Lessard-Sams Outdoor Heritage Council

Rum River Wildlife and Fish Habitat Enhancement using Bioengineered Bank Stabilization
Laws of Minnesota 2020 Accomplishment Plan

General Information

Date: 09/23/2024

Project Title: Rum River Wildlife and Fish Habitat Enhancement using Bioengineered Bank Stabilization

Funds Recommended: $816,000

Legislative Citation: ML 2020, Ch. 104, Art. 1, Sec. 2, subd 5(n)

Appropriation Language: $816,000 the second year is to the commissioner of natural resources for an agreement with the Anoka County Soil and Water Conservation District to restore and enhance riverine habitat in the Rum River using eco-sensitive, habitat-building, and bioengineering approaches. A list of proposed enhancements must be provided as part of the required accomplishment plan.

Manager Information

Manager's Name: Chris Lord
Title: District Manager
Organization: Anoka Conservation District
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Location Information

County Location(s): Anoka.

Eco regions in which work will take place:

- Metro / Urban

Activity types:

- Enhance

Priority resources addressed by activity:

- Habitat

Narrative

Abstract

In partnership with Anoka County and landowners, Anoka Conservation District will enhance Rum River habitat by utilizing eco-sensitive, habitat-building, bioengineering approaches to address active bank erosion on three to seven reaches. Sediment delivered from bank erosion threatens fish and mussel reproduction. The Rum River is a state designated Outstanding Resource Value Water and Wild, Scenic and Recreational River with eighty actively failing riverbanks in Anoka County alone. Project partners will address these in a phased approach utilizing CWF, LSOHC, and CPL funds. LSOHC funds will be used for projects that primarily enhance habitat, including for species in greatest conservation need.

Design and Scope of Work

Eighty sites spanning seven miles of actively eroding riverbank were identified along the Rum River in Anoka County, an Outstanding Resource Value Water and Wild, Scenic and Recreational River. Identified bank failures contribute an estimated 7,838 tons of sediment to the river annually, which decimates littoral transitional habitat, smothers fish spawning areas, compromises mussel reproduction and vigor, and reduces success of predatory game fish species due to increased turbidity. The Anoka Conservation District (ACD), along with Anoka County and landowners, proposes to systematically stabilize and enhance these damaged riverbanks. In total this undertaking will require a projected $14 million in public and private funds, drawing upon several grant funding sources, and spanning multiple grant cycles.

An inventory of active erosion sites was finalized in March of 2019 by ACD (https://www.anokaswcd.org/images/AnokaSWCD/Reports/Inventory/Rum_River_Erosion_Inventory_Final.pdf). Based on erosion severity, sites were assigned one of three stabilization approaches, which align with one of three state funding sources. Seventeen tall, severely eroding riverbanks require armament, have a primary benefit of water quality improvement, and will be addressed with CWF funding. Twenty-one shorter, moderately eroding riverbanks can be corrected utilizing bioengineering approaches, have a primary benefit of habitat enhancement, and will be addressed with LSOHC funds. Forty-two short, moderately eroding riverbanks can be corrected utilizing cedar tree revetments and will be addressed with CPL funds.

This grant request is for ACD, in partnership with Anoka County, to enhance three to seven sites over three years that can be addressed using bioengineering approaches such as bendway weirs and root wads that produce in-stream habitat for fish, turtles and amphibians, native plantings and staking that produce riparian habitat above the water, and light toe armoring and minor grading that make these habitats traversable by wildlife. Sites will be prioritized considering linear feet of habitat enhanced, cost-benefit analysis, landowner buy-in, and accessibility. Phase-1 projects will enhance up to 2,250 feet of habitat, and reduce sediment loads to the Rum River by up to 630 tons/year.

Riverbank stabilization design and installation processes can present hazards to some wildlife; namely nearshore mussels, amphibians and reptiles during construction, and reptiles and amphibians that are unable to safely traverse the post-construction stabilization materials and plantings. As part of this project, ACD intends work with experts in the field to conceptualize, design and implement approaches to best abate these hazards, with particular attention on species in greatest conservation need (SGCN) such as state-listed mussels and Blanding's turtles.

The Rum River is identified as a key river stretch for habitat and species richness for SGCN through Anoka County. Large portions of critical streambank transitional habitat that these species depend on are gone already, with more lost each year. The number of optimal sites for habitat enhancing bioengineering approaches is limited, and will continue to diminish if left unchecked. Inventory work by ACD shed light on the severity of the issue and the scale of the opportunity to take corrective action.

