Lessard-Sams Outdoor Heritage Council

Trout Stream Restoration in the Root River Watershed

ML 2024 Request for Funding

General Information

Date: 06/23/2023

Proposal Title: Trout Stream Restoration in the Root River Watershed

Funds Requested: $12,278,200

Confirmed Leverage Funds: $65,000

Is this proposal Scalable?: Yes

Manager Information

Manager's Name: Terence Ruane
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Location Information

County Location(s): Houston and Winona.

Eco regions in which work will take place:

- Southeast Forest

Activity types:

- Protect in Easement
- Restore

Priority resources addressed by activity:

- Habitat

Narrative

Abstract

RES will use its stream restoration and land protection expertise to restore and protect coldwater trout streams in the Root River watershed in southeast Minnesota. RES will utilize its internal team of designers, regulatory specialists, and ecological restoration professionals to deliver a high-quality stream restoration and habitat protection project that will restore and enhance up to 25,316 linear feet stream habitat in critical areas of the Root River watershed and its sub-watersheds. RES proposes to use an innovative guaranteed-performance model for this project where RES will only be reimbursed for the successful completion of the objectives.

Design and Scope of Work

Accessible trout fishing is a high priority for Minnesotans and attracts out-of-state tourism. The Driftless Area has some of the country's best trout streams, but agricultural practices, invasive species, and floodplain disconnection has led to incised streams and heavy sedimentation. The Root River Watershed Monitoring & Assessment Report identifies impairments including sediment, bacteria, macroinvertebrates, and nitrates, resulting in degraded habitat for trout. Native brook trout require rock riffles, gravel bottom runs, clear water, and cold temperatures. Other local trout species also thrive in environments that include in-stream woody debris, riffles, and deep pools. In addition to suboptimal habitat for trout, incised streams with overgrown woody banks are difficult for anglers to access.

RES plans to protect and restore up to 25,316 LF of coldwater trout streams in the Root River watershed in southeast Minnesota. RES' scope includes:

- identifying degraded trout streams without current protection;
- engaging high-priority landowners;
- acquiring easements;
- assessing current habitat conditions, designing and permitting, and implementing stream restoration activities;
- stewardship during vegetation establishment with three years of post-construction maintenance.

Alternative to DNR OMBS' Pass-Through Grants Reimbursement Manual, RES seeks funding on a pay-for-performance basis, meaning RES has identified a fixed cost per LF of restored trout stream and will request reimbursement from LSOHC only for the successful outcomes achieved (i.e., LF of stream successfully protected and restored). This approach provides LSOHC assurance that funding achieves the project's stated goals. By integrating all phases of the project, RES can achieve significant efficiencies while guaranteeing high-quality environmental outcomes. RES will only be paid upon completion of milestones associated with achieving the agreed-upon ecological uplift.

To determine what streams, meet the standard of "degraded", and to demonstrate reimbursable ecosystem uplift, RES will collect baseline data for each project, including photographs, eroded bank heights, channel characteristics, and existing vegetative conditions. RES will score each project based on the Minnesota Stream Habitat Assessment (MSHA) protocol and DNR's Trout Easement Scoring worksheet. Each project will demonstrate improvement using these tools when pre- and post-restoration conditions are compared. Only projects demonstrating improvement will be reimbursable. RES will coordinate with local DNR fisheries staff during the easement identification, site selection, and design process to ensure protected sites align with their priorities for the Root River watershed. Following construction, RES will submit as-built designs and an annual monitoring summary report of post-construction conditions, adaptive management measures, and maintenance performed.

RES determined the cost per LF of stream using typical costs for each project component. RES utilized DNR's easement costs, which follow the 2022 Minnesota Statues 84.0272, subdivision 2. RES estimated other costs based on in-house expertise in natural channel design and construction. RES' potential reimbursement is capped at the fixed cost per LF, even if costs exceed the agreed-upon fixed rate. In effect, RES agrees to only be paid a flat rate for

success. If projects do not advance due to landowners backing out, fatal flaws identified during design and permitting, or other challenges, RES won't be reimbursed for those costs.

