

Lessard-Sams Outdoor Heritage Council Fiscal Year 2022 / ML 2021 Request for Funding



Date: May 28, 2020

Program or Project Title: Knife River Habitat Rehabilitation-Phase VI (HRE05)

Funds Requested: \$950,000

Manager's Name: Tony Cuneo and Kevin J.Bovee
Title: Ex.Director and Project Manager
Organization: Zeitgeist (ZG) and Lake Superior Steelhead Association (LSSA)
Address: 222 E. Superior Street, Duluth, MN. 55802
Address 2: P. O. Box 16034, Duluth, MN. 55816
City: Duluth, MN 55816
Office Number: 218-336-1410
Mobile Number: 218-269-7427
Email: tony@zeitgeiststarts.com
Website: www.steelheaders.org

County Locations: Lake, and St. Louis.

Eco regions in which work will take place:

- Northern Forest

Activity types:

- Enhance

Priority resources addressed by activity:

- Wetlands
- Forest
- Habitat

Abstract:

Historic Knife River flooding has led to stream channel degradation. This degradation resulted in slumping streambanks, sediment discharge exceeding the total maximum daily load (TMDL) and the loss of instream trout habitat. This is LSSA's 6th LSOHC Grant proposal in the Knife River. Since the LSSA began grant work on the Knife River (2013), the DNR has observed a 215% increase in the adult steelhead population. Our LSOHC projects have also stabilized ~2 miles of stream channel, restored ~15,000 feet of streambanks and reduced annual sediment discharge by 700 tons. For more information go to www.steelheaders.org.

Design and scope of work:

PROBLEM TO BE ADDRESSED

The Knife River's forest has changed over the past century, which has led to instability of the stream channel during flood events. This channel instability has resulted in significant streambank erosion, channel widening, streambed downcutting and loss of trout habitat. The LSSA's LSOHC grant projects have attempted to reverse this channel instability by restoring the underlying causes of these stream impairments, while at the same time improving the overall trout fishing. Our previous LSOHC projects have achieved this goal by stabilizing ~2 miles of stream channel, restoring ~15,000 feet of streambank, reducing annual sediment discharge by 700 tons, replanting thousands of trees/shrubs and observing a 215% increase to the adult steelhead population. This 215% increase occurred when two prominent Lake Superior Tributaries saw their steelhead return decrease (Brule River -4.5% from average) (Portage Creek - 201% from 2007).

The LSSA and DNR have worked together to identify three priority restoration reaches. These three restoration project sites will not

only rehabilitate key trout habitats and restore fishing opportunities, but will also reverse the historic ecological damage to the watershed by stabilizing streambanks, reducing erosion, minimizing sediment discharge, decreasing turbidity levels, reconstructing riparian wetlands, reducing downstream flood impacts and reestablishing instream trout habitat in the watershed.

SCOPE OF WORK

- Assess, survey and design the stream reach(s) to obtain a permit to DNR and Army Corp of Engineers.
- Obtain baseline assessment data.
- Restore the stream channel's shape, dimension and profile.
- Remove flood debris and sediment from the streambed.
- Enhance instream trout habitat by strategically positioning large woody debris, rock structures and "J" hooks into the channel.
- Create new floodplains/wetlands.
- Reconnect the river channel to the floodplain.
- Raise groundwater table.
- Stabilize streambanks.
- Rehabilitate riparian tree canopy.
- Monitor water temperature.

HOW PRIORITIES WERE SET

The MPCA identified erosion areas within the Knife River Watershed during their TMDL study. The LSSA has assessed these MPCA identified erosion areas, along with other watershed reaches, for the presence of cool water, availability of trout and potential to restore stream impacts. This has allowed LSSA to prioritize areas for restoration that provide the best benefit for aquatic life and improved water quality. The LSSA also has a policy to work from an upstream to downstream manner. Our top-down restoration approach eliminates re-impacting previous restored reaches and reduces downstream flooding and sedimentation.

Urgency and Opportunity of the Project

Reach 8 and 13 are within prime trout habitat sections of the Knife River and by restoring these areas, we can improve trout spawning success and juvenile retention. Restoring the Lower River improves adult trout access to the spawning grounds. This Lower River project also restores a historic but now lost fishing opportunity in the Knife River. This Lower River fishing area was once revered as one of the premier areas to catch steelhead.

