**PROJECT TITLE: Tactical Invasive Plant Management Plan Development and Implementation**

**I. PROJECT STATEMENT**

We will systematically identify, prioritize, coordinate and eliminate target infestations. This continuation project informs decision-making and coordinates priority infestation management. Previously, we modeled distribution of common and glossy buckthorns, Canada thistle, garlic mustard, Japanese knotweed, leafy spurge, multiflora rose, narrowleaf bittercress, plumeless thistle, purple loosestrife, spotted knapweed, tansy and wild parsnip. We are conducting an economic analysis for these weed species with quantifiable damages and control costs. This work enables us to understand invasion fronts and economic costs on statewide and regional scales. We propose to similarly analyze the following species with bold indicating an economic analysis will be done.

|  |  |  |
| --- | --- | --- |
| **Asian bush honeysuckles** | Dalmatian toadflax | **Oriental bittersweet** |
| **Barberries** | Grecian foxglove | **Palmer amaranth** |
| Black locust | Japanese hops | Poison hemlock |
| Black swallow-wort | Brown/meadow knapweed complex | Teasels |

We began eradication on a statewide scale with the LCCMR project *Elimination of Target Invasive Plant Species*. We will expand that effort to include regional priorities like eliminating isolated buckthorn infestations in northern Minnesota before they spread. We will create online videos about identifying and safely managing infestations. We will improve ISMTrack, an Invasive Species Management Tracking system in development, and add capacity for biocontrol data. Our previous ENRTF projects enabled us to build capacity for early detection and rapid response and to assess widespread infestations and prioritize control. Our first *Elimination of Target Invasive Plant Species* project started with 5 species. We are growing this effort to work with 29 species.

**II. PROJECT ACTIVITIES AND OUTCOMES**

|  |  |  |
| --- | --- | --- |
| **Activity 1 Title: Model invasive plant distribution, conduct economic analyses, communicate management priorities and develop online training**  **Description:** Utilize and refine methods developed in the initial Tactical Invasive Plant Management Plan Development to build distribution models for all species listed above and conduct an economic analysis for species listed in bold. Create online maps and videos to show invasion fronts and priority infestations and how to safely control them. Hold workshops to inform vegetation managers about plant identification, invasion fronts and management priorities.  **ENRTF BUDGET: $ 222,937** | |  |
| **Outcome** | **Completion Date** |
| *1.* Model distribution of species listed above. | 06/30/22 |
| *2.* Conduct economic analysis of Asian bush honeysuckles, barberries, oriental bittersweet and Palmer amaranth. | 01/15/23 |
| *3.* Six workshops are held and online maps and videos are created. | 05/30/23 |

|  |  |  |
| --- | --- | --- |
| **Activity 2 Title: Communicate management priorities, coordinate efforts to control priority infestations**  **Description:** MDA coordinators will engage public and private landowners on priority infestation management, compile best management practices and participate in the development of outreach materials. Project partners will develop and provide job skill training to Conservation Corps AmeriCorps members related to identifying, tracking, and controlling priority infestations to prepare the next generation of natural resource professionals with the in demand certifications and experience to protect green infrastructure in public parks, inland waterways and other natural spaces from the damaging effects of invasive species.  **ENRTF BUDGET: $ 400,200** | |  |
| **Outcome** | **Completion Date** |
| *1.* Coordinate control with public and private landowners on 50 priority infestations. | 06/30/23 |
| *2.* Outreach materials with best management practices are developed. | 06/30/23 |

|  |  |  |
| --- | --- | --- |
| **Activity 3 Title: Continue to improve and implement ISMTrack and add capacity for tracking biological control agent releases and bioagent population 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 created an app. Next we will add more users, improve the app and add biocontrol release point and monitoring tracking.  **ENRTF BUDGET: $ 35,000** | |  |
| **Outcome** | **Completion Date** |
| *1.* Add at least 50 ISMTrack users, including testers in other agencies | 04/30/23 |
| *2.* Improve ISMTrack app and add biological control tracking capacity | 06/30/23 |

**III. PROJECT PARTNERS AND COLLABORATORS:** This interdisciplinary project requires a large team.

**Receiving funds:** Matthew Russell (Extension) will lead the invasive plant distribution analysis. William Lazarus (U of M) will lead the economic analysis. Angela Gupta (Extension) will lead outreach. Doug Ekstrom, Dorian Hasselmann and Dustin Looman (CCM) will lead priority infestation control. Chuck Bargeron (UGA) will direct ISMTrack development. Monika Chandler (MDA) will lead priority infestation communications and management and provide overall project coordination. All provide expertise, equipment, facilities, and technical support.

**Not receiving funds:** 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.

**IV. LONG-TERM IMPLEMENTATION AND FUNDING:** Implementation began in 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 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.

MDA has a budget initiative for pass-through weed grant funds to local governments and for core weed program funding. If this initiative is fully funded, we would not need ENRTF support for MDA’s two positions and travel in this proposal. MDA would continue project coordination.

**V. SEE ADDITIONAL PROPOSAL COMPONENTS:**

**A. Proposal Budget Spreadsheet**

**B. Visual Component or Map**

**F. Project Manager Qualifications and Organization Description**