



Environment and Natural Resources Trust Fund (ENRTF) M.L. 2015 Work Plan

Date of Report: October 15, 2014

Date of Next Status Update Report: January 1, 2016

Date of Work Plan Approval:

Project Completion Date: December 31, 2017

Does this submission include an amendment request? No

PROJECT TITLE: Reintroduction and Interpretation of Bison in Minnesota State Parks

Project Manager: Edward Quinn

Organization: MN Department of Natural Resources – Division of Parks & Trails

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Web Address:

- **Main DNR Homepage:** <http://www.dnr.state.mn.us/index.html>,
- **MNDNR Minneopa Reintroduction Webpage:**
http://www.dnr.state.mn.us/state_parks/minneopa/bison.html
- **MNDNR Minneopa Bison Reintroduction plan amendment:**
http://files.dnr.state.mn.us/input/mgmtplans/parks/minneopa_bison_amendment.pdf
- **Minnesota Zoo Bison Conservation Webpage**
- <http://mnzoo.org/conservation/minnesota/bison-conservation-minnesota/>

Location: Blue Earth & Rock counties (include map)

Total ENRTF Project Budget:

ENRTF Appropriation: \$600,000

Amount Spent: \$0

Balance: \$600,000

Legal Citation: M.L. 2015, Chp. 76, Sec. 2, Subd. 03h

Appropriation Language:

\$600,000 the first year is from the trust fund to the commissioner of natural resources to preserve American bison by reintroducing Bison to Minneopa state park and provide interpretive learning opportunities at Blue Mounds and Minneopa State Parks. This appropriation is available until June 30, 2018, by which time the project must be completed and final products delivered.

I. PROJECT TITLE: Reintroduction and Interpretation of Bison in Minnesota State Parks

II. PROJECT STATEMENT:

This project will help preserve American bison (*Bison bison*), provide more and better interpretive opportunities to learn about bison and prairie ecosystems, and improve prairie quality.

- The International Union for the Conservation of Nature classifies bison as Near-Threatened due to the small number (< 32,000 in N. America) managed to preserve the species in the public interest. Existing threats include genetic manipulation of commercial herds for marketable traits, habitat loss, cattle gene introgression & small population effects. Genetic testing of most of the approx. 100 bison at Blue Mounds State Park has shown the herd to be free of cattle mitochondrial DNA and containing 99.8% bison nuclear DNA. This genetic composition and diversity is on par with several Dept. of Interior/National Park herds and makes the Blue Mounds herd an excellent candidate to contribute to the conservation of the genome and population of wild bison. In order to sustain the genetic viability of the MN population and play a role in national conservation efforts requires increasing the MN population to 400-500 animals utilizing several DNR sites and the MN Zoo. This project will aid in the reintroduction of bison to a second location, Minneopa State Park, in order to begin growing DNR's bison population.
- Re-introducing bison to Minneopa requires installation of fencing, well-drilling, construction of a handling facility and construction of a watering pond within the bison range at the park. Fencing and well-drilling efforts are underway utilizing other funding sources. This project will help provide the monies needed for design and construction of the handling facility and watering pond.
- This project will also provide the means to create excellent opportunities to view bison up close via personal vehicle or public tours and learn about the history and importance of bison and prairie ecosystems. It is anticipated that these new opportunities will increase visitation at Minneopa State Park by > 32,000 and at Blue Mounds by > 1,000 visitors.
- At Blue Mounds, this funding will support acquisition of an ADA-accessible, off-highway safari vehicle to transport visitors into the prairie among the bison and the staffing/signage needed for visitors to learn about bison and the prairie ecosystems in which they live.
- At Minneopa these monies will be used to obtain critical informational, regulatory and safety signage and road improvements to insure that visitors will be able to experience bison and prairies three or more seasons a year.
- Additionally, reintroduction of bison to Minneopa will aid in the restoration/maintenance of remnant prairie in the park. Bison feed primarily on grasses and use their horns to create wallows (shallow depressions). These activities provide variation in vegetative species/structure which improves wildlife diversity on-site.

III. OVERALL PROJECT STATUS UPDATES:

Project Status as of January 1, 2016:

Project Status as of July 1, 2016:

Project Status as of January 1, 2017:

Project Status as of July 1, 2017:

Project Status as of January 1, 2018:

Overall Project Outcomes and Results:

IV. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Design and Construct a Humane Bison Handling Facility (Minneopa) Budget: \$305,787

Description: This facility is for annual roundup of animals for genetic testing, animal transfers to manage genetic diversity and carrying capacity, micro-chip placement for animal ID and disease prevention/management. It will be designed using Grandin humane livestock handling principles and other recent innovations in bison handling facilities, such as serpentine passageways and a hydraulic cube and squeeze chute (Berlinic Cube). See examples on illustration page).

