



## Environment and Natural Resources Trust Fund

### M.L. 2020 Approved Work Plan

#### General Information

**ID Number:** 2020-050

**Staff Lead:** Corrie Layfield

**Date this document submitted to LCCMR:** August 13, 2021

**Project Title:** Pollinator Central: Habitat Improvement with Citizen Monitoring

**Project Budget:** \$750,000

#### Project Manager Information

**Name:** Rebecca Tucker

**Organization:** Great River Greening

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#### Project Reporting

**Date Work Plan Approved by LCCMR:** August 13, 2021

**Reporting Schedule:** February 1 / August 1 of each year.

**Project Completion:** June 30, 2025

**Final Report Due Date:** August 14, 2025

#### Legal Information

**Legal Citation:** M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 08a

**Appropriation Language:** \$750,000 the second year is from the trust fund to the commissioner of natural resources for an agreement with Great River Greening to restore and enhance approximately 400 acres of pollinator habitat on traditional and nontraditional sites such as roadsides and turf grass from Hastings to St. Cloud to benefit pollinators and build knowledge by engaging approximately 100 citizens in monitoring the impact of habitat improvements. This appropriation is available until June 30, 2025, by which time the project must be completed and final products delivered.

**Appropriation End Date:** June 30, 2025



## Narrative

**Project Summary:** Restore / enhance 406 acres of pollinator habitat on 17 traditional and nontraditional sites, from Hastings to St. Cloud, to benefit pollinators and build knowledge of the impacts through citizen monitoring.

**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.

## 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

## Activities and Milestones

### Activity 1: Pollinator Habitat Restoration and Enhancement

**Activity Budget:** \$628,000

**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
Site selection and management plan completion for 17 sites.	June 30, 2022
Restoration and enhancement completion on 17 sites for a total of 406 acres.	June 30, 2024

### Activity 2: Citizen Science Pollinator Monitoring

**Activity Budget:** \$122,000

**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 13 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
Pre-restoration baseline surveys for 17 sites.	June 30, 2022

Site specific monitoring plan - 13 (citizen surveys), 3 (photographic surveys), 1 (bumblebee capture surveys).	June 30, 2022
Data collection for all surveys complete, final report on initial findings on all 17 sites.	June 30, 2024

## Dissemination

**Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.**

Great River Greening will coordinate multiple volunteer events and widely distribute digital media to showcase individual projects and educate the community on the specific restoration and enhancement work being done. This will include e-news letters, social media, and online articles written with partners on their websites, describing the activities as well as the benefits these activities have to the natural environment and the surrounding communities.

We will also document the method and results of the pollinator insect monitoring on these restoration sites. The collected data will be given to the site partners individually and collectively, as well as disseminated in the form of written summaries and presentations and talks to the site owners and general conservation community. This will allow other restoration practitioners as well as the general public to use the knowledge gained on successful pollinator habitat improvement techniques on projects of their own in the future.

The Environmental and Natural Resource Trust Fund will be acknowledged in all dissemination, as well as with on site signage as required by the associated guidelines.

## 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
Upland and Shoreline Restoration in Greater Metropolitan Area	M.L. 2014, Chp. 226, Sec. 2, Subd. 06g	\$300,000
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, Wetland, and Shoreline Restoration in Greater Metropolitan Area	M.L. 2016, Chp. 186, Sec. 2, Subd. 08g	\$509,000
Community Stewardship to Restore Urban Natural Resources - Phase Ten	M.L. 2017, Chp. 96, Sec. 2, Subd. 08i	\$524,000

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Ecologist		Oversees Project Management			17%	0.93		\$75,000
Field Technician		Conducts on-site work to support project deliverables			32%	0.27		\$10,000
Volunteer Outreach Mgr		Manages all tasks related to volunteer acquisition, event development and event execution			17%	0.39		\$15,000
Grant Administrator		Tracks grant and project budget compliance, develops status reports and amendments, processes reimbursement requests			25%	0.18		\$12,000
							<b>Sub Total</b>	<b>\$112,000</b>
<b>Contracts and Services</b>								
U of M Bee Lab	Sub award	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	Sub award	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.				1.35		\$405,600