Explain how the proposal addresses habitat protection, restoration, and/or enhancement for fish, game & wildlife, including threatened or endangered species conservation

Our proposal aims to protect and restore a significant number of high priority trout streams. Approaching this opportunity at a habitat-scale is critical because biodiversity and sustainable fish populations depend on miles of contiguous healthy streams, not just disconnected high-quality stretches. MPCA has identified many biological impairments in Root River streams, which can be meaningfully improved only through a large-scale restoration and corridors approach. Trout move daily to feed and rest throughout different habitats and will move seasonally in response to life stage requirements or environmental conditions. Corridors for trout to move between reaches will impact the ability to build populations. Brook trout require diverse habitat with riffles, deep pools, different flow intensities, and large in-stream structures like wood and boulders. Our stream design will stabilize banks and reconnect adjacent floodplains, allowing organic matter interchange and a variety of seasonal depths. RES plans to restore meanders using toewood structures, stone toe and bank grading, and rootwad composite. RES will reestablish in-stream habitat and floodplain reconnection using vane structures, boulder clusters, and habitat logs. RES will incorporate constructed riffles, channel shaping, flood benches, and other features to create habitat and stream stability. This restoration approach benefits macroinvertebrate populations, a trout food source, which requires in-stream and shallow water habitat for breeding and survival. In addition to trout species, this watershed also hosts smallmouth bass, channel catfish, rock bass, sunfish, crappies, and rough fish. The project will benefit other SGCN and other non-game species, including Northern long-eared bat (federally endangered), skink, North American racer, smooth softshell, timber rattlesnake, Pickerel frog, SGCN fish and mussels, 40+ species of birds, deer and countless furbearer game species. The Minnesota Wildlife Action Plan scores the riparian corridors within the watershed as largely medium to high for five scalable metrics: SGCN population viability scores, SGCN richness, spatially prioritized Sites of Biodiversity Significance, ranks of Lakes of Biological Significance, and Stream Indices of Biological Integrity (IBI). Funding restoration in this region will protect valuable habitat for countless species native to Minnesota. RES will evaluate the presence of sensitive species in site selection and factor this into the scorecard.

What are the elements of this proposal that are critical from a timing perspective?

Trout populations and degraded streams warrant priority to build resiliency to future threats, including temperature, land use changes, and exacerbation of degraded conditions. Although fish populations may appear stable, changing climate conditions have resulted in aquatic species crashes in other locations. Without proactive stewardship and protection of the remaining resources, these populations may not be prepared for sudden changes that we will face over the next 10-15 years. Further, invasive woody species continue to threaten riparian habitat, destabilizing banks and spreading to pristine areas. Managing these suboptimal areas now prevents degradation in adjacent high-quality areas, and may reduce future costs to restore even larger areas.
Interest in outdoor recreation and trout fishing surged in the last few years, which has put additional stress on public natural resources. Securing new easements now is vitally important to support this recreational engagement and prevent future land conversion to agriculture.

Describe how the proposal expands habitat corridors or complexes and/or addresses habitat fragmentation:

The project's focus on the Driftless Area region, known for its exceptional trout streams, is driven by the importance of preserving and expanding trout habitat corridors. By creating in-stream habitat structures, such as woody debris, riffles, and deep pools, over a target minimum of 3000 LF of stream, the project creates habitat

corridors with diverse environments that support trout reproduction, shelter, and access to food sources. RES' strategy seeks to engage high-priority riparian landowners with the specific intent to create long-term connectivity between protected streams and continuous habitat complexes along the stream banks. This watershed has a high proportion of private land ownership with limited areas designated for conservation. Focus on the riparian corridors first to establish habitat corridors will provide a critical boost for trout, but also for the other species who rely upon these resources. This aligns with the Minnesota Wildlife Action Plan's assessment of the Root River Watershed, calling out the need to reduce channelization, restore stream connectivity, and remove invasive species to enable access to riparian areas.

