



# Environment and Natural Resources Trust Fund (ENRTF) M.L. 2017LCCMR Work Plan

**Date of Submission:** August 30, 2016

**Date of Next Status Update Report:** October 31, 2017

**Date of Work Plan Approval:**

**Project Completion Date:** June 30, 2020

**Does this submission include an amendment request?** NO

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**PROJECT TITLE:** Continue Expansion of Minnesota Wildflowers Online Botanical Reference

**Project Manager:** Catherine Chayka

**Organization:** Minnesota Wildflowers Information

**Mailing Address:** 1590 Long Lake Road

**City/State/Zip Code:** New Brighton, MN 55112

**Telephone Number:** (651) 399-4064

**Email Address:** info@minnesotawildflowers.info

**Web Address:** <https://www.minnesotawildflowers.info>

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**Location:**

**Plant Survey & Photography:** Selected sites statewide

**Website publishing:** In-house at New Brighton address

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**Total ENRTF Project Budget:**

**ENRTF Appropriation:** \$270,000

**Amount Spent:** \$0

**Balance:** \$0

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**Legal Citation:** M.L. 2017, Chp. xx, Sec. xx, Subd. xx

**Appropriation Language:**

*[To be inserted following the MN Legislative Session in Spring 2017. This will be blank for the initial submission and will be provided to you at a later date.]*

**I. PROJECT TITLE: Continue Expansion of the Minnesota Wildflowers Online Botanical Reference**

**II. PROJECT STATEMENT:**

Apart from a handful of professionals, the average Minnesotan and even most professional natural resource managers are not skilled in plant identification, yet the ability to positively identify plants is crucial in identifying areas that need protection, in recognizing new or existing invasive species, in monitoring restoration projects, in delineating wetlands, in managing invasive species. The Minnesota Wildflowers project fills this need by providing a free, web-based field guide that currently profiles over 1200 plant species with more than 10,000 high quality photos. This 3-year funding commitment will allow the project to complete the work begun with 2014-2017 ENRTF funding, add aquatic plants, and expand the image catalog by a target 400-600 additional species. At the end of this project 85-90% of the 2100+ vascular plant species in Minnesota, as recognized by the Minnesota Department of Natural Resources, will be profiled online or ready to publish.

Quality control is paramount to producing a quality reference. We use only credible botanical sources as well as our extensive personal experience in drafting species accounts. The richness of the resource comes from the high quality technical images associated with each species. Experience has taught us that the only way to reliably obtain the quality images required for identification purposes is to photograph the plants ourselves (donated images rarely meet quality standards, are inadequate to supply a complete suite for a species account, or simply do not exist for many Minnesota plant species). Gathering technical images requires extensive field work throughout the state during the growing season, and intensive publishing through the winter months.

**III. OVERALL PROJECT STATUS UPDATES:**

**Project Status as of October 31, 2017:**

**Project Status as of April 30, 2018:**

**Project Status as of October 31, 2018:**

**Project Status as of April 30, 2019:**

**Project Status as of October 31, 2019:**

**Project Status as of April 30, 2020:**

**Overall Project Outcomes and Results:**

**IV. PROJECT ACTIVITIES AND OUTCOMES:**

**ACTIVITY 1: Field Survey, Digital Photography and Publishing**

**Description:**

Precise, high resolution digital images of all key plant morphological characteristics that are necessary for accurate identification will be collected from locations across the state. Over 99% of images used in the Minnesota Wildflower identification resource are obtained directly in the field by staff through survey, using historical records available from the Herbarium at the Bell Museum of Natural History as a primary source of location information for specific species. Survey sites are selected based on age, habitat quality and site accessibility. Underwater cameras are utilized to photograph aquatic species in their natural habitat as much as possible. When appropriate and permitted, specimens may be collected for further study and photography in vitro. If species are located but not suitable for photography, for reasons such as poor weather or phenology, their locations are documented using GPS for return trips later that season or in subsequent seasons. Most images are reviewed post field season for quality and/or redundancy.