STAKEHOLDER INVOLVEMENT

The LSSA has consulted and collaborated with DNR Lake Superior Area Supervisor, DNR Duluth Area Fisheries Supervisor, DNR Region 2 Stream Specialist and private landowners.

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:

The Knife River is a designated trout stream. DNR trout stream designations are provided to watersheds that have a cold-water resource. Cold-water streams receive special protection because of their value to fish and wildlife and because they are relatively scarce in Minnesota.

The Knife River is more unique than other trout streams in Minnesota because this watershed has anadromous (migratory trout) and does not have a barrier falls. The Knife River is the only watershed in Minnesota that has these two combined features. So, of the 60 + tributaries that connect to Lake Superior with anadromous trout populations, only the Knife River, does not have a barrier waterfall that limits upstream migration. Finally, the Knife River Watershed consists of over 65 miles of anadromous trout habitat, which represents over 50% of all the anadromous trout habitat in Minnesota.

The Knife River also has another unique feature; according to DNR genetics researcher Charles Kruger, the Knife River has a genetically distinct strain of steelhead. Not only are these trout genetically distinct from other North Shore watersheds, but Knife River steelhead, are genetically distinct within its own watershed. This means that trout produced in the Main Knife River are genetically different and distinct than other trout produced within its tributaries of: Stanley Creek, McCarthy Creek, Main West Branch, Little West Branch, Captain Jacobson and Little Knife River.

This grant proposes to rehabilitate, restore and create instream habitat to enhance and protect the uniqueness of the Knife River's trout population. This project will specifically create, enhance and protect instream habitats that are critical to trout spawning, rearing and staging steelhead.

Finally, trout stocking has been discontinued in the Knife River with the closure of the French River Hatchery. The closing of this hatchery removes the safety net for the Knife River trout population. So essentially, the Knife River is on its own to maintain its trout population exclusively through natural reproduction and to continue to do so we need to focus on rehabilitating its degraded habitat.

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

By completing this project, we are diminishing the opportunity for downstream ecological damage that annually impacts the lower river. The funding of this project will prevent hundreds of tons of sediment from discharging from the proposed project banks, minimize downstream flood impacts because floodwaters will be retained in restored upstream wetlands and improve upstream access to the spawning grounds for anadromous trout.

The other reason timing is so critical is to reestablish the lost riparian canopy. A major component of rehabilitating a trout stream is to restore a mixed overhead canopy. This canopy takes 5 to 10 years for shrubs and 25 to 75 years for large trees to reestablish. The reestablishment of riparian cover is critical to minimize the colonization of invasive species, such as reed canary grass and buckthorn that are already present in the watershed.

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 LSSA uses scientifically based, current Natural Channel Design (NCD) principles/parameters for all of our stream restoration projects. Prior to conducting any LSOHC grant projects, the LSSA first conducts a series of NCD stream assessments. The following is summary of our assessments.

The Main Knife River Stem is geomorphically stable from Mile 23 (headwaters) downstream to Mile 16. This section has the coolest water and most intact tree canopy.

Mile 16-12 is where channel instability begins. This instability is observed by the down cutting of the streambed, eroding streambanks and sediment deposition. This section is where 90% of the spawning occurs because the streambed gradient flattens and gravel deposits can form. This 4-mile section is the LSSA's "priority" area because our restoration work is most effective here. This is where the highest trout population and the start of channel instability coexist. Reach 8 and 13 are located in our priority area.

Mile 2 to the mouth is critical for steelhead staging and migration but is more noteworthy as the main fishing area. This stretch is where large adult trout migrate and stage to pass over two large waterfalls to reach the spawning grounds. Efficient movement of spawning trout through this section is critical, so they reach the spawning grounds in good reproductive condition. The first waterfalls area is where the Lower River project is located.

The LSSA's restoration priorities feature a top/down approach. This approach overtime will ultimately extend suitable trout habitat corridor downstream because we have systematically improved the habitat by:

- Stabilizing the stream channel.
- Cooling water temperature.
- Restoring spawning gravel.
- Enhancing rearing habitat.
- Retaining floodwaters.
- Reducing erosion and sediment load.
- Reestablishing overhead riparian tree canopies.

The only exception to the LSSA top/down approach involves Lower River fish migration impairments. Fish migration is the most critical restoration priority in the Knife River because anadromous trout migrate several miles upstream to access their spawning grounds. If these fish are confined to the Lower River, they will spawn in poor habitat and their offspring will prematurely leave the watershed and be preyed upon in Lake Superior.

