

**Environment and Natural Resources Trust Fund
2012-2013 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 048-C2

Search and Destroy Target Invasive Plant Species

Topic Area: C2. Invasive Species - Terrestrial

Total Project Budget: \$ 512,000

Proposed Project Time Period for the Funding Requested: 3 yrs. July 2013 - June 2016

Other Non-State Funds: \$ 0

Summary:

To prevent environmental and economic damage, we will: 1) Train volunteers and professionals to find target species; 2) Control these species before they spread; and 3) Monitor to prevent re-infestation.

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Sponsoring Organization: Dept. of Agriculture

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Location

Region: Statewide

County Name: Statewide

City / Township:

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



Environment and Natural Resources Trust Fund (ENRTF) 2012-2013 Main Proposal

PROJECT TITLE: Search and destroy target invasive plant species

I. PROJECT STATEMENT

It is cheapest, easiest, and least harmful to find and control small populations of invasive plants before they become widespread and damaging. We propose to detect, survey, control, and monitor target invasive plant species with the goal of protecting forest and grassland (including prairie) habitats. This is a statewide project on public and private lands that will stop target species before they proliferate.

Target Species List: Species include but are not limited to the following. They are listed in order of feasibility to eradicate based upon their abundance and distribution.

1. **Dalmatian toadflax** overtakes grasslands and reduces biodiversity, wildlife habitat, and livestock production. It is beginning to spread in northwestern Minnesota.
2. **Cutleaf teasel** forms dense stands in grasslands and riparian areas reducing species diversity and wildlife habitat. There are scattered infestations in different areas of the state.
3. **Japanese hops** are annual vines that grow so rapidly that they smother other plants. There are two known infestations in southeastern Minnesota.
4. **Oriental bittersweet** is a woody vine that is destroying swaths of forest in Red Wing and Winona by girdling and breaking the trees then covering and shading the remains so that little else grows.
5. **Grecian foxglove** is highly toxic to humans, wildlife, and livestock. It also displaces native plants. As of spring 2012, most infestations are in Washington County.

All of the above species are prohibited noxious and invasive weeds on the Eradicate List (Minnesota Statutes, Section 18.78) providing a legal backing for our efforts. These target species are distributed across a wide range of property lines and land uses making eradication unfeasible without a strategic, collective approach. These species are not common in Minnesota so individual landowners do not have the knowledge and means to identify and control them. A state-led, concerted effort is necessary to control of all reproducing populations and is outlined below.

Prevent and Detect Target Species: The University of Minnesota Extension (U of M) will train professionals and volunteers to identify, report, and prevent the spread of target species using a combination of field-based training sessions, workshops, and a new annual statewide “InvasiveBlitz” (similar to BioBlitz plant and animal survey events but with a focus on removing invasive species).

Survey and Delineate: The Minnesota Department of Agriculture (MDA) will use established survey methods to search areas surrounding known infestations and delineate infestations.

Control Target Species: Conservation Corps Minnesota (CCM) field crews will be contracted for target species control including initial containment and control of extensive Oriental bittersweet infestations in Red Wing and Winona. Crews are located throughout the state and can work across property lines.

Monitor Sites and Follow-up: After initial control of target species at a site, the site will be adopted by volunteers. U of M will train these volunteers in workshops to monitor the sites long-term, collect and enter data, and provide follow-up control such as missed plants or re-sprouting.

If we act now, we can prevent the environmental and economic costs of managing these invasive plants over future decades.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Prevent and Detect Target Species

Budget: \$28,500

U of M will train professionals and volunteers to identify, report, and prevent target species spread.

Outcome	Completion Date
1. 24 Training sessions/workshops throughout state conducted and evaluated	06/10/2016
2. Hold InvasiveBlitz events at 30 locations throughout Minnesota	06/30/2016

Activity 2: Survey and Delineate Target Species Then Coordinate Control Budget: \$205,000

MDA will perform a comprehensive survey of distribution and infestation density. Data will be entered into a national database. MDA will contract and coordinate with CCM for target species control.

Outcome	Completion Date
1. Preliminary survey completed of known infestations	12/15/2014
2. Contract written with CCM for target species control	12/15/2014
3. Data are available on the web in a national database to promote data sharing	06/10/2016

Activity 3: Control Target Species Budget: \$225,000

MDA will contract with CCM for trained and equipped field crews to control target invasive species.

Outcome	Completion Date
1. Initial control of Oriental bittersweet completed	11/13/2015
2. CCM crews controls remaining target species	06/10/2016

Activity 4: Monitor Sites and Follow-up Budget: \$53,500

U of M will train volunteers to monitor sites collect and enter data, and provide follow-up control.

Outcome	Completion Date
1. A planning tool and resource manual will be created and provided to volunteers in print and online	06/30/2014
2. Volunteers are trained in 21 workshops	06/10/2016
3. Volunteers monitor sites, report observations, and control target species	Ongoing after project

III. PROJECT STRATEGY

A. Project Team/Partners

Receiving funds: Angela Gupta with U of M will lead the education and monitoring components. Monika Chandler with MDA will lead survey and delineation and coordination of target species control with CCM. All organizations will provide in-kind equipment, facilities, and GIS/technical support.

