

Lessard-Sams Outdoor Heritage Council

Fiscal Year 2018 / ML 2017 Request for Funding



Date: June 15, 2016

Program or Project Title: MN DNR Aquatic Protection and Enhancement - Phase IX (HA01)

Funds Requested: \$7,023,000

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County Locations: Becker, Big Stone, Blue Earth, Brown, Carlton, Cass, Caver, Cook, Crow Wing, Dakota, Douglas, Faribault, Fillmore, Goodhue, Houston, Hubbard, Itasca, Jackson, Kanabec, Kandiyohi, Lake, LeSueur, Lincoln, Meeker, Mille Lacs, Mower, Murray, Olmsted, Otter Tail, Pine, Redwood, Rice, Scott, Sherburne, St. Louis, Wabasha, Winona, and Wright.

Regions in which work will take place:

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

Activity types:

- Protect in Easement
- Enhance
- Protect in Fee

Priority resources addressed by activity:

- Habitat

Abstract:

We propose a programmatic approach to achieve prioritized aquatic habitat protection for lakes and trout streams across Minnesota. We propose to protect 2 miles of shoreline on our most outstanding lake resources with fee title acquisition, and 27 miles of trout streams with permanent conservation easements on private land. Protected lands will be designated as Aquatic Management Areas (AMA's) administered by the Minnesota DNR Division of Fish and Wildlife. We also propose to continue accelerated habitat assessment, and enhance 500 acres on AMA's.

Design and scope of work:

Minnesota's lakes and rivers continue to be threatened by loss of riparian habitat resulting from development and conversion of natural land cover. The consequences include loss of sensitive fish and aquatic plants, diminished gamefish habitat, and degraded water quality, which is an important component of fish habitat. We propose a programmatic approach to achieve prioritized aquatic habitat protection for lakes and trout streams across Minnesota. We propose to protect 2 miles of shoreline on our most outstanding lake resources with fee title acquisition, and 27 miles of trout streams with permanent conservation easements on private land. We also propose to continue accelerated habitat assessment, and enhance 500 acres on AMA's.

Protected lands will be designated as Aquatic Management Areas (AMA's) administered by the Minnesota DNR Division of Fish and

Wildlife. AMA's have strong support from conservation groups and anglers because they provide multiple benefits of habitat protection and recreational access. The AMA program permanently protects more than 830 miles of shoreline in over 330 AMA's that perpetuate fish and wildlife populations, safeguard water quality, and offer recreational access.

Trout stream conservation easement acquisition is based on several criteria as described in the sign-up criteria attachment. Criteria to prioritize potential acquisitions include fishery quality, rare natural features, potential to link with existing easements to increase protected corridors, and the need for access to conduct habitat restoration and enhancement projects. An important benefit of the trout stream conservation easement program is the access provided for restoration and enhancement projects conducted by MNDNR and partner organizations such as Trout Unlimited.

Fee title AMA acquisition will employ a programmatic approach that provides clear, objective, and transparent criteria that limit opportunities to "the best of the best." Scoring (sign-up criteria attachment) takes into account fisheries, water quality, wildlife habitat, plant communities, and species of greatest conservation need. Rating criteria to prioritize parcels will also include the potential to expand and link existing protected areas, and the presence of sensitive shoreline habitat and vegetation. Among lakes with good habitat and water quality, those facing higher threat levels are higher priority than lakes with sufficient protection already in place. Achieving sufficient protection for lakes now means we will not need to restore them later.

Cost of lake shore property varies widely, and our estimates are below current market prices for high quality lake shore in some areas. However, we seek high priority parcels with motivated conservation minded owners, and are often successful in obtaining partial donations.

The AMA program provides permanent protection, but many parcels could provide better fish and wildlife habitat with accelerated enhancement. MDNR currently has two LSOHC-funded crews conducting habitat assessments on AMA's and developing management guidance. LSOHC also provides funding for .5 FTE for contracting and coordinating enhancement projects. The assessment crews are on track to meet or exceed the goals of the accomplishment plan, specifically developing management guidance for 100 AMA's. We propose to continue this work for an additional 3 years.

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

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

The Fish Habitat Plan acknowledges the reality of limited funding, along with continuing loss of riparian and aquatic habitat and water quality. The plan emphasizes strategic investment in actions with the greatest potential return. Protection is focused on high quality habitat in locations facing risk of habitat degradation, and in places where local support is strong. Our selection criteria ensure that we are investing in the best available parcels, and benefiting not only fisheries, but also sustaining healthy landscapes.

Prioritization of trout stream conservation easements considers fishery quality and public use, as well as the potential for additional partner investment in habitat improvement projects. Working with motivated stakeholders and partners is an important element of both plans.

Accelerated AMA enhancement maximizes the ecological value of protected parcels.

Which LSOHC section priorities are addressed in this proposal:

Prairie:

- Restore or enhance habitat on public lands

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

Northern Forest:

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

Metro / Urban:

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

Southeast Forest:

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

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

The AMA system protects riparian habitat throughout Minnesota, and provides places to fish and engage in other outdoor activities. The primary purpose of AMA's is to protect fisheries and habitat, setting it apart from other state lands. The AMA program is modest in size, encompassing about 43,000 acres statewide, including both fee-title AMA's and conservation easements. The parcels are on average small in comparison to other state lands, but protect habitats that are important not just to fish, but by wildlife including birds, mammals, reptiles, and amphibians. Our goal is to apply strategic protection now to avoid the need for restoration later.

