

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

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**Project Title:**

**ENRTF ID: 126-C**

Dangerous Plant Guides: How to Recognize and React

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**Category:** C. Environmental Education

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**Total Project Budget:** \$ 138,380

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

**Summary:**

There is a growing need to provide outreach materials on dangerous plants to residents who enjoy the outdoors. This project will develop videos, brochures, and posters for statewide distribution.

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**Location**

**Region:** Statewide

**County Name:** Statewide

**City / Township:**

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**Alternate Text for Visual:**

ATV trail cut through infestation of wild parsnip, blisters caused by wild parsnip, map of wild parsnip by county, and washing with soap after contact with poison ivy.

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



## Environment and Natural Resources Trust Fund (ENRTF)

### 2018 Main Proposal

#### Project Title: Dangerous Plant Guides: How to Recognize and React

#### PROJECT TITLE: Dangerous Plant Guides: How to Recognize and React

### I. PROJECT STATEMENT

Toxic plants can be dangerous and result in threats to human health and the enjoyment of the outdoors. Diverse outreach materials will help the public identify toxic plants and reduce the number of dangerous reactions caused by contact or ingestion. Currently, there are minimal available printed materials, videos and limited budgets and there is a growing need to provide outreach materials on toxic plants to residents who enjoy the outdoors. This project partners with Minnesota Poison Control System, the lead organization in this subject area. The project will develop videos, written materials, webpages, and interactive maps to help identify and avoid toxic plants and provide information on what to do when a person makes contact with one of these dangerous species. Many toxic plants grow in Minnesota. These plants are found in natural areas, home gardens, and on both public and private lands. In many cases, these species are also invasive and are detrimental to the diversity and function of healthy ecosystems, causing harm and concern for humans, livestock, and wildlife.

This project will develop a toxic plants compendium that will be available to the public and identifies the species, describes how the plants are toxic, how to safely manage established populations, and what procedures to take if a person comes in contact with these plants. The materials will be translated into Spanish, Hmong, and Somali and the videos will provide voiceover in these languages as well. Materials will be disseminated to Minnesotans through a variety of outlets, including classrooms and nature centers. The Minnesota Poison Control System will distribute the materials to the medical community and Minnesota Agriculture in the Classroom will distribute to classrooms across Minnesota. Populations served include landowners, outdoor enthusiasts, recreational groups, and community/school garden growers throughout the state of Minnesota. These outreach materials will help people who want to enjoy the outdoors without experiencing the problems caused by toxic plants. The list of toxic plants includes the following:

- **\*Wild parsnip** (*Pastinaca sativa*): Wild parsnip is a highly invasive plant that forms large monocultures. Its sap, in the presence of sunlight, can cause burns and blisters to exposed skin.
- **\*Poison hemlock** (*Conium maculatum*): Poison hemlock is acutely toxic to animals and humans when ingested, causing paralysis or death if enough toxin is ingested. Reports of infestations are increasing in Minnesota.
- **\*Grecian foxglove** (*Digitalis lanata*): Grecian foxglove toxicity can trigger fatal arrhythmias, nausea, and vomiting. It is also an invasive plant that displaces native vegetation.
- **Poison ivy** (*Toxicodendron radicans*): Exposure to the toxic compound in poison ivy causes severe blisters, rashes, and swelling on human skin and animals. Inhaling smoke from burning poison ivy can cause serious respiratory problems. Poison ivy is a public health concern along trails, rights-of-way, and many public areas.
- **Woody nightshade** (*Solanum dulcamara*): woody nightshade is a non-native woody vine. Toxicity causes vomiting, convulsions, and slowed blood circulation and breathing.
- **\*Japanese barberry** (*Berberis thunbergii*): Japanese barberry is a popular landscape plant that has been documented naturalizing in wooded areas. Research in Connecticut has shown that dense stands of Japanese barberry have higher black-legged tick (deertick) populations, resulting in public health concerns because black-legged ticks carry the bacteria that cause Lyme and other tick-borne diseases.

\*indicates plant species that are non-native and considered invasive in Minnesota.

### II. PROJECT ACTIVITIES AND OUTCOMES

**Activity 1: Improving public information on toxic plants**

**Budget: \$137,380**



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**2018 Main Proposal**

**Project Title: Dangerous Plant Guides: How to Recognize and React**

An MDA Plant Health Specialist will coordinate the development of the printed materials, website, and video development. The Plant Health Specialist will also analyze documented reports and develop criteria for defining a plant as toxic. The Plant Health Specialist will work with Minnesota Poison Control and other project partners on content development and implementation. Work will be done by MDA; video development and editing will be subcontracted with selection through a competitive process.

<b>Outcome</b>	<b>Completion Date</b>
1. Analyze reports of 6 toxic plant species	12/30/2018
2. Define and develop toxic plants outreach materials	06/30/2019
3. Write video scripts for: wild parsnip, poison hemlock, Grecian foxglove, poison ivy, and woody nightshade	12/30/2019
4. Create ArcGIS online map of toxic plant locations	12/30/2019
5. Develop brochures for 6 toxic plant species, 1 flyer with all the species, and 1 poster with all the species	06/30/2020
6. Record and edit videos	12/30/2020
7. Translate materials and video scripts into Spanish, Hmong, and Somali	12/30/2020
8. Disseminate completed outreach materials	06/30/2021

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

Emilie Justen – Minnesota Department of Agriculture (in-kind): Principal investigator responsible for oversight of the project.

