Environment and Natural Resources Trust Fund (ENRTF)
M.L. 2019 ENRTF Work Plan (Main Document)

Today's Date: June 7, 2019

Date of Next Status Update Report: January 31, 2020

Date of Work Plan Approval: June 17, 2019

Project Completion Date: June 30, 2022

Does this submission include an amendment request? No

PROJECT TITLE: Noxious Weed Detection & Eradication

Project Manager: Mark Abrahamson

Organization: Minnesota Department of Agriculture

College/Department/Division: Plant Protection

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Location: Statewide

Total Project Budget: $1,000,000

Amount Spent: $0

Balance: $1,000,000

Legal Citation: M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 6c

Appropriation Language: $1,000,000 the first year is from the trust fund to the commissioner of agriculture to continue to monitor, detect, and eradicate noxious weeds, including Palmer Amaranth, primarily in conservation plantings and to develop and implement methods to prevent infestation and protect prairies, other natural areas, and agricultural crops. Of this amount, $650,000 is for grants to local communities to help combat infestations.

I. PROJECT STATEMENT:

This project will significantly reduce the impact of noxious weeds on Minnesota. We will work to identify, control and remove infestations of noxious weeds that are high priorities for the state and for local governments across Minnesota. We will do this through three lines of work. The first (Activity 1) will be a noxious weed grant program that will allow local governments to propose weed control projects that are a high priority in their jurisdictions. The second (Activity 2) will be weed control efforts directed from the state level towards high priority target weeds such as Palmer amaranth. The third line of work (Activity 3) will be enhancing mobile capability for ISMTrack, a critical tool for tracking weed control efforts and progress. This work will serve citizens across Minnesota with the goal of protecting conservation plantings, prairies, other natural areas, and agricultural crops.

The success of this project will be enhanced by previous and current work supported by the ENRTF. The M.L. 2017 project *Tactical Invasive Plant Management Plan Development* will help define regional priorities through the work it has accomplished and is doing in defining invasion fronts, identifying isolated infestations and projecting control costs. Projects proposed by local governments can be vetted within the context of the *Tactical Plan* project and preference given to those that address regional as well as local priorities.

The *Tactical Plan* project will also help guide state level efforts to address high priority weed issues. Weed problems that demand simultaneous efforts across multiple jurisdictions or may otherwise be impractical for local governments to tackle will be addressed through Activity 2. The M.L. 2016 project *Elimination of Target Invasive Plant Species* created a framework for the state to follow in cooperation with Conservation Corps of Minnesota and other partners to address weed issues difficult to manage at the local level.

The ENRTF has invested in the development of the weed management tracking tool, ISMTrack, and we will work with project partners to track outcomes using this system. It will be imperative that project information is entered and managed through this system in order to quantify and evaluate the impact of management activities. While ISMTrack is functional for desktop computing, more work is needed to bring full functionality into a mobile environment. Activity 3 will be focused on the deployment and continued development of a mobile app for ISMTrack as well as system enhancements related to tracking biological control based weed management.

This project will be conducted in collaboration with the wide range of partners who are brought together through the Noxious Weed Advisory Committee. We will implement management recommendations from the Minnesota Invasive Terrestrial Plants and Pests Center as new research is available.

II. OVERALL PROJECT STATUS UPDATES:

First Update January 31, 2020

Second Update July 31, 2020

Third Update January 29, 2021

Fourth Update July 30, 2021

Fifth Update January 31, 2022

Final Report between project end (June 30) and August 15, 2022

III. PROJECT ACTIVITIES AND OUTCOMES:

Activity 1: Grants for Local Management of Noxious Weeds
Description: The grant program will enable local governments to identify, control and remove priority infestations of noxious weeds. This activity will benefit from past and current efforts supported by the ENRTF to identify and prioritize infestations of noxious weeds in Minnesota which can be used to give preference to local efforts that will pay regional dividends. State and local partnerships are a key factor for successful noxious weed management and the grant program will help maintain and foster those partnerships.

The MDA has experience in administering grants for noxious weed management having received a one-time appropriation to provide grants during the 2018-2019 biennium as outlined by M.S. 18.90. Many local governments applied for grants and many successful projects to control and remove noxious weed infestations have been completed. The Department anticipates that the ENRTF grant program will be conducted in a similar fashion to the last.

