



Environment and Natural Resources Trust Fund

2021 Request for Proposal

General Information

Proposal ID: 2021-139

Proposal Title: Pollinator Central: Habitat Improvement with Citizen Monitoring

Project Manager Information

Name: Rebecca Tucker

Organization: Great River Greening

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Project Basic Information

Project Summary: Restore / enhance 500 acres of pollinator habitat on 20 traditional and nontraditional sites, from Hastings to St. Cloud, to benefit pollinators and build knowledge of the impacts through citizen monitoring.

Funds Requested: \$981,000

Proposed Project Completion: 2024-06-30

LCCMR Funding Category: Methods to Protect, Restore, and Enhance Land, Water, and Habitat (F)

Project Location

What is the best scale for describing where your work will take place?

Region(s): Metro, Central,

What is the best scale to describe the area impacted by your work?

Region(s): Metro, Central,

When will the work impact occur?

During the Project and In the Future

Narrative

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

Current rural and urban corridors are largely undeveloped habitat for pollinators, often with open mowed turf serving as boundaries between pavement and other impermeable surfaces. These patches of vegetation can be opportunities for municipalities, cities, and utilities to develop low-maintenance, high reward ecological areas that benefit both the pollinator community as well as the neighborhoods that these parks, schools, and public spaces serve. In addition to the restoration and establishment of pollinator habitat for imperiled species, there is an opportunity for stewardship, community education, and hands on monitoring in an effort to understand how pollinators interact with these rural and urban spaces.

What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.

Following recommendations from the Governor's Committee on Pollinator Protection and other habitat assessment guides, we will restore habitats in urban, suburban, and rural landscapes to support a 'hopscotch' corridor for pollinators, as well as improve core habitat areas. Turf conversion of small, high quality patches will join grassland, edge, wetland, shoreline, and limited amounts of forest and woodland all within flight distance of year-round habitat.

Proposed implementation will follow recommendations provided by the Habitat Assessment Guide for Rusty Patched Bumble Bee (Xerces), the U.S. Fish and Wildlife Service Monarch Conservation Database and other guides, field surveys and expert review. Emphasis will be placed on adjacency within a landscape mosaic to provide forage habitat throughout the year, as determined by using state-of-the-art pollinator habitat 'core and - patches' adjacency mapping analysis. Restoration and enhancement activities will be guided by ecological plans, and implemented by a variety of labor forces including subcontractors, field crews, landowner in-kind, and volunteers.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

These improvements will increase floral resources and improve nesting and over-wintering habitat for pollinators, while engaging a total of 400 habitat volunteers in field activities. In addition, we will monitor every site through a number of direct pollinator monitoring techniques, guided by Xerces Society and U of M Bee Lab, to collect useful data on pollinator response to habitat improvements, effectively engaging 100 community scientists in monitoring efforts by requiring reasonable time, skill, and expense, making the approach scalable. A final report will be generated and disseminated that will help guide the implementation in future phases of this program.

Activities and Milestones

Activity 1: Pollinator Habitat Restoration and Enhancement

Activity Budget: \$861,000

Activity Description:

Habitat restoration and enhancement steps will typically follow: Site selection and ranking; habitat improvement plan including goals timelines, labor forces such as volunteers, landowners, Greening crew, subcontractors and partners, and long-term management; site preparation, installation, establishment; and monitoring throughout.

We will restore pollinator habitat with a focus on SGCN bumble bee species on public and protected private locations through a pollinator corridor following the Mississippi River anchored by Twin Cities and St. Cloud. Following recommendations from the Governor’s Committee and others, we will include non-traditional habitat areas, including turf conversions and roadsides in addition to traditional habitat cores. Typical restoration activities will include prairie and savanna restoration; wetland and shoreline restoration and enhancement; judicious use of woodland and forest restoration, restricted in size and to locations that are adjacent to season-long habitat emphasizing forbs, select flowering shrubs and trees, and habitat needs for overwintering and nesting. Restoration and enhancement activities will be implemented guided by ecological plans, and implemented by a variety of labor forces including subcontractors, field crews, landowner in-kind, and volunteers.