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

Two special concern mussel species were found in the Rum River in Anoka County during the 2004 statewide mussel survey, Ligumia recta (Black Sandshell) and Lasmigona compressa (Creek Heelsplitter). Additionally, the threatened species Emydoidea blandingii (Blanding's Turtle) has been documented numerous times in and near the Rum River. Special concern terrestrial species identified include Pituophis catenifer (Gophersnake), and Buteo lineatus (Red-shouldered hawk). Correcting eroded gaps in riparian-littoral habitat and improving water quality by decreasing sediment loads to the river will expand and reconnect high quality habitat for these species.

Before and during construction, ACD will consult with experts in the field to implement, or even develop, best practices to mitigate mussel loss. Project designs will incorporate wildlife friendly elements and traversable infrastructure for amphibians and reptiles that often get trapped in traditional riprap projects. SGCN and wildlife in general will benefit from these practices and design elements.

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

A 360° photo-inventory and GIS analysis of streambank condition of the Rum River through Anoka County were combined to identify eighty damaged and eroding riverbank stretches. The stretches were categorized by optimal stabilization approach, and an annual sediment load was calculated for each using the WI NRCS Field Office Technical Guide for streambank erosion. All eighty stretches identified were ranked by cost effectiveness for water quality benefit. Only those projects with a high potential for habitat enhancing bioengineering approaches, and a high-ranking cost effectiveness for water quality improvement, will be considered for this project.

Stabilization and enhancement of these eroded stretches will reconnect currently fragmented riparian-littoral habitat along the Rum River, a key ecological resource in Anoka County. The MN County Biological Survey identifies Silver Maple floodplain forest and Oak/Red Maple lowland forest types along the Rum River in Anoka County. Currently, eroded and failing banks disconnect these lowland forest habitats from the littoral river habitat due to lack of riparian transitional habitat. In many cases, the eroding banks present a cliff-like barrier between the two. Stabilizing these banks as well as providing traversable transitional habitat will reconnect these habitat types for species that rely on them.

Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most 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 two other plans are addressed in this program?

- Minnesota's Wildlife Action Plan 2015-2025
- Other : Tomorrow's Habitat for the Wild and Rare

Which LSOHC section priorities are addressed in this program?

Metro / Urban

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

Outcomes

Programs in metropolitan urbanizing region:

- A network of natural land and riparian habitats will connect corridors for wildlife and species in greatest conservation need ~ *This project will allow us to reconnect gaps in Rum River riparian-littoral habitat currently fragmented and missing due to eroded riverbank. Over seven miles of this missing habitat was identified during an ACD Rum River erosion inventory. Up to 2.55 acres of habitat along 2,250 feet of Rum River shoreline will be enhanced with this funding.*

Does this program include leveraged funding?

Yes

Explain the leverage:

The project includes both secured and budgeted cash match from Anoka County, Rum WMOs, and landowners. Anoka County has pledged over $442k of grant match over five years for Rum River stabilization and enhancement projects. Of the $442k Anoka County pledge, $108,720 is planned as direct match for this project. An additional $81,600 is anticipated as landowner match as a sum of all individual project match dollars. Stabilization projects occurring on land owned by municipalities or Anoka County will still be expected to have a landowner match contributed by the owning entity. The Upper and Lower Rum River Watershed Management Organizations have also pledged up to $15,366 in local match. In all, a 25% match of grant funds is expected.

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 will not supplant or substitute any previous funding.

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

ACD and its local partners are dedicated to sustaining the Rum River as a high quality water, ecological, recreational, hunting, and fishing resource and wildlife corridor through Anoka County. A variety of additional projects and funding sources are planned into the future to continue to build and sustain Rum River habitat and water quality. ACD will continue its legacy of streambank stabilization projects utilizing state and local funding sources. Anoka County has pledged over $442k over the next five years to support these activities, and other local partners are supportive as well.

Maintenance of completed projects will be performed by individual landowners through maintenance agreements as part of individual project contracts. ACD holds maintenance agreements with many landowners with similar projects installed on their properties. Routine site inspections will be performed by ACD as part of the maintenance agreement terms with each landowner.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
1, 3, 9 after install	Anoka Conservation District	Site Inspections in accordance with signed maintenance agreement	Follow up with landowner on maintenance needs and provide any necessary technical assistance	-
Annual After Install	Landowner	Maintenance of integrity and viability of project	-	-

Activity Details

Requirements

If funded, this program 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 or on lands to be acquired in this program?
Yes

Where does the activity take place?