The desired outcome of protection in the AMA system is to maintain ecosystems that support the continued existence of Minnesota's fish and wildlife. The legacy is the ability of future generations to visit a natural Minnesota lakeshore and fish in clean water with healthy populations of fish and other aquatic life. A legacy of protected lakes and rivers is significant in the Land of 10,000 lakes.

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

The GIS-based prioritization tool we are using to score and rank candidate parcels for fee-title AMA acquisition evaluates proximity to existing protected complexes. The scoring system gives preference to parcels that expand complexes. The scoring tool also addresses biological diversity, outstanding fisheries, and presence of rare natural features and species.

Trout stream conservation easement acquisition is also based on a scoring system that provides preference for candidate parcels that link existing easements and expand protected corridors. The scoring system awards points to parcels with rare natural features and sites with biodiversity significance, both of which are identified in the MBS GIS layer.

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

Protection and enhancement work identified in this proposal focuses on riparian habitat. Although benefits to fisheries are a primary consideration of the program, riparian areas are also important to game and nongame wildlife, including species of greatest conservation need. We will use a scoring system for fee-title AMA acquisition that takes into account multiple considerations including presence of species of greatest conservation need. Some criteria, such as the potential to expand corridors and protected areas benefit many species. The scoring systems are described in more detail in the attachments.

One component of the scoring system is the "lakes of biological significance," a multidisciplinary approach to scoring biological diversity and the presence of rare and sensitive natural features. This rating system for fee-title AMA's was developed by DNR staff and includes inputs from fisheries and wildlife, including game and nongame species. The documented presence of species of greatest conservation need is one of the scoring criteria. Sensitive shorelines, which addresses the presence of species intolerant of disturbance is another scoring criterion. Fish communities are assessed with monitoring conducted by MDNR, and monitoring scores reflect measures of both intolerant species and overall species richness.

The proposal takes a programmatic approach that for fee-title AMA acquisition is intended to recognize the "best of the best" without eliminating the potential for protection in any geographic region. Because species distribution is not uniform across the state, species targeted for protection will vary across regions. Fish targeted for protection may include lake sturgeon, which is a SGCN. Twenty-one additional fish species are currently listed as SGCN in Minnesota. Other SCGN species that depend on aquatic and riparian habitat include several turtle species, common mudpuppy, two frog species, and several species of waterfowl and shorebirds.

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

To address this question, we are providing averages for potential aquatic indicator species in Minnesota. These averages are generated

from available data and published sources, and do not capture the variability inherent in wild populations. Natural populations, including healthy populations with good habitat, vary among locations, and also rise and fall within lakes and rivers. Most fish surveys conducted by DNR produce an index of abundance (catch per unit effort) rather than a population estimate.

Indicator species for trout stream conservation easements in SE MN include brook trout (100 lbs/acre) and brown trout (130 lbs/acre). In NE Minnesota, rainbow trout may also be present; total trout biomass in the NE is typically about 40 lbs/acre. For programmatic AMA acquisition, we will work in lakes that may have different fish communities. Likely indicator species include walleye, with typical populations of 2 adults/acre, muskellunge, with typical populations of about 0.2 adults per acre, and northern pike, with average populations of about 10 adults per acre. Cisco or tullibee are indicators in deep, clear lakes. The objective of protection is to maintain the habitat that supports tullibee, and the indicator is their continued presence in netting assessments, with multiple year classes present. Their populations are not estimated with current sampling methods.

Outcomes:

Programs in the northern forest region:

- Healthy populations of endangered, threatened, and special concern species as well as more common species *For lakes with fee-title AMA acquisition, fish community monitoring (including non-game fish) assesses condition of aquatic resource, and includes measures of intolerant species and overall species richness. DNR Fisheries also conducts surveys of gamefish to track trends in populations of species targeted for harvest.*

Trout stream conservation easements will protect stream corridors from development. Easements will be monitored by MNDNR staff to ensure compliance with easement terms.

AMA enhancement work is based on site assessments and site-level management guidance developed by AMA assessment crews. Future site visits by assessment crews will evaluate habitat condition.

Programs in forest-prairie transition region:

- Protected, restored, and enhanced aspen parklands and riparian areas *AMA enhancement work will be conducted in riparian areas in this region. AMA assessment crews conduct site inventories and develop site-level management guidance. Projects are conducted to address specific management issues. Future site evaluations will document outcomes.*

Programs in metropolitan urbanizing region:

- AMA enhancement work will be conducted in riparian areas in this region. AMA assessment crews conduct site inventories and develop site-level management guidance. Projects are conducted to address specific management issues. Future site evaluations will document outcomes.

Programs in southeast forest region:

- High priority riparian lands, forestlands, and savannas are protected from parcelization and fragmentation *Trout stream conservation easements will protect stream corridors from development. Easements will be monitored by MNDNR staff to ensure compliance with easement terms.*

AMA enhancement work will be conducted in riparian areas in this region. AMA assessment crews conduct site inventories and develop site-level management guidance. Projects are conducted to address specific management issues. Future site evaluations will document outcomes.