Several state reports identify the riparian networks in this region as the key habitat corridors, with some of the last intact forested areas directly adjacent to the aquatic resources. Protecting and restoring these resources under permanent easements is critically important. Restoration efforts will mitigate the impacts of agricultural practices, invasive species, and floodplain disconnection, reducing sedimentation and improving water quality critical for sustaining healthy trout habitats. Agriculture has fragmented much of the North Branch, South Branch, and South Fork watersheds, in particular, leading to a higher need for re-establishing habitat corridors in those areas. In the Money Creek watershed, greater habitat connectivity still exists and presents an opportunity to permanently preserve that scarce resource and improve habitat quality.

Which Conservation Plans referenced in MS97A.056, subd. 3a are most applicable to this project?

- Driftless Area Restoration Effort
- Strategic Plan for Coldwater Resources Management in Southeastern Minnesota

Explain how this proposal will uniquely address habitat resilience to climate change and its anticipated effects on game, fish & wildlife species utilizing the protected or restored/enhanced habitat this proposal targets.

Our project will improve this ecosystem's resiliency to climate change through protection and restoration of coldwater trout streams in southeast Minnesota. As climate change poses challenges such as rising temperatures and altered precipitation patterns, these streams serve as critical refuges for species like trout. Improving floodplain connections will increase beneficial groundwater inputs to maintain cold water temperatures and keep baseflow steady during extended dry periods. Improving floodplain connections will reduce impacts to in-stream habitat during high flow events. Further, downstream flooding could be reduced by allowing floodwaters to access the natural floodplain again and reducing the speed at which that water moves out of the system.

These ecosystems are vulnerable to climate change and for that reason, building resilience here will improve the long-term viability of game, fish, and other wildlife species and promote their ability to adapt and persist in a changing climate.

Which LSOHC section priorities are addressed in this proposal?

Southeast Forest

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

Describe how this project/program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife, and if not permanent outcomes, why it is important to undertake at this time:

This stream restoration project will produce significant and permanent conservation outcomes for fish, game, and other wildlife by restoring the natural habitat, enhancing the surrounding ecosystem, and setting the sites up for

long-term success. By restoring the natural hydrology of the stream, stabilizing the streambank with native vegetation and installing trout habitat structures, the project will improve water quality and in-stream habitat to grow fish populations, permanently protect critical trout fishing resources for generations of anglers to come, and enhance habitat corridors for game and sensitive non-game species. Additionally, we plan to use the latest scientifically-supported design and construction techniques that promote biodiversity and provide long-term benefits for the entire ecosystem (e.g., wood structures versus a rock-driven stabilization approach). Our approach includes intensive adaptive management for the first three years following construction, as we know from experience that just building these projects without an establishment strategy can lead to vegetation or bank failures and ultimately dilution of value in the investment made in the project. These projects require ongoing stewardship during establishment to set them up for enduring success.

The project can serve as a pilot to demonstrate the value and efficiency of a pay-for-environmental outcomes model. This approach guarantees state funding is spent responsibly and achieves the stated environmental objectives at the agreed-upon cost. With the increasing challenges we face to biodiversity, achievement of conservation priorities on an expedient and cost-effective basis is critical and this proposal will meet that standard.

Outcomes

Programs in southeast forest region:

- Rivers, streams, and surrounding vegetation provide corridors of habitat ~ *RES has developed a comprehensive scorecard utilizing established criteria from Minnesota state agencies, which will serve as a tool for evaluating and scoring our project. This scorecard incorporates the MPCA's Stream Habitat Assessment Protocol and the DNR's Trout Easement Scoring Worksheet. By utilizing this scorecard, we can establish baseline data for each proposed site, demonstrate ecological uplift that will be achieved with our design, document how the project site improved following construction and vegetation establishment, and maintain consistent evaluations during our annual monitoring periods. Our evaluation and scoring reports will be submitted to LSOHC on an annual basis.*

What other dedicated funds may collaborate with or contribute to this proposal?

- N/A

Per MS 97A.056, Subd. 24, Please explain 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 for funding is not supplanting or substituting previous funding.