As described, this activity will leverage previous work supported by ENRTF to fund local weed control efforts using the Office of Grants Management protocol. There will be two grant cycles between July 1, 2019 and June 30, 2022. RFPs will be developed and released, funds will be disbursed, and final reports will be submitted to the grant administrator.

Data from local projects will be managed in ISMTrack which will allow the MDA and partners to assess the impact of management and inform future decisions.

ACTIVITY 1 ENRTF BUDGET: $650,000

Outcome	Completion Date
1. Grant cycle #1 RFP released	12/31/19
2. Grant cycle #1 awards disbursed	12/31/20
3. Grant cycle #1 final reports due	02/28/21
4. Grant cycle #2 RFP released	12/31/20
5. Grant cycle #2 awards disbursed	12/31/21
6. Grant cycle #2 final reports due	02/28/22
7. Grantees' management activities completed in ISMTrack	06/30/22

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ACTIVITY 2 Title: Communicate management priorities, coordinate efforts to control priority infestations
Description: The MDA will identify areas where state-led weed management work is needed using information developed by past and current ENRTF projects and consultation with partners and stakeholders. To manage these priority infestations, MDA staff will engage affected public and private landowners, compile best

management practices and develop materials to support weed control and eradication efforts. The MDA will coordinate weed control and removal work carried out under contract by the Conservation Corps of Minnesota and other partners.

The MDA has experience conducting work of this nature since 2013 through the project *Elimination of Target Invasive Plant Species (ETIPS)*. Using the management model developed by this project the MDA has led efforts to identify, control and remove plant species on the Noxious Weed Eradicate list including black swallow-wort, brown knapweed, meadow knapweed, Dalmatian toadflax, common teasel, cutleaf teasel, Japanese hops, Oriental bittersweet, Grecian foxglove, poison hemlock and Palmer amaranth. In particular, when Palmer amaranth was detected in conservation planting in 2016 and 2017, the MDA was prepared to quickly implement eradication measures using the *ETIPS* model. By 2018, Palmer amaranth was no longer found in any of the affected plantings. The MDA will continue this approach for weed problems that are not practical for local governments to address.

This work will leverage sophisticated mapping systems in EDDMapS and ISMTrack to coordinate work and keep all project partners informed about weed distributions, management activities and their outcomes.

ACTIVITY 2 ENRTF BUDGET: $300,000
We will utilize funds from M.L. 2016 and M.L. 2017 ENRTF appropriations for this activity in FY20. Once M.L. 2016 and M.L. 2017 funds are spent, we will begin using M.L. 2019 funds for this activity.

Outcome	Completion Date
1. Coordinate control of priority infestations with public and private landowners.	06/30/22
2. Outreach materials with best management practices are developed and distributed	06/30/22
3. Contract control and removal of weeds through CCM	06/30/22
4. Management activities are tracked in ISMTrack	06/30/22

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Activity 3 Title: Complete full development of mobile computing for ISMTrack and add capacity for tracking biological control based management
Description: ISMTrack is an Invasive Species Management Tracking System originally developed with ENRTF support. In the initial Tactical Plan project, we refined ISMTrack, built queries and began development of a mobile app. In this project we will expand the capabilities of the mobile app and add features for biocontrol tracking. As a result of these enhancements, we will add more users and make it easier for land managers to track weed management activity. The ability to track and measure the success of management is critical to understanding the performance of these initiatives to identify, control and remove noxious weeds in Minnesota.

The University of Georgia is the creator of ISMTrack and we will contract with them for this work. The MDA and University of Georgia have a proven history of successful development related to ISMTrack and EDDMapS

and this activity has a high likelihood of success.

ENRTF BUDGET: $ 35,000

Outcome	Completion Date
1. Deploy mobile app and include at least 10 testers in other agencies	04/30/22
2. Add biological control tracking capacity	06/30/22

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IV. DISSEMINATION:

Description: Regional and local collaboration require excellent communication with partners. The MDA will develop a communications plan to facilitate weed management planning with the public, CWMAs, land managers, and researchers. The communication plan will leverage webpages, news media (print, television, and radio) and social media. Updates and findings will be presented at the 2020 Upper Midwest Invasive Species Conference, and other meetings (LCCMR funding will not be used for meeting registration). For the grant program, the MDA will notify the public and solicit requests for the grant RFPs by posting the RFP on the MDA website, notifying County Agricultural Inspectors, local units of government, FY18 and FY19 MDA weed grant recipients, and targeting underrepresented groups. Annual reports of grant outcomes, including metrics to measure impact, will be disseminated at the completion of each grant cycle through press releases from the MDA Commissioner's office.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the ENRTF Acknowledgement Guidelines.

