

**Environment and Natural Resources Trust Fund
2018 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 102-C

Pollinator Ambassadors for Urban Gardens

Category: C. Environmental Education

Total Project Budget: \$ 421,431

Proposed Project Time Period for the Funding Requested: 3 years, July 2018 to June 2021

Summary:

The Pollinator Ambassadors for Urban Gardens project will enhance outreach capacity for pollinator education by creating an outreach toolkit and training educators and youth for engagement in native pollinator education.

Name: Elaine Evans

Sponsoring Organization: U of MN

Address: 219 Hodson Hall, 1980 Folwell Ave
St Paul MN 55108

Telephone Number: (651) 644-1227

Email evan0155@umn.edu

Web Address www.beelab.umn.edu

Location

Region: Statewide

County Name: Statewide

City / Township:

Alternate Text for Visual:

Native pollinator experts will create an outreach kit available throughout MN and will train 3 educators to train 30 pollinator ambassadors who will reach ~15,000 people at outreach events.

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



PROJECT TITLE: Pollinator Ambassadors for Urban Gardens

I. PROJECT STATEMENT

The Pollinator Ambassadors for Urban Gardens project will enhance outreach capacity for pollinator education by **training educators and youth who will then be engaged in native pollinator education**. In addition, the project will provide pollinator education and habitat improvement tools to greater Minnesota with creation of a **pollinator education toolkit** including a pollinator habitat assessment guide for yards and gardens.

Why? Native pollinators are important for crop production and ecosystem health. Declines have led to increased awareness with 87% of Minnesotans concerned about pollinator decline (MEP poll, 2017). **Public education is in higher demand than can be met by pollinator educators** like the UMN Bee Squad, Bee Atlas, and Monarch Lab, and Pollinate Minnesota with more than 500 requests each year. Many pollinator gardens are in urban areas but there is little documentation of pollinator use or support for endangered or rare pollinators.

Goals.

- 1) Enhance native pollinator outreach capacity by training pollinator educators, engaging urban youth, and providing a pollinator outreach kit that will be distributed through greater Minnesota.
- 2) Increase knowledge of pollinators, particularly rare and endangered pollinators, in urban pollinator gardens.

How? The Pollinator Ambassador program extends the audience of current pollinator education programs by engaging youth as educators to **reach different audiences than adult educators** and by **focusing on native pollinators**. Experts in native pollinator education and monitoring (UMN Bee Squad, UMN Monarch Lab) will work with youth educators (UMN Monarch Lab, UMN Extension, Pollinate Minnesota) to:

- 1) Train Pollinator Ambassador instructors and youth to engage in native pollinator education.
- 2) Assess value of urban gardens to pollinators.
- 3) Provide tools for distance pollinator education.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Train Pollinator Ambassador instructors and youth to engage in education Budget: \$188,357

Instructors will be trained by experts in native pollinator biology. They will in turn train groups of youth (ages 15-18) in 3 urban centers in pollinator education using Driven to Discover Citizen Science curriculum (Pollinators and Monarchs). Groups will be based in Minneapolis, Saint Paul, and Rochester due to existing connections between youth groups and Extension Educators in these locations. Youth Pollinator Ambassadors will fulfill requests for public presentations. This project expands on a program begun in 2016 by the UMN Bee Squad, training underserved youth in honey bee education.

Outcome	Completion Date
1. Experts in native pollinator biology and conservation will train Pollinator Ambassador instructors as well as other pollinator educators lacking native pollinator expertise, such as educators at the UMN Landscape Arboretum’s Pollinator Discovery Center and the Bell Museum and Planetarium. Pollinator Ambassador instructors will train ~30 youth (~10 in each of 3 urban centers) to prepare them for public native pollinator education.	9/01/2020
2. Train youth in pollinator outreach programming. Pollinator Ambassadors will fulfill requests for public presentations at schools, festivals, parks, and other public events reaching ~15,000 people over three years.	9/01/2020

Activity 2: Assess value of urban pollinator gardens to native pollinators Budget: \$ 182,034

Pollinator Ambassadors will apply classroom instruction in pollinator biology in the field and gain experience in field biology techniques while gathering information on pollinator use of urban pollinator gardens and effects of



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resource enhancement for rare and endangered bees and butterflies. Data will be analyzed to determine support of pollinators by urban gardens and shared with ongoing databases of Minnesota bees.