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

Following RES' implementation of restoration activities, RES will maintain each site for three years to ensure any issues during establishment are addressed proactively. This work is all included in our fixed cost per LF of stream. Our goal for these restored streams at the end of the maintenance period is that they are largely self-sustaining. Design parameters will be based on the current and potential hydrologic regime for the Driftless Area including up to 100-year storm events. RES has significant experience designing and restoring streams for US Army Corps of Engineers mitigation projects that require a perpetually restored stream. RES will apply those same techniques to these projects to set them up for long-term success. Further, RES will work with DNR as the easement and long-term steward to develop an adaptive management toolkit that will identify when additional maintenance is warranted.

Woody invasive control may be needed to minimize encroachment into the restored banks. Where possible, RES

will educate the landowner on how to take proactive steps to reduce the presence of invasive species on their property long term.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2024	Funding Source A: LSOHC Original Grant	Use easement criteria to identify and enter into programmatic agreements with willing landholders.	Deploy crews to conduct design as well as field evaluations and submit permits to applicable agencies.	Begin project construction and feature installation.
2025	Funding Source A: LSOHC Original Grant	Develop an adaptive management toolkit to identify criteria that trigger maintenance activities	Complete project construction phase	Implement project maintenance monitoring phase year 1
2026	Funding Source A: LSOHC Original Grant	Begin the process of transferring parcel easements to MN DNR	Project maintenance and monitoring phase year 2	Draft and submit a year 1 monitoring report to applicable agencies
2027	Funding Source A: LSOHC Original Grant	Draft and submit year 2 monitoring report to applicable agencies	Complete 3 years of maintenance and monitoring	Draft final stewardship plan
2028	Funding Source A: LSOHC Original Grant	Submit final stewardship plan	Draft and submit year 3 monitoring report to applicable agencies	Complete DNR transfer process for all eased parcels

Provide an assessment of how your program may celebrate cultural diversity or reach diverse communities in Minnesota, including reaching low- and moderate-income households:

RES plans to engage local stakeholders at a deeper level if this project is funded, including any local tribal groups and other BIPOC organizations in the region, to obtain their input on priority stream reaches, and workforce development, and to capture local expertise on native plants and habitat conditions. Although RES plans to self-perform the work under this project, if opportunities exist to engage BIPOC stakeholders in workforce development or use as subcontractors, RES will evaluate those opportunities under our fixed cost per LF structure. As one example, RES is working in another state with a local tribe to collect native seed materials for a large-scale riparian restoration project. RES values the tribe's local expertise around native vegetation communities and the importance of these habitats to the indigenous populations.

This project can benefit BIPOC communities by improving access to outdoor spaces close to the populated areas of the state, which tend to have more diverse communities than other rural parts of Minnesota. Many BIPOC and diverse communities may have limited access to outdoor spaces, which can negatively impact their health and well-being. By restoring streams and improving the surrounding ecosystem, the project can provide a safe and accessible outdoor space for these communities to enjoy. Additionally, the project can address environmental injustices that may have disproportionately affected these communities in the past, such as pollution and habitat destruction.

RES will strive to engage communities of color in recreational activities that promote a deeper connection to nature. For example, RES may work with local stakeholders to organize fishing events or other outdoor activities that allow residents to experience the restored stream firsthand. RES will look for opportunities to work with school groups in low-income communities to study and recreate in this area post-construction. This can help to build community relationships and foster a sense of pride and ownership in the restoration project. We will also ensure that any signage produced for this project that results in angling access for the public will be printed in Spanish, Somali, and Hmong in addition to English.

Activity Details

Requirements

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

Is the land you plan to acquire (easement) 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 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 or on lands to be acquired in this program?
Yes

Where does the activity take place?

- AMA
- Other : Private land to be converted to easement.

Land Use

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

Will neonicotinoid pesticide products be used within any activities of this proposal?
No

Will the eased land be open for public use?
Yes

Describe the expected public use:
The eased land will be open for public use as an Angler Management Area.

