Lessard-Sams Outdoor Heritage Council
Laws of Minnesota 2012 Final Report

Date: November 07, 2016

Program or Project Title: Knife River Habitat Restoration

Funds Recommended: $380,000

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Legislative Citation: ML 2012, Ch. 264, Art. 1, Sec. 2, Subd. 5(g)

Appropriation Language: $380,000 in the second year is to the commissioner of natural resources for an agreement with the Lake Superior Steelhead Association to restore trout habitat in the Upper Knife River Watershed. A list of proposed restorations must be provided as part of the required accomplishment plan. Notwithstanding rules of the commissioner of natural resources, restorations conducted pursuant to this paragraph may be accomplished by excavation.

County Locations: Lake, and St. Louis.

Regions in which work was completed:

- Northern Forest

Activity types:

- Enhance

Priority resources addressed by activity:

- Habitat

Summary of Accomplishments:

Phase I work was conducted on the main Knife River and its Main West Branch tributary. Primary goals were met and these goals include: stream connectivity, riparian zone tree planting, stream assessment and black ash stand identification.
• Stream Connectivity - repaired Second Falls on the main Knife River.
• Tree Planting - two volunteer and one CCM projects where several thousand trees were planted.
• Stream Assessment - surveyed beaver dams, monitored instream water temperatures, identified adult spawning/juvenile holding habitat and stream bank erosion areas on the West Branch.
• Black Ash - identify and map stands in watershed.

Process & Methods:

STREAM CONNECTIVITY

The single, largest barrier affecting stream connectivity in the Knife River watershed occurred at the Second Falls on the main Knife River, approximately three miles upstream from Lake Superior. This barrier blocked fish from ascending upstream to the fertile spawning areas inland. Originally, swim pockets allowed easy passage, then the DNR blasted the pockets and installed a cement weir. The weir worked well until it blew out around 2005.

After great effort, the LSSA gained the support of the DNR to remedy the barrier. After meeting with the DNR pinning large boulders in

place to create a deep jumping pool was agreed on by all parties.

The LSSA approached LSOHC to modify Phase I's scope of work with support from Comm. Landwehr and Director Boggess. Once LSOHC approved the change, the project came together in just a few weeks. Permits were obtained, four large rocks were donated at no charge by Cliffs Natural Resources-North Shore Mining and the project begun under the direction of the MNDNR.

The best two boulders were chosen and mobilized to the site. In less than three days the boulders were placed and pinned to the bedrock. The placed boulders created the needed jumping pool immediately below the falls. Monitoring has confirmed that fish can now easily pass the former barrier in most flows to gain access to the fertile spawning grounds upstream throughout the entire watershed.

We had excellent cooperation from St. Louis County Forestry and the MN DNR.

TREE PLANTING:

The Lake Superior Steelhead Association (LSSA) has long believed that a healthy watershed includes a healthy and diverse riparian zone. During the initial walk through under Phase I, a superb planting site was noted in the Main West Branch, with excellent access via the North Shore State Trail.

A plan was immediately established for a LSSA 'volunteer' plant in the spring of 2013. The BMP for riparian plantings presently is that of a mix of coniferous and deciduous species to provide a more diverse forest. The LSSA also wanted to expand the plantings to include species that may become common due to future climate change. The species to be included in our riparian zone plantings in Phase I included tamarack, white spruce, silver maple, river birch and swamp white oak. The listed species are all native to Minnesota and were approved by the MN DNR.

Following the successful 2013 plant, LSSA members came back in 2014 to plant 150 deciduous trees at the same site. Also in the spring of 2014, Conservation Corp Minnesota planted hundreds more deciduous trees in another beaver meadow just downstream from the volunteer site.

One major lesson learned was that larger sized trees are needed in order to compete with the invasive reed canary grass found throughout the watershed in old beaver meadows.

We had excellent cooperation with both the MN DNR and the St. Louis County Forestry Dept. for our planting work.

STREAM ASSESSMENT

Before any rehabilitation project could begin in the watershed, the LSSA realized that information must be gathered that would allow us to prioritize any future rehabilitation efforts.

