

**Environment and Natural Resources Trust Fund**

# M.L. 2021 Approved Work Plan

## **General Information**

**ID Number:** 2021-065

**Staff Lead:** Michael Varien

**Date this document submitted to LCCMR:** July 21, 2021

**Project Title:** Prescribed-Fire Management for Roadside Prairies - Phase II

**Project Budget:** $217,000

## **Project Manager Information**

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## **Project Reporting**

**Date Work Plan Approved by LCCMR:** July 20, 2021

**Reporting Schedule:** December 1 / June 1 of each year.

**Project Completion:** July 31, 2023

**Final Report Due Date:** September 14, 2023

## **Legal Information**

**Legal Citation:** M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 08e

**Appropriation Language:** $217,000 the first year is from the trust fund to the commissioner of transportation to continue to protect biodiversity and enhance pollinator habitat on roadsides by helping to create a self-sufficient prescribed-fire program at the Department of Transportation.

**Appropriation End Date:** June 30, 2024

## **Narrative**

**Project Summary:** This project will continue to protect biodiversity and enhance pollinator habitat on roadsides by helping to create a self-sufficient prescribed fire program at the Minnesota Department of Transportation

**Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.**

In the last three years MnDOT has made significant progress in building a fire program. Prior to phase one of this project MnDOT was conducting on average 5 burns a year, since the project started MnDOT has been completing 25+ burns a year. We have identified several roadsides needing fire management, trained four prescribed fire crews around the state, and formally adopted MN DNR standards for training and qualifications. Despite this progress, we are currently constrained by a shortage of staff qualified to lead the fire crews. By adopting MN DNR standards, we have set a high bar for individuals to become qualified to lead prescribed fires, hereafter referred to as a “burn boss.” To become qualified as a burn boss, an employee must take several classes and work with mentors to demonstrate competency with various skills. Depending on the availability of trainings and mentors, this processtakes several years. Without enough qualified burn bosses, we are currently forced to rely on two burn bosses and therefore can only implement a small number of prescribed fires each year.

**What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.**

This project will temporarily bring in qualified fire personnel who will train and mentor MnDOT crews and crew leaders. With this mentoring we can continue to train a fully qualified burn boss from within each of our crews, making each crew more self-sufficient. Continuing to have an additional burn boss on staff has increased burning five fold and MnDOT doesn't want to lose that momentum. With phase two MnDOT will have a goal of conducting 40 to 60 burns a year.

**What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state’s natural resources?**

This project will also address several administrative constraints on our fire program. These include roadside vegetation inventory, site prioritization, planning, and monitoring. The increased assistance provided through would be temporary, but we are focusing it on areas that can create lasting change. This project will overcome hurdles and continue to build the capacity of our fire program. This will allow fire to become more regular and sustainable part of our vegetation management work. By increasing the long-term use of prescribed fire we will more effectively protect the biodiversity of prairie remnants, enhance existing native plantings, and restore additional roadside habitat.

## **Project Location**

**What is the best scale for describing where your work will take place?** Region(s): NW, Central, SE, SW, Metro,

**What is the best scale to describe the area impacted by your work?** Region(s): Central, Metro, NW, SE, SW,

**When will the work impact occur?** During the Project

## **Activities and Milestones**

### **Activity 1: Prescribed fire program support & Implementation**

**Activity Budget:** $182,000

**Activity Description:**Prior to conducting a prescribed fire we require a detailed plan that has been reviewed by qualified fire personnel and signed by relevant department officials. The time required to write these prescribed fire plans has limited their number and therefore has limited the number of roadsides on which fire can be used. As part of this activity the employee will assist and mentor burn boss trainees in preparing plans. Plans will be written for roadsides that have been identified as priorities using data gathered in Activity 3. This has a dual impact on increasing self-sufficiency in that plans will be useful for several years and burn boss trainees will gain skills needed to write new plans (or update existing plans) as needed.
 Implementing a prescribed fire requires a great deal of preparation. This includes creating and maintaining fire breaks, arranging for and preparing equipment, obtaining burn permits, notifying local authorities and neighbors, preparing press releases, and reporting accomplishments. The employee will assist district crews with this coordination, helping to do the work when necessary but empowering crews to do it themselves as much as possible.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Complete 10 new and update 20 prescribed fire plans across the state | June 30, 2023 |
| Conduct 20-50 prescribed burns (20-100 miles/80-500 acres of roadside) per year | June 30, 2023 |