Summary Budget Information for Activity 1:

ENRTF Budget: \$ 305,787
Amount Spent: \$ 0
Balance: \$ 305,787

Outcome	Completion Date
1. Conduct site visits to view/evaluate bison handling facilities at similar agencies.	06/30/2016
2. Design the handling facility to complement the site identified in 2014.	12/31/2016
3. Prepare bid specifications, request proposals, review proposals, select contractor.	3/1/2017
4. Complete installation/construction of handling facility components.	10/31/2017

Project Status as of January 1, 2016:

Project Status as of July 1, 2016:

Project Status as of January 1, 2017:

Project Status as of July 1, 2017:

Project Status as of January 1, 2018:

Final Report Summary

ACTIVITY 2: Design & Construction of a Watering Pond (Minneopa) Budget: \$60,367

Description: Design/construction of a watering pond resembling a “prairie pothole” approx. ¼ acre in size at Minneopa to provide a permanent, no maintenance water source to complement livestock waterers installed in 2014. An isolated water source is necessary to minimize the risk of disease introduction so the source may be a well or spring.

Summary Budget Information for Activity 2:

ENRTF Budget: \$ 60,367
Amount Spent: \$ 0
Balance: \$ 60,367

Outcome	Completion Date
1. Identify potential pond locations and select site.	08/31/2015
2. Complete pond design.	10/31/2015
3. Prepare bid specifications, request proposals, review proposals, select contractor.	02/01/2016
4. Complete pond construction.	07/31/2016

Project Status as of January 1, 2016:

Project Status as of July 1, 2016:

Project Status as of January 1, 2017:

Final Report Summary

ACTIVITY 3: Upgrading of approx. 2.8 miles of Wildlife Viewing Drive (Minneopa). Budget: \$51,157
Description: A lift of 3"-4" of gravel will be placed on the wildlife viewing drive through the bison range to provide for three season+ observation of bison by visitors similar to the experience at Custer State Park in South Dakota.

Summary Budget Information for Activity 3: ENRTF Budget: \$ 51,157
 Amount Spent: \$ 0
 Balance: \$ 51,157

Outcome	Completion Date
1. Prepare bid specifications, review RFP's, select contractor	09/15/2015
2. Oversee contractor/project implementation	11/01/2015

Project Status as of January 1, 2016:

Final Report Summary

ACTIVITY 4: Connecting Blue Mounds & Minneopa State Park visitors with bison and prairie ecosystems through personal and non-personal interpretation. Budget: \$182,689
Description: At Blue Mounds park visitors will view bison up-close via naturalist-led tours using an ADA-accessible, 12 passenger off-highway vehicle designed to minimally impact prairie. This project will fund acquisition and necessary customization of the safari vehicle, initial staffing to design/conduct tours and develop/install new interpretive signage. At Minneopa, this project will fund critical interpretive, informational and safety related signage related to bison at the park.

Summary Budget Information for Activity 4: ENRTF Budget: \$182,689
 Amount Spent: \$ 0
 Balance: \$182,689

Outcome	Completion Date
1. Design of Interp., informational, safety signage for Minneopa & Blue Mounds (viewing drive, self-guided trails, etc).	10/31/2015
2. Creation and Installation of signage at Minneopa & Blue Mounds	5/15/2016
3. ½ year Interpretive naturalist 2 to coordinate/conduct safari tours as well as other tasks.	4/16—10/2016
4. Acquisition & necessary customization of multi-passenger OHV for bison range tours	6/30/2016

Project Status as of January 1, 2016:

Project Status as of July 1, 2016:

Project Status as of January 1, 2017:

Final Report Summary

V. DISSEMINATION:

Description: The effort to re-introduce bison to Minneopa State Park and grow a conservation herd in Minnesota has already generated significant interest from the media and the public. See the following link as an

example (<http://news.dnr.state.mn.us/2014/09/04/bison-being-reintroduced-to-minneopa-state-park-by-fall-2015/>). It is anticipated that additional coverage will occur as the site is developed and certainly when the bison are reintroduced to Minneopa in the fall of 2015. In addition to media coverage and DNR and MN Zoo news releases, information about the project will also be disseminated through personal and non-personal interpretation at both Blue Mounds and Minneopa as well as through the MN Zoo's information and education efforts. There are currently two webpages that communicate efforts about the project (see links below).

