



Environment and Natural Resources Trust Fund

M.L. 2021 Draft Work Plan

General Information

ID Number: 2021-375

Staff Lead: Corrie Layfield

Date this document submitted to LCCMR: March 25, 2021

Project Title: Reintroduction Of Bison To Spring Lake Park Reserve

Project Budget: \$560,000

Project Manager Information

Name: Tom Lewanski

Organization: Dakota County

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Project Reporting

Date Work Plan Approved by LCCMR:

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

Project Completion: June 30, 2024

Final Report Due Date: August 14, 2024

Legal Information

Legal Citation:

Appropriation Language:

Appropriation End Date: June 30, 2024

Narrative

Project Summary: Dakota County, in conjunction with the Minnesota Bison Conservation Herd, will reintroduce American plains bison (*Bison bison*) to the prairie of Spring Lake Park Reserve.

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

The tall-grass prairie is one of Minnesota's most threatened ecosystems. Fire is often used as a practical and cost-effective means of prairie restoration and management. However, it is well documented that repeated use of fire, even on longer intervals, often results in an overabundance of graminoids and a reduction in forbs, to the detriment of floral and faunal diversity.

Increasingly, grazing is being used to restore and maintain native grasslands because of physical and behavioral attributes. There is no more suitable grazer than the native American bison, having evolved with prairie ecosystems for millennia. Bison had profound impacts, primarily through their habit of feeding selectively on grasses and grazing in patches. Forbs, that are otherwise suppressed, are released. Grasses recover between grazing events and persist in non-grazed areas. Re-establishment of bison grazing has been shown to reverse the loss of biodiversity from prairies with frequent burning regimes. Management that incorporates both fire and bison grazing have also been successfully implemented, resulting in a more heterogeneous landscape with improved ecosystem resiliency.

While there has been an increase in re-introduced bison onto the natural landscape, they are very small scattered herds, and there are few bison without detectable cattle DNA .

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.

Dakota County, in partnership with the Minnesota Bison Conservation Herd, will reintroduce bison to about 130 acres of native and re-constructed prairie within Spring Lake Park Reserve along the Mississippi River near Hastings. ENRTF funds will be used to construct the infrastructure required to contain the bison and keep the animals and park visitors safe. Dakota County will receive bison that will be culled from the State's current herd at Blue Mounds S.P. and/or Minneopa S.P. Once culled, the animals will be transported to Spring Lake Park Reserve and released into the prepared range. The bison reintroduction is being paid for out of separate funds and will be occurring concurrently with the ENRTF-funded portion of the project. Research has demonstrated that bison increase plant and animal diversity, by grazing and wallowing, amongst other behaviors. For example, arthropods, which play an important role in prairie ecosystems, benefit from the presence of bison. In turn, grassland bird species benefit from increased food supply that include those arthropods, but also from the resulting landscape diversity created by grazing.

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 increase biodiversity, landscape heterogeneity and ecosystem resiliency by reintroducing the primary historic prairie grazer in Minnesota, the American plains bison. By introducing bison, without cattle genes, the plant community will become more diverse and will likely enhance ecosystem function and overall stability via niche complementarity.

- Dakota County will assist the Minnesota Zoo's and the Minnesota DNR's goals of increasing the size of the Minnesota Bison Conservation Herd, which is an effort to establish a herd of bison that are free of detectable cattle mitochondrial DNA.

Park visitors will have opportunities to view and learn about bison.

Project Location

What is the best scale for describing where your work will take place?

Region(s): Metro

What is the best scale to describe the area impacted by your work?

Statewide

When will the work impact occur?

During the Project and In the Future

Activities and Milestones

Activity 1: Design and construct infrastructure required for bison herd management.

Activity Budget: \$360,000

Activity Description:

Dakota County will design and construct all infrastructure required for the bison. This will include perimeter fencing, gates, water provision and all other structures required to keep the bison contained, healthy and safe. The range, approximately 130-acres in size, will be designed to maximize the benefits to the prairie as well as provide opportunities for the public to view and learn about the bison. The containment fence will be constructed of wire mesh. When the required infrastructure is in place, Dakota County, working with the Minnesota Bison Conservation Herd, will take ownership of bison culled from the States herds and release them into the range at Spring Lake Park Reserve. The actual bison reintroduction is a separate, complementary project that is not utilizing ENRTF.