### **Activity 2: Hiring, Training, and Mentoring Prescribed Fire Crews**

**Activity Budget:** $5,000

**Activity Description:**MnDOT currently has four prescribed fire crews, in process of adding another crew, it has only two burn bosses. This shortage results in several days each season during which one or more crews are unable to burn despite favorable weather and fuel conditions. To continue the growth of our fire program, we will use project funds to continue to employee the person who was hired under Phase One of this program.. This employee is qualified as a burn boss and able to lead prescribed fires and mentoring crewmembers. This employee will work directly with existing crews to conduct prescribed fires on roadsides.
MnDOT prescribed fire policy requires that fire personnel follow the same training and qualification standards as the MN DNR. These rigorous standards are important to ensuring the safety and effectiveness of roadside prescribed fire, but they present a major obstacle to developing a self-sufficient fire program. While all existing crew members are trained to the basic level (that of Wildland Firefighter Type 2), at least one member of each crew needs to become qualified as a burn boss to lead that crew on prescribed fires.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Increase crewmembers level of experience by working on 10-20 burns per year. | June 30, 2023 |
| Qualify at least 2 MnDOT employees as MN Burn Boss Type 2. | June 30, 2023 |
| Qualify at least 4 MnDOT employees to the level of MN Ignition Specialist Type 2. | June 30, 2023 |

### **Activity 3: Roadside prairie inventory and fire effects monitoring**

**Activity Budget:** $30,000

**Activity Description:**There are hundreds or thousands of miles of roadsides that could benefit from prescribed fire. These need to be prioritized to promote the most efficient use of resources. The project staff will inventory and map roadsides with native vegetation. Roadsides with prairie vegetation will be ranked using various factors to prioritize them for burning. Ranking criteria will include quality of native plant communities, remnant or planted status, conduciveness to use of fire, etc.
The employee will continue fire effects monitoring program to evaluate results. This information will be used to ensure that fires are meeting vegetation management objectives while limiting negative impacts on wildlife, including insects. With this information we will be able to adjust the timing, frequency, and intensity of fires as needed. Monitoring data will also be used to demonstrate accomplishments.
Inventory and monitoring data will be stored in GIS format in a geodatabase.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Monitor fire effects at 20-40 sites across the state. | September 30, 2022 |
| 1. Inventory prairie remnants and native plantings on 2000 miles (30,000 acres) of roadside. | September 30, 2022 |

## **Dissemination**

**Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.**All presentation that pertain to MnDOT fire program will give credit to LCCMR. MnDOT prescribed fire policy is in the process of being updated and a section acknowledges LCCMR funds and credit for expansion. All research results will be shared with interagency partners. Next to MnDOT logo on burn plans a trust fund logo will be included. Trust Fund logo will be added to Vegetation monitoring sites.

## **Long-Term Implementation and Funding**

**Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this be funded?**By the end of this project MnDOT will have a self-sufficient prescribed fire program. The result will be an increased use of prescribed fire, enabling MnDOT to more effectively protect the biodiversity of prairie remnants, enhance existing native plantings, and restore additional roadside habitat.

## **Other ENRTF Appropriations Awarded in the Last Six Years**

|  |  |  |
| --- | --- | --- |
| **Name** | **Appropriation** | **Amount Awarded** |
| Prescribed Fire Management for Roadside Prairies | M.L. 2017, Chp. 96, Sec. 2, Subd. 08f | $345,000 |

## **Budget Summary**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category / Name** | **Subcategory or Type** | **Description** | **Purpose** | **Gen. Ineli gible** | **% Bene fits** | **# FTE** | **Class ified Staff?** | **$ Amount** |
| **Personnel** |  |  |  |  |  |  |  |  |
| 1 Fire Staff |  | Help build MnDOT Prescribed Fire Program |  |  | 25% | 2 |  | $180,000 |
|  |  |  |  |  |  |  | **Sub Total** | **$180,000** |
| **Contracts and Services** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Equipment, Tools, and Supplies** |  |  |  |  |  |  |  |  |
|  | Tools and Supplies | Fire handtools and supplies | To provide fire fighters with tools necessary to effectively fight fire. |  |  |  |  | $7,000 |
|  | Equipment | ATV tank, pump, sprayers (5 spray units). | Provide ATVs with sprayers to increase productivity and safety. |  |  |  |  | $15,000 |
|  | Equipment | Personal protective equipment, Fire Shelters, Fire coats, web gear, etc. (12+ sets). | To provide safety for fire fighters |  |  |  |  | $5,000 |
|  |  |  |  |  |  |  | **Sub Total** | **$27,000** |
| **Capital Expenditures** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Acquisitions and Stewardship** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Travel In Minnesota** |  |  |  |  |  |  |  |  |
|  | Miles/ Meals/ Lodging | 25 overnight trips at approximately $200 per night | To get to and from burns, inventory, monitoring, etc. |  |  |  |  | $5,000 |
|  |  |  |  |  |  |  | **Sub Total** | **$5,000** |
| **Travel Outside Minnesota** |  |  |  |  |  |  |  |  |
|  | Conference Registration Miles/ Meals/ Lodging | Travel, meals, lodging, registration feed. This will be used for 4 peoples extended training. | To get into fire trainings outside of MN. | X |  |  |  | $5,000 |
|  |  |  |  |  |  |  | **Sub Total** | **$5,000** |
| **Printing and Publication** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Other Expenses** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
|  |  |  |  |  |  |  | **Grand Total** | **$217,000** |