Water temperature was a key so 23 temperature loggers were deployed throughout the watershed. Loggers were in place from June 1 through September 30 so that the data would coincide with data collected by the MNDNR. This data determined where juvenile trout could survive and grow, which provided a habitat restoration focal point.

The Main West Branch and major unnamed tributaries were assessed for stream conditions, possible connectivity blockages, the state of the riparian cover, condition of stream banks, the location of adult spawning habitat and availability of juvenile holding habitat. The identified impacts were compiled and overlaid with water temperature data so rehabilitation priorities could be selected based on stream biology.

One fact quickly learned was the significant impact of past and present beaver activity in the watershed. One unnamed tributary had 29 current or historic dams in just over six miles of stream. The beaver meadows created by these dams allow for invasive reed canary grass to infiltrate throughout the riparian zone eliminating any regeneration of trees.

Through the assessment, the LSSA learned that more spring inflow occurred than originally thought by the MNDNR. We are now able to predict where trout can live, thrive or parish based on water temperature.

BLACK ASH

In the Scope of Work for Phase I of our Knife River Habitat Restoration Grant, identification and possible under plantings in black ash stands were discussed. The emerald ash borer (EAB) has the potential to wipe out huge tracts of black ash stands through out the United Sates. According to Laurentian RC& D GIS data, the Main West Branch has over 10 miles of black ash cover in the immediate riparian zone.

During the assessment portion of Phase I, field notes and GPS coordinates were taken on black ash stands throughout the Main West Branch. Technological advances have improved making identification of specific tree species possible by satellite imagery. LIDAR and color infrared imagery (CIR), when combined, give the height, mass and specific electromagnetic spectrum to plants.

Black ash is rather unique in that it is usually the last to leaf out in the spring and one the earliest to lose its leaves in the fall. Using our field data and comparing the CIR imagery for the area after black ash had lost their leaves and other deciduous trees maintained their leave cover, we could identify areas that held black ash.

Our work was very timely in that the EAB has now been identified in Duluth's Park Point neighborhood, most recently, in far eastern Duluth.

One major item learned from both CIR/LIDAR imagery and verified in the field is that black ash stands are of mixed deciduous species-ash, maple and some yellow birch making under planting less imperative.

Explain Partners, Supporters, & Opposition:

The LSSA held two volunteer tree-planting sessions where we had approx. 45 volunteers including members from Arrowhead Fly Fishers and TU attending. LSSA members donated their vehicles, shovels and tools. Also, Dunn Bros. Coffee in Duluth donated the lunch and beverages at no cost: In-Kind Donations. The LSSA had great support from St. Louis County Forestry Dept. They helped flag access routes and granted permits to work on county land. MN DNR-Trails out of Two Harbors allowed the LSSA to access the volunteer planting site via the North Shore Trail and to mobilize all the material via ATV by way of the North Shore Trail; Duluth Area Fisheries were of great support and issued permits in a very timely manner. Conservation Corp Minnesota did a fabulous job of planting in a remote setting.

Additional Comments:

Exceptional challenges, expectations, failures, opportunities, or unique aspects of program

ADDITIONAL COMMENTS

The LSSA learned several important things concerning the watershed during the assessment phase: the longterm affects from beaver on the riparian zone; how prevalent reed canary grass is in the watershed; the extent of cold water tributaries in the watershed and areas within the watershed that can support trout and those that can't support trout.

Two very valuable lessons were learned related to planting beaver meadows: trees must be quite large to survive the reed canary grass and potted trees are best when feasible; also, to plant the very remote beaver meadows, tree plugs can be utilized making it possible to carry many plugs into remote sites much easier. Bare root stock will not survive the competing vegetation in most beaver meadows.

Other Funds Received:

- Clean Water Fund

How were the funds used to advanced the program:

Clean Water Fund money is being used for the Knife River Watershed's middle sections (clay bank sections). This money is being used to stabilize slumping clay banks as part of the TMDL implementation plan. This money has been provided to the Lake County Soil and Water Conservation District (SWCD). The LSSA and SWCD are working cooperatively on separate sections of river to insure the entire watershed is improved. The LSSA is primarily working on the upper river spawning and rearing tributaries exclusively on public land, while the SWCD is working on the middle river sections (clay bank section) and concentrating primarily on private lands. PLEASE NOTE: Clean water funds were used as described above by the SWCD but the LSSA did not receive the Clean Water Fund grant, the SWCD did. Our combined efforts have a very positive impact on the entire watershed.