Outcome	Completion Date
1. Pollinator Ambassadors will survey in ~12 urban pollinator gardens using standard bee survey protocols and protocols from the Monarch Larva Monitoring Project.	6/31/2021
2. Pollinator Ambassadors will monitor pollinator gardens for rare and endangered bees and butterflies through additions of flowers on which specialists depend.	6/31/2021

Activity 3: Provide tools for distance pollinator education Budget: \$51,040

A pollinator habitat assessment guide focused on home, school, and community gardens will be created and made available to the public, including schools, to enhance effectiveness of gardens as pollinator habitat. A pollinator outreach toolkit including table-top poster displays, an interactive quiz, and materials for citizen science projects will be developed for use by organizations such as 4H groups, nature centers, and schools unable to bring in pollinator experts to present information.

Outcome	Completion Date
1. Garden pollinator habitat assessment guide, based on the successful model developed by the Xerces Society for farms and natural areas, will be developed by the Xerces Society in cooperation with the UMN Bee Lab.	6/31/2019
2. Create and promote pollinator outreach kit, as described above. Distribute ~200 kits to groups in greater Minnesota reaching ~100,000 people.	6/31/2021

III. PROJECT STRATEGY

Dr. Elaine Evans, Asst. Extension Prof., UMN, will direct the project, provide expertise on native bees, develop survey protocols, analyze monitoring data, and submit project reports. **Dr. Rebecca Masterman**, Asst. Extension Prof. UMN and **Ana Heck**, UMN Bee Squad Project Coordinator, will advise on project design and pollinator outreach kit content. **Erin Rupp**, Exec. Dir. Pollinate Minnesota, will develop connections with youth groups in St Paul and Minneapolis and provide youth education. **Katie-Lyn Bunney** and **Sarah Weaver** of the UMN Monarch Lab will provide expertise on monarch butterflies and youth education. **Patrick Jirik**, UMN Youth Development Extension Educator, and **Andrea Lorek Strauss**, UMN Extension Educator, will advise on connections with youth groups in southeast MN and project design. A yard and garden pollinator habitat assessment guide will be developed by staff at the Xerces Society, including **Sarah Foltz Jordan**, in cooperation with the UMN Bee Lab.

B. Project Impact and Long-Term Strategy

The Pollinator Ambassadors for Urban Gardens program will 1) increase pollinator education reach by training youth, 2) increase knowledge of pollinators in urban pollinator gardens, and 3) create widely available tools for pollinator outreach. Engaging youth in cross-age teaching and citizen science can benefit youth development. The long-term strategy is to develop a replicable program that could expand to other cities and include an option for academic credit for youth participants. The program will be scalable to different sized communities with the long-term goal of having Pollinator Ambassadors in every city in Minnesota.

C. Timeline Requirements

The Pollinator Ambassadors for Urban Gardens project will take three years. A portion of the first year will be used to establish monitoring sites, coordinate arrangement with youth organizations, train Pollinator Ambassador Instructors, and prepare pollinator outreach kits. Youth leadership training will be run for two summers, providing an opportunity for advanced learning for returning Pollinator Ambassadors. The intervening winter and spring will be used to finalize data, review progress, and make any relevant adaptations to programs for the following summer. We will use a final winter and spring to finalize results of citizen science monitoring.