Activity Milestones:

Description	Completion Date
Restoration and Enhancement site selection and management planning	2022-06-30
Restoration and enhancement implementation	2024-06-30

Activity 2: Citizen Science Pollinator Monitoring

Activity Budget: \$120,000

Activity Description:

Monitoring will include timed vegetation meanders, and pollinator assessment using guides such as Rusty Patched Bumble Bee Habitat Assessment guide (Xerces Society). Direct pollinator monitoring guided and developed by Xerces Society and U of M Bee Lab will encompass a suite of approaches including citizen science techniques of timed meander counts on 16 sites, with training; non-lethal bumble bee capture with expert identification 3 times per year for 3 years on one site, non-lethal photography with expert identification at 3 sites.

Monitoring will occur pre and post restoration/enhancement to determine the pollinator habitat value of the site and the response to the improvements. This monitoring will potentially take several forms and at escalating levels of rigor: the simplest monitoring will include a timed count of 3 categories of pollinators (honey bees vs. native bees vs. other floral visitors); catch and release surveys of bumble bees with expert identification following MN Native Bee Survey and Midwest Guide to Bumble Bee Monitoring (Xerces Society) methods; and camera ‘trapping’ using skilled photographers and expert identification using guidelines established by the USFWS for monitoring bumble bee communities and new approaches being developed by Xerces Society and the Bee Lab for other groups

Activity Milestones:

Description	Completion Date
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Establish baseline surveys for each of the sites	2022-06-30
Define site monitoring plans	2022-06-30
Data collection and final report	2024-06-30

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?

This is the first phase of the Pollinator Central program as funded by the LCCMR appropriations (pending legislation as this application is being submitted), and owing to the volume of interest we have received each time we have released RFPs to land-owning partners, we anticipate that there will be critical need and opportunity for future multiple phases in this Pollinator Central corridor. These projects are well matched by cash and in-kind funding from landowners and other sources, and the landowners will commit to long term maintenance of the restoration sites. The restoration monitoring information will be disseminated with grant assistance.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Metro Conservation Corridors Phase VIII - Enhancing Restoration Techniques for Improved Climate Resilience and Pollinator Conservation	M.L. 2015, Chp. 76, Sec. 2, Subd. 08f	\$400,000
Upland and Shoreline Restoration in Greater Metropolitan Area	M.L. 2014, Chp. 226, Sec. 2, Subd. 06g	\$300,000
Community Stewardship to Restore Urban Natural Resources - Phase Ten	M.L. 2017, Chp. 96, Sec. 2, Subd. 08i	\$524,000
Upland, Wetland, and Shoreline Restoration in Greater Metropolitan Area	M.L. 2016, Chp. 186, Sec. 2, Subd. 08g	\$509,000

Project Manager and Organization Qualifications

Project Manager Name: Rebecca Tucker

Job Title: Program Manager

Provide description of the project manager's qualifications to manage the proposed project.

Rebecca Tucker (M.S. Botany and Population Genetics, Purdue University), has a diverse set of experience planning, executing, and funding the restoration of native habitats. After studying wild rice for her masters, she spent three and a half years as a research assistant at the Archbold Biological Station in Florida where she carried out plant and habitat assessments, managed hydrological engineering plans, coordinated bidding and budgets for contracted restoration projects, and implemented a variety of land management activities. Before coming to Great River Greening, Rebecca was a research assistant on the University of Minnesota Healthy Prairies project. She has also engaged the public through educational talks and worked on numerous farm and greenhouse research projects at a number of organizations. Currently, as Great River Greening's Twin Cities Metro Program Manager, Rebecca develops and manages the urban enhancement and restoration within the seven county metro area focused primarily on invasive species reduction, pollinator habitat establishment, and local community outreach.