What is the plan to sustain and/or maintain this work after the Outdoor Heritage Funds are expended:

The LSSA has been very involved with the Knife River for the past 40 years. We will continue to monitor LSSA tree plantings, both volunteer and CCM, over the coming years to assess growth patterns and survivability in this watershed. The LSSA will be following very closely the climate change throughout the world but specifically any change that might affect the immediate riparian zone within the entire Knife River watershed. If need be, volunteer efforts can be instituted.

Outcomes:

The original accomplishment plan stated the program would

Programs in the northern forest region:

- Qualitative outcomes include short, intermediate and long term outcomes. Short Term Qualitative Outcomes (3 to 5 years):Improve in-stream habitat, Re-establish hydraulic connectivity, Provide education and awareness to user groups, Intermediate Term Qualitative Outcomes (6 to 10 years), Reduce erosion, Restore overhead tree/shrub canopy, Long Term Qualitative Outcomes (20+ years): Increase smolt retention time in the upper watershed (higher percentage of juvenile steelhead smolting at age 2). Observe a higher percentage of repeat adult spawners. Restore the forest composition to coniferous trees.

How will the outcomes be measured and evaluated?

We can perform a post construction stream assessment data collection project that will compare the pre-construction stream assessment data which was obtained by Natural Resources Research Institue (NRRI) on a stretch of the Main West Branch in the project area. We can also visually compare growth of trees in the project area in all three outcome periods. Can compare numbers of returning adults/downbound smolts at DNR weir on main Knife River. Finally, water temps will decrease in the long term as the riparian zone canopy fills in and we can compare those temps with pre-construction/planting temperatures.

Budget Spreadsheet

Final Budget line item reallocations are allowed up to 10% and do not need require an amendment to the Accomplishment Plan

Total Amount: $380,000

Budget and Cash Leverage

Budget Name	Request	Spent	Cash Leverage (anticipated)	Cash Leverage (received)	Leverage Source	Total (original)	Total (final)
Personnel	$40,000	$47,000	$0	$0		$40,000	$47,000
Contracts	$250,000	$305,000	$0	$0		$250,000	$305,000
Fee Acquisition w/ PILT	$0	$0	$0	$0		$0	$0
Fee Acquisition w/o PILT	$0	$0	$0	$0		$0	$0
Easement Acquisition	$0	$0	$0	$0		$0	$0
Easement Stewardship	$0	$0	$0	$0		$0	$0
Travel	$5,000	$0	$0	$19,200	LSSA	$5,000	$19,200
Professional Services	$30,000	$1,500	$0	$0		$30,000	$1,500
Direct Support Services	$0	$0	$0	$0		$0	$0
DNR Land Acquisition Costs	$0	$0	$0	$0		$0	$0
Capital Equipment	$0	$0	$0	$0		$0	$0
Other Equipment/Tools	$15,000	$4,200	$0	$0		$15,000	$4,200
Supplies/Materials	$40,000	$21,300	$0	$0		$40,000	$21,300
DNR IDP	$0	$0	$0	$0		$0	$0
Total	$380,000	$379,000	$0	$19,200		$380,000	$398,200

Personnel

Position	FTE	Over # of years	Spent	Cash Leverage	Leverage Source	Total
Manager of Programs	0.50	4.00	$47,000	$0		$47,000
Total	0.50	4.00	$47,000	$0		$47,000

Explain any budget challenges or successes:

Originally we were told that LSOHC funds could be used to cover the cost of our Line of Credit. We were later informed that was not the case so the LSSA General Fund has been picking up the approx. $ 400/ month cost of the line of credit to do the watershed work. This should be considered a direct cash donation by the LSSA.