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

- H5 Restore land, wetlands and wetland-associated watersheds
- H6 Protect and restore critical in-water habitat of lakes and streams

Which other plans are addressed in this proposal:

- Long Range Plan for Fisheries Management
- Knife River Implementation Plan for Turbidity-Total Maximum Daily Load (TMDL).

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

The DNR's Lake Superior Management Plan outlines how Rainbow Trout will be managed in Lake Superior Tributaries. This plan provides data and recommendations for restoring Knife River steelhead. Below is some DNR data and management strategies.

- Juvenile steelhead appear to be prematurely emigrating from the Knife River due to poor rearing habitat.
- Early emigrating juveniles (age 1) are preyed upon at a high rate in Lake Superior and is a major limiting factor to the steelhead population in the Knife River.
- Restoring the Knife River's instream habitat should equate to greater 2-year old juvenile steelhead retention.
- This greater retention should significantly increase the adult steelhead population in the Knife River.
- The LSSA's past Knife River habitat project work has occurred from 2013-2019.
- The DNR's 2013-2019 Knife River trap data, concludes the steelhead population has increased by 215%.
- Continued restoration of the Knife River should result in continued steelhead population increases.

Which LSOHC section priorities are addressed in this proposal:

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

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 LSSA uses Natural Channel Design (NCD) methodology for stream restoration projects. This process restores the stream's geomorphic parameters by placing natural materials in the streambed to restore the channel and stabilize streambanks. This is different from traditional restoration techniques that riprap armor streambanks without addressing the underlying deficiencies.

Another benefit of NCD projects, is the use of large woody debris. Prior to the turn of the century, large trees fell into the channel providing instream habitat and overhead cover. This instream deposition of wood resulted in the creation of deep scour pools and the accumulation of spawning gravels that provide important lifecycle habitat features. The LSSA is restoring this lost woody habitat by importing logs from local loggers. This not only benefits the stream but provides additional income to loggers.

Another advantage of NCD stream restoration projects, is they are designed to be self-maintaining. This is due to the resizing of stream channels, reestablishing floodplain elevations and stabilizing streambanks to allow for floodwaters to create the bank and sediment to be transported.

The final aspect of this project is the restoration of lost fishing pools in the Lower river. These pools historically held over 100 anglers at a time and now due to sediment discharge from the 2012 flood, can only hold half that many. This restoration will also provide better staging habitat for upstream migrating trout by creating rest areas where trout can hold out of the heavy stream current.

Relationship to other funds:

- Clean Water Fund
- Minnesota's Lake Superior Coastal Program

Describe the relationship of the funds:

In 2012, Legacy Clean Water Fund and Great Lakes Commission provided money to the Lake County Soil and Water Conservation District for the Knife River watershed's private stream sections. This money was used to stabilize slumping clay banks as part of the TMDL implementation plan. This money was awarded to the Lake County Soil and Water Conservation District. The Lake County SWCD has also received three Buck thorn removal grants to protect the Knife River riparian zone.

The LSSA and SWCD have been working cooperatively on separate sections of river to insure the entire watershed is addressed and improved. The LSSA is primarily working on the upper river habitat on public lands and private lands with easements, while the SWCD is working on the lower river sections and concentrating on private lands.

The LSSA was awarded a Lake Superior Coastal Program grant as a match in the Knife River Habitat Rehabilitation-PH III LSOHC grant award.

Does this program include leverage in funds:

Yes

The LSSA has used its charitable gaming funds to perform over \$500,000 for Knife River restoration work prior to the Legacy Amendment being passed. This funding donated money to the DNR for the Knife River fish traps, population assessments and creel census on the Knife River, a smolt stocking program for five years, stream access stairs and walking platforms to reduce bank erosion, signs to highlight regulation changes, in stream restoration, trees, tree planting materials and labor and stocking of fish.

We continued to use our gaming funds to supplement our first five phases of this LSOHC grant. The LSSA has spent approximately \$60,000 to fund grant work on private, non-leasehold property, design on the Second Falls restoration project and creation of two LSOHC promotional videos on our Grant Funded Projects. The LSSA has also spent in excess of \$25,000 on beaver flights, dam removal and beaver trapping in the watershed.

