Lessard-Sams Outdoor Heritage Council
Fiscal Year 2018 / ML 2017 Request for Funding

Date: May 26, 2016

Program or Project Title: Restoration of Non-native Cattail Dominated Wetlands in Rainy Lake (WRE03)

Funds Requested: $1,782,700

Manager's Name: Bryce Olson
Title: Biologist
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County Locations: St. Louis

Regions in which work will take place:

- Northern Forest

Activity types:

- Restore

Priority resources addressed by activity:

- Wetlands

Abstract:

Non-native cattails (Typha spp.) have invaded wetlands in Rainy Lake and elsewhere in Voyageurs National Park, displacing native vegetation, reducing biodiversity, degrading fish/wildlife habitat, impairing recreational opportunities, and degrading cultural resources, especially wild rice (Zizania palustris). These lakes are designated "Outstanding Resource Value Waters" (Minn. R.7050.0180) where herbicide use is prohibited. Treatment methods include mechanical removal, used by Native American communities for wild rice restoration, along with burning and other methods. We propose to remove cattails using these methods followed by reestablishment of native vegetation to restore wetland communities. Funds are needed to implement our restoration plan.

Design and scope of work:

Step 1 - Remove Non-native Cattail: In areas of dense invasion, non-native hybrid cattails will be mechanically removed using plant mulching and harvesting barges. Cutting/harvesting barges are a quick and cost-effective method to completely remove aquatic vegetation where herbicide use is prohibited. Harvesting equipment cuts up and removes cattails, including the dense cattail mats that prevent other vegetation from growing. The equipment also collects the cattail biomass and stores it onboard until dumping in a designated location nearby. Any cattails not accessible by the harvesting equipment will be removed with hand tools designed for aquatic vegetation use. Burning will be used as a tool to reduce cattail biomass. We will conduct treatments over the course of multiple seasons to accommodate annual water level changes, weather delays, and availability of equipment. We are partnering/contracting with several Native American communities in Minnesota that have extensive experience in removal of cattails using harvesting equipment to restore wild rice communities and other native vegetation.

Step 2 – Restore Native Species: Following removal of cattail, we will use a combination of methods to reestablish native vegetation. Simply removing the cattail mats, even ones in place for many decades, will allow dormant seeds, including wild rice and other native aquatic plants, to germinate without any further effort. Since it is unknown what viable seed bank exists, park staff will use an onsite

greenhouse and native plant nursery to propagate plants, transplant plants from nearby sites, and directly-sow seeds to re-establish a diverse community of native species.

Step 3 – Reestablish Muskrats (Ondatra zibethicus) as Natural Biocontrol of Cattails: Muskrats may be a viable natural biocontrol for cattail populations and could aid in wetland restoration efforts and long-term management. Muskrats use cattails extensively for food and building materials. Their activities create natural openings in invaded wetlands that can improve habitat for fish and wildlife and increase overall biodiversity. Muskrats will be trapped from other wetlands in the region and restocked in invaded wetlands to further enhance wetland restoration. We will reestablish muskrats at different stocking rates (for example, stocking 20 muskrats per wetland vs. 50 per wetland), which will help to determine cost-effectiveness of the technique. We will also determine if such stocking can be used to reduce cattail in invaded wetlands and or if they are better used to maintain restored wetlands.

The steps outlined above are part of our 10-year Wetland Restoration Plan initiated by Voyageurs National Park in 2016 to restore these non-native cattail invaded wetlands. Evaluation of cattail removal and plant restoration techniques are currently funded by the NPS and other partners. Outdoor Heritage Funds would be used to implement the selected cattail removal and wetland restoration techniques outlined in Steps 1-3. Completion of this proposed project would restore cattail invaded wetlands to diverse wetland communities that will create and enhance fish and wildlife habitat and improve recreational and cultural opportunities for Minnesotans.

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

- H2 Protect critical shoreland of streams and lakes
- H5 Restore land, wetlands and wetland-associated watersheds

Which other plans are addressed in this proposal:

- Managing Minnesota's Shallow Lakes for Waterfowl and Wildlife
- Voyageurs National Park 10-year Wetland Restoration Plan

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

One of the primary objectives of Managing Minnesota's Shallow Lakes for Waterfowl and Wildlife Plan is to control invasive species such as non-native cattail and reseed with wild rice. Our proposed project would meet both of these objectives, and thus restore waterfowl and wildlife habitat.