Activity Milestones:

Description	Completion Date
Finalize design of range, prepare bid and construction documents	September 30, 2021
Review proposals and select construction contractor	January 31, 2022
Construct/install bison related infrastructure including water structures	September 30, 2023

Activity 2: Design and construct a humane Bison Handling Facility

Activity Budget: \$200,000

Activity Description:

The handling facility will be used for an annual roundup of bison for genetic testing, animal transfers to manage genetic diversity and carrying capacity, micro-chip placement for animal ID and disease prevention and management. It will be designed using Grandin's humane livestock handling principles. It will include gathering/holding pens, driveway access, a curved passageway, gates, electrical service, water and squeeze chute.

Activity Milestones:

Description	Completion Date
Design handling facility	October 31, 2021
Prepare bid documents, review proposals and select construction contractor	January 31, 2022
Construct handling facility	September 30, 2022

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Jay Biedny	Dakota County	Will Coordinate the construction of project related infrastructure.	No
Autumn Hubbell	Dakota County Parks	Coordinating the planning and implementation of the educational/interpretive components of the project.	No
Joe Walton	Dakota County Parks	Will lead the ecological monitoring, both pre and post treatment, to document the impacts that the bison are having on the prairie.	No
Ed Quinn	Minnesota Department of Natural Resources	As a representative of the Minnesota Bison Conservation Herd, Ed has served and will continue to serve as an adviser to the Dakota County project. The Minnesota Bison Conservation Herd may also provide excess bison, culled from the existing herd, to start a herd at Spring Lake Park Reserve.	No

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.

Information about this project and ENRTF funding will be presented on Dakota County's parks website using the ENRTF logo, during interpretive programs, with interested media and to natural resource and land management professionals. In addition, Dakota County will display ENRTF signs in several locations near the bison range.

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?

Dakota County acknowledges that there will be operational and maintenance expenses beyond the timeframe of the grant and is fully committed to providing the funding required to meet these expenses. This project is part of a larger effort by the Minnesota Department of Natural Resources and the Minnesota Zoo to establish a bison herd that contain no detectable cattle genes, in the State. Dakota County will have access to the expertise and assistance of these organizations. County natural resource staff will oversee the management of the bison and the management and monitoring of the prairie.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
							Sub Total	-
Contracts and Services								
TBD	Professional or Technical Service Contract	Construction of bison containment and management infrastructure. This includes fencing, waterers, gates, cattle guards, etc. Costs include materials and supplies.				0.4		\$360,000
TBD	Professional or Technical Service Contract	Construct bison handling facility within the bison range at Spring Lake Park Reserve. Costs include materials and supplies.				0.2		\$200,000
							Sub Total	\$560,000
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
							Sub Total	-
Travel Outside Minnesota								

							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
							Sub Total	-
							Grand Total	\$560,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
In-Kind	Value of the bison that the Minnesota Bison Conservation Herd (Minnesota Department of Natural Resources & Minnesota Zoological Gardens) will be providing to Dakota County	Bison from the Minnesota Bison Conservation Herd will be used to start the bison herd at Spring Lake Park Reserve	Pending	\$10,000
			State Sub Total	\$10,000
Non-State				
Cash	Dakota County	These funds will be used throughout the project including the construction of the bison fencing, handling facility and other infrastructure for the bison.	Pending	\$164,000
			Non State Sub Total	\$164,000
			Funds Total	\$174,000

Attachments

Required Attachments

Visual Component

File: [8ee645be-662.docx](#)

Alternate Text for Visual Component

Bison range map (concept one) at Spring Lake Park Reserve...

Board Resolution or Letter

Title	File
Dakota County Board Resolution	2af483cd-8f7.docx

Optional Attachments

Support Letter or Other

Title	File
Invitation letter for Dakota County to join the Minnesota Bison Conservation Herd	b9e06187-32e.pdf

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

To bring the project budget in line with the LCCMR recommended funding amount of \$560,000, the education/interpretive components as presented in the project proposal have been removed. The recommended funding amount of \$560,000 has been distributed thus: \$360,000 - construction of all infrastructure required by the bison, \$200,000 - construction of the handling facility.

