

**Environment and Natural Resources Trust Fund
2020 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 207-F

Pollinator Central: Habitat improvement with citizen monitoring

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

Sub-Category:

Total Project Budget: \$ 981,000

Proposed Project Time Period for the Funding Requested: June 30, 2023 (3 yrs)

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 impact through citizen monitoring.

Name: Wiley Buck

Sponsoring Organization: Great River Greening

Job Title: Program Manager

Department: _____

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Location:

Region: Central

County Name: Anoka, Dakota, Hennepin, Ramsey, Scott, Sherburne, Stearns, Washington

City / Township:

Alternate Text for Visual:

M.L. 2020 - Pollinator Central - Great River Greening map of proposed project sites on a Minnesota county map surrounded by pictures of people and pollinators.

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ TOTAL	_____ %



PROJECT TITLE: Pollinator Central: Habitat improvement with citizen monitoring from Hastings to St. Cloud.

I. PROJECT STATEMENT

We will restore and enhance 500 acres of pollinator habitat on 20 traditional and nontraditional sites, from Hastings to St. Cloud, to benefit pollinators and build knowledge of impact through citizen monitoring.

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 and 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. These improvements will increase floral resources and improve nesting and over-wintering habitat for pollinators. A total of 400 habitat volunteers will be engaged in field activities.

Site selection will follow ranking by the Habitat Assessment Guide for Rusty Patched Bumble Bee (Xerces) 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.

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, in order to collect useful data on pollinator response to habitat improvements, effectively engaging 50 citizen scientists in monitoring efforts by requiring reasonable time, skill, and expense, making the approach scaleable. A final report will be generated and disseminated that will help guide the implementation in future phases of this program.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1 Title: Pollinator Habitat Restoration and Enhancement

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.



**Environment and Natural Resources Trust Fund (ENRTF)
2020 Main Proposal Template**

ENRTF BUDGET: \$861,000

Outcome	Completion Date
<i>1. Site selection, management planning</i>	<i>June 30 2021</i>
<i>2. Restoration and Enhancement implementation</i>	<i>June 30, 2023</i>

Activity 2 Title: Citizen Science Pollinator Monitoring

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.

ENRTF BUDGET: \$120,000

Outcome	Completion Date
<i>1. Baseline surveys for each of the 20 sites....</i>	<i>June 30 2021</i>
<i>2. Site by site monitoring plan</i>	<i>June 30, 2021</i>
<i>3. Data collection and final report</i>	<i>June 30, 2023</i>

III. PROJECT PARTNERS AND COLLABORATORS:

Xerces Society
U of M Bee Lab
Landowners (see parcel list)

IV. LONG-TERM IMPLEMENTATION AND FUNDING:

We anticipate that there will be additional need and opportunity for future multiple phases in this Pollinator Central corridor.

Landowners will commit to long term maintenance of the restoration sites.

Attachment A: Project Budget Spreadsheet
Environment and Natural Resources Trust Fund
M.L. 2020 Budget Spreadsheet



Legal Citation:

Project Manager: Wiley Buck

Project Title: Pollinator Central: Habitat improvement with citizen monitoring from Hastings to St. Cloud