Programs in prairie region:

- Improved condition of habitat on public lands *AMA enhancement work will be conducted in riparian areas in this region. AMA assessment crews conduct site inventories and develop site-level management guidance. Projects are conducted to address specific management issues. Future site evaluations will document outcomes.*

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

Funding for easement stewardship is included in the current proposal. Stewardship funds will be transferred to a Dedicated Stewardship Account and interest earned from the account will fund the annual stewardship and monitoring work for the easement. Trout stream easements will have baseline property reports, compliance monitoring, enforcement protocols, record-keeping, and landowner relations protocols following DNR Operational Order 128 "Conservation Easement Stewardship" and DNR Fish and Wildlife Division guidance.

Fee title Aquatic Management Area habitat enhancement projects are conducted using funding in addition to LSOHC. Permanent Fisheries staff funded by the Game and Fish account and Heritage Enhancement account also provide support for monitoring, maintenance and enhancement of AMA's.

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

Year	Source of Funds	Step 1	Step 2	Step 3
2020 or as easements are completed	LSOHC	Transfer funds to easement stewardship account	Baseline property report complete prior to closing	Use approved baseline as reference for future monitoring visits
perpetually, approx. 3-yr intervals	Easement stewardship account (LSOHC)	Conduct scheduled monitoring visits.	Produce monitoring reports, meet with landowner to address any violations of easement terms	Follow-up as necessary, document resolution or refer for enforcement
2020 or as fee-title AMAs are acquired	LSOHC	Address initial site development (boundary surveys, signs)	Develop site specific management guidance identifying maintenance/enhancement needs.	Prioritize AMA enhancement projects, implement as funding permits.
perpetually	Game and Fish fund, Heritage Enhancement Fund	monitor fee-title AMAs for management of ecological values and for encroachment or other violations	Update site-level management guidance	Prioritize and implement management

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

Continued development pressure on lakeshores leads to loss of sensitive shoreline habitat. The scoring criteria for fee-title AMA acquisition address many issues, including the quality of resource and the risk of habitat loss. The programmatic approach is intended to spend public money on the "best of the best," putting higher priority on systems that are relatively intact but lacking a level of protection sufficient to prevent future degradation. The urgency is to achieve a level of protection now that will be sufficient to avoid the need for restoration later.

LSOHC funding accelerates the enhancement work that can be completed on AMA's. This work includes projects to address invasive species, which left untreated, can spread to affect larger areas. Prompt treatment to contain invasives can be more effective and less costly than delaying.

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

not applicable

Relationship to other funds:

- Clean Water Fund

Describe the relationship of the funds:

MNDNR Fisheries has CWF support to conduct biological monitoring of lake fishes. The primary purpose of monitoring is to inform the state of Minnesota's Watershed Assessment Framework, involving multiple state agencies and local governments to insure that standards for water quality and aquatic life are met. The fish monitoring data are also used in the scoring system to prioritize parcels for protection (AMA acquisition), and are a useful tool to measure outcomes, specifically to verify that critical protection levels are correlated with high quality fish communities. MNDNR Fisheries staff also use Clean Water Fund support to participate in watershed-based strategy development to inform local planning and influence outcomes for fisheries and fish habitat.

This proposal has no direct leverage of the other funds, but the CWF and OHF both provide support for a statewide strategic framework for investment in aquatic habitat and water quality.

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

Appropriation Year	Source	Amount
2011	Acquisition, all non-LSOHC sources (RIM, bonding, LCCMR, Game and Fish)	602,000
2012	Acquisition, all non-LSOHC sources	230,000
2012	Habitat enhancement, non-LSOHC sources, projects only (salary not included)	17,300
2013	Acquisition, all non-LSOHC sources	456,000
2013	Habitat enhancement, non-LSOHC sources, projects only	36,600
2014	Acquisition, all non-LSOHC sources	560,000
2014	Habitat enhancement, non-LSOHC sources, projects only	37,500
2015	Acquisition, all non-LSOHC sources	438,000
2015	Habitat enhancement, non-LSOHC sources, projects only	30,200
2016	Habitat enhancement, non-LSOHC sources, projects only	34,400

Activity Details

Requirements:

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 - **Yes**

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

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)**

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

Land Use:

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

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

Enhancement will take place on AMA's. All AMA's on parcel list are open to fishing, most are open to hunting. Acquisition will take place on lands Not currently open for hunting and fishing.

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

Land acquired for fee-title aquatic management areas will be open for fishing, and would follow existing regulations for the waterbody on which the AMA is located. Most AMA's are "general use" which also includes hunting and trapping following state of Minnesota regulations.

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

Trout stream conservation easements will allow angling.

