

**Environment and Natural Resources Trust Fund  
2019 Request for Proposals (RFP)**

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**Project Title:**

**ENRTF ID: 218-F**

Piping Plovers and Common Terns: Critical Habitat Restoration

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**Category:** F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat

**Sub-Category:**

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**Total Project Budget: \$** 1,243,500

**Proposed Project Time Period for the Funding Requested:** June 30, 2022 (3 yrs)

**Summary:**

This project will restore critical habitat for threatened and endangered bird species lost due to recent sustained high water levels on Interstate Island in the St. Louis River estuary.

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**Name:** Daryl Peterson

**Sponsoring Organization:** Minnesota Land Trust

**Title:** Director of Restoration

**Department:** \_\_\_\_\_

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Duluth MN 55802

**Telephone Number:** (218) 722-1416

**Email** dpeterson@mnland.org

**Web Address** www.mnland.org

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**Location**

**Region:** Northeast

**County Name:** St. Louis

**City / Township:** Duluth

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**Alternate Text for Visual:**

The figure shows the location of the Interstate Island project site in Duluth on the St. Louis River, site boundaries, and photos of flooding that has occurred there since 2015.

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity	_____ Readiness	_____ Leverage	_____ TOTAL _____%
_____ If under \$200,000, waive presentation?			



**PROJECT TITLE: Piping Plovers and Common Terns: Critical Habitat Restoration**

**I. PROJECT STATEMENT**

This project will restore imperiled critical avian habitat in the St. Louis River estuary. Restoration will occur on Interstate Island Wildlife Management Area (WMA), which is the largest of only two remaining Common Tern (*Sterna hirundo*) nesting areas in the Lake Superior watershed and is the only federally-listed critical habitat for Piping Plover (*Charadrius melodus*) in Minnesota. Recent high water levels have caused significant loss of habitat on the island. Approximately 2/3 of all Common Terns breeding in the Lake Superior watershed nest at Interstate Island WMA, making it critical to the Lake Superior and Minnesota tern population. This project adds to the Minnesota Department of Natural Resources' (DNR) St. Louis River Restoration Initiative.

The Piping Plover is listed as endangered in Minnesota and federally; the Common Tern is listed as threatened in Minnesota. Both birds are designated as 'Birds of Conservation Concern' in the Great Lakes Region by the US Fish and Wildlife Service (USFWS) and as 'Species in Greatest Conservation Need' (SGCN) by the Minnesota DNR. Both plovers and terns nest on low-lying, open, sandy shores and beaches. While plovers do not currently nest on Interstate Island, the island provides stopover habitat for them.

The Minnesota DNR stabilized and enhanced a limited tern nesting area on Interstate Island in 2015; this work was conducted as an emergency effort to save a portion of the island's nesting area from flooding. Since then, sustained higher than normal water levels in Lake Superior and increased storm surge have decreased the availability of tern and plover habitat on the island by approximately 50%. Additional habitat loss will render the island unsuitable for nesting birds entirely. The US Army Corps of Engineers predicts lake levels will continue to rise to reach record levels in 2018 and that a new "normal" will prevail for the foreseeable future. This project will restore the island habitat by increasing its elevation to adapt to expected future water levels.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1: Restoration of Piping Plover and Common Tern Habitat**

Design, engineering, and construction for habitat restoration at Interstate Island, as well as post-restoration avian monitoring will occur in this activity. Restoration is anticipated to include increasing the island's elevation by approximately two feet through stabilization and placement of sandy substrate. These actions will restore habitat that is currently submerged and protect remaining habitat that is at risk of flooding against increased water levels. A restoration site team will be formed for the project with participation of resource management experts from Minnesota DNR, Wisconsin DNR, Minnesota Land Trust (MLT), University of Minnesota-Natural Resources Research Institute (NRRI), American Bird Conservancy (ABC), and USFWS. The team will direct the engineering design to ensure it meets Piping Plover and Common Tern habitat and management needs. Long-term management and maintenance needs for the island, with the intent of ensuring its continued use as tern nesting habitat, will be identified during the design process. The outcome of the proposed restoration will be continued viability of the largest Common Tern nesting colony in the Lake Superior watershed.