Are there currently trails or roads on any of the proposed acquisitions?
No

Will new trails or roads be developed or improved as a result of the OHF acquisition?
No

Will the land that you acquire (fee or easement) be restored or enhanced within this proposal's funding and availability?
Yes

Other OHF Appropriation Awards

Have you received OHF dollars in the past through LSOHC that are current OPEN appropriations?
No

Timeline

Activity Name	Estimated Completion Date
Activity 1 – Engage willing landowners and obtain easement agreements	May 2024- June 2024
Activity 2 – Design and permitting for each secured easement	June 2024-July 2024
Activity 3 - Begin restoration of purchased lands	July 2024-April 2025
Activity 4 – Three Year Maintenance Period	June 2025- December 2027
Activity 5 – Transition management and easement enforcement to DNR	December 2028

Budget

Totals

Item	Funding Request	Total Leverage	Leverage Source	Total
Personnel	-	-	-	-
Contracts	$9,369,900	$100,000	RES, USDA-NRCS	$9,469,900
Fee Acquisition w/ PILT	-	-	0	-
Fee Acquisition w/o PILT	-	-	0	-
Easement Acquisition	$364,600	$9,800	RES	$374,400
Easement Stewardship	$95,000	-	0	$95,000
Travel	$174,800	-	0	$174,800
Professional Services	$1,924,400	$8,000	0	$1,932,400
Direct Support Services	$349,500	$48,000	RES	$397,500
DNR Land Acquisition Costs	-	-	0	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	0	-
Supplies/Materials	-	-	0	-
DNR IDP	-	-	0	-
Grand Total	**$12,278,200**	**$165,800**	**-**	**$12,444,000**

Amount of Request: $12,278,200
Amount of Leverage: $165,800
Leverage as a percent of the Request: 1.35%
DSS + Personnel: $349,500
As a % of the total request: 2.85%
Easement Stewardship: $95,000
As a % of the Easement Acquisition: 26.06%

Total Leverage (from above)	Amount Confirmed	% of Total Leverage	Amount Anticipated	% of Total Leverage
$165,800	$65,000	39.2%	$100,800	60.8%

Detail leverage sources and confirmation of funds:
RES has included staff time for easement acquisitions, stakeholder engagement, as well as monitoring and stream scorecard creation into this leverage line.

Does this proposal have the ability to be scalable?
Yes

If the project received 50% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?
RES proposes a payment structure tied to environmental outcomes, which can be scaled up or down on a unit (LF) basis. Reimbursement is capped at $485/LF with negotiated milestone payments.RES recommends a minimum funding value of $1,455,000 tied to a minimum project size of 3,000 LF.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?

Personnel costs aren't separate from contracts because we propose an alternate funding structure that is tied to environmental outcomes. All implementation costs are provided under "Contracts", and that amount could be scaled down to align with 50% of the target LF. DSS expenses would be adjusted proportionately downward.

If the project received 30% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?
If the project received 30% of the requested funding, RES would reduce the quantity of linear feet of stream on a pro rata basis. We would recommend not going lower than 3,000 LF, as that allows us to achieve the minimum level of efficiency.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?
Personnel costs aren't separate from contracts because we propose an alternate funding structure that is tied to environmental outcomes. All implementation costs are provided under "Contracts", and that amount could be scaled down to align with 30% of the target LF. DSS expenses would be adjusted proportionately downward.

Contracts

What is included in the contracts line?
Contracts includes labor, materials, equipment, and project management for implementation. RES expects to self-perform all work and cap reimbursement requests at $485/LF of successfully restored/protected stream that meets scorecard requirements. Three years of adaptive management and maintenance is included to maximize likelihood of long-term success of the stream.

Professional Services

What is included in the Professional Services line?

- Appraisals
- Design/Engineering
- Other :
- Surveys
- Title Insurance and Legal Fees

Easement Stewardship

What is the number of easements anticipated, cost per easement for stewardship, and explain how that amount is calculated?
We anticipate at total of 8 easements at a cost of $11,870.02 per easement which equates to at total of $94,960 for 8 parcels.

Travel

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
This item includes project mobilization from our operational hub to the project area.

I understand and agree that lodging, meals, and mileage must comply with the current MMB Commissioner Plan:
Yes

Direct Support Services

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?
RES calculated our DSS costs buy calculating costs associated with grant management, procurement, and financial reporting as that related to the execution and management of the grant.