Voyageurs National Park and partners are currently implementing a 10-year Wetland Restoration Management Plan. While the initial stages to determine the most cost-effective cattail removal and wetland restoration techniques are funded, OHF funds would allow us to implement Phase 2 of the plan, that is to begin large-scale removal of non-native cattails to restore wetlands and associated fish and wildlife species.

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:

Invasive species are an ever-increasing problem, especially in critical habitats such as wetlands. The public and land management agencies are gradually becoming more aware of the severity of cattail invasions and the threat they pose to biodiversity, recreation, and cultural needs. Our proposed project will take place within a US National Park and one of Minnesota's most iconic lakes – the combined visibility of these areas will enhance our ability to increase awareness of the issue and detail real solutions to a sticky problem. More complete and cost-effective management strategies will allow broader control of non-native cattails as well as restoration of wetlands in the region once the best techniques are identified. Adaptation of these techniques in areas outside of our project area will provide greater protection of critical habitats outside of initial proposed treatment areas. These areas provide critical habitat for fish, especially spawning areas for species such as northern pike. Many game species, such as aquatic furbearers and migratory waterfowl, rely on these habitats for critical stages of their life. Other wildlife species, especially those on Minnesota's list of Species with Greatest Conservation Need, depend on these habitats. There are also culturally significant species such as wild rice, which are in need of restoration. Several Native American communities in Minnesota have been working to restore wild rice elsewhere in the state. Our wetland restoration project will restore critical wetland habitats while simultaneously extending outreach and education of relevant issues to a variety of local and regional stakeholders.

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 proposed project is designed using an Adaptive Management framework to improve management decisions. The basic premise of this approach is to "learn while doing", where science-based information from CURRENT management is used to inform FUTURE management. While the cattail removal methods we described are currently being successfully used by regional Native American communities for wild rice restoration, the most appropriate and cost effective methods for cattail removal without herbicides must be determined in this region. The best methods for reestablishment of a diverse suite of native vegetation species in these systems also needs to be determined. Adaptive Management will allow short-term goals (evaluation of removal/restoration techniques and treatment of invaded wetlands) to be reached while simultaneously improving future knowledge and management decisions (broad-scale application of the techniques). This will eventually lead to a more robust and cost-effective invasive cattail management plan to protect critical habitats in the region, reducing fragmentation and increasing corridors and complexes of these critical wetland habitats. While the MN County Biological Survey activities have yet to be completed in this area (this is the last part of the state to be surveyed), it is already known that many of the wetland habitats in the area are currently threatened by invasive cattails. Any rare species and habitats identified by the upcoming MN Biological Survey will add further urgency to our proposed restoration work.

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:

Over 50% of Minnesota's wetlands have been lost over the last 200 years. Of the remaining wetlands, most are under threat of invasive species including non-native cattails. More than 43% of threatened or endangered species in Minnesota and elsewhere in the US depend on wetlands. It is therefore critical to restore remaining wetlands which have been degraded by invasive species. The proposed wetland project will result in a more natural and diverse community that will benefit a variety of both game and non-game species of fish and wildlife. One of the main target species for the proposed project is wild rice, a plant with high cultural and biological significance. In addition, wetlands will be restored to create diverse plant communities to create or enhance habitat for a variety of fish and wildlife species. Targeted bird species include yellow rail (Coturnicops noveboracensis), American bittern (Botaurus lentiginosus), least bittern (Ixobrychus exilis), Virginia rail (Rallus limicola), red-necked grebe (Podiceps grisegena), and black tern (Chlidonias niger), all of which are on Minnesota's list of Species in Greatest Conservation Need. Targeted mammal species include several important furbearer species, namely muskrats, river otter (Lontra canadensis), American beaver (Castor canadensis), and mink (Neovision vision). Important targeted fish species include northern pike (Esox Lucius), whose spawning areas are degraded by invasive non-native cattails. Several other species on Minnesota's list of Species in Greatest Conservation Need will also benefit from the proposed project, including: common snapping turtles (Chelydra serpentine), eastern red-backed salamanders (Plethodon cinereus), a variety of insects such as caddisflies, and various mollusk species.