Completion of nesting habitat restoration should directly benefit the Common Tern by improving the quality and availability of nesting and rearing habitat, while reducing competition for nesting space with co-nesting Ring-billed Gulls. These actions should result in higher nesting productivity and survival of hatch-year birds. We predict that restoration will also provide quality stopover habitat for a multitude of shorebird species, including Piping Plover, during migration. Post-restoration monitoring will be conducted to determine effects of restoration on bird productivity (tern nesting success) and migratory bird use (quantify use by other avian species). Breeding activity of Common Terns will be monitored for two years; use of Interstate Island by migrating shorebird species will also be determined in fall and spring. Restoration effectiveness will be evaluated by examining pre- and post-restoration breeding success and juvenile survival.



**Environment and Natural Resources Trust Fund (ENRTF)  
2019 Main Proposal**

The MLT will administer grant funds, facilitate the Restoration Site Team, and manage completion of the project. The MLT will sub-award funds to NRRI and ABC for monitoring and management planning. Engineering and construction services will be sought from private businesses through competitive bids.

**ENRTF BUDGET: \$1,243,500**

Outcome	Completion Date
1. Engineering design documents and construction documents	October 2019
2. Construction of restoration design	To be completed ASAP with latest completion date of November 2020
3. Long-term management and maintenance plan	June 2022
4. Post-restoration avian monitoring	June 2022

**III. PROJECT PARTNERS:**

**A. Partners receiving ENRTF funding**

Name	Title	Affiliation	Role
Alexis Grinde Annie Bracey	Wildlife Ecologist Avian Ecologist	UM-NRRI	Restoration Site Team; avian monitoring
Sean Graff Peter Dieser	Vice President, Great Lakes Region Public Lands Coordinator	American Bird Conservancy	Restoration Site Team

**B. Partners NOT receiving ENRTF funding**

Name	Title	Affiliation	Role
Martha Minchak	Assistant Area Wildlife Manager	Minnesota DNR	Restoration Site Team; technical assistance
Sumner Matteson	Conservation Biologist	Wisconsin DNR	Restoration Site Team
Ted Koehler	Fish and Wildlife Biologist	USFWS Ashland Fish and Wildlife Conservation Office	Restoration Site Team
Fred Strand	Area Wildlife Manager (Retired)	Volunteer	Restoration Site Team

**IV. LONG-TERM- IMPLEMENTATION AND FUNDING:**

Restored habitat on Interstate Island will be managed by Minnesota DNR Nongame Wildlife program in partnership with Wisconsin DNR. The long-term management and maintenance plan developed in this project will be delivered to Minnesota and Wisconsin DNR's to inform their coordinated implementation through their respective nongame wildlife programs. In addition, the plan will inform an anticipated project to be conducted by Minnesota DNR on Common Tern population management needs throughout the state in FY2019.

**V. TIME LINE REQUIREMENTS:**

Increased water surface elevations and more powerful storm surges are expected in Lake Superior and the St. Louis River Estuary for the foreseeable future. Further habitat loss will occur on Interstate Island and the remaining Common Tern nesting area will continue to be threatened until the project is implemented. Therefore, design and engineering will be completed as soon as possible once funds are made available. It is our hope that construction may begin in Fall 2019. However, this aggressive timeline may not be possible and construction may begin in Summer 2020 as soon as the terns have migrated for the season.