Federal Funds

Do you anticipate federal funds as a match for this program?
Yes

Are the funds confirmed?
No

What is the approximate date you anticipate receiving confirmation of the federal funds?
July 2026

Output Tables

Acres by Resource Type (Table 1)

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	0	0	58	58
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	58	58
Enhance	0	0	0	0	0
Total	**0**	**0**	**0**	**116**	**116**

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	$11,904,100	$11,904,100
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	$374,100	$374,100
Enhance	-	-	-	-	-
Total	**-**	**-**	**-**	**$12,278,200**	**$12,278,200**

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	58	0	0	58
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	58	0	0	58
Enhance	0	0	0	0	0	0
Total	**0**	**0**	**116**	**0**	**0**	**116**

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	$11,904,100	-	-	$11,904,100
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	$374,100	-	-	$374,100
Enhance	-	-	-	-	-	-
Total	**-**	**-**	**$12,278,200**	**-**	**-**	**$12,278,200**

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	$205,243
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	$6,450
Enhance	-	-	-	-

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	$205,243	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	$6,450	-	-
Enhance	-	-	-	-	-

Target Lake/Stream/River Feet or Miles

4.8 Miles

Parcels

Sign-up Criteria?
No

Explain the process used to identify, prioritize, and select the parcels on your list:
RES will focus on parcels within impaired sub-watersheds of the Root River Watershed due to the historic classification as high priority trout habitat and the current status of the habitat as severely degraded. Specifically, RES will prioritize trout streams in the following subwatersheds: Money Creek, North Branch, South Branch, and South Fork of the Root River. These areas have been identified by MPCA as impaired reaches in need of protection and restoration. RES will use existing prioritization criteria outlined by the Minnesota DNR, including the current quality of trout habitat, existing land use, connectivity to other habitats, potential for restoration, threats to the stream, and the presence of endangered or threatened species.

Using this prioritization criteria, RES has conducted a GIS analysis to identify streams that meet the criteria, and started outreach to landowners with significant stream reaches on their property (i.e., more than 5,000 LF). After the initial engagement, RES conducts site visits to evaluate and document baseline stream conditions. RES will then prepare a concept and the scorecards referenced herein to determine the current scores of the stream and share them with the local DNR fisheries team to confirm the assessment and expected improvement post-restoration. Assuming alignment from the local staff, RES will provide an easement agreement for landowner's signature. RES will prioritize streams that have a high potential for ecological improvement with restoration, landowners who will permit public access for fishing, and those that create and/or connect corridors of high-quality habitat.

Protect Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Money Creek Parcel 2	Houston	10406218	16	-	No
Money Creek Parcel 1	Winona	10507203	20	-	No

Parcel Map

- Protect in Easement
- Protect in Fee with PILT
- Protect in Fee W/O PILT
- Restore
- Enhance
- Other

Trout Stream Restoration in the Root River Watershed

What?
Restoration & protection of 25,316 Linear Feet of designated trout streams.

Why?
Recreational, economic and ecological benefits from trout streams are under threat.

Who?
RES' team of designers, regulatory specialists, and ecological restoration professionals.

When?
2024-2025: Easement acquisition and construction
2026-2028: Establishment maintenance: for three years post construction.

How?
LSOHC will only pay for each linear foot of successfully restored stream.

Grant amount requested is $12,278,158.

Funding Approval — **LSOHC Approves RES Project Concept & Budget per LF**

Site ID & Feasibility — **RES identifies sites and conducts due diligence, documents baseline, secures landowner buy-in**

Site Approval — **RES obtains buy-in from local DNR fisheries staff on ecological uplift and stream design**

Implement — **RES acquires easement and completes design, implements construction**