2018 Detailed Project Budget

Project Title: Pollinator Ambassadors for Urban Gardens

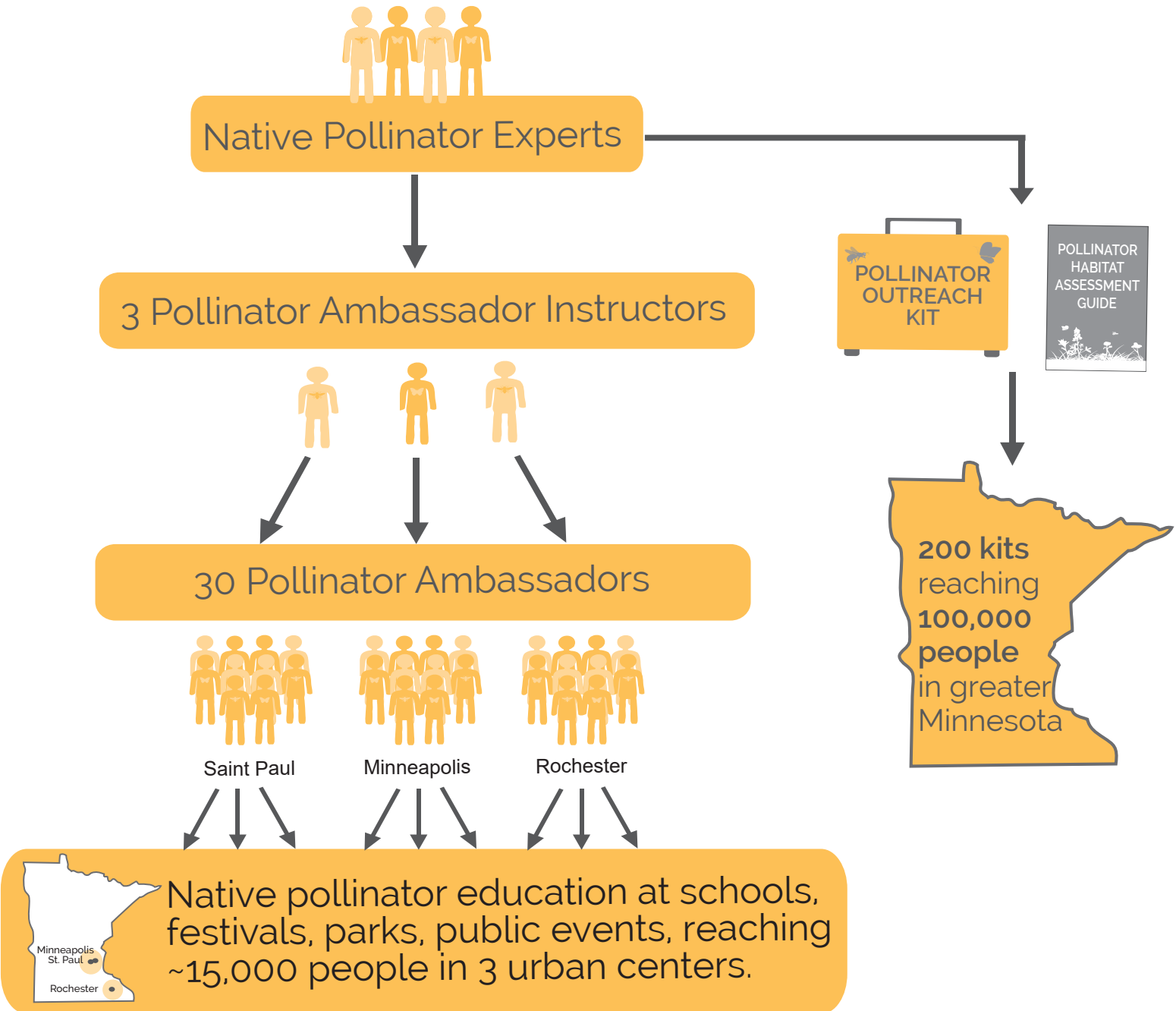
IV. TOTAL ENRTF REQUEST BUDGET: 3 years

BUDGET ITEM	AMOUNT
Personnel:	
Elaine Evans, Project Director, 20% FTE (70% salary, 30% benefits) for 3 years, provide expertise in native bee biology, oversee field data collection for rare and endangered pollinators, oversee and provide content for pollinator outreach kits and habitat assesment guides, analyze data from monitoring, write reports	\$ 50,082
1 Pollinator Ambassador Project Manager for 75% FTE (80% salary, 20% benefits) for 3 years to coordinate program, evaluate program, manage data from citizen science monitoring	\$ 134,580
Sarah Weaver, Pollinator Ambassador Instructor, 15% FTE (75% salary, 25% benefits) for 3 years to provide expertise in butterfly conservation, train with other pollinator experts, instruction of Pollinator Ambassadors	\$ 33,568
Katie-Lyn Bunney, Pollinator Ambassador Instructors, 15% FTE (75% salary, 25% benefits) for 3 years to provide expertise in butterfly conservation, train with other pollinator experts, instruction of Pollinator Ambassadors	\$ 23,172
1 Communication Specialist for 10% FTE (80% salary, 20% benefits) for 3 years to promote program, design pollinator outreach kits	\$ 16,431
30 Pollinator Ambassadors, 10% FTE (93% salary, 7% benefits) for 3 years for training time with Pollinator Ambassador Instructors, conducting pollinator surveys, and outreach events	\$ 111,146
Professional/Technical/Service Contracts:	
Erin Rupp, Pollinate Minnesota, Pollinator Ambassador Instructor, (10 days x 8 hrs x \$120/hr x 2 yrs) + (5 days x 8 hrs x \$60/hr x 1 yr) for 3 years to provide expertise in youth education, training with pollinator experts, instruction of Pollinator Ambassadors	\$ 21,600
1 Regional Manager - 10% FTE 2 yrs June - Aug to coordinate local program needs in SE MN	\$ 10,000
Xerces Society - produce a habitat assessment guide for 1 year	\$ 5,000
Equipment/Tools/Supplies:	
Craft and office materials (including posterboards, markers, etc.) for Pollinator Ambassadors to design and create outreach displays	\$ 500
Materials for citizen science monitoring including 6 sweep nets @ \$30 each, misc. insect curation supplies, 2,000 pins and labels \$200, 3 insect drawers and trays \$400, native plant materials for resource specialists 60@\$3 each, Monarch Larva Monitoring Protocol kits 30 @ \$35 each	\$ 2,000
Travel:	
Travel for Pollinator Ambassadors to garden sites from cooperating organizations. Vehicle rental for 20 visits to field sites	\$ 4,500
Travel for Pollinator Ambassador Instructors to work with groups in SE MN. ~180 miles round trip for 40 visits @\$0.5325 per mile	\$ 3,852
Additional Budget Items:	
Printing costs for habitat assessment guides and Pollinator Ambassador outreach materials	\$ 3,000
Postage costs for Pollinator Ambassador outreach kits	\$ 2,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 421,431