**VI. SEE ADDITIONAL PROPOSAL COMPONENTS:**

- A. Proposal Budget Spreadsheet
- B. Visual Component or Map
- D. Acquisition, Easements, and Restoration Requirements
- F. Project Manager Qualifications and Organization Description
- G. Letter or Resolution
- H. Certified Audit or 990 Tax Information

## 2019 Proposal Budget Spreadsheet

**Project Title:** Piping Plovers and Common Terns: Critical Habitat Restoration

### IV. TOTAL ENRTF REQUEST BUDGET 3 years

BUDGET ITEM (See "Guidance on Allowable Expenses")	AMOUNT
<b>Personnel:</b>	
MLT Director of Restoration, 1 person, 5% FTE for 3 years (10% tax & benefits rate)	\$ 16,900
MLT Lake Superior Projects Coordinator, 1 person, 25% FTE for 3 years (10% tax & benefits rate)	\$ 48,400
MLT Finance Manager, 1 person, 5% FTE for 3 years (10% tax & benefits rate)	\$ 16,200
<b>Professional/Technical/Service Contracts:</b>	
Engineering and construction (RFP to be issued)	\$ 1,100,000
Avian restoration success monitoring (Natural Resources Research Institute; Gov't Partner)	\$ 60,000
Habitat design planning (American Bird Conservancy)	\$ 2,000
<b>Equipment/Tools/Supplies:</b>	\$ -
<b>Acquisition (Fee Title or Permanent Easements):</b>	\$ -
<b>Travel:</b>	\$ -
<b>Additional Budget Items:</b>	\$ -
<b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>	<b>\$ 1,243,500</b>

### V. OTHER FUNDS (This entire section must be filled out. Do not delete rows. Indicate "N/A" if row is not applicable.)

SOURCE OF FUNDS	AMOUNT	Status
<b>Other Non-State \$ To Be Applied To Project During Project Period:</b>		
USFWS Midwest Region Coastal Program	\$ 150,000	Pending
NOAA Coastal Program	\$ 7,000	Pending
<b>Other State \$ To Be Applied To Project During Project Period:</b>		
N/A	N/A	N/A
<b>In-kind Services To Be Applied To Project During Project Period:</b>		
Martha Minchak, Asst. Area Wildlife Manager, Minnesota DNR (technical assistance for project)	\$ 6,000	Secured
Volunteer support (Fred Strand; field work and maintenance; 175 hrs/yr @\$25/hr)	\$ 13,125	Secured
American Bird Conservancy staff time and travel	\$ 2,000	Secured
Minnesota DNR staff time for regular island activities	\$ 4,500	Secured
Minnesota DNR boat use	\$ 9,000	Secured
Minnesota DNR and Wisconsin DNR Common Tern monitoring and island maintenance	\$ 10,500	Secured
<b>Past and Current ENRTF Appropriation:</b>		
N/A	N/A	N/A
<b>Other Funding History:</b>		
Emergency nesting habitat restoration (FY2015): USFWS Cooperative Agreement with Minnesota DNR (\$40,000) and Outdoor Heritage Fund (\$121,783)	\$ 161,783	Secured
Common Tern Population Research UMN-NRRI (thru FY2018; Multiple funding sources including USFWS)	\$ 150,000	Secured

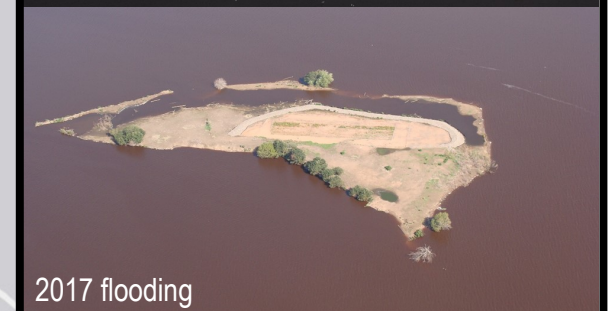
Attachment C:  
Environment and Natural Resources Trust Fund  
M.L. 2019 Acquisition/Restoration Parcel List Spreadsheet  
Project Title: Piping Plovers and Common Terns: Critical Habitat Restoration  
Legal Citation:  
Project Manager: Daryl Peterson  
Organization: Minnesota Land Trust  
College/Department/Division:  
M.L. 2019 ENRTF Appropriation: \$1,243,500 (requested)  
Project Length and Completion Date: 3 years, June 30, 2022  
Today's Date: April 11, 2018