Finally, the LSSA has provided a large in-kind volunteer effort. This in-kind donation has amounted to over \$60,000 for equipment use and rental, volunteer labor, meals, travel and other expenses. The LSSA anticipates contributing \$5,000 to this project in the form of payments and in-kind donations.

Per MS 97A.056, Subd. 24, Any state agency or organization requesting a direct appropriation from the OHF must inform the LSOHC at the time of the request for funding is made, whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose:

This request does not supplant and funding nor does it is a substitution for any projects mentioned.

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

Appropriation Year	Source	Amount
FY 20 12	Great Lakes Commission (GLRI funded) on Hawk Hill Road	\$ 293,000
FY 20 12	Clean Water Fund-Copper Hill Road	\$ 212,000
FY 20 15	LCMR-Buckthorn Removal	\$ 54,000
FY 20 16	DNR-Buckthorn Removal	\$ 12,800
FY 20 17	Clean Water Fund-Buckthorn Removal	\$ 144,000
20 18	Minnesota Lake Superior Coastal Program	\$ 50,000

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

A critical component of this project is to ensure beaver do not re-impact areas that have been rehabilitated. To ensure that the Lessard Sams Outdoor Heritage Council projects are maintained after project completion, annual helicopter flights are conducted to ensure beavers do not re-colonize the project areas. These beaver flights are conducted in late autumn by the DNR as they have been previously for over 15 years. If dams or beaver activity is noted in the annual flight, the DNR will contract with Federal trappers to remove the beavers and notch their dams. The estimated cost of the flight, beaver removal and dam notching throughout the entire Knife River watershed is approximately \$15,000. If the DNR loses funding for this project, the TMDL implementation plan has budgeted \$35,000 annually for this task. Included in this budget is beaver flights, trapping, dam notching and supplemental tree planting.

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

Year	Source of Funds	Step 1	Step 2	Step 3
July 1, 20 23 - June 30, 20 24	DNR	Beaver Flights	Beaver Trapping	N/A
July 1, 20 23 - June 30, 20 24	DNR and LSSA	Beaver Flights	Beaver Trapping	Tree Planting
July 1, 20 24 - June 30, 20 25	DNR	Beaver Flights	Beaver Trapping	N/A
July 1, 20 24 - June 30, 20 25	DNR and LSSA	Beaver Flights	Beaver Trapping	Tree Planting

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

Steelhead Trout are an indicator species in the Knife River.

- Knife River juvenile steelhead are genetically predetermined to leave the Knife River at age 2 for Lake Superior.
 - Approximately 80% of Knife River juvenile steelhead prematurely emigrate to Lake Superior.
 - When juvenile steelhead prematurely (before age 2) emigrate the Knife River to Lake Superior they are smaller in size and significantly preyed upon.
 - When juvenile steelhead emigrate the Knife River at age 2 they are larger and are preyed upon less frequently.
 - According to the DNR, 1 adult steelhead will return from Lake Superior to spawn in the Knife River out of every 350 early emigrating juveniles. This is a 1:350 ratio.
 - By contrast, 1 adult steelhead will return from Lake Superior to spawn in the Knife River out of every 10 (age 2) emigrating juveniles.
- This DNR study concludes that juvenile steelhead that remain in the Knife River until age 2 return at a 1:10 ratio or 35 times greater rate.

- The average annual number of juvenile steelhead that emigrate the Knife River is ~13,000.
- By increasing the number of 2-year old steelhead from ~ 20% to ~ 50%, we would expect the population of adult steelhead to increase three-fold or 300%. This would equate to a run of ~2,200 adults.
- This population increase is possible within the next 12 years because the LSSA's work has seen the steelhead population double since 2014 (6 years).

Activity Details

Requirements:

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

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program - **Yes**

Is the restoration and enhancement activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (Permanently Protected Conservation Easements County/Municipal)**

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**

Land Use:

Have you received OHF dollars in the past through LSOHC? - **Yes**

Past appropriations and spending to date:

Apprp Year	Approp Amount Received	Approp Amount Spent to Date	Leverage as Reported in AP/th>	Leverage Realized to Date	Total Acres Affected in AP	Total Acres Affected to Date	Program Complete and Final Report Approved?
2012	380000	380000	0	0	204	204	YES
2014	1410000	1410000	0	0	612	612	YES
2018	927000	776800	142900	142900	356	356	NO
2019	891000	11500	96600	0	325	0	NO
2020	700000	0	77900	0	300	0	NO