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ To Be Applied To Project During Project Period	\$ -	NA
Other State \$ To Be Applied To Project During Project Period:	\$ -	NA
In-kind Services To Be Applied To Project During Project Period:	\$ -	NA
Past and Current ENRTF Appropriation:	\$ -	NA
Other Funding History:	\$ -	NA

POLLINATOR AMBASSADORS for Urban Gardens



Project manager qualifications:

Dr. Elaine Evans, Assistant Extension Professor UMN, is Co-PI for the Minnesota Bee Atlas, an ENRTF funded project engaging citizens in documenting the distribution and phenology of wild Minnesota bees and is the founder of the Minnesota Bumble Bee Survey. Her current duties focus on expanding pollinator education in Minnesota. Dr. Evans' role for Pollinator Ambassadors in Urban Gardens would be to direct the project, submit project reports, provide expertise in native bee biology, analyze data for pollinator collections, and advise on content for pollinator outreach kits.

Dr. Rebecca Masterman is an Assistant Extension Professor UMN and is Program Director for the UMN Bee Squad where she and Ana Heck initiated the Pollinator Ambassadors program for honey bee education. She will advise on development of Pollinator Ambassadors program and content for pollinator toolkits.

Ana Heck is the UMN Bee Squad Project Coordinator. She has coordinated the UMN Bee Squad Pollinator Ambassadors program, which has focused on honey bees, and will advise on development and management of the Pollinator Ambassadors program.

Erin Rupp is the Executive Director of Pollinate Minnesota, will develop connections with youth group coordinators to assemble the Pollinator Ambassadors, provide youth education expertise, and serve as a Pollinator Ambassador Instructor.

Katie-Lyn Bunney, Program Coordinator for Monarchs in the Classroom, and **Sarah Weaver**, Program Coordinator for Citizen Science & Schoolyard Gardens, will provide expertise and instruction on monarch butterflies, provide youth education expertise, and serve as a Pollinator Ambassador Instructor.

Andrea Locke Strauss, Extension Educator in Rochester MN, specialist in environmental education program design and development, and **Patrick Jirik**, Youth Development Extension Educator in Rochester MN, will advise on program development and develop connections with youth groups in Rochester MN.

Organization description:

The project is a collaboration of youth educators and pollinator biologists managed by the **UMN Bee Squad** program housed in the University of Minnesota Entomology and Extension programs. Pollinator biology expertise will be provided by members of the internationally recognized **UMN Bee Lab** and **UMN Monarch Lab**. Youth development and education experts from the **UMN Monarch Lab**, **UMN Extension**, and **Pollinate Minnesota** will develop effective programming for youth. A habitat assessment guide for pollinators in yards and gardens will be developed by staff at the **Xerces Society for Insect Conservation** in consultation with the UMN Bee Lab. Data and specimens from monitoring efforts will be managed by the UMN Bee Lab. We will coordinate efforts and share data with the Monarch Larva Monitoring Project, the MN Bumble Bee Survey, and the LCCMR-funded MN Bee Atlas.