#	Acquisition or Restoration Parcel Name	Geographic Coordinates (preferably from the center of the parcel) Format: [Deg.]° [Min.]' [Sec.]" [Hemis.]		Estimated Cost	Estimated Annual PILT Liabilities	County	Site Significance (please include what ecosystem (e.g., prairie, forest, wetland, savanna) is represented as well as the ecological significance, site importance, conservation value, and public benefits)	Activity Description (e.g. fee title acquisition, conservation easement acquisition, site preparation, restoration)	# of Acres	# of Shoreline Miles	Type of Landowner (private individual or trust, non-profit organization, for-profit entity)	Proposed Fee Title or Easement Holder (if applicable)	Status of work (e.g. engaged in landowner negotiations, no longer in consideration, restoration activities underway)
		Latitude	Longitude										
1	Interstate Island WMA	46°44'58"N	92°06'37"W	\$ 1,243,500	N/A	St. Louis	Piping Plover and Common Tern critical habitat	restoration	5	0.3	State	NA	restoration not started
2													
3													
4													
5													
6													
7													
8													
9													
10													
NOTES:													



**Project Title:** Piping Plovers and Common Terns: Critical Habitat Restoration



**Project Partners:**

- Minnesota Land Trust
- University of Minnesota– Natural Resources Research Institute
- American Bird Conservancy
- Minnesota Department of Natural Resources
- Wisconsin Department of Natural Resources
- US Fish and Wildlife Service



**Attachment D. Additional Work Plan Information for Acquisition, Easements, and Restoration**

**Restoration**

1. Provide a statement confirming that all restoration activities completed with these funds will occur on land permanently protected by a conservation easement or public ownership.

**All restoration activities to be completed with ENTRF funds will be conducted on the State of Minnesota's Interstate Island Wildlife Management Area (WMA).**

2. Summarize the components and expected outcomes of restoration and management plans for the parcels to be restored by your organization, how these plans are kept on file by your organization, and overall strategies for long-term plan implementation.

**This project will increase elevations at Interstate Island WMA to restore habitat lost to increased Lake Superior water levels. The restoration will include stabilizing the island (as determined to be necessary in the engineering design process) and placement of sand substrate. Habitat enhancements specific to Piping Plover and Common Tern use will be made, including placement of small stone and driftwood, as well as fencing specific nesting areas. These activities will protect the critical habitat from loss due to climate change and should result in higher nesting productivity and survival of hatch-year birds. In 2017, 91 Common Tern young were fledged from 129 nests on the island. This number of nesting adult terns is below the recommended 200+ nesting pairs required to maintain a stable population.**

**A long-term management and maintenance plan for Interstate Island will be developed in this project. This plan will be submitted to both Minnesota DNR and Wisconsin DNR to inform their regular nongame wildlife management activities at Interstate Island. Both states have regular, on-going activities related to management of the WMA. Funding mechanisms will be sought by the project partners (Minnesota Land Trust, NRRI, American Bird Conservancy, Minnesota DNR, Wisconsin DNR, and US Fish and Wildlife Service) to address any identified needs that are not currently part of these regular activities. Discussions are expected to occur with the US Army Corps of Engineers about island nourishment with appropriate navigational dredge materials to address regular loss from wind and ice erosion over time.**