Accomplishment Timeline

Activity	Approximate Date Completed
Assess, design and permit Knife River Restoration Reaches	July 1, 2021 - July 1, 2024
Construction Activities Reach 8 and 13	July 15, 2022 - September 15, 2024
Tree Planting	September 1, 2022 - June 30, 2025
Construction Lower River Area	July 1, 2022 - June 30, 2024
Post Construction Survey as required by MN DNR	July 1, 2023 - June 30, 2025

Budget Spreadsheet

Total Amount of Request: \$950,000

Budget and Cash Leverage

BudgetName	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$155,000	\$0		\$155,000
Contracts	\$670,000	\$2,000	Private Source:LSSA	\$672,000
Fee Acquisition w/ PILT	\$0	\$0		\$0
Fee Acquisition w/o PILT	\$0	\$0		\$0
Easement Acquisition	\$0	\$0		\$0
Easement Stewardship	\$0	\$0		\$0
Travel	\$0	\$4,000	Private Source: ZG & LSSA	\$4,000
Professional Services	\$0	\$3,000	Private Source: ZG & LSSA	\$3,000
Direct Support Services	\$0	\$0		\$0
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$5,000	\$0		\$5,000
Supplies/Materials	\$120,000	\$0		\$120,000
DNR IDP	\$0	\$75,000	MN DNR	\$75,000
Total	\$950,000	\$84,000	-	\$1,034,000

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Fiscal Management	0.60	4.00	\$69,000	\$0		\$69,000
Project Management	0.60	4.00	\$86,000	\$0		\$86,000
Total	1.20	8.00	\$155,000	\$0	-	\$155,000

Amount of Request: \$950,000
 Amount of Leverage: \$84,000
 Leverage as a percent of the Request: 8.84%
 DSS + Personnel: \$155,000
 As a % of the total request: 16.32%
 Easement Stewardship: \$0
 As a % of the Easement Acquisition: -%

What is included in the contracts line?

The Contracts line item includes the cost of doing the actual work on the project which will be outlined in the RFP for this phase of the project. It also includes outside contracting that may occur for the project; ie contracting with CCM, NRRI, etc.

Describe and explain leverage source and confirmation of funds:

Using LSSA's charitable gaming, general fund and in-kind donations. Allocated by LSSA Board approval. ZG funds allocated by ZG board approval. Other Knife River leverage estimated at \$ 100,000: MNDNR-weir operation, creel census, annual shocking program, temp monitoring, steelhead relocation, easement work.

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:

Overall project accomplishments would have to be scaled back accordingly.

Has funding for these positions been requested in the past? - Yes

Please explain the overlap of past and future staffing and position levels previously received and how that is coordinated over

multiple years?

All invoices must be broken out per the specific phase being worked on. Invoices are first checked by Project Manager, verified as factual and billed to the specific grant phase before being forwarded on to the Fiscal Management team in place. The Fiscal Management team in turn verifies proper grant/activity coding. Running budget balances (individual budget categories) are maintained for each specific grant. There are several layers of checks and balances in place with the Knife River Habitat Rehabilitation grant awards.

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	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	0	0	330	0	330
Total	0	0	330	0	330

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	\$0	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$0	\$0
Enhance	\$0	\$0	\$950,000	\$0	\$950,000
Total	\$0	\$0	\$950,000	\$0	\$950,000

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	0	0	0	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	0	0	0	0	330	330
Total	0	0	0	0	330	330

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	\$0	\$0	\$0	\$0	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$0	\$0	\$0
Enhance	\$0	\$0	\$0	\$0	\$950,000	\$950,000
Total	\$0	\$0	\$0	\$0	\$950,000	\$950,000

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	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$0
Enhance	\$0	\$0	\$2,879	\$0

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	\$0	\$0	\$0	\$0
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$0
Protect in Easement	\$0	\$0	\$0	\$0	\$0
Enhance	\$0	\$0	\$0	\$0	\$2,879

Automatic system calculation / not entered by managers

Target Lake/Stream/River Feet or Miles

16 Miles

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.