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands (original)	Wetlands (final)	Prairies (original)	Prairies (final)	Forest (original)	Forest (final)	Habitats (original)	Habitats (final)	Total (original)	Total (final)
Restore	0	0	0	0	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0	0	0	0	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0	0	0	0	0
Enhance	0	0	0	0	0	0	204	255	204	255
Total	0	0	0	0	0	0	204	255	204	255

Table 2. Total Funding by Resource Type

Type	Wetlands (original)	Wetlands (final)	Prairies (original)	Prairies (final)	Forest (original)	Forest (final)	Habitats (original)	Habitats (final)	Total (original)	Total (final)
Restore	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Enhance	$0	$0	$0	$0	$0	$0	$380,000	$379,000	$380,000	$379,000
Total	$0	$0	$0	$0	$0	$0	$380,000	$379,000	$380,000	$379,000

Table 3. Acres within each Ecological Section

Type	Metro Urban (original)	Metro Urban (final)	Forest Prairie (original)	Forest Prairie (final)	SE Forest (original)	SE Forest (final)	Prairie (original)	Prairie (final)	N Forest (original)	N Forest (final)	Total (original)	Total (final)
Restore	0	0	0	0	0	0	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	0	0	0	0	0	0	0	0
Protect in Fee W/O State PILT Liability	0	0	0	0	0	0	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0	0	0	0	0	0	0
Enhance	0	0	0	0	0	0	0	0	204	255	204	255
Total	0	0	0	0	0	0	0	0	204	255	204	255

Table 4. Total Funding within each Ecological Section

Type	Metro Urban (original)	Metro Urban (final)	Forest Prairie (original)	Forest Prairie (final)	SE Forest (original)	SE Forest (final)	Prairie (original)	Prairie (final)	N Forest (original)	N Forest (final)	Total (original)	Total (final)
Restore	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Protect in Fee with State PILT Liability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Enhance	$0	$0	$0	$0	$0	$0	$0	$0	$380,000	$379,000	$380,000	$379,000
Total	$0	$0	$0	$0	$0	$0	$0	$0	$380,000	$379,000	$380,000	$379,000

Target Lake/Stream/River Feet or Miles (original)

17

Target Lake/Stream/River Feet or Miles (final)

17+ Miles of stream

Explain the success/shortage of acre goals:

The LSSA surpassed its acre goal for Phase I. We also assessed for connectivity the entire 17 miles of the Main West Branch, the largest tributary to the Knife River. The Main West Branch was assessed both aerially and on foot. The LSSA proposed to restore connectivity in the watershed and that was achieved by the 2nd Falls project's great success. Hundreds and hundreds of trees were planted in the project's riparian zone. The LSSA exceeded the original proposed scope of work.

Parcel List

Section 1 - Restore / Enhance Parcel List

Lake

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
25-5211-05490	05211205	1	$2,300	Yes	Stream bed and bank enhancemenet
25-5211-05550	05211205	0	$400	Yes	Stream bed and bank enhancement
25-5211-06490	05211206	1	$1,300	Yes	Stream bed and bank enhancement
25-5211-06550	05211206	4	$9,000	Yes	Stream bed and bank enhancement