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

Wild rice is capable of producing up to 500 pounds of seed per acre in a good year. The 990 acres of wetlands proposed to be restored contain approximately 260 acres of cattail to be removed. Assuming the majority of these areas are capable of supporting wild rice, this could potentially yield up to 130,000 pounds of wild rice seed in a good year. This seed is an important food source for wildlife as well as being culturally significant. While wild rice is a targeted species by this project, wetlands will be restored to a diversity of native plant species. This will create habitats to support a wide variety of fish and wildlife species including species of greatest conservation need. These restored wetlands will also serve as seed sources for other wetlands outside the project area extending the positive impacts of this wetland restoration project.

Outcomes:

Programs in the northern forest region:

- Improved aquatic habitat indicators *Post cattail treatment and restoration surveys of vegetation and wildlife will be compared to historic as well as pretreatment and restoration surveys to determine success of the project. Long term monitoring of vegetation and indicator species will also determine the ultimate success of this wetland restoration project.*

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

All invasive species control and habitat restoration projects require ongoing maintenance. Voyageurs National Park has permanent and seasonal staff capable of sustaining the monitoring and maintenance required once the OHF funds have been expended. We are also incorporating much of the ongoing monitoring and maintenance into current and future programs already occurring at the park and surrounding areas. We are working closely with other agencies and partners to develop long-term management plans for the control of invasive cattails and protection of critical wetland habitats. One of our project's objectives is to also increase public and other stakeholder awareness and education on the issues with invasive species and critical habitats which should in turn bring in future funds for long-term wetland management.

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

Year	Source of Funds	Step 1	Step 2	Step 3
2022-2027	NPS	Determine efficacy of restoration	Removal of any reemerging invasive cattails	Replant native vegetation as needed
2022-2027	NPS	Monitor impacts of restoration on wetlands	Monitor cattial impacts on restored wetlands	Monitor fish and wildlife in restored wetlands
2022-2027	NPS	Publish and present outcomes of project to educate and assist other wetland management plans	Continue partnerships to assist with cattail and wetland management	Develop effective cattail and wetland management strategies

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

Non-native cattail is an insidious invader that has rapidly invaded and degraded lakeshores in northern Minnesota. Immediate removal of cattails will slow its spread and reverse wetland loss. Further, a seedbank of viable natural plant species exists beneath the dense patches of cattails. While many species can remain buried for years, viability decreases over time; the sooner treatment occurs the better the natural regeneration of wild rice and other important species. Release of existing native plants is more cost-effective than purchasing seed or propagating plants in a nursery setting. Recent analysis of aerial imagery has revealed large sections of floating cattail mats detaching from bays and moving via by wind action that create new invasions and cause navigational hazards. Cost-effective management strategies are desperately needed, especially in areas where herbicide is prohibited. Results from our project can be applied in similar environments to reduce spread of invasive cattails.

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

We currently have funding ($240,000) to execute the first two years of our 10-year Wetland Restoration Plan (evaluation of cattail removal techniques and establishment of native vegetation) which should yield the most appropriate and cost effective technique for cattail removal and restoration of impacted wetlands. These funds are currently secured. Additional federal funds (~$200,000) are anticipated by end of Federal fiscal year 2016 to expand the first stages of cattail removal and restoration evaluation. A proposal has been submitted to solicit additional funds from National Park Service partners. We are also currently with Kansas State University, which is providing ~$100,000 in in-kind support. With the evaluation of cattail removal and wetland restoration techniques funded, Outdoor Heritage Fund appropriations would allow expansion and implementation of these methods to start restoring wetlands at a larger scale.

Relationship to other funds:

- National Park Service funds, Donation funds, Other Federal Agency Funds, and in-kind support

Describe the relationship of the funds:

The National Park Service and other federal agencies have provided $240,000 in funds towards initial stages of this project to evaluate cattail removal and restoration techniques. Non-profit donations of an additional $20,000 have also been provided to the park. We are anticipating ~$200,000 of other National Park Service funds for contracting. We are partnering with Kansas State University, which will provide ~$100,000 in in-kind support, and also collaborating with local Native American communities for additional in-kind support. The matching/in-kind contributions we describe here are not contingent upon receiving Outdoor Heritage Fund support.