Species identification accounts are drafted addressing all key morphological structures (i.e. flowers, leaves, stems, etc.), using field notes cross-referenced with standard accepted botanical references (e.g. Flora of North America, etc.). County distribution maps are constructed using confirmed personal observations and Herbarium records for point locations, along with the DNR's MNTaxa county level information. Technical terms are rephrased as needed to ensure understanding by users of all experience levels. Cross references are made to related and/or similar species, and a previously published species may be updated to include new information, additional or improved images, and/or a reciprocal link to the new species account. Cataloged field images are again reviewed for completeness, selected and edited as required to clearly show the desired traits, then optimized for web use and uploaded to the remote web site. The final text draft is typically reviewed by a collaborator before publishing and any errors, omissions or ambiguities corrected.

Taxonomy and the statewide vascular plant spreadsheet published by the Minnesota Department of Natural Resources (i.e. MNTaxa) are reviewed annually. Previously published species accounts are updated accordingly when appropriate.

**Summary Budget Information for Activity 1:**

**ENRTF Budget: \$270,000**  
**Amount Spent: \$ 0**  
**Balance: \$0**

<b>Outcome</b>	<b>Completion Date</b>
1. 33,000 miles traveled statewide, 40-50 sites visited/yr, complete image sets obtained for targeted 250-400 plant species - both native and exotic, including aquatics, forbs, trees, shrubs, ferns, grasses, sedges, rushes	June 30, 2020
2. Minimum 450 new plant species pages added to field guide, including aquatics, forbs, trees, shrubs, ferns, grasses, sedges, rushes	June 30, 2020

**Activity 1 Status as of October 31, 2017:**

**Activity 1 Status as of April 30, 2018:**

**Activity 1 Status as of October 31, 2018:**

**Activity 1 Status as of April 30, 2019:**

**Activity 1 Status as of October 31, 2019:**

**Activity 1 Status as of April 30, 2020:**

**Final Report Summary:** A final report will be submitted between June 30 and August 15, 2020.

**V. DISSEMINATION:**

**Description:**

Individual species additions and updates are announced on the web site's home page (<https://www.minnesotawildflowers.info>) as they are made, and announcements of important project updates and discoveries are made to social networking sites and/or the web site's blog. We seek out public outreach opportunities at relevant expositions and conferences, as well as presentations to Master Gardeners, Master Naturalists, and other groups and organizations interested in the wild plants of Minnesota.

**Status as of October 31, 2017:**

Status as of April 30, 2018:

Status as of October 31, 2018:

Status as of April 30, 2019:

Status as of October 31, 2019:

Status as of April 30, 2020:

**Final Report Summary:** A final report will be submitted between June 30 and August 15, 2020.

**VI.PROJECT BUDGET SUMMARY:**

**A. Preliminary ENRTF Budget Overview:**

**\*This section represents an overview of the preliminary budget at the start of the project. It will be reconciled with actual expenditures at the time of the final report.**

<b>Budget Category</b>	<b>\$ Amount</b>	<b>Overview Explanation</b>
Personnel:	\$ 243,925	.75FTE for 3yrs - P. Dziuk .75FTE for 3yrs - K. Chayka (base salary for each \$54205/yr, no benefits)
Professional/Technical/Service Contracts:	\$	N/A
Equipment/Tools/Supplies:	\$ 2,000	safety GPS beacon, wet suit, camping gear, batteries, maps, miscellaneous field and photography supplies, graphics software
Capital Expenditures over \$5,000:	\$	N/A
Fee Title Acquisition:	\$	N/A
Easement Acquisition:	\$	N/A
Professional Services forAcquisition:	\$	N/A
Printing:	\$	N/A
Travel Expenses in MN:	\$ 24,075	Field work mileage (11,000/yr, statewide), parking, permits, lodging for 40-50 nights/yr, food for overnight trips plus 10-15 day trips/yr (the preferred and least expensive lodging option is tent camping at state parks and other public lands)
Other:	\$	NA
<b>TOTAL ENRTF BUDGET:</b>	<b>\$ 270,000</b>	