St. Louis

Name	TRDS	Acres	Total Cost	Existing Protection?	Description
210-0010-00220	05312202	17	$25,900	Yes	Stream bed and bank enhancement
210-0010-00310	05312202	7	$10,600	Yes	Stream bed and bank enhancement
210-0010-00311	05312202	7	$10,600	Yes	Stream bed and bank enhancement
210-0010-00400	05312203	7	$10,400	Yes	Stream bed and bank enhancement
210-0010-00550	05312203	7	$10,600	Yes	Stream bed and bank enhancement
210-0010-01640	05312210	11	$16,600	Yes	Stream bed and bank enhancement
210-0010-01710	05312210	5	$8,100	Yes	Stream bed and bank enhancement
210-0010-01711	05312210	5	$8,100	Yes	Stream bed nd bank enhancement
210-0010-01760	05312210	6	$8,600	Yes	Stream bed and bank enhancement
210-0010-01761	05312210	6	$8,600	Yes	Stream bed and bank enhanceement
210-0010-02550	05312215	17	$23,900	Yes	Stream bed nd bank enhancement
210-0010-02610	05312215	25	$37,400	Yes	Stream bed and bank enhancement
210-0010-02760	05312216	4	$5,500	Yes	Stream bed and bank enhancement
210-0010-03880	05312222	3	$4,700	Yes	Stream bed and bank enhancement
210-0010-04010	05312222	5	$6,800	Yes	Stream bed and bank enhancement
210-0010-04020	05312222	6	$9,100	Yes	Stream bed and bank enhancement
210-0010-04050	05312223	18	$26,300	Yes	Stream bed and bank enhancement
210-0010-04830	05312227	2	$3,300	Yes	Stream bed and ban k enhancement
210-0010-04880	05312227	12	$17,800	Yes	Stream bed and bank enhancement
210-0010-04950	05312227	6	$8,700	Yes	Stream bed and bank enhancement
210-0010-05090	05312228	5	$7,400	Yes	Stream bed and bank enhancement
210-0010-06100	05312234	3	$4,700	Yes	Stream bed and bank enhancement
210-0010-06130	05312234	10	$14,900	Yes	Stream bed and bank enhancement
210-0010-06590	05312236	0	$500	Yes	Stream bed and bank enhancment
210-0010-30870	05312222	4	$6,000	Yes	Stream bed and bank enhancement
502-0020-05560	05412235	25	$37,600	Yes	Stream bed and bank enhancement
502-0020-05720	05412236	22	$33,300	Yes	Stream Bed and bank enhancement

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.

Completed Parcel: 210-0010-00220

# of Total Acres:	17
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	02
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	17
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$25,900

Completed Parcel: 210-0010-00310

# of Total Acres:	7
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	02
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	7
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-00311

# of Total Acres:	7
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	02
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	7
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-00400

# of Total Acres:	7
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	03
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	7
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-00550

# of Total Acres:	7
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	03
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	7
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-01640

# of Total Acres:	11
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	10
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	11
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-01710

# of Total Acres:	5
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	10
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	5
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-01711

# of Total Acres:	5
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	10
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	5
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-01760

# of Total Acres:	6
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	10
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	6
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-01761

# of Total Acres:	6
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	10
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	6
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-02550

# of Total Acres:	17
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	15
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	17
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-02610

# of Total Acres:	25
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	15
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	25
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-02760

# of Total Acres:	4
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	16
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	4
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-03880

# of Total Acres:	3
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	3
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-04010

# of Total Acres:	5
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	5
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-04020

# of Total Acres:	6
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	6
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-04050

# of Total Acres:	18
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	23
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	18
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-04830

# of Total Acres:	2
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	27
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	2
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-04880

# of Total Acres:	12
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	27
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	12
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-04950

# of Total Acres:	6
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	27
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	6
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-05090

# of Total Acres:	5
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	28
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	5
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-06100

# of Total Acres:	3
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	34
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	3
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-06130

# of Total Acres:	10
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	34
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	10
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-06590

# of Total Acres:	0
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	36
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	0
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 210-0010-30870

# of Total Acres:	4
County:	St. Louis
Township:	053
Range:	12
Direction:	2
Section:	22
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	4
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 25-5211-05490

# of Total Acres:	1
County:	Lake
Township:	052
Range:	11
Direction:	2
Section:	05
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	1
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 25-5211-05550

# of Total Acres:	0
County:	Lake
Township:	052
Range:	11
Direction:	2
Section:	05
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	0
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 25-5211-06490

# of Total Acres:	1
County:	Lake
Township:	052
Range:	11
Direction:	2
Section:	06
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	1
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 25-5211-06550

# of Total Acres:	4
County:	Lake
Township:	052
Range:	11
Direction:	2
Section:	06
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	4
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