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

Appropriation Year	Source	Amount
2016	NPS	$116,097

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 activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (US National Park)**

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**

Accomplishment Timeline

Activity	Approximate Date Completed
Remove invasive cattails	2022
Reestablish native vegetation in areas cattails were removed	2022
Maintain restored wetlands with bio-control and mechanical techniques	2022
Monitor effectiveness of cattail removal and reestablishment of native vegetation	2022
Document recent and historic invasion and spread of cattails	2022
Report results and recommend most cost effective cattail and wetland management strategies	2027

Budget Spreadsheet

Total Amount of Request: $1,782,700

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	$835,600	$654,500	NPS and other federal agencies, NPS, NPS, Donations, University Partner, University Partner, University Partner, NPS, NPS, NPS	$1,490,100
Contracts	$600,000	$200,000	National Park Service	$800,000
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	$25,000	$10,000	NPS	$35,000
Professional Services	$0	$5,000	NPS	$5,000
Direct Support Services	$162,100	$81,100	NPS	$243,200
DNR Land Acquisition Costs	$0	$0		$0
Capital Equipment	$35,000	$200,000	NPS	$235,000
Other Equipment/Tools	$50,000	$50,000	NPS	$100,000
Supplies/Materials	$75,000	$50,000	NPS	$125,000
DNR IDP	$0	$0		$0
Total	$1,782,700	$1,250,600	-	$3,033,300

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Biologist Project Manager	0.75	5.00	$445,100	$151,500	NPS and other federal agencies	$596,600
Biological Science Technician - Term	0.50	5.00	$119,100	$119,100	NPS	$238,200
Biological Science Technician - Seasonal	0.50	5.00	$135,700	$45,200	NPS	$180,900
Biological Science Technician - Seasonal	0.50	5.00	$135,700	$45,200	Donations	$180,900
University Partner Professor Grad Student Advisor	0.10	2.00	$0	$10,000	University Partner	$10,000
University Partner Graduate Student	1.00	2.00	$0	$70,000	University Partner	$70,000
University Partner Undergraduate Assistant	0.50	2.00	$0	$25,000	University Partner	$25,000
Project Administrator	0.01	5.00	$0	$10,000	NPS	$10,000
Project Supervisor	0.10	5.00	$0	$56,000	NPS	$56,000
Restoration Ecologist	0.25	5.00	$0	$122,500	NPS	$122,500
Total	4.21	41.00	$835,600	$654,500	-	$1,490,100

Capital Equipment

Item Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Boat and motor for water access	$35,000	$200,000	NPS	$235,000
Total	$35,000	$200,000	-	$235,000

Amount of Request:	$1,782,700
Amount of Leverage:	$1,250,600
Leverage as a percent of the Request:	70.15%
DSS + Personnel:	$997,700
As a % of the total request:	55.97%
Easement Stewardship:	$0
As a % of the Easement Acquisition:	-%

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

Requested 10% of grand total for overhead, 100% of which is direct to this program. Anticipated leverage of 5% of grand total as in-kind support direct to this program

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

The amounts in the contract line includes $400k for contracting harvesting equipment for cattail removal, and $200k for university partner. The university partner is doing a large portion of monitoring the impacts of cattails on wetlands as well as the impacts of the restoration on wetlands.

Does the amount in the travel line include equipment/vehicle rental? - Yes

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

Automobile lease for the project to travel to and from project sites and haul equipment and tools

Describe and explain leverage source and confirmation of funds:

Current in-hand leverage funds are through the NPS and other federal agencies ($220k) as well as donation funds ($20k). Additional NPS funds (~$200k) are anticipated by end of fiscal year 2016. Also have in-kind support from a partnering university (~$100k) and also partnering Native American communities

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:

The ratio of administrative costs versus acres of wetlands restored would be disproportionate (i.e. less cost effective/efficient) due to relatively fixed administrative and personnel costs. Therefore, if funds are reduced, administrative costs will go down slightly but number of acres restored will be dramatically reduced.

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	990	0	0	0	990
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	0
Total	990	0	0	0	990

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	$1,782,700	$0	$0	$0	$1,782,700
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	$0
Total	$1,782,700	$0	$0	$0	$1,782,700

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	0	990	990
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	0	0
Total	0	0	0	0	990	990

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	$1,782,700	$1,782,700
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	$0	$0
Total	$0	$0	$0	$0	$1,782,700	$1,782,700

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	$1,801	$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	$0	$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	$1,801
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	$0

Target Lake/Stream/River Feet or Miles

0

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

Parcel List

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

Parcels for treatment and restoration were first identified by the presence of invasive cattails of significant quantity to evaluate the effects and success of removal and restoration techniques. All other parcels with invasive cattails present are selected for future treatment once the most cost effective techniques are determined and additional funds allow. The parcels selected for initial treatment were then prioritized by existence of previous surveys to monitor indicator species and vegetation changes due to cattail invasion as well as test the effects of treatment types. Parcels with archeological and cultural sites were avoided to protect those resources until additional study shows the most appropriate action. The remaining parcels after this process are prioritized by ease of access and cost effectiveness of restoration.