Are there currently trails or roads on any of the acquisitions on the parcel list - **No**

Will new trails or roads be developed as a result of the OHF acquisition - **No**

Accomplishment Timeline

Activity	Approximate Date Completed
purchase trout stream conservation easements	6/30/2020
purchase fee-title AMAs	6/30/2020
conduct easement baseline reports and dedicate stewardship funding for easements	6/30/2020
initial site development (boundary surveys and signs) for fee-title AMAs	6/30/2022
complete funded AMA enhancement projects on 500 acres	6/30/2022
100 new or updated management guidance documents on fee-title AMAs	6/30/2022
monitor easements and enforce easement terms	perpetually
monitor fee-title AMAs and update/implement management guidance	perpetually

Budget Spreadsheet

Total Amount of Request: \$7,023,000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$675,000	\$0		\$675,000
Contracts	\$310,000	\$0		\$310,000
Fee Acquisition w/ PILT	\$2,800,000	\$0		\$2,800,000
Fee Acquisition w/o PILT	\$0	\$0		\$0
Easement Acquisition	\$2,500,000	\$0		\$2,500,000
Easement Stewardship	\$250,000	\$0		\$250,000
Travel	\$15,000	\$0		\$15,000
Professional Services	\$370,000	\$0		\$370,000
Direct Support Services	\$68,000	\$0		\$68,000
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$0	\$0		\$0
Supplies/Materials	\$35,000	\$0		\$35,000
DNR IDP	\$0	\$0		\$0
Total	\$7,023,000	\$0		\$7,023,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
AMA Assessment Crew Leaders	2.00	3.00	\$400,000	\$0		\$400,000
Seasonal AMA Technicians	1.00	3.00	\$200,000	\$0		\$200,000
AMA shoreline restoration specialist	0.50	2.00	\$75,000	\$0		\$75,000
Total	3.50	8.00	\$675,000	\$0		\$675,000

Amount of Request: \$7,023,000
 Amount of Leverage: \$0
 Leverage as a percent of the Request: 0.00%
 DSS + Personnel: \$743,000
 As a % of the total request: 10.58%
 Easement Stewardship: \$250,000
 As a % of the Easement Acquisition: 10.00%

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

Standard calculator used by MNDNR programs was used to calculate direct and necessary charges.

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

\$250,000 is for enhancement projects on AMA's. The remainder is for initial work on new fee-title acquisitions.

Does the amount in the travel line include equipment/vehicle rental? - No

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

none

Describe and explain leverage source and confirmation of funds:

We have not built leverage into budget, however we seek leverage on fee-title acquisitions from landowners willing to donate value.

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

Tell us how this project would be scaled and how administrative costs are affected, describe the "economy of scale" and how

outputs would change with reduced funding, if applicable:

Fee title and easement acquisition are programmatic and scalable. Funding reductions would result in fewer protected acres. Because professional services for real estate transactions are not dependent on parcel sizes, reductions in overall funding may increase cost per acre. AMA assessment and enhancement work, including salary, would be highest priorities.

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	150	150
Protect in Fee W/O State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	725	725
Enhance	0	0	0	500	500
Total	0	0	0	1,375	1,375

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$0	\$0	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$3,029,400	\$3,029,400
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$3,029,300	\$3,029,300
Enhance	\$0	\$0	\$0	\$964,300	\$964,300
Total	\$0	\$0	\$0	\$7,023,000	\$7,023,000

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	22	0	0	128	150
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	508	0	217	725
Enhance	30	100	50	170	150	500
Total	30	122	558	170	495	1,375

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	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$444,400	\$0	\$0	\$2,585,000	\$3,029,400
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$2,120,500	\$0	\$908,800	\$3,029,300
Enhance	\$57,900	\$192,900	\$96,400	\$327,800	\$289,300	\$964,300
Total	\$57,900	\$637,300	\$2,216,900	\$327,800	\$3,783,100	\$7,023,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	\$0	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$20,196
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$4,178
Enhance	\$0	\$0	\$0	\$1,929

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	\$0	\$0	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$20,200	\$0	\$0	\$20,195
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$4,174	\$0	\$4,188
Enhance	\$1,930	\$1,929	\$1,928	\$1,928	\$1,929

Target Lake/Stream/River Feet or Miles

28

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

Parcel List

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

Enhancement projects are identified by AMA assessment crews who develop site-level guidance for management including enhancement projects. Staff prioritize projects based on urgency of the management issue, and feasibility including likelihood of success and project cost. The enhancement parcel list contains more projects/acres than can be completed with proposed funding. Although the parcel list is prioritized, projects can be delayed by weather or availability of contractors to bid on projects, and may be substituted with lower ranking projects on the list. We propose to complete enhancement on 500 acres from the list below.

Acquisition is programmatic with criteria for fee-title acquisition and trout stream conservation easements explained in the sign-up criteria attachment. The acquisition parcel list for conservation easements is representative of areas we are most likely to complete acquisitions, but does not represent specific parcels.