**Explanation of Use of Classified Staff:** N/A

**Explanation of Capital Expenditures Greater Than \$5,000:** N/A

**Total Number of Full-time Equivalent (FTE) Directly Funded with this ENRTF Appropriation:** 4.5 (1.5 FTE x 3 years)

**Total Number of Full-time Equivalent (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:** N/A

**B. Other Funds:**

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
<b>Non-state</b>			
Public donations (~\$7,000/yr)	\$21,000	\$	Out of state travel, accounting services, taxes, general operating expenses
<b>TOTAL OTHER FUNDS:</b>	<b>\$21,000</b>	<b>\$</b>	

**VII. PROJECT STRATEGY:**

**A. Project Partners:**

**Partners receiving ENRTF funding**

- None

**Partners NOT receiving ENRTF funding**

- Steve Eggers, US Army Corps of Engineers ecologist: additional images
- Jason Husveth, botanist/ecologist: expert peer review and consultation
- The Biota of North America Program (BONAP): national species distribution range maps

**B. Project Impact and Long-term Strategy:**

Of two factors that drive usage (presence on internet over time and volume of content), this project’s greatest contribution is towards the latter. Increases in online usage of just the past two years demonstrates the impact of the online field guide: usage has nearly doubled since 2014, approaching .5M users in 2016. Public donations are sufficient to keep this resource operational on an annual basis when ENRTF funding ends in 2020, at which time field work and publishing will continue on a volunteer basis. Discussions are in progress to turn control over to the University of Minnesota Bell Museum of Natural History should the MWI organization dissolve. Public donations may serve to build a reserve to keep it funded and online should the Bell take control.

**C. Funding History:**

Funding Source and Use of Funds	Funding Timeframe	\$ Amount
ENRTF - field work and publishing	7/1/14 - 6/30/17	\$150,000
From 2007 to 7/1/14 the project was funded by volunteers		

**VIII. REPORTING REQUIREMENTS:**

- The project is for 3 years, will begin on 7/1/17, and end on 6/30/20.
- Periodic project status update reports will be submitted 4/30 and 10/31 of each year.
- A final report and associated products will be submitted between June 30 and August 15, 2020.

**IX. VISUAL COMPONENT or MAP(S):**



X. FEE TITLE ACQUISITION/CONSERVATION EASEMENT/RESTORATION REQUIREMENTS:  
N/A

**Environment and Natural Resources Trust Fund**  
**M.L. 2017 Project Budget**



**Project Title:** Continue Expansion of Minnesota Wildflowers Online Botanical Reference

**Legal Citation:** *Fill in your project's legal citation from the appropriation language - this will occur after the 2017 legislative session*

**Project Manager:** Catherine Chayka

**Organization:** Minnesota Wildflowers Information

**M.L. 2017 ENRTF Appropriation:** \$270,000

**Project Length and Completion Date:** 3 Years, June 30, 2020

**Date of Report:** August 30, 2016

<b>ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET</b>	<b>Activity 1 Budget</b>	<b>Amount Spent</b>	<b>Activity 1 Balance</b>	<b>TOTAL BUDGET</b>	<b>TOTAL BALANCE</b>
<b>BUDGET ITEM</b>	<b><i>Field survey, Photography &amp; Publishing</i></b>				
<b>Personnel (Wages and Benefits)</b>	\$243,925		\$243,925	\$243,925	\$243,925
Catherine Chayka: Project manager, managing editor, field surveyor, photographer: \$121,962.5 (100% salary); 75% FTE for 3 yrs.					
Peter Dziuk: Field Survey Coord., chief photographer, publishing assistant: \$121,962.5 (100% salary); 75% FTE for 3 yrs					
<b>Equipment/Tools/Supplies</b>	\$2,000		\$2,000	\$2,000	\$2,000
Safety GPS beacon					
Wet suit, snorkle					
Photographic supplies, batteries, software					
Camping & miscellaneous field supplies					
<b>Travel expenses in Minnesota</b>	\$24,075		\$24,075	\$24,075	\$24,075
Mileage, throughout MN: ~11000/yr					
Lodging: 40-50 nights/yr					
Food: overnight plus 10-15 day trips/yr					
Parking and permits					
<b>COLUMN TOTAL</b>	<b>\$270,000</b>	<b>\$0</b>	<b>\$270,000</b>	<b>\$270,000</b>	<b>\$270,000</b>