Section 1 - Restore / Enhance Parcel List

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Alder Bay	07121234	106	$191,100	Yes
Alder Bay S	07021203	38	$68,400	Yes
Bushyhead S	07122235	47	$85,500	Yes
Cranberry Central	07021205	269	$485,100	Yes
Cranberry Central W	07021206	2	$3,200	Yes
Cranberry E	07121233	9	$15,800	Yes
Cranberry N	07121232	123	$221,200	Yes
Cranberry SE	07021204	2	$3,300	Yes
Cranberry SE	07021208	34	$61,100	Yes
Cranberry SW	07021207	15	$26,400	Yes
Dove Bay	07122236	92	$165,500	Yes
Lost Bay Central	07121236	78	$140,300	Yes
Lost Bay E	07120231	10	$17,200	Yes
Lost Bay W	07121235	24	$42,500	Yes
Perry Point	07022203	28	$50,400	Yes
Rainy Lake Visitor Center	07022204	48	$85,500	Yes
Reuter Creek NE	07022202	23	$42,500	Yes
Reuter Creek SE	07022211	2	$3,200	Yes
Reuter Creek W	07022210	33	$59,100	Yes
Soboleski Bay	07121225	2	$4,200	Yes
Springers Point	07122234	5	$9,500	Yes
Sunrise Point	07121231	1	$2,500	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

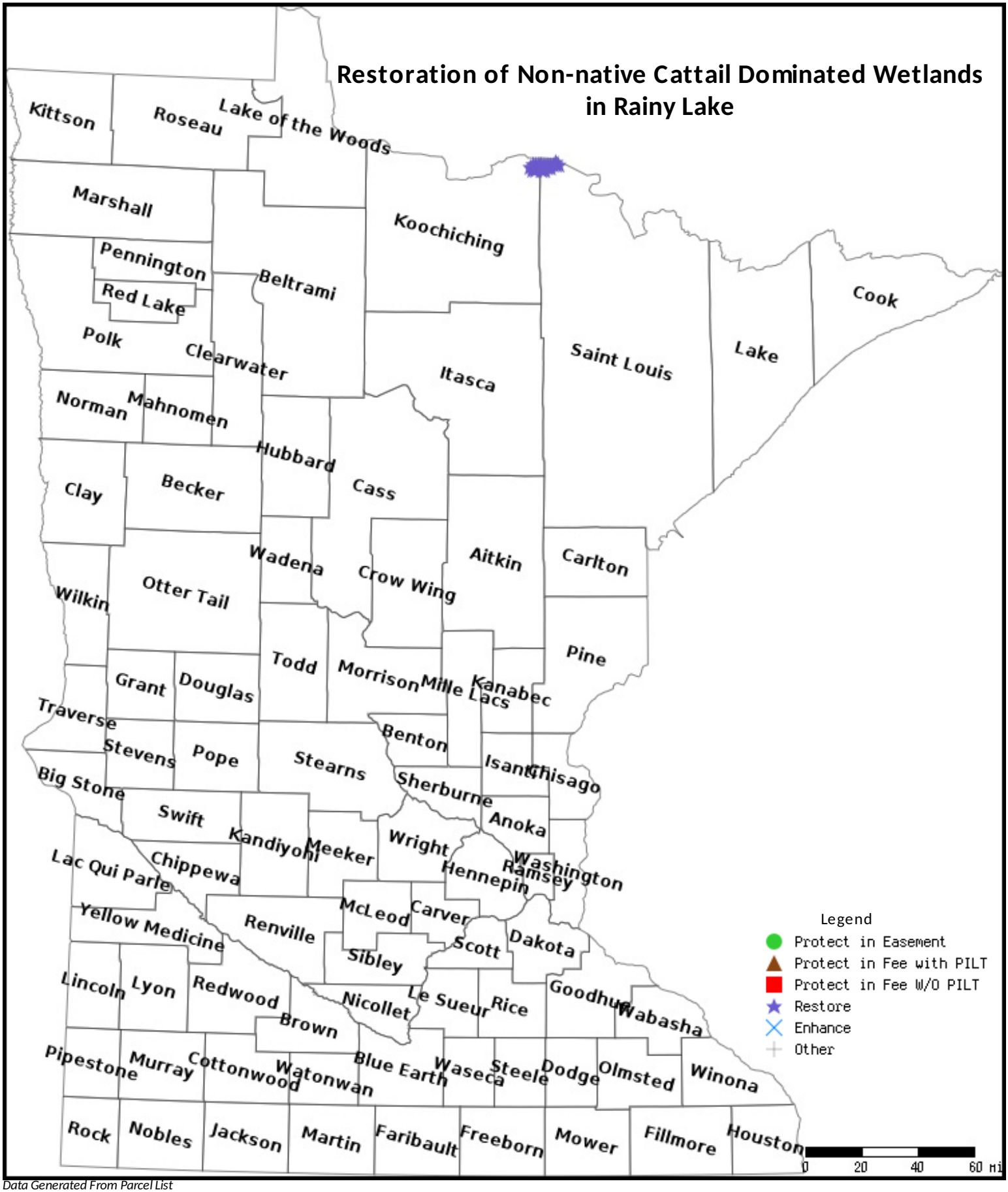
Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map