Section 1 - Restore / Enhance Parcel List

Becker

Name	TRDS	Acres	Est Cost	Existing Protection?
Little Floyd Lake	13941210	3	\$0	Yes
Meadow Lake	13841221	3	\$0	Yes
Middle Cormorant	13843221	5	\$0	Yes
Upper Cormorant Lake	13843205	150	\$0	Yes

Big Stone

Name	TRDS	Acres	Est Cost	Existing Protection?
MN River Headwaters	12146216	12	\$0	Yes

Blue Earth

Name	TRDS	Acres	Est Cost	Existing Protection?
Ida Lake	10528212	5	\$0	Yes

Brown

Name	TRDS	Acres	Est Cost	Existing Protection?
Cottonwood River	10932203	10	\$0	Yes

Carlton

Name	TRDS	Acres	Est Cost	Existing Protection?
Blackho of River	04717226	10	\$0	Yes

Cass

Name	TRDS	Acres	Est Cost	Existing Protection?
Allens Bay (Point)	14131202	1	\$0	Yes
Buetow	14228221	3	\$0	Yes

Caver

Name	TRDS	Acres	Est Cost	Existing Protection?
Lotus Lake	11623201	5	\$0	Yes

Cook

Name	TRDS	Acres	Est Cost	Existing Protection?
Cascade River	06202214	20	\$0	Yes
Devil Track River	06201234	5	\$0	Yes
Swamp River	06304229	20	\$0	Yes

Crow Wing

Name	TRDS	Acres	Est Cost	Existing Protection?
Bertha Moody Lake	13528232	15	\$0	Yes

Dakota

Name	TRDS	Acres	Est Cost	Existing Protection?
Gores	11517223	20	\$0	Yes
South Branch Vermillion River	11418229	63	\$0	Yes
Vermillion River	11418219	54	\$0	Yes

Douglas

Name	TRDS	Acres	Est Cost	Existing Protection?
Geneva Lake	12837216	15	\$0	Yes
Miltona	13037232	100	\$0	Yes
West Rachel Shores	12739215	5	\$0	Yes

Faribault

Name	TRDS	Acres	Est Cost	Existing Protection?
Blue Earth River	10428221	10	\$0	Yes

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?
Etna Creek	10213225	80	\$0	Yes

Goodhue

Name	TRDS	Acres	Est Cost	Existing Protection?
Gemini	11217207	40	\$0	Yes

Hubbard

Name	TRDS	Acres	Est Cost	Existing Protection?
1st CrowWing	13933223	20	\$0	Yes

Itasca

Name	TRDS	Acres	Est Cost	Existing Protection?
Bender	15028210	50	\$0	Yes
Crawford Island	05626217	10	\$0	Yes
Island Lake	15028205	5	\$0	Yes
Pokegama Lake	05425204	5	\$0	Yes
Sugar Brook	05426203	10	\$0	Yes

Jackson

Name	TRDS	Acres	Est Cost	Existing Protection?
Rush Lake	10136222	38	\$0	Yes

Kanabec

Name	TRDS	Acres	Est Cost	Existing Protection?
Little Knife	04124221	100	\$0	Yes

Kandiyohi

Name	TRDS	Acres	Est Cost	Existing Protection?
Elizabeth Lake	11833203	10	\$0	Yes
Middle Lake	12135209	3	\$0	Yes
Norway Lake	12135205	6	\$0	Yes

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
Knife River	05312212	20	\$0	Yes

LeSueur

Name	TRDS	Acres	Est Cost	Existing Protection?
Horseshoe Lake	10923201	113	\$0	Yes
St Peter	11026214	30	\$0	Yes

Lincoln

Name	TRDS	Acres	Est Cost	Existing Protection?
Benton Lake	10945203	10	\$0	Yes
Stay Lake	11144229	11	\$0	Yes

Meeker

Name	TRDS	Acres	Est Cost	Existing Protection?
Minniebelle Lake	11831212	13	\$0	Yes
North Fork Crow River	12132224	43	\$0	Yes
Thompson Lake	11732217	10	\$0	Yes

Mille Lacs

Name	TRDS	Acres	Est Cost	Existing Protection?
Cedar Creek	04325215	10	\$0	Yes
Chuck Davis	03626203	16	\$0	Yes

Mower

Name	TRDS	Acres	Est Cost	Existing Protection?
Cedar River	10218215	22	\$0	Yes

Murray

Name	TRDS	Acres	Est Cost	Existing Protection?
Buttermilk Run	10840233	25	\$0	Yes

Otter Tail

Name	TRDS	Acres	Est Cost	Existing Protection?
Dead Lake	13540219	5	\$0	Yes
East Lost Lake	13341211	1	\$0	Yes
Fish Lake	13742216	0	\$0	Yes
Lake Seven	13740207	5	\$0	Yes
Lake Six	13740206	2	\$0	Yes
Lida Lake	13642217	1	\$0	Yes
Long Lake	13740228	35	\$0	Yes
Loon Lake	13741235	4	\$0	Yes
Mason Lake Pass	13339222	2	\$0	Yes
McDonald Lake	13640230	2	\$0	Yes
North Turtle Lake	13341223	4	\$0	Yes
Rice-Boedigheimer Lake	13539209	3	\$0	Yes
Scalp Lake	13740207	0	\$0	Yes
Toad River	13738232	1	\$0	Yes

Pine

Name	TRDS	Acres	Est Cost	Existing Protection?
Barnes Springs	04118212	20	\$0	Yes

Redwood

Name	TRDS	Acres	Est Cost	Existing Protection?
Riverside	11335228	5	\$0	Yes
Sanborn	10936227	55	\$0	Yes
Whispering Ridge	11436232	118	\$0	Yes