Organization: Great River Greening

Project Budget: \$981,000

Project Length and Completion Date: 3 years; June 30, 2023

Today's Date: 15 April 2019

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
BUDGET ITEM				
Personnel (Wages and Benefits)		\$ 116,000	\$ -	\$ 116,000
4 Ecologist, \$86,000 (83% salary, 17% benefits), 36% FTE each year for 3 years				
3 Field Crew Members, \$7,300 (68% salary, 32% benefits), 6 % FTE each year for 3 years				
2 Volunteer Outreach, \$16000 (83% salary, 17% benefits), 14% FTE each year for 3 years				
2 Administration \$ 13,000 (62% salary, 38% benefits), 7 % FTE each year for 3 years				
Professional/Technical/Service Contracts				
Restoration and Enhancement sub-contracts following state competitive RFP requirements		\$ 587,000	\$ -	\$ 587,000
U of M Bee Lab, to 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.		\$ 40,000	\$ -	\$ 40,000
Xerces Society, to 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.		\$ 40,000	\$ -	\$ 40,000
Equipment/Tools/Supplies				
Seeds, plugs, herbicide, tools for R/E activities conducted by Greening crew, volunteers, landowners		\$ 181,000	\$ -	\$ 181,000
Sampling materials		\$ 3,000	\$ -	\$ 3,000
Capital Expenditures Over \$5,000				
Printing				
Outreach materials, dissemination materials		\$ 1,000	\$ -	\$ 1,000
Travel expenses in Minnesota				
Truck and POV mileage; occassional overnight lodging and per diem for field work		\$ 6,000	\$ -	\$ 6,000
Other				
Volunteer Event food and bvg; rentals (potty, tent, table/chairs, security): 450 vols, \$5K. Dissemination at 2 conference \$500 each including out of state travel: \$1K.		\$ 7,000	\$ -	\$ 7,000
COLUMN TOTAL		\$ 981,000	\$ -	\$ 981,000
SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT				
	Status (secured or pending)	Budget	Spent	Balance
Non-State: City, County, Township, ISD: Site specific match, typically for labor; Private foundations, typically for labor in a certain geography or conservation goal; Corporations, typically for private volunteer events.	pending	\$ 90,000	\$ -	\$ 90,000
Federal: National Fish and Wildlife Foundation <i>Monarch Butterfly and Pollinators Conservation Fund 2019</i> . Increase deliverables	pending	\$ 100,000	\$ -	\$ 100,000
In kind: Landowner R/E activities e.g. site prep, seeding, invasive control, hauling	pending	\$ 35,000	\$ -	\$ 35,000
Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS		Budget	Spent	Balance
ML 2016 Upland, Wetland, and Shoreline Restoration in Greater Metropolitan Area	\$ 155,000	\$ -	\$ -	\$ -
ML 2017 Community Stewardship to Restore Urban Natural Resources—Phase X	\$ 395,000	\$ -	\$ -	\$ -

Pollinator Central: Habitat and Monitoring





#	Acquisition or Restoration Parcel Name	Geographic Coordinates		Estimated Cost	Estimated Annual PILT Liabilities	County	Site Significance	Activity Description (all restoration)	# of Acres	# of Shoreline Miles	Type of Landowner	Proposed Fee Title or Easement Holder	Status of work
		Latitude	Longitude										
1.1	Westwood Hills Nature Center IV	44° 58' 05.7" N	93° 23' 33.6" W	\$ 45,500		Hennepin	highly visited large habitat core with mosaic of wetland, lake, shoreline, prairie, savanna, woodland, forest.	wetland, shoreline, savanna, and woodland pollinator patches	15		Municipality		Phases 1-3 complete/underway with Trust Fund and City funds
1.2	Commons Park	44° 54' 22.5" N	93° 33' 59.1" W	\$ 15,000		Hennepin	lake shoreline with woodland habitat	turf conversion to prairie, savanna knoll clearing, slopes exposes	3		Municipality		Engaged in landowner negotiations
1.3	Ramsey COR	45° 13' 53.2" N	3° 27' 36.8" W	\$ 6,000		Anoka	linear ROW adjacent to railroad ROW	turf conversion to tallgrass prairie ROW adjacent to RR	3		Municipality		Engaged in landowner negotiations
1.4	Sucker Lake/Lake Vadnais	45° 04' 35.2" N	93° 06' 14.4" W	\$ 113,000		Ramsey	aquatic, shoreline and wetland habitat complex	Shoreline and wetland pollinator enhancement	45		WMO		Engaged in landowner negotiations
1.5	Spring Lake Park Reserve: Phase I	44° 45' 23.0" N	92° 58' 56.1" W	\$ 60,000		Dakota	large habitat core with mosaic	Regal Fritillary habitat target; prairie enhancement with focus on violet; woodland patches	200		County		Engaged in landowner negotiations
1.6	Ritter Farm Park	44° 40' 23.7" N	93° 18' 01.2" W	\$ 36,000		Dakota	varied habitat with woodland edge	woodland opening and prairie establishment	16		Municipality		Engaged in landowner negotiations
1.7	Hidden Valley Park	44° 45' 47.2" N	93° 20' 34.4" W	\$ 15,000		Scott	high quality dry prairie remnant with rare species	pollinator lawn; enhance remnant, raingarden, reconstruction	5		Municipality		Earlier work funded by Trust Fund and City
1.8	Sedan Brook SNA	45° 32' 52.5" N	95° 05' 12.1" W	\$ 30,000		Stearns	habitat core for wet prairie, woodland, riparian	wet-mesic prairie reconstruction to add to existing habitat core	10		State		Engaged in landowner negotiations
1.9	Liberty Glen Park	45° 32' 16.0" N	94° 08' 28.9" W	\$ 88,000		Sherburne	part of large habitat complex in river valley	floodplain wetland enhancement; pollinator patches in adjacent Talahi Woods (following OHF)	44		Municipality		Engaged in landowner negotiations
1.10	Dakota Trail	44° 55' 09.9" N	93° 42' 55.7" W	\$ 60,000		Hennepin	recent 3RPD acquisition; adjacent to current trail site	restore old field to prairie	30		Park District		Engaged in landowner negotiations
1.11	Mississippi River Bluff	45° 13' 28.2" N	93° 28' 10.0" W	\$ 60,000		Hennepin	two sites along river bluff; future trail site	restore old field to prairie	30		Park District		Engaged in landowner negotiations
1.12	Inspiration Easement	45° 00' 45.2" N	92° 47' 26.0" W	\$ 40,000		Washington	restored prairie in river corridor	interseeding prairie	20		Municipal Easement		Engaged in landowner negotiations
1.13	Hidden Falls/Crosby Farm/Meekeer Dam	44° 54' 17.1" N	93° 11' 26.5" W	\$ 51,000		Ramsey	forest, woodland, savanna, prairie, shoreline, wetland mosaic in river corridor	interseeding; woodland; turf conversion; pollinator turf	20		Municipality		Engaged in landowner negotiations
1.14	St. Louis Park: Oak Hill / Louisiana Oaks	44° 56' 36.4" N	93° 22' 33.0" W	\$ 20,000		Hennepin	high visitation site, woodland and edge habitat	woodland opening and pollinator planting	8		Municipality		Engaged in landowner negotiations
1.15	Maplewood City Hall	45° 00' 13.3" N	93° 01' 15.4" W	\$ 25,000		Ramsey	high visitation site with mosaic of wetland, shoreline, turf, prairie, savanna	pollinator lawn, prairie, wetland, pollinator woodland patches	5		Municipality		Engaged in landowner negotiations
1.16	Clear Lake Twsp Park	45° 24' 21.0" N	93° 59' 46.6" W	\$ 9,000		Sherburne	high prairie and savanna potential site, in river corridor	butterfly garden; plugs	2		Municipality		Engaged in landowner negotiations
1.17	Woodbury Basins	44° 55' 08.0" N	92° 56' 12.2" W	\$ 106,000		Washington	highly visible sites in development cores with corridor habitat	two highly visible stormwater basins incl City Hall	34		Watershed District		Engaged in landowner negotiations
1.18	State Highway ROW	45° 19' 02.0" N	93° 39' 59.7" W	\$ 50,000		Stearns, Sherburne, Anoka	linear corridor habitat	turf conversion, pollinator lawn	10		MnDOT		Engaged in landowner negotiations
1.19	Clearview Elementary School Forest	45° 26' 16.3" N	94° 00' 53.5" W	\$ 30,000		Sherburne	high quality prairie remnant stressed by red cedar encroachment	Red cedar removal to release prairie remnant	10		ISD		Pollinator gardens underway with private funds
1.20	Crow Lake Twsp BSWR RIM Easement	45° 28' 36.2" N	95° 01' 23.7" W	\$ 1,500		Stearns	59 ac grassland, wetland mosaic in ag landscape	Intensive pollinator seeding	1		Protected Private		Engaged in landowner negotiations