Minnesota DNR Minneopa Reintroduction Webpage

http://www.dnr.state.mn.us/state_parks/minneopa/bison.html

Minnesota Zoo Bison Conservation Webpage

<http://mnzoo.org/conservation/minnesota/bison-conservation-minnesota/>

Project Status as of January 1, 2016:

Project Status as of July 1, 2016:

Project Status as of January 1, 2017:

Project Status as of July 1, 2017:

Final Report Summary:

VI. PROJECT BUDGET SUMMARY:

A. ENRTF Budget Overview:

Budget Category	\$ Amount	Overview Explanation
Personnel:	\$ 45,000	Interpretive Naturalist 2 (70% salary, 30% benefits). 50% FTE for 1 year.
Professional/Technical/Service Contracts:		
Design & installation of bison handling facility at Minneopa State Park	\$300,000	For similar work at Blue Mounds, DNR used Grandin Livestock Handling Systems for design and Hi-Hog Farm/Ranch Equipment for materials and installation. These or similar contractors will be utilized for the work at Minneopa.
Design & construction of a watering pond at Minneopa	\$59,210	DNR will coordinate with the local Soil & Water Conservation District on location/design and local excavators/pond builders for construction.
Add 3-4" gravel to 2.8 miles of wildlife drive.	\$50,000	DNR will contract with a sand/gravel operation and driveway installer type company for this contract.
Equipment/Tools/Supplies:	\$ 54,217	Safety, directional, interpretive signs at Minneopa & Blue Mounds.
Capital Expenditures over \$5,000:	\$ 80,000	12 passenger, ADA-accessible, Off-Highway safari type vehicle designed for minimal impact on prairie.
Direct & Necessary Expenses*	\$ 11,573	HR Support (~\$663), Safety Support (~\$164), Financial Support (~\$7,539), Communication Support (~\$1,141), IT Support (~\$1,137), Planning Support (~\$704), and Procurement Support (~\$235) that are necessary to accomplishing funded programs/projects.
TOTAL ENRTF BUDGET:	\$600,000	

**Direct and Necessary expenses include both Department Support Services (Human Resources, IT Support, Safety, Financial Support, Communications Support, Planning Support, and Procurement Support) and Division Support Services. Department Support Services are described in the agency Service Level Agreement, and billed internally to divisions based on rates that have been developed for each area of service. These services are directly related to and necessary for the appropriation. Department leadership services (Commissioner's Office and Regional Directors) are not assessed. Division Support Services include costs associated with Division business offices and clerical*

support. Those elements of individual projects that put little or no demand on support services such as large single-source contracts, large land acquisitions, and funds that are passed-thru to other entities are not assessed Direct and Necessary costs for those activities.

Explanation of Use of Classified Staff:

No classified staff will be funded from this appropriation.

Explanation of Capital Expenditures Greater Than \$5,000:

Design and Construction of a Humane Handling Facility at Minneopa State Park (\$300,000) – this facility is critical for managing herd size and genetic diversity during annual round-ups. It will be permanently used for these purposes as well as to mark animals (micro-chip placement) and disease prevention/management.

Design and Construction of a watering pond at Minneopa State Park (\$59,210) – this pond will serve as a secondary water source for bison in cold weather and likely their primary source of drinking water during the warmer months. The pond, once built, will be a permanent part of the Minneopa State Park landscape.

Safari type Tour Vehicle at Blue Mounds State Park (\$80,000) – For several years, the division has discussed ways that visitors might be able to see bison within the large (533 acre) range at the park. This 12 passenger, ADA-accessible off-highway vehicle will provide that opportunity. It is fully anticipated that the vehicle will remain at Blue Mounds through its useful existence.

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

0.5 FTE Interpretive Naturalist 2 at Blue Mounds State Park

Number of Full-time Equivalent (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:

N/A

B. Other Funds: The DNR will utilize approximately \$220,000 in other funds to implement this project. \$120,000 in in-kind services will be provided by DNR staff for park operations, resource management and interpretation related to bison at Minneopa State Park. In addition MN Zoo staff will provide about \$50,000 in in-kind services to assist with DNA sampling, managing the herd’s genetic data and provide technical assistance related to the handling facility and watering pond construction. About \$50,000 will be needed in other monies for infrastructure.