Rice

Name	TRDS	Acres	Est Cost	Existing Protection?
Cannon River Dundas	11120215	15	\$0	Yes
Cannon River Morristown	10922223	18	\$0	Yes
Sakatah Lake	10922216	5	\$0	Yes

Scott

Name	TRDS	Acres	Est Cost	Existing Protection?
Eagle Creek	11521218	29	\$0	Yes

Sherburne

Name	TRDS	Acres	Est Cost	Existing Protection?
Eagle Lake	03427232	7	\$0	Yes

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Donna Lake	05412201	5	\$0	Yes
French River Headwaters	05213216	150	\$0	Yes
Lester River	05114212	50	\$0	Yes
Sucker River	05213202	20	\$0	Yes
Tower Hatchery	06116203	5	\$0	Yes

Wabasha

Name	TRDS	Acres	Est Cost	Existing Protection?
Miller Creek	11112209	15	\$0	Yes
Whitewater Way	10812227	7	\$0	Yes
Zumbro River	10914222	4	\$0	Yes

Winona

Name	TRDS	Acres	Est Cost	Existing Protection?
Coolridge Creek	10509223	5	\$0	Yes

Wright

Name	TRDS	Acres	Est Cost	Existing Protection?
Ramsey Lake	12026218	3	\$0	Yes

Section 2 - Protect Parcel List**Becker**

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Elbow Lake	13843205	29	\$180,000	No	Full	Full
Sugar Bush Lake	14140821	22	\$440,000	No	Full	Full

Carlton

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	04716230	0	\$0	No	No	Full

Cook

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	06201232	0	\$0	No	No	Full

Fillmore

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	10208209	0	\$0	No	No	Full

Goodhue

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	11215226	0	\$0	No	No	Full

Houston

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	10105222	0	\$0	No	No	Full

Itasca

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Sand Lake	14826228	25	\$600,000	No	Full	Full
Sand Lake	14826228	26	\$600,000	No	Full	Full

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	05707228	0	\$0	No	No	Full

Olmsted

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	10512220	0	\$0	No	No	Full

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	05312201	0	\$0	No	No	Full

Wabasha

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	10910228	0	\$0	No	No	Full

Winona

Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Trout stream easement TBD	10508233	0	\$0	No	No	Full

Section 2a - Protect Parcel with Bldgs

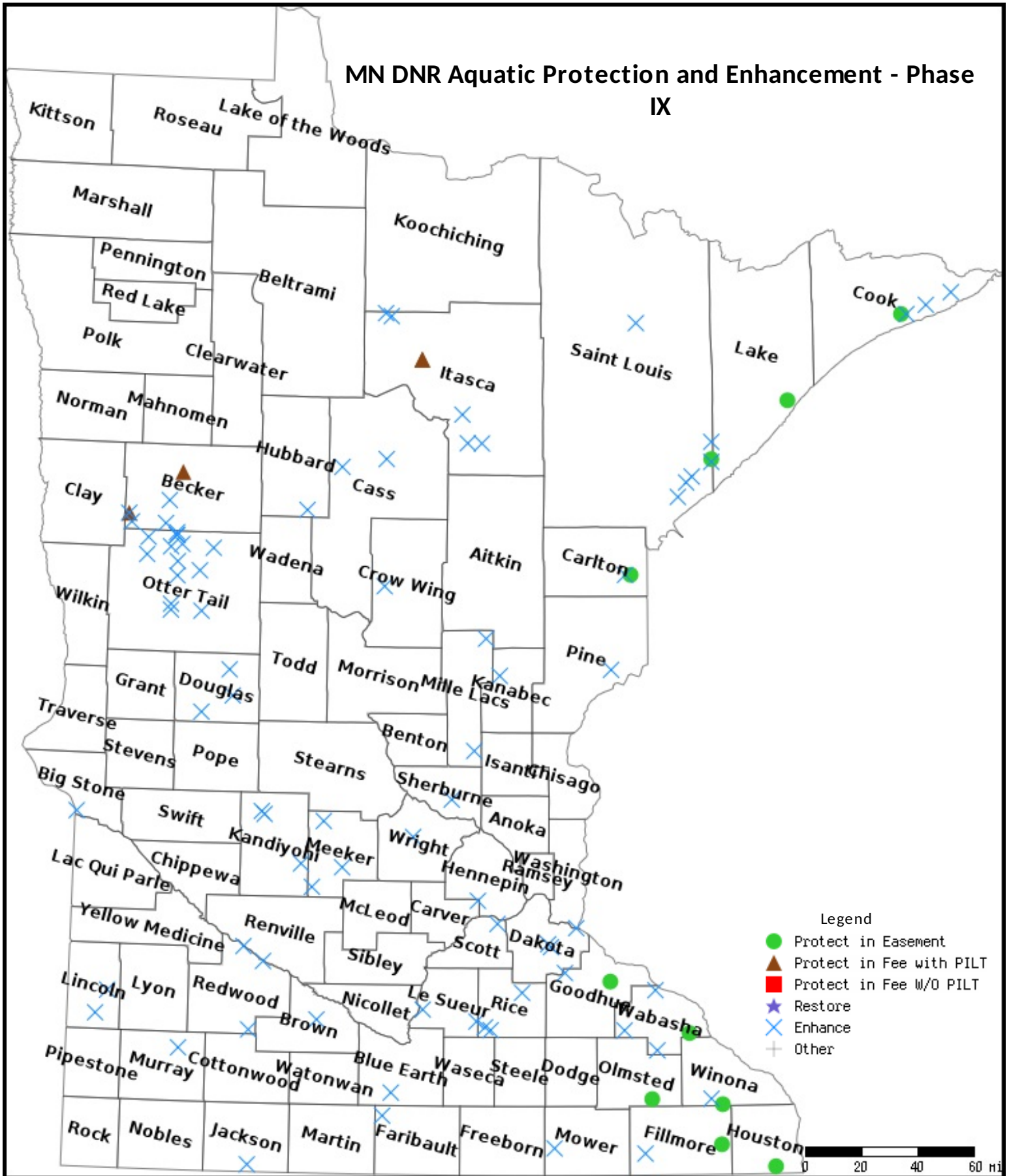
No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map