- Public Waters

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program, either by the proposer or the end owner of the property, outside of the initial restoration of the land?
No

Timeline

Activity Name	Estimated Completion Date
Landowner outreach and site selection for 2021 projects	September 2020
Site survey, design engineering, and permitting	February 2021
Project construction	September 2021
Landowner outreach and site selection for 2022 projects	September 2021
Site survey, design engineering, and permitting	February 2022
Project construction	September 2022
Landowner outreach/site selection for 2023 projects (in the event that all projects are not completed in first two years)	September 2022
Site survey, design engineering, and permitting	February 2023
Project construction	June 2023

Date of Final Report Submission: 11/01/2023

Availability of Appropriation: Subd. 7. Availability of Appropriation

Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor

Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. Unless otherwise provided, the amounts in this section are available until June 30, 2023. For acquisition of real property, the amounts in this section are available until June 30, 2024, if a binding agreement with a landowner or purchase agreement is entered into by June 30, 2023, and closed no later than June 30, 2024. Funds for restoration or enhancement are available until June 30, 2025, or five years after acquisition, whichever is later, in order to complete initial restoration or enhancement work. If a project receives at least 15 percent of its funding from federal funds, the time of the appropriation may be extended to equal the availability of federal funding to a maximum of six years if the federal funding was confirmed and included in the original approved draft accomplishment plan. Funds appropriated for fee title acquisition of land may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.

Budget

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

Totals

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	$183,600	-	-	$183,600
Contracts	$571,200	$144,000	Anoka County, Rum WMOs, Landowner	$715,200
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	$40,800	$10,300	Anoka County, Rum WMOs, Landowner	$51,100
Direct Support Services	-	$46,300	Anoka County, Rum WMOs, Landowner	$46,300
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	$20,400	$5,100	Anoka County, Rum WMOs, Landowner	$25,500
DNR IDP	-	-	-	-
Grand Total	**$816,000**	**$205,700**	**-**	**$1,021,700**

Personnel

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
ACD District Manager	0.05	3.0	$27,500	-	-	$27,500
ACD Administrator	0.01	3.0	$2,800	-	-	$2,800
ACD Specialist	0.235	3.0	$73,400	-	-	$73,400
ACD Principal	0.186	3.0	$79,900	-	-	$79,900

Amount of Request: $816,000
Amount of Leverage: $205,700
Leverage as a percent of the Request: 25.21%
DSS + Personnel: $183,600
As a % of the total request: 22.5%
Easement Stewardship: -
As a % of the Easement Acquisition: -

How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?
Fund-equivalent reduction from original application in deliverables. We realized we lumped construction oversight into contracts instead of personnel, and now plan to do designs in-house with engineer sign-off from a neighboring SWCD, causing a shift from professional services to personnel. These shifts were left proportional to the first Accomplishment Plan.

Describe and explain leverage source and confirmation of funds:
$124,086 is secured from Anoka County and Rum Watershed Management Organizations toward the grant project as a whole. Landowners will provide remaining funds for all individual sites, whether in public or private ownership. Additional partner funds may be used for other ineligible expenses. Personnel matched with DSS leverage.

Contracts

What is included in the contracts line?
100% of the dollars in the contract line will be spent on contracted enhancement work along the Rum River. All survey and design work will be performed under Professional Services and ACD personnel cost. ACD intends to do as much survey and design work in-house as possible to maximize cost-effectiveness.

Federal Funds

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

Output Tables

Acres by Resource Type (Table 1)

Type	Wetland	Prairie	Forest	Habitat	Total Acres
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	3	3
Total	**0**	**0**	**0**	**3**	**3**

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	$816,000	$816,000
Total	**-**	**-**	**-**	**$816,000**	**$816,000**

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
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	3	0	0	0	0	3
Total	**3**	**0**	**0**	**0**	**0**	**3**

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	$816,000	-	-	-	-	$816,000
Total	**$816,000**	**-**	**-**	**-**	**-**	**$816,000**

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	$272,000

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	$272,000	-	-	-	-

Target Lake/Stream/River Feet or Miles

2,250 river feet, which equals 2.55 acres.