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
Non-state	N/A	N/A	
	\$	\$	
State			
Parks and Trails Legacy Fund	\$120,000		PAT in-kind funding needed annually for park operations, resource management and interpretation related to bison management at Minneopa. 2 yr total.
Parks and Trails Legacy Fund	\$50,000		Construction of a small pole building associated with handling facility and assist with pond construction costs if amount exceeds available funds.
Arts and Cultural Heritage Legacy Fund (50%) General Fund (50%)	\$50,000		MN Zoo In-kind services provided during the project: assisting with DNA sampling, compiling & analyzing studbook data, consultation on design of handling facility and pond installation, transport &

			quarantine of bison, interagency meeting coordination.
TOTAL OTHER FUNDS:	\$220,000	\$	

VII. PROJECT STRATEGY:

A. Project Partners:

The project team includes staff from DNR Parks and Trails and the MN Zoo. Since 2012, DNR Parks & Trails and MN Zoo have an interagency agreement for cooperative management of bison and prairie wildlife native to Minnesota. Only DNR Parks and Trails will be receiving project funds. DNR Parks and Trails is responsible for planning and implementing the four major activities identified in this work plan. MN Zoo staff will provide technical advice regarding design of the handling facility and pond as well as conduct the other activities of the project identified above.

B. Project Impact and Long-term Strategy:

Three-four more reintroduction sites will eventually be needed to reach the 400-500 animals required. DNR has suitable state parks, but is open to partnering with other organizations. In-kind contributions have been made by DNR and MN Zoo staff in managing the existing population and planning for the Minneopa reintroduction. DNR and MN Zoo will provide partial funding via project dollars and in-kind services toward future reintroduction efforts and may also submit a future request to assist with additional reintroduction sites.

C. Funding History: This is a new project. The DNR selected Minneopa for reintroducing bison in 2013. Staff time (in-kind services) has been invested since then in planning for the infrastructure, operations, resource management and interpretive needs related to the reintroduction. Funds have also been secured and/or expended on site preparation, well installation and installation of fencing and gates.

Funding Source and Use of Funds	Funding Timeframe	\$ Amount
<u>Genetic Testing (P&T Legacy Fund*)</u> – confirm bison genetics & heritage of animals.	FY14-FY15	\$3,100
<u>Site Preparation at Minneopa (P&T Legacy Fund*)</u> – baseline vegetation assessment, woody plant removal, invasive species control & prescribed burning.	FY14-FY15	\$10,200
<u>Well Installation Minneopa (P&T Legacy Fund*)</u> – provide permanent watering source for bison.	FY15	\$62,000
Fence and gate installation (P&T Legacy Fund) – installation of approx.. 22,000’ of 6 strand wire fence & several gates around 330 acres or remnant prairie/bison range at Minneopa.	FY15	\$145,000

**Parks and Trails Legacy Fund – Laws 2013, Chapter 137, article 3.*

VIII. FEE TITLE ACQUISITION/CONSERVATION EASEMENT/RESTORATION REQUIREMENTS:

A. Parcel List:

N/A

B. Acquisition/Restoration Information:

N/A

IX. VISUAL COMPONENT or MAP(S):

See attached document for location map and examples of a handling facility and safari vehicle.

X. RESEARCH ADDENDUM:

N/A

XI. REPORTING REQUIREMENTS:

Periodic work plan status update reports will be submitted no later than January 2016, July 2016, January 2017, July 2017, and January 2018. A final report and associated products will be submitted between January 1 and March 1, 2018.

**Environment and Natural Resources Trust Fund
M.L. 2015 Project Budget**

Project Title: *Reintroduction and Interpretation of Bison in Minnesota State Parks*

Legal Citation: *M.L. 2015, Chp. 76, Sec. 2, Subd. 03h*

Project Manager: *Edward Quinn*

Organization: *MNDNR Division of Parks & Trails*

M.L. 2015 ENRTF Appropriation: \$ 600,000

Project Length and Completion Date: *2.5 years, December 31 ,2017*

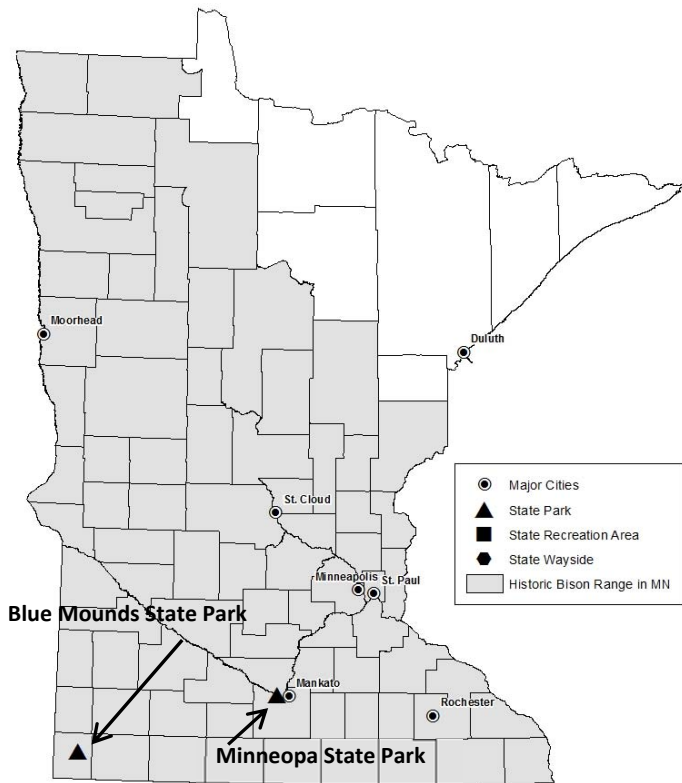
Date of Report: *October 15, 2014 (Rev. 5/14/2015)*