Not receiving funds: We will draw from Extension’s existing statewide base of volunteers in the Master Naturalist, Woodland Advisor, MN Women’s Woodland Network, Master Gardener, Tree Care Advisor, Minnesota Phenology Network, and Forest Pest First Detector programs, which together total over 103,000 active, trained volunteers. We will collaborate with DNR and Mn/DOT, other federal and state agencies, counties, municipalities, and private landowners.

B. Timeline Requirements

The project will run for three years from 07/01/2013 to 06/30/2016.

C. Long-Term Strategy and Future Funding Needs

This is the first phase of eradicating target species. Eradication is defined as target species absence for six years after the last seed was produced. Therefore, eradication must be achieved in a long-term effort and the ongoing monitoring and follow-up by volunteers is critical. The second phase involves a continuation of activities, but will not require as substantial of investment for control of existing infestations since maintenance is less labor intensive than initial control. State funds will be leveraged in proposals for federal funding for volunteer training and control of target species.

2012-2013 Detailed Project Budget

IV. TOTAL ENRTF REQUEST BUDGET 3 years

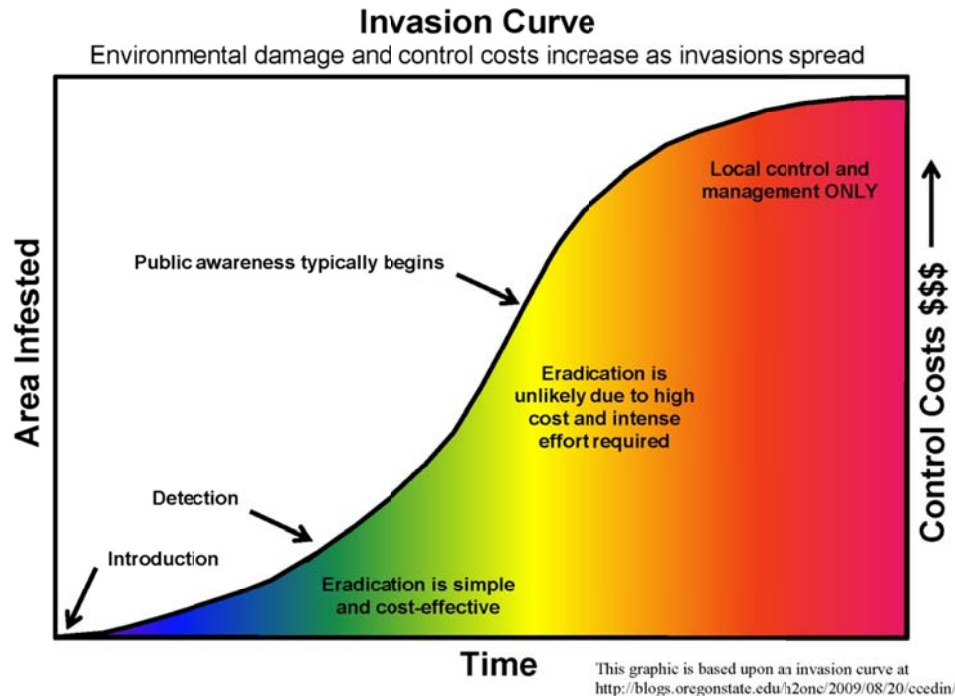
<u>BUDGET ITEM</u>	<u>AMOUNT</u>
MDA Personnel Total	\$ 180,000
One 3 year FTE Research Scientist 1 mean salary \$40,000/yr plus fringe benefits @ 52% for Activity 2 survey and project coordination	\$ 180,000
MDA Contract Total	\$ 225,000
Contract with Conservation Corps Minnesota for initial control of large Oriental bitterweet infestations in Red Wing and Winona (75 acres at \$2,000/acre = \$150,000) and other target invasive species (\$75,000)	\$ 225,000
MDA Equipment/Tools/Supplies Total	\$ 2,000
Equipment: One handheld GPS unit with navigation	\$ 500
Supplies: Includes tags, flags, herbarium supplies, etc. for Activity 2	\$ 1,500
MDA Travel Total	\$ 23,000
Mileage for vehicle rental and fuel to be used for Activity 2 and project coordination	\$ 14,000
Meals and lodging: Approx. 180 days of meals and 45 overnight lodging for Activity 2 survey and project coordination.	\$ 9,000
MDA Total (includes pass-through to Conservation Corps MN)	\$ 430,000
U of M Contract Total	\$ 25,200
Web database development for monitoring (\$25,000) and web hosting (\$200) for Activity	\$ 25,200
U of M Equipment/Tools/Supplies Total	\$ 23,000
Resource manuals (\$4,000); samples, materials, and small tools for workshops (approx. \$200/workshop*45 workshops = \$9,000) and to provide to volunteers (\$10,000)	\$ 23,000
U of M Travel Total	\$ 29,000
Lodging and meals (\$300/workshop) and mileage (\$350/workshop) for U of M instructors for 45 workshops = \$29,250 for at least 2 instructors/workshop	\$ 29,000
Additional Budget Items Total	\$ 4,800
Heavy-duty signs: 50 for the Activity 1 InvasiveBlitz at approx. \$15/sign = \$800 and 200 for Activity 4 at \$20/sign = \$4,000 to raise awareness of target invasive species	\$ 4,800
U of M Total	\$ 82,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 512,000