### **Classified Staff or Generally Ineligible Expenses**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category/Name** | **Subcategory or Type** | **Description** | **Justification Ineligible Expense or Classified Staff Request** |
| **Travel Outside Minnesota** | Conference Registration Miles/Meals/Lodging | Travel, meals, lodging, registration feed. This will be used for 4 peoples extended training. | The higher burn class required to be a burn boss are only offered once every couple of years in Minnesota. These classes are hard to get into, so by being allowed to take these classes out of state gives a higher chance of being accepted to classes. |

### **Non ENRTF Funds**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Specific Source** | **Use** | **Status** | **Amount** |
| **State** |  |  |  |  |
| In-Kind | General Fund | MnDOT currently has a Prescribed Fire Coordinator which spend 50% of his time on fire and 8 district staff that spend 5% to 10% of there time on fire. The LCCMR funded staff will work directly with these people to meet our overall goal. | Secured | $125,000 |
|  |  |  | **State Sub Total** | **$125,000** |
| **Non-State** |  |  |  |  |
|  |  |  | **Non State Sub Total** | **-** |
|  |  |  | **Funds Total** | **$125,000** |

## **Acquisition and Restoration**

### **Parcel List**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **County** | **Site Significance** | **Activity** | **Acres** | **Miles** | **Estimated Cost** | **Type of Landowner** | **Easement or Title Holder** | **Status of Work** |
| Fire Region | Statewide | prairie | Restoration | - | - | - | Public | No | In progress |
| **Totals** |  |  |  | **0** | **0** | **-** |  |  |  |

### **Restoration**

**1. Provide a statement confirming that all restoration activities completed with these funds will occur on land permanently protected by a conservation easement or public ownership.**All restoration associated with the project will occur on state of MN property.

**2. Summarize the components and expected outcomes of restoration and management plans for the parcels to be restored by your organization, how these plans are kept on file by your organization, and overall strategies for long-term plan implementation.**MnDOT goal is to burn 80 to 500 acres of right-of way per year and all burns will be recorded in ARCMAP and in MnDOT burn summary worksheet.

**3. Describe how restoration efforts will utilize and follow the Board of Soil and Water Resources “Native Vegetation Establishment and Enhancement Guidelines” in order to ensure ecological integrity and pollinator enhancement.**All restored prairie will follow the Board of Soil and Water Resources guidelines.

**4. Describe how the long-term maintenance and management needs of the parcel being restored with these funds will be met and financed into the future.**Long term maintenance and management needs will be picked up in the districts the restoration occur. Once burn crews are self sufficient with a burn boss, they will be able to maintain these parcels long term.

**5. Describe how consideration will be given to contracting with Conservation Corps of Minnesota for any restoration activities.**If contracting occurs for the project consideration will be given to Conservation Corps of Minnesota.

**6. Provide a statement indicating that evaluations will be completed on parcels where activities were implemented both 1) initially after activity completion and 2) three years later as a follow-up. Evaluations should analyze improvements to the parcel and whether goals have been met, identify any problems with the implementation, and identify any findings that can be used to improve implementation of future restoration efforts at the site or elsewhere.**Monitoring of fire effects will be conducted on 20+ burns annually and 10+ on a three year basis.

## **Attachments**

### **Required Attachments**

#### ***Map***

File: [4e308bca-965.pdf](https://lccmrprojectmgmt.leg.mn/media/map/4e308bca-965.pdf)

#### ***Alternate Text for Map***

Attachment has map of Remnant prairies in Minnesota, photo of what a MnDOT right-of-way looks like after a burn, photo of a prescribed fire in progress....

### **Optional Attachments**

#### ***Support Letter or Other***

|  |  |
| --- | --- |
| **Title** | **File** |
| Background check form | [5ac04976-94f.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/5ac04976-94f.pdf) |

## **Difference between Proposal and Work Plan**

#### ***Describe changes from Proposal to Work Plan Stage***

Budget is less than what was original submitted, dollar amount changed to match what was approved by LCCMR, updated Project Location and area of project will affect. \*\*I will not need to hire any new staff, this funding is to keep 1 FTE supported (I deleted that field). When I enter 2 years in for 1 FTE the number 200 is auto filed and I can't change that. I changed dates on Roadside Prairie inventory and fire effects monitoring to Sept of 2022. Burns completed after that time will not be monitored with this funding. I added description for why out of state travel is requested.

## **Additional Acknowledgements and Conditions:**

The following are acknowledgements and conditions beyond those already included in the above workplan:

**Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?**
 N/A

**Do you agree travel expenses must follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?**
 Yes, I agree to the Commissioner's Plan.

**Does your project have potential for royalties, copyrights, patents, or sale of products and assets?**
 No

**Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?**
 N/A

**Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?**
 N/A

**Does your project include original, hypothesis-driven research?**
 Yes

**Does the organization have a fiscal agent for this project?**
 No