MN DNR Aquatic Protection and Enhancement - Phase IX



Data Generated From Parcel List

MNDNR Aquatic Protection and Enhancement, Phase 9



Proposal Summary

Protect 27 miles of trout streams with conservation easements.

Enhance 500 acres of Aquatic Management Areas, including AMA assessment crew (3 FTE) and contracting/coordination position (0.5 FTE)

Protect 150 acres of high quality lakeshore with fee-title Aquatic Management Area acquisition

Total request: \$7.23 Million

Trout Stream Conservation Easement Acquisition

- Programmatic approach with emphasis on SE and NE Minnesota.
- Goal of protecting 27 miles of trout stream.
- Easements provide permanent protection of stream corridor, angler access and access for DNR and partner habitat enhancement projects.
- Key indicator species are brook trout and brown trout.
- Potential easements prioritized with criteria including fishery quality, current and potential habitat condition, expanding protected areas, rare ecological features, access for restoration projects, and expected use.
- \$3 million requested

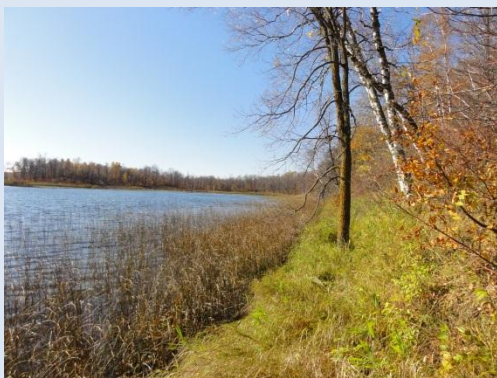


Accelerated AMA Enhancement

- Two ongoing AMA assessment crews to develop management guidance for AMA's.
 - Each with 1 crew leader and 0.5 FTE technician
- 0.5 FTE for contracting and enhancement project coordination.
 - Implementation coordinated with CCM, other contractors, MNDNR Wildlife roving crews
- Enhancement projects
 - AMA enhancement projects are identified by AMA assessment crews. Funding requested to enhance 500 acres. Work can take place on the shore or upland.
- Funding requested, including positions and projects \$965,000



AMA's: protecting the best of the best



AMA enhancement: prescribed burn at Horseshoe Lake AMA, seeding for prairie restoration at Whispering Ridge AMA



Fee Title AMA Acquisition

- Programmatic approach following MNDNR's Fish Habitat Strategic Plan

http://files.dnr.state.mn.us/fish_wildlife/fisheries/habitat/2013_fishhabitatplan.pdf

- Focus on high quality systems to achieve critical protection levels now and avoid the need for restoration later.
- Scoring criteria for consistent, transparent ranking of candidate parcels.
- Accomplishment plan goal of 150 protected acres.
- \$3 million requested.

Contact

Martin Jennings, Fish Habitat Program Manager
MNDNR Fisheries, martin.jennings@state.mn.us (651) 259-5176



Criteria used to determine Strategic WMA/AMA Acquisition Tool (SWAAT) scores for proposed fee title acquisitions on lakes

Primary criteria used for proposed AMA or WMA parcels

- Within or adjacent to existing WMA, or adjacent to WPA or designated wildlife lake. WMA or AMA in-holdings = 6 points, adjacent to a AMA or WMA or designated wildlife lake= 3 points, adjacent to a WPA= 1 point (possible points 0 to 6)
- Within a 4 square mile area there are existing AMA, WMA, WPA, Designated Wildlife Lakes, State Funded Conservation Easements (including: ACUB, CREP I, CREP II, PWP, RIM, RIM-WRP), DNR Administered Lands (including: AMA, FMA, SNA, SFT, SPK, SRA, County Forest), or TNC Preserves and Managed areas. (Possible points 1 to 5)
- Proximity to people/users within 50 miles of proposed acquisition (possible points 0 to 4 based on population)
- Proposed acquisition is within a Prairie Plan Core Area/Corridor/Corridor Complex (0 to 4 pts)
- Proportion of watershed protected based on analysis conducted by DNR Fisheries Research (possible points = 1, 2, or 5)