Organization: Great River Greening

Organization Description:

Great River Greening's mission is to secure the legacy of Minnesota land and water through community-based restoration, stewardship and partnership, striving to improve Minnesota's natural resources, protect clean air and water, and increase community access to sustainable open space. Since 1995, Great River Greening has engaged 47,000 volunteers (12,500 of them youth) in hands-on education and stewardship activities, helping restore over 10,700 acres

of habitat in 400 communities across Minnesota. Great River Greening focuses our work in locations and on activities that provide conservation impact, ecosystem services, and community benefits, with projects including: developing planting designs and/or restoration management plans for natural areas; planting native trees, shrubs, wildflowers, and grasses; stabilizing shorelands and ravines; conducting ecological inventories; implementing conservation practices on farmland; and completing restoration and management activities including exotic species removal, prairie seed collection, and prescribed burns. In addition, Great River Greening engages community members from schools, faith groups, civic groups, businesses, and veterans groups in public volunteer events and engages over one hundred youth each year in the Field Learning for Teens service-learning Program. Through community education and engagement, Greening is restoring natural resources, while building environmental leaders and stewards of tomorrow.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Ecologist		Oversees Project Management			17%	1.08		\$86,000
Field Technician		Conducts on-site work to support project deliverables			32%	0.18		\$7,000
Volunteer Outreach Mgr		Manages all tasks related to volunteer acquisition, event development and event execution			17%	0.42		\$16,000
Grant Administrator		Tracks grant and project budget compliance, develops status reports and amendments, processes reimbursement requests			25%	0.21		\$13,000
							Sub Total	\$122,000
Contracts and Services								
U of M Bee Lab	Professional or Technical Service Contract	The U of M Bee Lab will identify bumble bee species from photographs at 750-1,000 specimens per 40 hours, including data management and analysis. Time and materials basis. Single-source provider selected due to the unique and expert set of skills required for these tasks.				0.54		\$40,000
Xerces Society	Professional or Technical Service Contract	The Xerces Society will lead nine public bumble bee monitoring events, three citizen and GRG staff training workshops, and provide expert support for monitoring efforts. Single-source provider selected due to the unique and expert set of skills required for these tasks.				0.54		\$40,000
Restoration and Enhancement sub-contracts following state competitive RFP requirements	Professional or Technical Service Contract	Restoration and Enhancement sub-contracts following state competitive RFP requirements to support work such as: site preparation, prairie seeding, invasive species control, woody harvest, thinning, forestry mowing, herbicide treatment, prescribed fire, haying.				1.95		\$581,000

							Sub Total	\$661,000
Equipment, Tools, and Supplies								
	Tools and Supplies	Seeds, plugs, herbicide, tools for R/E activities conducted by Greening crew, volunteers, landowners	Supplies required to support activity 1 restoration/enhancement deliverables					\$181,000
	Tools and Supplies	Sampling materials	Supplies required to support activity 2 monitoring					\$3,000
							Sub Total	\$184,000
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Truck and POV mileage; occassional overnight lodging and LCCMR allowable expenses for field work	Travel to sites to support deliverables					\$6,000
							Sub Total	\$6,000
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Printing	Outreach materials, dissemination materials	Promotional material for volunteer acquisition, signage for event site instructions and logistics					\$1,000
							Sub Total	\$1,000

Other Expenses								
		Volunteer event related expenses	Tent, table, chairs, food, latrine, etc., as required to support project volunteer event deliverables and the promotion of LCCMR strategy and objectives to citizen volunteers.					\$7,000
							Sub Total	\$7,000
							Grand Total	\$981,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
Cash	Landowner site specific match (City, County, Township, ISD)	Typically for labor; Private foundations, typically for labor in a certain geography or conservation goal; Corporations, typically for private volunteer events.	Pending	\$90,000
In-Kind	National Fish and Wildlife Foundation Monarch Butterfly and Pollinators Conservation Fund 2020.	Increase deliverables	Potential	\$85,000
In-Kind	Landowner direct contribution.	R/E activities e.g. site prep, seeding, invasive control, hauling	Pending	\$35,000
			Non State Sub Total	\$210,000
			Funds Total	\$210,000