NOTES: Activity 2 Monitoring will occur on these same sites but is a separate cost.

Attachment D. Additional Work Plan Information for Restoration

Great River Greening statement.

1. All restoration activities completed with these funds will occur on land permanently protected by a conservation easement or public ownership.
2. Restoration plans include target community, timelines, methods, budgets and long term maintenance. These plans are filed electronically by unique project numbers. 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.
3. 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.
4. We contact the Conservation Corps of Minnesota once the grant is secured to seek their interest for any restoration activities.
5. 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.



GREAT RIVER GREENING

RESTORING LAND, WATER AND WONDER

Project Manager Qualifications

Wiley Buck (M.S. Wildlife Conservation, University of Minnesota) has over 20 years of experience leading restoration projects, coordinating partnerships, and overseeing Outdoor Heritage Fund and Environmental and Natural Resources Trust Fund grants as Program Manager at Great River Greening. Wiley manages several research and monitoring projects including oak ecotype growth and survival, the effects of conservation grazing on vegetation, and pollinator surveys. In addition, Wiley manages the Anoka Sand Plain Partnership and serves as Greening's representative for the Metro Conservation Corridors Partnership. Wiley's restoration expertise builds upon prior experience with McHenry County Conservation District, The Nature Conservancy, Chicago Wilderness, and Minnesota DNR's Scientific and Natural Areas Program.

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, Greening has engaged 44,000 volunteers (12,000 of them youth) in hands-on education and stewardship activities, helping restore over 10,000 acres of habitat in 400 communities across Minnesota. 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, 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 field activities and team-building, youth learn about the role of technology and science in enjoying and improving our environment, build skills in restoration activities, and explore environmental science and technology careers. Through community education and engagement, Greening is restoring natural resources, while building environmental leaders and stewards of tomorrow.