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Final Report between project end (June 30) and August 15, 2022

V. ADDITIONAL BUDGET INFORMATION:

A. Personnel and Capital Expenditures

Explanation of Capital Expenditures Greater Than $5,000: Not applicable

Explanation of Use of Classified Staff: Not applicable

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

Enter Total Estimated Personnel Hours for entire duration of project: 4,992	Divide total personnel hours by 2,080 hours in 1 yr = TOTAL FTE: 2.4

Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation: We cannot accurately estimate the number of FTEs for the grant program. Funds will not be used for recipient salaries and overhead but they may hire interns or other short-term personnel. We estimated 1,000 hours for interns or other short-term personnel for the grant program. We estimate an additional 500 hours for contracted invasive plant control.

Enter Total Estimated Contract Personnel Hours for entire duration of project: 1,500	Divide total contract hours by 2,080 hours in 1 yr = TOTAL FTE: 0.72

VI. PROJECT PARTNERS:

A. Partners outside of project manager's organization receiving ENRTF funding
Local government units will receive grant funds. Contracts, with priority for Conservation Corps Minnesota will be developed for invasive plant control. Depending upon CCM capacity, this may include private companies. Chuck Bargeron (UGA) will direct ISMTrack development.

B. Partners outside of project manager's organization NOT receiving ENRTF funding
Angela Gupta (Extension), Trent McCorkle (MN Assoc. of County Ag. Inspectors), Laura Van Riper (DNR Invasive Species), David Hanson (MnDOT Vegetation Mgmt), Daniel Shaw (BWSR CWMA Program), James Calkins (MN Nursery Landscape Assoc.), Roger Becker (U of M Weed Scientist), and Robert Venette (MN Invasive Terrestrial Plants and Pests Center Director) will provide technical expertise.

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

A coordinated effort to reduce the impact of noxious weeds in Minnesota will require a long-term strategy and investment. This funding creates an opportunity for the Noxious Weed Program to prioritize, coordinate and fund regional and local efforts that are the essential components of a long-term program. This work represents the culmination of the first Tactical Plan and Elimination of Target Invasive Plant Species projects and will continue during and after this project. Development of educational materials that synthesize research findings and best management practices into easy to understand guidelines are important components of a coordinated effort and this work is ongoing. These materials will be available online once this project is completed. We will collaborate with our network of private and public land managers, Cooperative Weed Management Areas and weed inspectors about managing invasion fronts and priority infestations. The grant program will enable communities to actively manage priority infestations. This will enhance local weed management efforts and better connect state and local activities. Ultimately, the long-term success will depend on permanent funding from the legislature for the greatest impact.

VIII. REPORTING REQUIREMENTS:

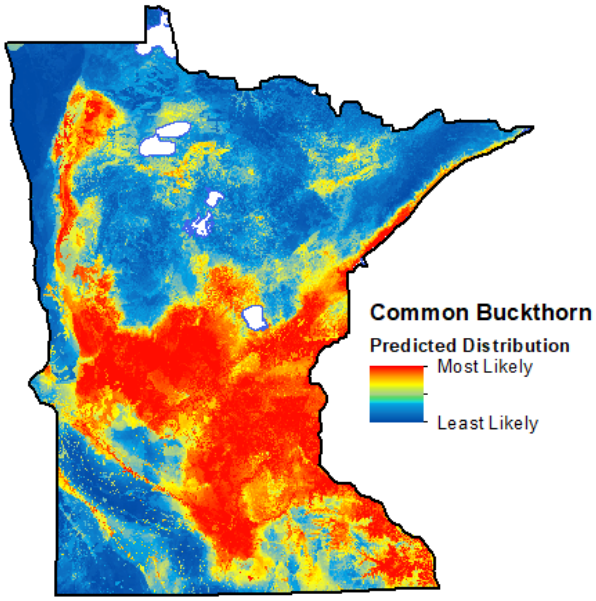
- Project status update reports will be submitted January 31 and July 31 each year of the project
- A final report and associated products will be submitted between June 30 and August 15, 2022