V. OTHER FUNDS

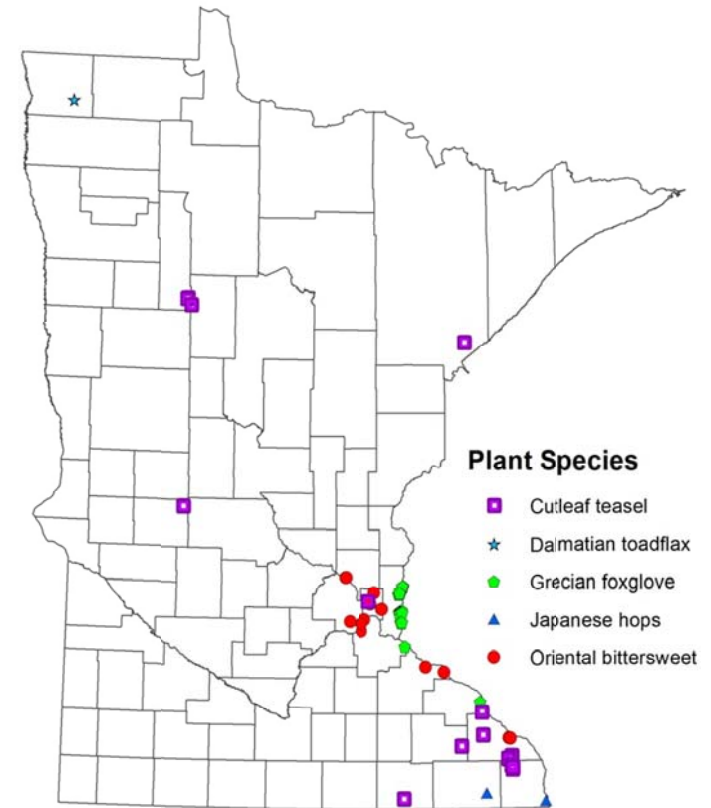
<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period: A proposal was submitted to the USDA Forest Service for Oriental bitterweet detection and management in Minnesota forests	\$ 25,000	Pending
In-kind Services During Project Period: MDA: Field equipment, computing/software, GIS and data management, and project management for 3 years (\$30,000); U of M: Two Extension Educators at 6% time for 3 years and one Extension Educator at 12% time for 3 years (\$50,000); and CCM: Approximately \$4/hr difference between actual cost per member (\$23.50/hr) and billing rate (\$19.50/hr) = \$46,000	\$126,000	Secured
Funding History: U of M Extension received a total of \$162,000 in federal and state grant funding for the award winning MN Forest Pest First Detector volunteer program development and past activities 2008 to present	\$162,000	Spent
TOTAL OTHER FUNDS =	\$313,000	

Search and Destroy Target Invasive Plant Species

To prevent environmental and economic damage, we will: 1) Train volunteers and professionals to find target species; 2) Control these species before they spread; and 3) Monitor to prevent re-infestation. If we do not act now, these species will proliferate and eradication will not be possible.



Target Invasive Plant Species Locations



Partners



Project title: Search and destroy target invasive plant species

Qualifications

Project Manager: Monika Chandler, M.S., Biological Control and Terrestrial Invasive Plant Early Detection Programs Coordinator, Minnesota Department of Agriculture

Monika has worked with invasive plants for over a decade. This includes a LCMR project titled “Assessing the Establishment of *Apthona* spp. Released for Control of Leafy Spurge, *Euphorbia esula* L., in Minnesota” with Luke Skinner, David Ragsdale, and Dharma Sreenivasam. She is currently a project manager for a LCCMR project titled “Emerald Ash Borer Biocontrol Research and Implementation”.

Her responsibilities as a terrestrial invasive plant early detection program coordinator are to:

- Facilitate identification/species determination
- Aid infestation delineation, quantification, and mapping
- Compile suggested practices from literature, weed scientist, and land managers for management recommendations
- Coordinate management efforts with public and private partners
- Communicate about species of concern with land managers in Minnesota and neighboring states.
- Write risk assessments for and present species of concern to the Noxious Weed Advisory Committee for evaluation. This committee makes formal recommendations to the Commissioner of Agriculture about listing and categorizing species as regulated prohibited noxious weeds.

Organization Description

The Minnesota Department of Agriculture’s Plant Protection Division will lead the target species survey, infestation delineation and mapping, and coordinate the control effort with Conservation Corps Minnesota. The Minnesota Department of Agriculture is authorized to eradicate and prevent the spread of harmful or dangerous plants pests in Minnesota by MN Statute 18G.03 subd. 1(e) (2008).