Outcomes

Programs in the northern forest region:

- Healthy populations of endangered, threatened, and special concern species as well as more common species *By funding this project, anadromous and stream trout populations should increase. This project will also provide habitat to invertebrate, amphibians, reptiles, birds and mammals. This project also will replant the riparian zone of the river with a mix old growth tree species (both deciduous and coniferous) and pollinator shrubs/native flowers. These plantings will reestablish a lush riparian canopy, help cool the water as trees mature and provide large wood debris in the stream as the trees die and fall into the river. DNR shocking data and future returns to the weir will measure the improvement in the fishery.*

Parcel List

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

The MPCA identified erosion areas within the Knife River Watershed during their TMDL study. The LSSA has assessed these MPCA identified erosion areas, along with other watershed reaches, for the presence of cool water, availability of trout and potential to restore stream impacts. This has allowed LSSA to prioritize areas for restoration that provide the best benefit for aquatic life and improved water quality. The LSSA's also has a policy to work from an upstream to downstream manner. Our top-down restoration approach eliminates re-impacting previous restored reaches and reduces downstream flooding and sedimentation.

Section 1 - Restore / Enhance Parcel List

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
Knife River	05211204	0	\$0	Yes
Knife River	05211205	0	\$0	Yes
Knife River	05211208	0	\$0	Yes
Knife River	05211217	0	\$0	Yes
Knife River	05211218	0	\$0	Yes
Knife River	05211219	0	\$0	Yes
Knife River	05211231	0	\$0	Yes
Knife River	05311233	0	\$0	Yes

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Knife River	05212224	0	\$0	Yes
Knife River	05212225	0	\$0	Yes
Knife River	05212236	0	\$0	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

Section 2a - Protect Parcel with Bldgs

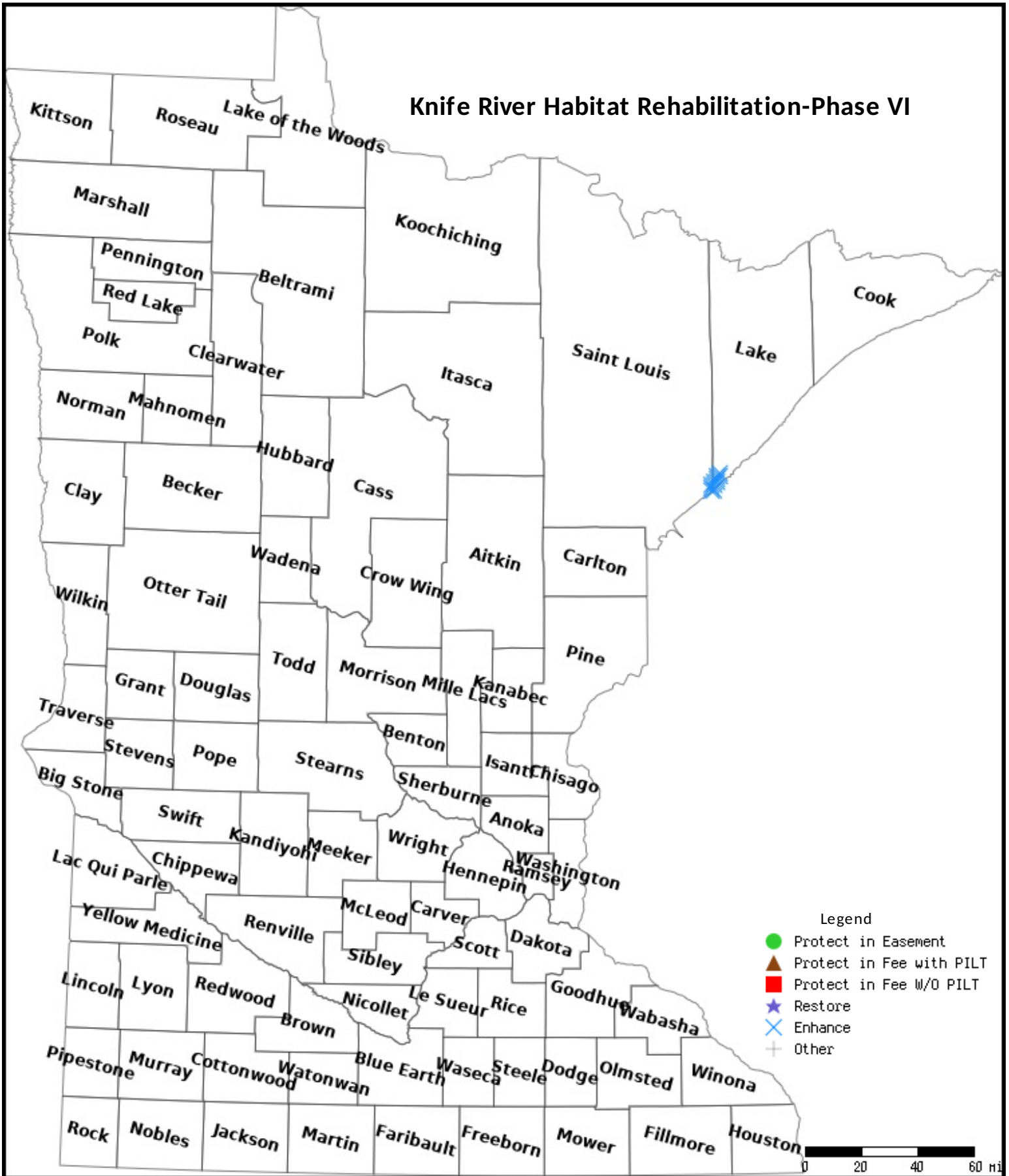
No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map