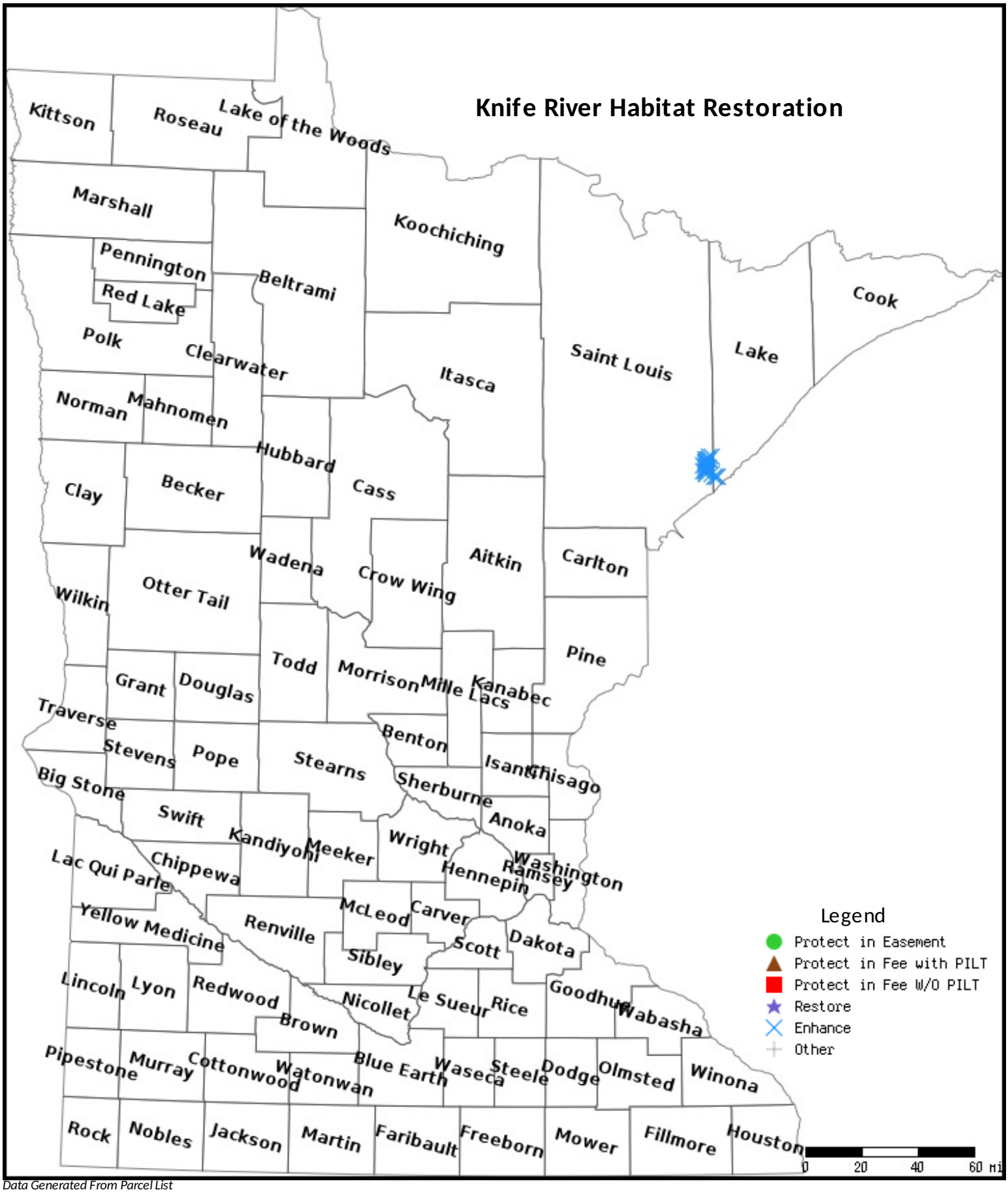
Completed Parcel: 502-0020-05560

# of Total Acres:	25
County:	St. Louis
Township:	054
Range:	12
Direction:	2
Section:	35
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	25
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Completed Parcel: 502-0020-05720

# of Total Acres:	22
County:	St. Louis
Township:	054
Range:	12
Direction:	2
Section:	36
# of Acres: Wetlands/Upland:	
# of Acres: Forest:	22
# of Acres: Prairie/Grassland:	
Amount of Shorline:	
Name of Adjacent Body of Water (if applicable):	
Has there been signage erected at the site:	
Total cost of Restoration/Enhancement:	$0

Parcel Map



Data Generated From Parcel List