Acquisition and Restoration

Parcel List

Name	County	Site Significance	Activity	Acres	Miles	Estimated Cost	Type of Landowner	Easement or Title Holder	Status of Work
Clear Lake Twsp Park	Sherburne	high prairie and savanna potential site, in river corridor	Restoration	2	-	\$9,000	Public		Has not begun
Clearview Elementary School Forest	Sherburne	high quality prairie remnant stressed by red cedar encroachment	Restoration	10	-	\$30,000	Public		Has not begun
Commons Park	Hennepin	lake shoreline with woodland habitat	Restoration	3	-	\$15,000	Public		Has not begun
Crow Lake Twsp BSWR RIM Easement	Stearns	59 ac grassland, wetland mosaic in ag landscape	Restoration	1	-	\$1,500	Private		Has not begun
Dakota Trail	Hennepin	recent 3RPD acquisition; adjacent to current trail site	Restoration	30	-	\$60,000	Public		Has not begun
Hidden Falls / Crosby Farm / Meeker Dam	Ramsey	forest, woodland, savanna, prairie, shoreline, wetland mosaic in river corridor	Restoration	20	-	\$51,000	Public		Has not begun
Hidden Valley Park	Scott	high quality dry prairie remnant with rare species	Restoration	5	-	\$15,000	Public		Has not begun
Inspiration Easement	Washington	restored prairie in river corridor	Restoration	20	-	\$40,000	Public		Has not begun
Liberty Glen Park: Phase I	Sherburne	part of large habitat complex in river valley	Restoration	44	-	\$88,000	Public		Has not begun
Maplewood City Hall	Ramsey	high visitation site with mosaic of wetland, shoreline, turf, prairie, savanna	Restoration	5	-	\$25,000	Public		Has not begun
Mississippi River Bluff	Hennepin	two sites along river bluff; future trail site	Restoration	30	-	\$60,000	Public		Has not begun
Ramsey COR	Anoka	linear ROW adjacent to railroad ROW	Restoration	3	-	\$6,000	Public		Has not begun
Ritter Farm Park	Dakota	varied habitat with woodland edge	Restoration	16	-	\$36,000	Public		Has not begun
Sedan Brook SNA	Stearns	habitat core for wet prairie, woodland, riparian	Restoration	10	-	\$30,000	Public		Has not begun
Spring Lake Park Reserve: Phase I	Dakota	large habitat core with mosaic	Restoration	200	-	\$60,000	Public		Has not begun
St. Louis Park: Oak Hill / Louisiana Oaks	Hennepin	high visitation site, woodland and edge habitat	Restoration	8	-	\$20,000	Public		Has not begun
State Highway ROW	Sherburne	State Highway 24 linear corridor habitat	Restoration	10	-	\$50,000	Public		Has not begun

Sucker Lake/Lake Vadnais	Ramsey	aquatic, shoreline and wetland habitat complex	Restoration	45	-	\$113,000	Public		Has not begun
Westwood Hills Nature Center IV	Hennepin	highly visited large habitat core with mosaic of wetland, lake, shoreline, prairie, savanna, woodland, forest.	Restoration	15	-	\$45,500	Public		Has not begun
Woodbury Basins: Phase I	Washington	highly visible sites in development cores with corridor habitat	Restoration	34	-	\$106,000	Public		Has not begun
Totals				511	0	\$861,000			

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 completed with these funds will occur on land permanently protected by a conservation easement or public ownership.

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.

Restoration plans include target community, timelines, methods, budgets and long term maintenance. These plans are filed electronically by unique project numbers and can be referenced by staff or landowner as required by the needs of the site.

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.

All plans will follow the most recent version Board of Soil and Water Resources “Native Vegetation Establishment and Enhancement Guidelines” in order to ensure ecological integrity and pollinator enhancement.

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.

Long-term maintenance and management needs of the parcel being restored with these funds become the responsibility of the landowner. Greening seeks to assist when possible.

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

Great River Greening contacts the Conservation Corps of Minnesota once the grant is secured to seek their interest for any restoration activities.

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.

Evaluations will be completed during the process including initially after activity completion and three years later as a follow-up. Evaluations will 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.

Attachments

Required Attachments

Map

File: [90f6a9bf-bf2.pdf](#)

Alternate Text for Map

Great River Greening map of proposed project sites on a Minnesota county map surrounded by pictures of people and pollinators.

Financial Capacity

File: [bb3ea89f-c89.pdf](#)

Board Resolution or Letter

Title	File
3G. GRG Board Letter of Authorization Final	f3e073c3-6dc.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

Yes: Restoration,

Does your project have patent, royalties, or revenue potential?

No

Does your project include research?

No

Does the organization have a fiscal agent for this project?

No

Pollinator Central: Habitat and Monitoring