Deborah Anderson – Minnesota Poison Control System (in-kind): Medical content expert, review of all materials and videos.

Monika Chandler – Minnesota Department of Agriculture (in-kind): review of all materials and videos.

David Hanson – Minnesota Department of Transportation (in-kind): review of all materials and videos.

**Project Partners Receiving Funds:**

- Minnesota Department of Agriculture [\$113,380]: To hire Plant Health Specialist for Activity 1
- Video and editing firm TBD [\$25,000]: To develop and edit videos for Activity 3

**Project partners not receiving funds:**

- Deborah Anderson (Minnesota Poison Control System): medical content expert and review of all materials and videos.
- Monika Chandler (MDA): review of all materials and videos.
- David Hanson (MnDOT): review of all materials and videos.

**B. Project Impact and Long-Term Strategy**

Toxic plants result in threats to human health and enjoyment of the outdoors. Outreach materials will help people identify and reduce the number of negative reactions caused by contact or ingestion of toxic plants. This project will help raise awareness of toxic plants in natural areas and home gardens and will provide safe management strategies for these toxic plants. MDA will compile detailed resources on toxic plants and will host the resources at a toxic plants website. The website can be linked to Poison Control, the Minnesota Departments of Health, Transportation, and Natural Resources, community gardens, schools, and through community education. This project builds on partnerships developed through the Elimination of Target Invasive Plants Species Phases 1 and 2 projects.

**C. Timeline Requirements**

The project is for 3 years, will begin on 07/01/2018 and end on 06/30/2021.

## 2018 Detailed Project Budget

**Project Title:** Dangerous Plant Guides: How to Recognize and React

### IV. TOTAL ENRTF REQUEST BUDGET 3 years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>MDA Personnel:</b>	
One 3 year temporary (hired for duration of project) part time (50%) Plant Health Specialist position estimated salary \$22,000 per year plus fringe benefits @ 43% for Activity 1	\$ 94,380
<b>Professional/Technical/Service Contracts:</b>	
Contract for development and editing of videos, video firm TBD. Video firm will subcontracted with selection through a competitive process	\$ 25,000
<b>Equipment/Tools/Supplies:</b>	
Herbarium supplies and display cases	\$ 1,000
<b>Translation:</b>	
Translation of printed materials and video scripts into Spanish, Hmong, and Somali, and audio recording of scripts.	\$ 13,000
<b>Printing:</b>	
Brochures, flyers, and posters	\$ 5,000
<b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>	<b>\$ 138,380</b>

### V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>Other Non-State \$ To Be Applied To Project During Project Period:</b>	N/A	
<b>Other State \$ To Be Applied To Project During Project Period:</b>	N/A	
<b>In-kind Services To Be Applied To Project During Project Period:</b> MDA: Overhead, field equipment, computing/software, GIS and data management, graphics for 2 years	\$ 44,000	Secured
<b>Past and Current ENRTF Appropriation:</b> 2013 Elimination of Target Invasive Plants project M.L. 2013, Chp. 52, Sec. 2, Subd. 06d	\$ 350,000	Spent
<b>Past and Current ENRTF Appropriation:</b> 2017 Elimination of Target Invasive Plants - Phase 2 project M.L. 2016, Chp. 186, Sec. 2, Subd. 06e1 and Subd. 06e2	\$ 750,000	Spent or obligated
<b>Other Funding History:</b>	N/A	

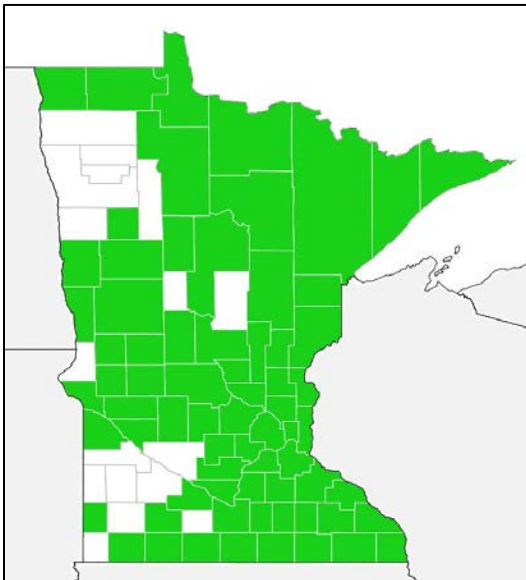
## Dangerous Plant Guides: How to Recognize and React



*ATV trail cut through infestation of wild parsnip.*



*Blisters caused by wild parsnip.*



*Wild parsnip is widely distributed throughout Minnesota. Counties that have documented wild parsnip. EDDMapS. 2017. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <http://www.eddmaps.org/>; last accessed May 15, 2017.*



*Washing with soap and water after contact with toxic plants.*

Emilie Justen has been the Noxious Weed Eradication Coordinator at the Minnesota Department of Agriculture for over three years. She holds a Master's degree in Horticulture and has taught college level courses, worked in the production plant nursery industry, and worked abroad as a Peace Corps Volunteer.

The Minnesota Department of Agriculture's mission is to enhance Minnesotan's quality of life by ensuring the integrity of our food supply, the health of our environment, and the strength of our agricultural economy.