



Environment and Natural Resources Trust Fund (ENRTF) M.L. 2018 ENRTF Work Plan (Main Document)

Today's Date: February 16, 2018

Date of Next Status Update Report: April 2019

Date of Work Plan Approval: 06/05/2018

Project Completion Date: June 30, 2020

Does this submission include an amendment request? ___

PROJECT TITLE: Pollinator Ambassadors Program for Gardens

Project Manager: Elaine Evans

Organization: Regents of the University of Minnesota

College/Department/Division: Entomology/ Extension

Mailing Address: 219 Hodson Hall, 1980 Folwell Ave

City/State/Zip Code: St Paul/MN/55108

Telephone Number: 651-644-1227

Email Address: evan0155@umn.edu

Web Address: www.beelab.umn.edu

Location: Statewide

Total Project Budget: \$250,000

Amount Spent: \$0

Balance: \$250,000

Legal Citation: M.L. 2018, Chp. 214, Art. 4, Sec. 02, Subd. 05f

Appropriation Language: \$250,000 the second year is from the trust fund to the Board of Regents of the University of Minnesota to increase knowledge of pollinators in gardens and yards and improve pollinator habitat by expanding outreach, training, and tools for Minnesota communities as part of the Pollinator Ambassadors program. This appropriation is available until June 30, 2021, by which time the project must be completed and final products delivered.

I. PROJECT STATEMENT: The Pollinator Ambassadors for Gardens project will enhance outreach capacity for pollinator education by **training educators and youth who will then be engaged in native pollinator education and monitoring**. 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 have been created to support pollinator conservation but there is little documentation of pollinator use or support for endangered or rare pollinators.

Goals and actions

Enhance native pollinator outreach capacity by:

- 1) training pollinator educators in native pollinator biology and conservation
- 2) engaging youth as pollinator educators to reach new audiences in underserved communities
- 3) providing a pollinator outreach kit to greater Minnesota nature centers, 4-H groups, and others.

Increase knowledge of pollinators by:

- 1) monitoring pollinators in gardens through youth engagement in citizen science
- 2) assess value of gardens to rare and endangered by enhancements with plants on which they depend

II. OVERALL PROJECT STATUS UPDATES:

First Update March 31, 2019

Second Update September 30, 2019

Third Update March 31, 2020

Final Update June 30, 2020

III. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Train Pollinator Ambassador Instructors and youth to engage in education and pollinator monitoring

ENRTF BUDGET: \$221,128

Description: Instructors and other pollinator educators will be trained by experts in native pollinator biology. They will in turn train groups of youth (ages 15-17) 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. This project expands on a program begun in 2016 by the UMN Bee Squad, training underserved youth in honey bee education. Pollinator Ambassador youth will fulfill requests for public presentations. We will track the number of people attending presentations by Pollinator Ambassador youth educators. Pollinator Ambassador youth 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 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 pollinators.

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.	6/30/2019
2. Pollinator Ambassador instructors will train ~30 youth (~10 in each of 3 urban centers) to prepare them for public native pollinator education.	9/30/2019
3. Pollinator Ambassador youth will fulfill requests for public presentations at schools, festivals, parks, and other public events reaching ~5,000 people.	6/30/2020
4. Pollinator Ambassador youth will survey gardens using standard bee survey protocols and protocols from the Monarch Larva Monitoring Project and monitor for rare and endangered bees and butterflies through additions of flowers on which specialists depend. Results will be summarized in a report on garden use by pollinators which will contribute to ongoing databases of pollinators.	6/30/2020

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ACTIVITY 2: Provide tools for distance pollinator education

ENRTF BUDGET: \$28,872

Description: 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. The habitat assessment guide and pollinator outreach toolkit will increase the ability of Minnesotans to provide high quality to pollinators by assessing their gardens and following suggestions for improvements. A pollinator outreach toolkit including table-top poster displays, an interactive quiz, and materials for citizen science projects will be developed for use by and distributed to organizations such as 4H groups, nature centers, and schools unable to bring in pollinator experts to present information. The pollinator outreach toolkit will enable organizations located a long distance from locations with pollinator experts to provide the public with high quality, engaging, pollinator education.