Parcels

Parcel Information

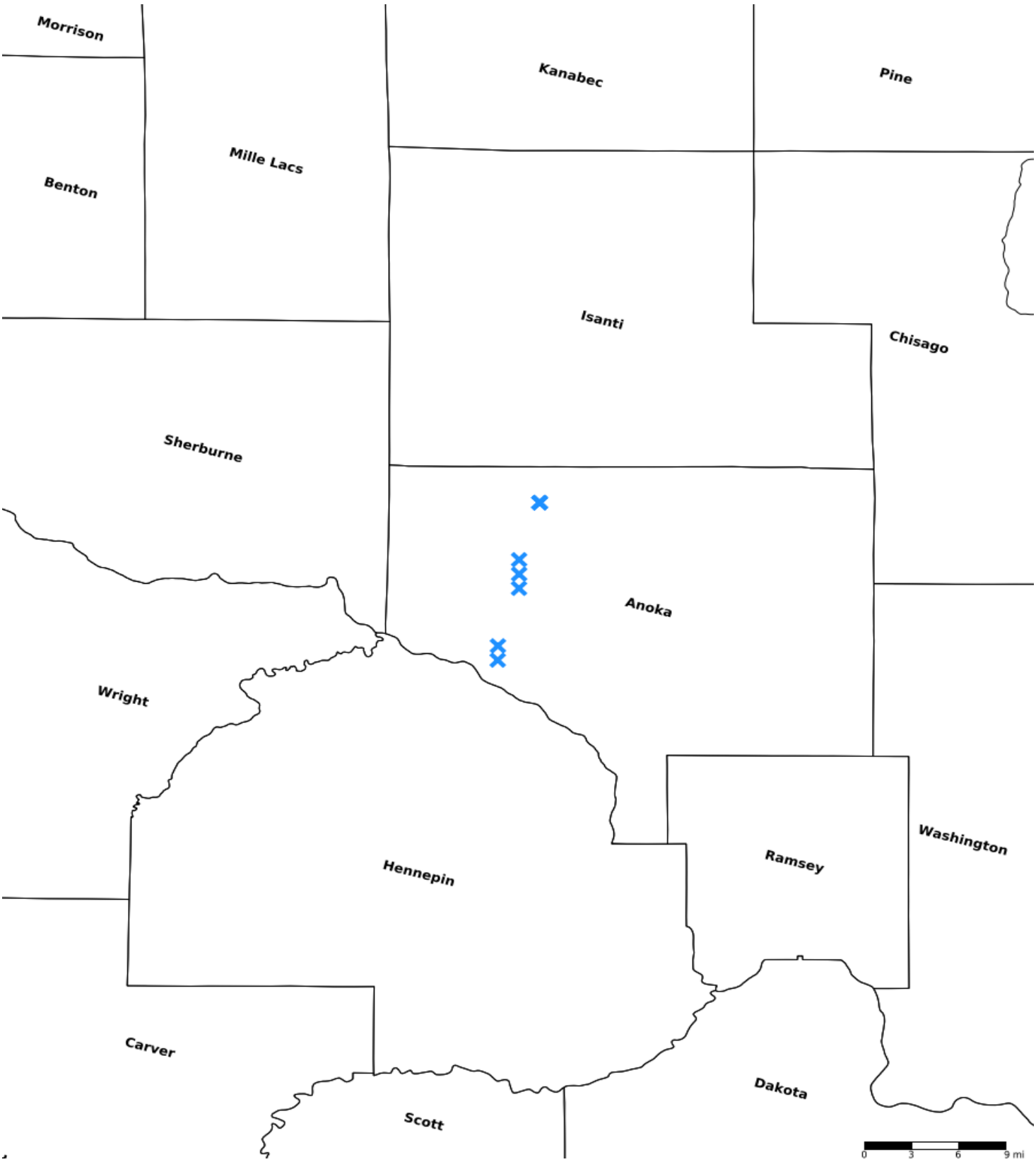
Sign-up Criteria?
No

Explain the process used to identify, prioritize, and select the parcels on your list:
Parcels originated from a Countywide inventory of the Rum River. Dozens of letters were sent and numerous site visits conducted. As properties came together, the projects that fit the program best, provided the most benefit for dollar spent, and were the most constructible were selected.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection	Description
Anoka Nature Preserve	Anoka	03225225	1	$7,000	Yes	200-ft. Riverbank
Heath	Anoka	03324205	1	$100,000	Yes	100-ft. Riverbank
Hanson	Anoka	03324205	1	$200,000	Yes	275-ft. Riverbank
Rum River Bad Medicine	Anoka	03324205	1	$200,000	Yes	200-ft. Riverbank
Martz	Anoka	03324205	1	$200,000	Yes	350-ft. Riverbank
Cedar Creek Cons. Area	Anoka	03324231	1	$190,000	Yes	500-ft. Riverbank
Rum Central	Anoka	03224206	1	$40,000	Yes	100-ft. Riverbank
Miller	Anoka	03324230	1	$175,000	Yes	400-ft. Riverbank
Dellwood	Anoka	03324205	1	$250,000	Yes	700-ft. Riverbank
State of MN Near Anoka HS	Anoka	03225236	1	$125,000	Yes	300-ft. Riverbank

Parcel Map



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