Secondary criteria used for proposed AMA or WMA parcels

- Size of proposed acquisition – larger parcels receive a higher score (possible points 0 to 3)
- Parcels on Wild Rice Lakes (2 pts)
- County Biological Site/Rare Natural Element on proposed acquisition (1 pts)
- MCBS NPC Prairie System or Complex or CWCS GAP Key Prairie Habitat types (3 pts)
- Nearby wetland complexes – 5 tier data from HAPET (1, 2, or 3pts)
- MCBS Sites of Biodiversity Significance (3pts)
- Restorable Wetlands on proposed acquisition (1 pt)
- Contains a high priority forest type not already covered under County Biological Site (2 pts)

Primary criteria used for proposed AMA parcels

- In-lake aquatic plant community condition based on Floristic Quality Index (possible points = 0, 1, 2, or 4)
- On a lake identified as a “lake of biological significance” based on analysis conducted by DNR Ecological and Waters Resource Division (possible points = 0, 2, 4, or 6)



- On a shoreline identified as “highly sensitive” based on analysis conducted by DNR Ecological and Waters Resource Division. Limited to north central MN (possible points = 0 or 3)
- Site-specific shoreline condition based on observations made during site visit (possible points = 0 to 8)

Secondary used for proposed AMA parcels

- Ratio of shoreline length (m) to parcel area (sq. m) is greater than 0.003 (1pt)
- Enhanced riparian connectivity based on WHAF data (1pt)
- Acceptable upstream point-source loading based on WHAF data (1pt)

Note: Scores are calculated as % of possible points within planning region.



Criteria to score and rank parcels as candidates for trout stream conservation easement acquisition

These criteria were developed with input from MNDNR Fisheries staff who manage trout water, and Fish and Wildlife Division Acquisition Unit staff. This tool is new, and some criteria and scoring thresholds are still being adjusted.

- Adjacent to existing state ownership/easement

Points are awarded by GIS tool. 0 = no existing easement on stream, 1 = easements on stream, but not touching, 3 = touches existing easement, 6 = touches existing easement on both side.

- Easement size

GIS calculated. 0 points if proposed easement is 0 to 999 feet, 1 points if proposed easement is 1000 to 1999 feet, 2 points if proposed easement is 2000-2999 feet. 3 points if proposed easement 3000 feet or greater.

- Instream habitat condition

Points based on site-specific conditions determined during site visit. Up to 6 points for the following features: stable bank, confined channel, substrate not dominated by fines, pool/riffle complex, in-stream cover or woody debris, overhead bank cover.

- Riparian condition

Points are awarded by GIS tool using the Watershed Health Assessment Framework layers. Scoring- 1 point for 60-74% riparian area in natural cover, 2 points 75-90%, 3 points for >90.

- Trout abundance

Award 1, 2, or 4 points based on the stream reach's trout density. Scoring would use current fish assessment data with different scales for NE and SE. Draft thresholds: SE 0 pts <50 lbs/acre, 1 point 50-99 lbs/acre, 2 points 100-200 lbs/acre, 4 points >200 lbs/acre.

NE- 0 points <5 trout/1000 ft., 1 point 5-14 trout/1000 ft, 2 points 14-36 trout/1000 ft, 4 points >36 trout/1000 ft.



- Trout natural reproduction

Points are based on professional judgement or existing data regarding the quality of the stream reach as trout spawning habitat. Scores would be 0 for populations originating mostly from stocking, 2 for streams with mixed natural recruitment and stocking, or 4 points if self-sustaining without stocking.

- Rare natural features

As identified by Minnesota Biological Survey (MBS) existing GIS layer. Points are awarded by GIS tool. 1 point if proposed easement (buffered by 20m) touches a polygon on the rare natural features GIS layer.

- MBS Sites of Biodiversity Significance

Points are awarded by GIS tool. 2 points if proposed easement (buffered by 20m) touches a polygon on the MBS site of biodiversity significance GIS layer.

- Recreation potential

Points are awarded by GIS tool querying census data for total population within 50 miles. 0 = <10,000, 1 = 10,001 to 20,000, 3 = 20,001 to 50,000, 4 = >50,000.

- Springs

Award 3 points awarded if the site has a spring. This would be based on info gather during site visit.

- Temperature resiliency

Award 1, 2, or 3 points based on the stream reach's temperature profile/stability. 0 points-temp exceeds 66 F > 5% of summer days, 3 points temp exceeds 66 F but on <5% summer days, 6 points if temperatures do not exceed 66 F.

- Longitudinal connectivity

Deduct 1 point if impassible barrier downstream of parcel.



- Restoration potential

Award 3 points if habitat is limiting and survey data indicate quality trout populations in reaches of same stream with better habitat.

- Identified anadromous importance

If the stream reach is known to support anadromous spawning runs, 1 point is awarded.

- Existing/potential angler use

Award up to 3 points based on professional judgement of factors including the stream reach's current angler use and demand for additional access.

- Accessible

Award 1 point if the proposed easement is crossed by a road or trail that would provide angler access other than from adjoining easement.

- Heritage brook trout or coaster brook trout

Award 3 points awarded if the stream reach has a known population of heritage brook trout or coaster run brook trout.