Knife River Habitat Rehabilitation-Phase VI



Data Generated From Parcel List

Grant Figure



Reach 8 Bank Slumping



Channel Instability. Note the Lateral Erosion to the Channel in the foreground



Reach 13 Bank Slumping



Erosion, Sediment and Trees Discharge into the Stream Channel

Congress of the United States
House of Representatives
Washington, DC 20515-2308

May 20, 2020

Lessard-Sams Outdoor Heritage Council
100 Rev. Dr. Martin Luther King Jr. Blvd.
State Office Building, Room 95
St. Paul, MN 55155

Dear Lessard-Sams Outdoor Heritage Council,

I write in support of the the Lake Superior Steelhead Association's (LSSA) grant application in Phase 6 of their plan to restore a section of the Knife River in St. Louis County, Minnesota. The Knife River is critically important for Steelhead along Minnesota's North Shore and the section the LSSA plans to restore is an ideal area for spawning. This section was heavily impacted by flooding in 2012 and has several steep eroding banks contributing excessive sediment to the stream. Reducing turbidity will not only benefit Steelhead, but the entire riparian ecosystem. Restoration plans for this project are consistent with current best practices aimed at restoring aquatic habitat and helps fulfill Lessard-Sams Outdoor Heritage Council's goal to "...restore, protect, and enhance Minnesota's wetlands, prairies, forests, and habitat for fish, game, and wildlife...".

Fish habitat in our rivers, and especially those along the North Shore of Lake Superior, are critically important to northeastern Minnesota. The Lake Superior Steelhead Association's Knife River restoration project aimed at improving water quality and boosting natural fish reproduction in Lake Superior is immensely beneficial to our area and it has my full support.

Sincerely,



Pete Stauber
Member of Congress
Minnesota's 8th Congressional District

Lessard-Sams Outdoor Heritage Council
100 Rev. Dr. Luther King Jr. Blvd.
State Office Building, Room 95
St. Paul, MN 55155

May 21, 2020

Dear Lessard-Sams Outdoor Heritage Council Members:

We are writing to offer our enthusiastic support for this project, part of which will be undertaken on our property in Two Harbors, Minnesota.

When we bought our little slice of land straddling the Knife River a few years back, we had a dream of being part of protecting and restoring Minnesota's tremendous natural resources. The property was overgrown with a dilapidated RV parked within 50 feet of the river, and scars of bank erosion. All we saw, however, were the tall trees, public fishing access, and the water of the Knife as it gurgled over river rocks.

Since that time, we have made progress: drilling a well, adding a septic system, building a small cabin with a patio, removing the RV, and addressing a smaller bank erosion issue with the Lake County SWCD. Fishermen enter the river at our property. Our kids fish in the river and eagerly ask fishermen how the day has gone for them. But there remains one glaring scar that impairs the waterway: a steep bank roughly 30 feet high and maybe 50-100 feet long of exposed clay.

Without proper attention, I'm afraid that bank will eventually collapse into the river, damaging access and water clarity far downstream. This project is essential.

The only party with resources for a project like this is through the Lessard-Sams Outdoor Heritage Council. I am thrilled to team up with the Lake Superior Steelhead Association, and other necessary governmental entities, to make it happen. I will continue to do my part to be a good steward of the land I own and the water that passes through it. I look forward to sportsmen using the Knife River for years to come.

Let me know if I can be of further help or if I can answer any questions for you.

Sincerely,

Ross and Jennifer Lovely

218-269-6017 (Ross)