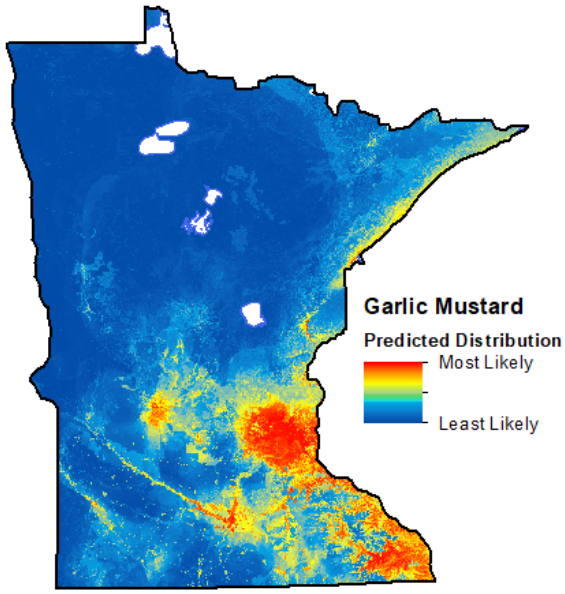
IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

A. Budget Spreadsheet
B. Visual Component or Map

Monitor, Detect and Eradicate Noxious Weeds

Systematically identify, prioritize, coordinate control and eliminate high priority invasive plant infestations





Distribution maps inform management priorities by defining invasion fronts and showing areas of small, isolated infestations that could be controlled before they spread.

Japanese barberry's green leaves stand out in this infestation that overwhelmed native wildflowers and other understory plants. The infestation threatens forest regeneration and is ideal deer tick habitat.

Attachment A:
Environment and Natural Resources Trust Fund
M.L. 2019 Budget Spreadsheet
Legal Citation: M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 06c
Project Manager: Mark Abrahamson
Project Title: Monitor, detect and eradicate noxious weeds
Organization: Minnesota Department of Agriculture
Project Budget: $1,000,000
Project Length and Completion Date: 3 years, June 30, 2022
Today's Date: June 7, 2019

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Budget	Amount Spent	Balance
BUDGET ITEM			
Personnel (Wages and Benefits)	$ 145,000	$ -	$ 145,000
Two 2 year 60% time Plant Health Specialist estimated salary $45,800/yr plus fringe benefits @ 33% for Activity 2 communicate priorities, assess infestations and coordinate control. These are supplementary positions.			
Professional/Technical/Service Contracts			
Contract Conservation Corps Minnesota for noxious weed control	$ 125,000	$ -	$ 125,000
Contract with University of Georgia, creator of the technology already in use by MDA, to improve ISMTrack and add biocontrol data capacity	$ 35,000	$ -	$ 35,000
Travel expenses in Minnesota			
Mileage ($36,200) & approximately 180 days of meals and 45 overnight lodging for Activity 2	$ 45,000	$ -	$ 45,000
Other			
Noxious weed management grants to local government units	$ 650,000	$ -	$ 650,000
COLUMN TOTAL	$ 1,000,000	$ -	$ 1,000,000

OTHER FUNDS CONTRIBUTED TO THE PROJECT	Status (secured or pending)	Budget	Spent	Balance
Non-State:		$ -	$ -	$ -
State:		$ -	$ -	$ -
In kind: Computing/software, GIS and data management, grant management and project management for 3 years		$ 70,000	$ -	$ 70,000

PAST AND CURRENT ENRTF APPROPRIATIONS	Amount legally obligated but not yet spent	Budget	Spent	Balance
Current appropriations				
M.L. 2016, Chp. 186, Sec. 2, Subd. 06e1 Elimination of Target Invasive Plant Species Phase 2		$ 750,000	$ 606,322	$ 143,678
M.L. 2017, Chp. 96, Sec. 2, Subd. 06e Tactical Invasive Plant Management Plan Development		$ 296,000	$ 167,037	$ 128,963
M.L. 2018, Chp. 214, Art. 4, Sec. 02, Subd. 06b Palmer amaranth detection and eradication continuation		$ 431,200	$ 87,362	$ 343,838
Past appropriations				
M.L. 2013, Chp. 52, Sec. 2, Subd. 06d Elimination of Target Invasive Plant Species		$ 350,000	$ 350,000	$ -
M.L. 2015, Chp. 76, Sec. 2, Subd. 10 - Emerging Issues Account and M.L. 2017, Chapter 96, Section 2, Subdivision 18 Palmer amaranth detection and eradication		$ 173,000	$ 145,746	$ 27,254