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.	6/30/2019
2. Create and promote pollinator outreach kit, as described above. Distribute ~200 kits to groups in greater Minnesota reaching ~10,000 people.	6/30/2020

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IV. DISSEMINATION:

Description: After receiving pollinator education training, Pollinator Ambassador youth will present pollinator education activities to organizations such as schools, nature centers, 4-H groups, as well as large public outreach events such as the Pollinator Party and Monarch Festival. Data collected by Pollinator Ambassador youth on use of pollinator gardens by pollinators will be shared with the Minnesota Bee Atlas database as well as incorporated into presentations by Pollinator Ambassadors, and cooperating organizations such as the U of MN Bee Squad and Monarch Lab, and Pollinate Minnesota. In addition, Pollinator Ambassadors instructors will receive broad training in native pollinator biology and conservation which will be incorporated into the educational programming of their host organizations. Pollinator Outreach Kits will be distributed to educational organizations throughout Minnesota. Priority will be given to groups that do not otherwise have access to pollinator outreach resources. Information about the kits, and ordering instructions, will be available at the website for the U of MN Bee Squad, www.beelab.umn.edu/bee-squad

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V. PROJECT BUDGET SUMMARY:

A. Preliminary ENRTF Budget Overview: See attached budget sheet

Explanation of Capital Expenditures Greater Than \$5,000:

Explanation of Use of Classified Staff:

Total Number of Full-time Equivalent (FTE) Directly Funded with this ENRTF Appropriation:

Enter Total Estimated Personnel Hours: 6150	Divide by 2,080 = TOTAL FTE: 3
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Total Number of Full-time Equivalent (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:

Enter Total Estimated Personnel Hours: 800	Divide by 2,080 = TOTAL FTE: 0.38
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B. Other Funds:

SOURCE OF AND USE OF OTHER FUNDS	Amount Proposed	Amount Spent	Status and Timeframe
Other Non-State \$ To Be Applied To Project During Project Period: None			
	\$	\$	
Other State \$ To Be Applied To Project During Project Period: none			
In-kind Services To Be Applied During Project Period: Project coordination and education program development to be provided by UMN Extension	\$ 6,000	\$	

employees Rebecca Masterman, Patrick Jirick, and Andrea Lorek Strauss			
Past and Current ENRTF Appropriation:			
Minnesota	\$	\$	
Other Funding History:			

VI. PROJECT PARTNERS:

A. Partners receiving ENRTF funding

Name	Title	Affiliation	Role
Elaine Evans	Assistant Extension Professor	U of MN Bee Lab	Project Manager
Ana Heck	Project Coordinator	U of MN Bee Squad	Project Lead
Brooke Sommerfeldt	Bee Research Technician	U of MN Bee Squad	Program Coordinator
Sarah Weaver	Program Coordinator for Citizen Science & Schoolyard Gardens	U of MN	Instructor
Katie-Lyn Bunney	Program Coordinator for Monarchs in the Classroom	U of MN	Instructor
Erin Rupp	Director	Pollinate Minnesota	Instructor
Anne Turnham	Communications	U of MN Bee Squad	Communications
Sarah Foltz Jordan	Pollinator Conservation Specialist	The Xerces Society	Create Habitat Guide

B. Partners NOT receiving ENRTF funding

Name	Title	Affiliation	Role
Rebecca Masterman	Assistant Extension Professor and Bee Squad Program Director	U of MN Bee Lab	Assistance with project management
Patrick Jirick	Youth Development Extension Educator	U of MN	Assistance with program coordination in Rochester
Andrea Lorek Straus	Extension Educator	U of MN	Assistance with educational programming

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

There is a higher demand for pollinator education than can be met by current pollinator educators. The Pollinator Ambassadors program will increase pollinator education capacity in Minnesota by training youth Pollinator Educators as pollinator outreach experts and creating pollinator outreach toolkits that will be made available to organizations throughout Minnesota, providing interactive pollinator education from experts. The pollinator outreach toolkit will include a habitat assessment guide for gardens, enabling assessment and improvement of gardens as pollinator habitat. As part of their training, Pollinator Ambassador youth will monitor pollinators in gardens and assess supplementation of gardens with plants preferred by rare and endangered pollinators. Results from monitoring will be summarized and shared with pollinator databases housed at the U of MN and included in education materials. Improving the capacity for pollinator education focused on native pollinators and increasing our understanding of pollinator usage of garden habitats will improve conditions for pollinators.