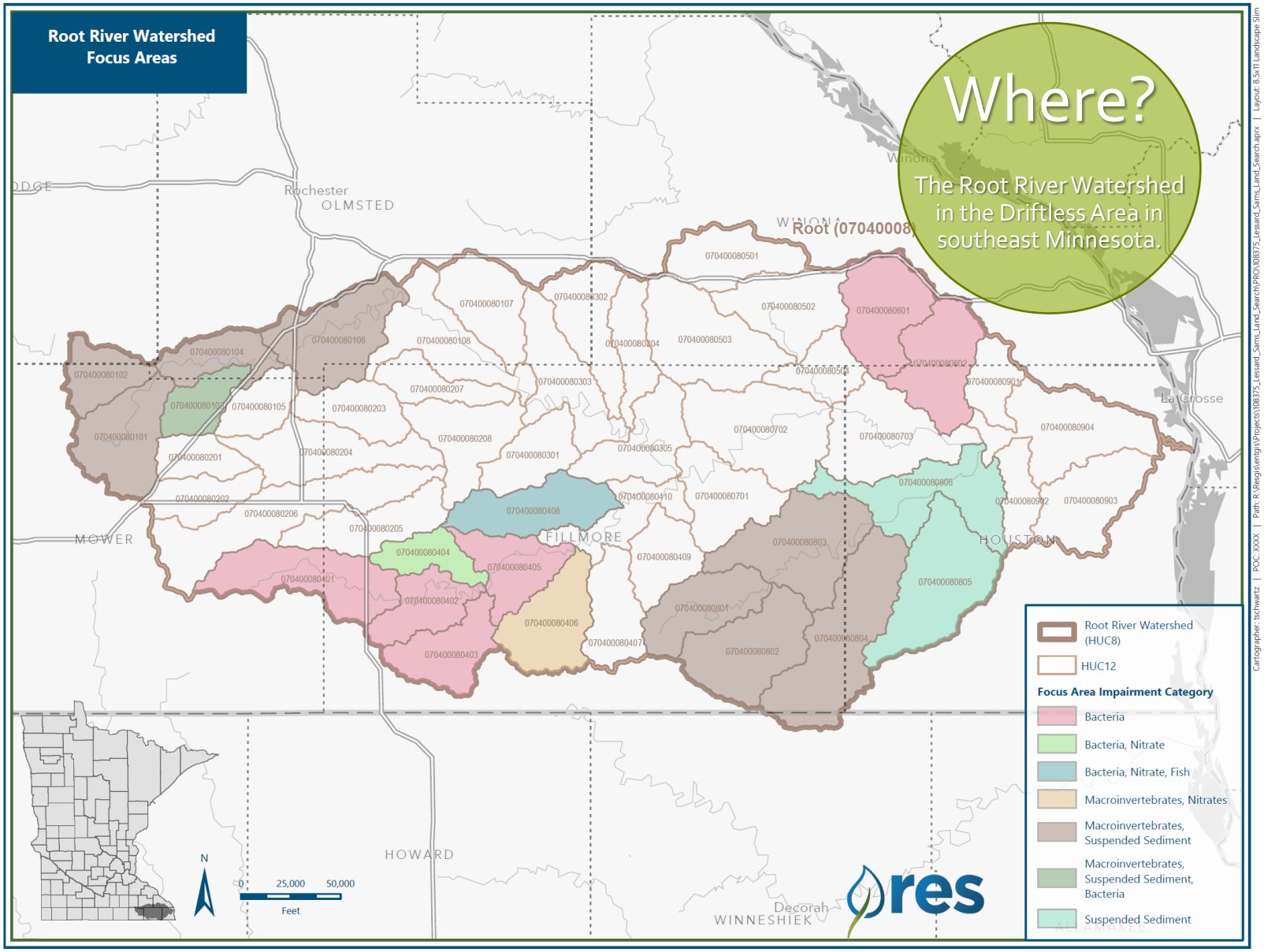
Steward — **Active stewardship for 3 years before sign-off/hand-off to DNR for long-term easement enforcement**

Payment — **RES Demonstrates # of LF of Ecological Uplift and LSOHC pays RES (preferably in milestone payments throughout process)***

res

CLEAN WATER LAND & LEGACY AMENDMENT

ML 2024 Request for Funding
Lessard-Sams Outdoor Heritage Council
May 26, 2023



The Driftless Area has some of the country's best trout streams, but agricultural practices, invasive species, and floodplain disconnection has led to incised streams and heavy sedimentation.

Planting native shoreline plants and removing woody and other invasive species and repairing highly incised banks (as shown) will provide greater angler access and provide floodplain connectivity to achieve greater long-term success.

Installation of stream riffles, deep pools, rootwad revetements, and streambank stabilization will improve and protect coldwater trout habitat.