14131202	71	\$50,000	Yes
Five Mile Point AMA	14329212	27	\$25,000	Yes
Girl Lake AMA	14128233	6	\$7,000	Yes
Gould Lake AMA	14231212	11	\$10,000	Yes
Kid/Lost Lake AMA	14029218	12	\$12,000	Yes
Larson Lake AMA	14030210	24	\$20,000	Yes
Leech Lake	14230222	54	\$50,000	Yes
Little Woman	14029215	14	\$15,000	Yes
Louise Lake AMA	14028222	7	\$7,000	Yes
Steamboat Lake AMA	14431220	57	\$40,000	Yes
Woman Lake AMA	14029215	60	\$50,000	Yes

Clay

Name	TRDS	Acres	Est Cost	Existing Protection?
Buffalo River	13945212	2	\$300,000	Yes
Buffalo River	13945201	2	\$200,000	Yes

Clearwater

Name	TRDS	Acres	Est Cost	Existing Protection?
Long Lost Lake AMA	13437218	9	\$10,000	Yes

Dakota

Name	TRDS	Acres	Est Cost	Existing Protection?
Vermillion River AMA	11418219	75	\$50,000	Yes

Hennepin

Name	TRDS	Acres	Est Cost	Existing Protection?
Frog Island AMA	11723241	1	\$5,000	Yes

Hubbard

Name	TRDS	Acres	Est Cost	Existing Protection?
Big Stony Lake AMA	13934211	58	\$30,000	Yes
Fifth Crow Wing AMA	14033230	28	\$25,000	Yes
Fourth Crow Wing AMA	13933204	17	\$15,000	Yes
Grace Lake AMA	14532205	12	\$12,000	Yes
Kabekona Lake AMA	14333224	25	\$25,000	Yes
Kabekona River AMA	14333204	7	\$7,000	Yes
Lower Bottle AMA	14134214	35	\$30,000	Yes
Sixth Crow Wing AMA	14033221	7	\$7,000	Yes
Straight Lake AMA	13935210	7	\$7,000	Yes
Straight River	13935206	10	\$16,000	Yes

Itasca

Name	TRDS	Acres	Est Cost	Existing Protection?
Long Lake Outlet	05954222	1,540	\$20,000	Yes

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
Balsam Lake AMA	05807203	142	\$15,000	Yes
Baptism River AMA	05707223	196	\$15,000	Yes
Beaver River AMA	05608230	440	\$15,000	Yes
East Beaver River AMA	05608216	870	\$15,000	Yes
Manitou River AMA	05806208	437	\$15,000	Yes
Split Rock River AMA	15509216	958	\$15,000	Yes
Stewart River	05311215	7	\$500,000	Yes

Mille Lacs

Name	TRDS	Acres	Est Cost	Existing Protection?
Chuck Davis AMA	03626203	48	\$25,000	Yes

Morrison

Name	TRDS	Acres	Est Cost	Existing Protection?
McDougall AMA	03932229	30	\$20,000	Yes
Shamaineau AMA	13231216	47	\$25,000	Yes

Otter Tail

Name	TRDS	Acres	Est Cost	Existing Protection?
Dead River-Walker Lake AMA	13440211	86	\$40,000	Yes

Ramsey

Name	TRDS	Acres	Est Cost	Existing Protection?
St. Paul Fish Hatchery AMA	02822204	77	\$50,000	Yes

Scott

Name	TRDS	Acres	Est Cost	Existing Protection?
Carls Lake AMA	11322201	3	\$5,000	Yes
Eagle Creek AMA	11521218	168	\$60,000	Yes
ODowd Lake AMA	11523224	6	\$7,000	Yes
St. Catherine Lake AMA	11322202	40	\$30,000	Yes

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Chester Creek	05014215	8	\$400,000	Yes

Todd

Name	TRDS	Acres	Est Cost	Existing Protection?
Little Birch AMA	12733224	24	\$20,000	Yes

Washington

Name	TRDS	Acres	Est Cost	Existing Protection?
Browns Creek AMA	03020220	22	\$20,000	Yes
Demontreville Lake AMA	02921204	7	\$10,000	Yes
Forest Lake AMA	03221211	87	\$50,000	Yes

Section 2 - Protect Parcel List

Becker

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Big Cormorant Lake	13843224	29	\$900,000	No	Limited	Full
Cotton Lake, p. 2	13940203	8	\$890,000	No	Limited	Full
Rock Lake	14040217	23	\$350,000	No	Limited	Full
Wolf Lake, p. 1	13937229	63	\$295,400	No	Full	Full

Beltrami

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Grace Lake	14632232	13	\$65,000	No	Limited	Full

Cass

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Pleasant Lake p1	14030221	2	\$3,000	No	No	Full
Pleasant Lake p2	14030221	5	\$264,000	No	No	Full
Pleasant Lake p3	14030221	3	\$260,000	No	No	Full

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.