VIII. REPORTING REQUIREMENTS:

- The project is for 2 years, will begin on 07/01/2018, and end on 06/30/2020.
- Periodic project status update reports will be submitted March/31 and September/30 of each year.
- A final report and associated products will be submitted between June 30 and August 15, 2020.

IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

- A. Budget Spreadsheet
- B. Visual Component or Map
- C. Parcel List Spreadsheet
- D. Acquisition, Easements, and Restoration Requirements
- E. Research Addendum

**Attachment A:
Environment and Natural Resources Trust Fund
M.L. 2018 Budget Spreadsheet**



Project Title: Pollinator Ambassadors Program for Gardens
Legal Citation: M.L. 2018, Chp. 214, Art. 4, Sec. 02, Subd. 05f
Project Manager: Elaine Evans
Organization: U of MN
College/Department/Division: CFANS/Entomology/Extension
M.L. 2018 ENRTF Appropriation: \$250,000
Project Length and Completion Date: 2 years, June 30, 2020
Date of Report: 02/16/2018

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Budget	Amount Spent	Balance
BUDGET ITEM			
Personnel (Wages and Benefits) - Overall	\$198,804	\$0	\$198,804
Elaine Evans, Pollinator Ambassador Project Manager: \$20,609 (80% salary, 20% benefits); 12.5% FTE for 2 years			
Ana Heck, Pollinator Ambassador Project Lead: \$17,299 (80% salary, 20% benefits) for 15% FTE for 2 years			
Brooke Sommerfeldt, Pollinator Ambassador Program Coordinator: \$12,472 (75% salary, 25% benefits) , 20% FTE for 2 years.			
Sarah Weaver, Pollinator Ambassador Instructor: \$28,182, (75% salary, 25% benefits) 25% FTE for 2 years			
Katie-Lyn Bunney, Pollinator Ambassador Instructor: \$25,272 (75% salary, 25% benefits), 19% FTE for 2 years			
Anne Turnham, Communication Specialist: \$16,805 (80% salary, 20% benefits) 15% FTE for 2 years			
36 Pollinator Ambassadors: \$78,165, (93% salary, 7% benefits) 10% FTE for 2 years			
Professional/Technical/Service Contracts - overall	\$30,520	\$0	\$30,520
Erin Rupp, Pollinate Minnesota, Pollinator Ambassador Instructor, (12 days x 8 hrs x \$120/hr) + (5 days x 8 hrs x \$60/hr) (Total estimated amount - \$13,920)			
Xerces Society - produce a habitat assessment guide for 1 year (Total estimated amount - \$5,000)			
Regional coordinator in Rochester MN for 2 years (Total estimated amount - \$10,000)			
Classroom Assistants/Chaperones for Training Seminar 4 people x 2 days x 10 hours x \$20/hr (Total estimated amount - \$1,600)			
Equipment/Tools/Supplies - overall	\$2,553	\$0	\$2,553
Craft and office materials (including posterboards, markers, etc.) for Pollinator Ambassadors to design and create outreach displays (Total estimated amount - \$553)			
Materials for citizen science monitoring: sweep nets, misc. insect curation supplies, pins and labels, insect drawers and trays, native plant materials for resource specialists, Monarch Larva Monitoring Protocol kits (Total estimated amount - \$2,000)			
Printing			

Printing costs for habitat assessment guides, Pollinator Ambassador outreach materials, and Pollinator Outreach Toolkits	\$7,000	\$0	\$7,000
Travel expenses in Minnesota - overall	\$8,913	\$0	\$8,913
Travel for Pollinator Ambassadors youth to garden sites and outreach events. (Total estimated amount - \$4,750)			
Initial training seminar: lodging \$1,400, meals \$1,800 (Total estimated amount - \$3,200)			
Travel for Instructors (Total estimated amount - \$963)			
Other - overall	\$2,210	\$0	\$2,210
Postage costs for Pollinator Ambassador outreach kits (Total estimated amount - \$2,000)			
Background checks- 6 people x \$35 (Total estimated amount - \$210)			
COLUMN TOTAL	\$250,000	\$0	\$250,000