							<b>Sub Total</b>	<b>\$485,600</b>
<b>Equipment, Tools, and Supplies</b>								
	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					\$134,400
	Tools and Supplies	Sampling materials	Supplies required to support activity 2 monitoring					\$3,000
							<b>Sub Total</b>	<b>\$137,400</b>
<b>Capital Expenditures</b>								
							<b>Sub Total</b>	<b>-</b>
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	<b>-</b>
<b>Travel In Minnesota</b>								
	Miles/ Meals/ Lodging	Activity 1 Truck and POV mileage; occasional overnight lodging and LCCMR allowable expenses for field work	Support site visits as to accomplish deliverables					\$5,000
	Miles/ Meals/ Lodging	Activity 2 Monitoring Related Travel	Support site visits as to accomplish deliverables					\$1,000
							<b>Sub Total</b>	<b>\$6,000</b>
<b>Travel Outside Minnesota</b>								
							<b>Sub Total</b>	<b>-</b>
<b>Printing and Publication</b>								
	Printing	Activity 2 Printing	Promotional material for volunteer acquisition, signage for event site instructions and logistics					\$2,000



							<b>Sub Total</b>	<b>\$2,000</b>
<b>Other Expenses</b>								
		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
							<b>Sub Total</b>	<b>\$7,000</b>
							<b>Grand Total</b>	<b>\$750,000</b>

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
<b>State</b>				
			<b>State Sub Total</b>	-
<b>Non-State</b>				
In-Kind	Landowner direct contribution.	R/E activities e.g. site prep, seeding, invasive control, hauling	Pending	\$35,000
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	Secured	\$85,000
			<b>Non State Sub Total</b>	<b>\$210,000</b>
			<b>Funds Total</b>	<b>\$210,000</b>

## 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	BWSR RIM Easement	Has not begun
Dakota Trail	Hennepin	recent 3RPD acquisition; adjacent to current trail site	Restoration	0	-	-	Public		No longer being considered
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	0	-	-	Public		No longer being considered
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	0	-	-	Public		No longer being considered
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
<b>Totals</b>				<b>406</b>	<b>0</b>	<b>\$628,000</b>			

## 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: [a43fd339-f7b.pdf](#)

#### *Board Resolution or Letter*

Title	File
3G. GRG Board Letter of Authorization Final	<a href="#">e0566f70-bdb.pdf</a>

### Optional Attachments

#### *Support Letter or Other*

Title	File
2021-07-06_ENRTF Background Check Certification Form FINAL_GreatRiverGreening	<a href="#">9b077349-8da.pdf</a>

## Difference between Proposal and Work Plan

### *Describe changes from Proposal to Work Plan Stage*

The University of Minnesota and Xerces Society budgets were updated to "Sub Awards". The date of the allocation changed to June 2024 (it may have been entered as 2025 when this was a ML2022 proposal), and all associated milestones for the Activity 1 and 2 accomplishments adjusted accordingly. The easement holder for the Crow Lake Twmsp BWSR RIM easement was entered. The reporting schedule was requested to be Feb 1 / Aug 1. Three projects were removed that are no longer proceeding through this grant funding, and all associated acreage and budgets were updated accordingly. The "Travel in Minnesota" budget was split between Activity 1 and 2 for clarity (total did not change). Funds were added to the Printing budget, and it was clarified that it is Activity 2, the Activity 2 budget total was then updated.

(RCT, July 21, 2021) - Attached the completed ENRTF Background Check Certification Form to 7. Attachments, and returned the Timeline end date back to 2025 on 4. Narrative.

## Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

**Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?**

N/A

**Do you agree travel expenses must follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?**

Yes, I agree to the Commissioner's Plan.

**Does your project have potential for royalties, copyrights, patents, or sale of products and assets?**

No

**Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?**

N/A

**Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?**

N/A

**Does your project include original, hypothesis-driven research?**

No

**Does the organization have a fiscal agent for this project?**

No



# Pollinator Central: Habitat and Monitoring