**The St. Louis River estuary (SLRE) is a designated Great Lakes Area of Concern (AOC). The SLRE Common Tern population is one of the criteria for removal of the AOC's 'Degraded Fish and Wildlife Populations' Beneficial Use Impairment. Maintaining islands that support colonial nesting waterbirds is an objective of the Lake Superior Lakewide Action and Management Plan (LAMP). Regional LAMP objectives for the St. Louis River include protection and restoration of habitats with special consideration of islands and softened shorelines, as well as the identification and protection of species at risk. Managing and protecting habitat for rare species SGCNs is a high priority for Minnesota DNR. This project is a key avian habitat restoration project in the estuary and within the St. Louis River Restoration Initiative.**

3. Describe how restoration efforts will utilize and follow the Board of Soil and Water Resources "Native Vegetation Establishment and Enhancement Guidelines" in order to ensure ecological integrity and pollinator enhancement.

**Common Tern and Piping Plover habitat has very specific vegetation needs. The "Native Vegetation Establishment and Enhancement Guidelines" will be utilized as appropriate. In general, vegetation at Interstate Island WMA has been managed to be sparse to eliminate the potential for habitation by predatory wildlife and to support the open, sandy beach and shoreline that the avian species require.**

4. Describe how the long-term maintenance and management needs of the parcel being restored with these funds will be met and financed into the future.

**A long-term management and maintenance plan for Interstate Island will be developed in this project. This plan will be submitted to both Minnesota DNR and Wisconsin DNR to inform their regular nongame wildlife management activities at Interstate Island WMA. Both states have regular, on-going activities related to management of the WMA (Minnesota) and the Common Tern colony (Minnesota and Wisconsin).**

5. Describe how consideration will be given to contracting with Conservation Corps of Minnesota for any restoration activities.

**The geographic location and conditions at Interstate Island WMA are generally not conducive for use of a Conservation Corps of Minnesota crew for restoration activities. Activities to be conducted include mechanical placement of materials. There is a possibility that the Conservation Corps of Minnesota could be engaged in placement of fencing and smaller habitat enhancements.**

6. Provide a statement indicating that evaluations will be completed on parcels where activities were implemented both 1) initially after activity completion and 2) three years later as a follow-up. Evaluations should analyze improvements to the parcel and whether goals have been met, identify any problems with the implementation, and identify any findings that can be used to improve implementation of future restoration efforts at the site or elsewhere.

**A post-construction as-built elevation survey will be conducted to document post-restoration conditions. The effect of restoration on the Common Tern population will be monitored for two nesting seasons immediately post-restoration. Use of the island by migrating shore birds, including Piping Plover, will also be monitored in fall and spring. Minnesota DNR and volunteer staff will also conduct immediate post-restoration and 3-year post-restoration assessments of the project during their management activities on the island. Any identified issues will be addressed within the process identified in the long-term management and maintenance plan developed in this project.**



**Project Title:** Piping Plovers and Common Terns: Critical Habitat Restoration

**Project Manager Qualifications and Organization Description**

Minnesota Land Trust (MLT) is an accredited 501(c)(3) non-governmental organization that preserves Minnesota's natural and scenic heritage through public and private partnerships. MLT works to protect and enhance Minnesota's threatened lands and waters by providing agencies, communities, and organizations with assistance in planning and delivering on-the-ground conservation in order to expand the State's overall capacity. The Land Trust plays a crucial role in St. Louis River recovery by developing and implementing priority on-the-ground restoration projects with local, state, and federal agencies.

Daryl Peterson has more than 20 years of experience planning, managing, and implementing ecological restoration projects in river environments and has been working on the St. Louis River since 2005. Daryl has managed many natural resource management projects in both California's Sacramento River bay-delta and Minnesota's St. Louis River Estuary. Recent St. Louis River projects he has managed include restoring sturgeon spawning habitat at Chamber's Grove and Fond du Lac Dam and Radio Tower Bay sheltered bay restoration. Daryl holds a bachelor's degree in Biology from Whittier College in California and a master's degree in Plant Ecology from California State, Chico. Daryl works out of MLT's Duluth office where he leads the Land Trust's work on Lake Superior and its tributaries.