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?

N/A

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?

No

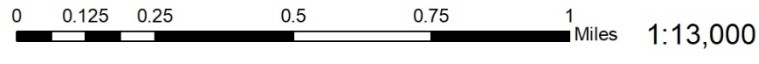
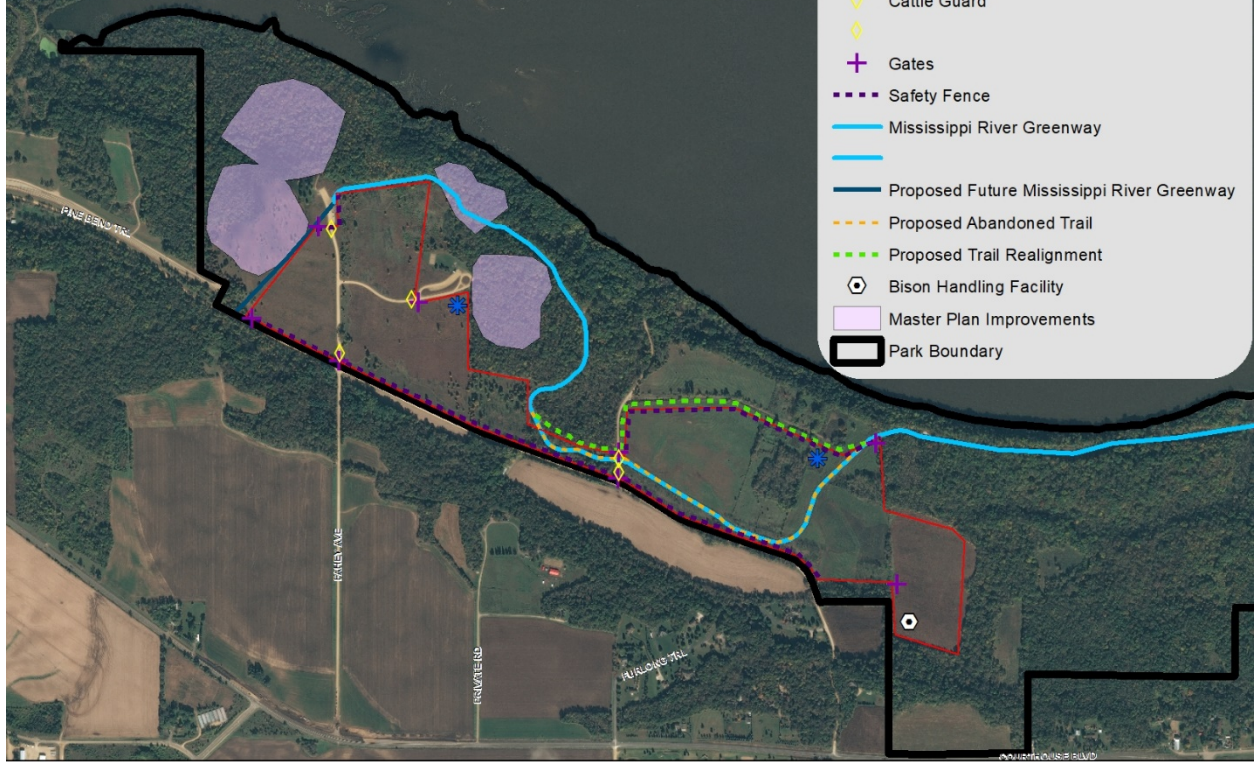
Does the organization have a fiscal agent for this project?

No

Bison Range Concept 1, Spring Lake Park Reserve

Legend

- Bison Range
- ✱ Bison Water Source
- ◇ Cattle Guard
- + Gates
- Safety Fence
- Mississippi River Greenway
- Proposed Future Mississippi River Greenway
- Proposed Abandoned Trail
- Proposed Trail Realignment
- Bison Handling Facility
- Master Plan Improvements
- Park Boundary



Satellite Imagery: Dakota County GIS, 2018