Data Generated From Parcel List

Restoration of Non-native Cattail Dominated Wetlands in Rainy Lake

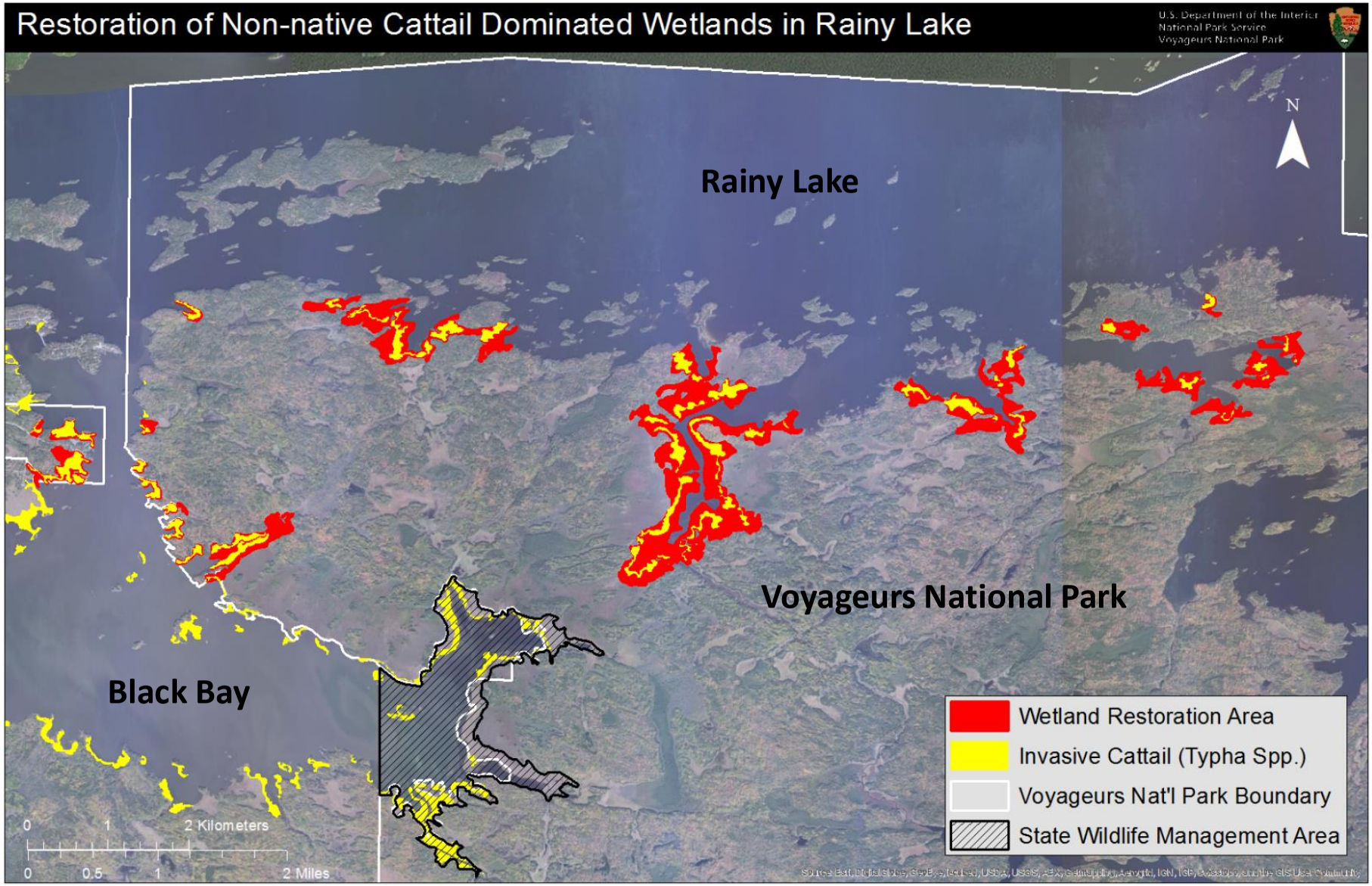
Invasive hybrid cattails grow denser and faster than most other wetland plants. Invaded wetlands become highly degraded over time, causing:

- Reduced biodiversity of fish, wildlife, plants, and insects
- Reduced fish and wildlife habitat
- Changes in nutrient conditions
- Loss of recreational opportunities
- Impacts to biotic cultural resources, especially wild rice

Removal of hybrid cattails and restoration of native species is a large and complex problem that requires an adaptive management approach to improve future management decisions. Challenges include:

- Selecting the most appropriate and cost effective techniques for treatment (e.g. burning, hand-cutting, mechanical harvesting, biological controls, or combination of methods)
- Developing methods for revegetation (e.g. collecting and broadcasting seeds, propagating seeds in greenhouse, transplanting from other areas, depending on buried viable seed source) to restore diverse habitat
- Monitoring impacts of cattails and treatment methods to native species and habitats
- Documenting recent and historic invasions and spread of cattail

In 2016**,** Voyageurs National Park initiated this 10-year plan to restore cattail-invaded wetlands. We are working closely with tribal, state, federal, and university partners to effectively address these complex issues and to educate the public about the severity of the problem. Additional resources will be needed to complete our 10-year Wetland Restoration Plan.


Restoration of Non-native Cattail Dominated Wetlands in Rainy Lake
U.S. Department of the Interior
National Park Service
Voyageurs National Park
N
Rainy Lake
Voyageurs National Park
Black Bay
Wetland Restoration Area
Invasive Cattail (Typha Spp.)
Voyageurs Nat'l Park Boundary
State Wildlife Management Area
0 1 2 Kilometers
0 0.5 1 2 Miles

VOYAGEURS
NATIONAL PARK
ASSOCIATION

May 23, 2016

Lessard-Sams Outdoor Heritage Council
95 State Office Building
St. Paul, MN 55155

Dear Council Members:

Voyageurs National Park Association fully supports Voyageurs National Park's Lessard-Sams Outdoor Heritage Fund proposal for "Restoring Wetland Biodiversity at Voyageurs National Park."

Voyageurs National Park Association serves as the nonprofit partner of the park. For over 50 years, our mission has been to protect and promote the natural, recreational and historic resources of Voyageurs. Under this mission, we are committed to helping the National Park Service restore wetland biodiversity and remove non-native invasive species over the next several years through partnership, financial and volunteer support.

Voyageurs National Park supports approximately 20,000 to 27,000 acres of wetlands. Many of these wetlands have been invaded by non-native hybrid cattails. What were once small, localized populations have increased dramatically. It is a serious threat to the ecological integrity of wetlands that is altering the dynamics of aquatic ecosystems and limiting use of waterways for recreation. Invasive cattails are having a devastating effect on wild rice. Wild rice is not only important for wildlife but plays a central role in the life of American Indian and First Nations communities in our area.

We fully support the efforts of Voyageurs National Park to restore the ecological integrity of wetlands in our state's only national park, an important piece of Minnesota's outdoor heritage.

Sincerely,

Christina Hausman
Executive Director

126 North 3rd Street, Suite 400
Minneapolis, MN 55401
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