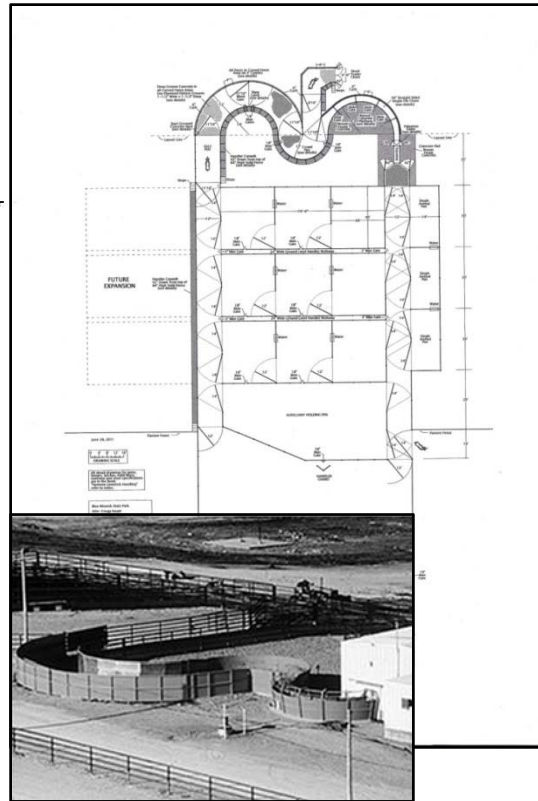
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1 Budget	Amount Spent	Activity 1 Balance	Activity 2 Budget	Amount Spent	Activity 2 Balance	Activity 3 Budget	Amount Spent	Activity 3 Balance	Activity 4 Budget	Amount Spent	Activity 4 Balance	TOTAL BUDGET	TOTAL BALANCE
BUDGET ITEM	<i>Design & Construct a Humane Bison Handling Facility - Minneopa</i>			<i>Design & Construction of a Watering Pond - Minneopa</i>			<i>Upgrading of approx. 2.8 miles of Wildlife Viewing Drive - Minneopa</i>			<i>Connecting Blue Mounds & Minneopa State Park visitors with bison and prairie ecosystems through personal and non-personal interpretation.</i>				
Personnel (Wages and Benefits)														
Interpretive Naturalist 2 (70% salary, 30% benefits). 50% FTE for 1 year										\$45,000	\$0	\$45,000	\$45,000	\$45,000
Professional/Technical/Service Contracts														
Upgrading of approx. 2.8 miles of wildlife drive to provide for three season+ observation. The upgrade consists of a 3"-4" lift of gravel to be placed on the road. Will contract with sand/gravel operation, driveway installer type company for this work. A competitive process will be used to select the contractor.							\$50,000	\$0	\$50,000				\$50,000	\$50,000
Design & installation of bison handling facility (gathering pen, holding pens, squeeze chute, etc). For similar work at Blue Mounds we have used Grandin Livestock Handling Systems for design and Hi-Hog Farm & Ranch Equipment for materials/installation. A competitive process will be used to select the contractor.	\$300,000	\$0	\$300,000										\$300,000	\$300,000
Design & construction of a watering pond at Minneopa to provide a permanent, no maintenance water source for bison in addition to the livestock waterers. Will potentially utilize an exterior exhibit company for the design and then work with local excavators/pond builders for construction. A competitive process will be used to select the contractor.				\$59,210	\$0	\$59,210							\$59,210	\$59,210
Equipment/Tools/Supplies														
<i>Signage: interpretive, directional and safety</i>										\$54,217	\$0	\$54,217	\$54,217	\$54,217
Capital Expenditures Over \$5,000														
Off-highway safari vehicle for 12 passengers, ADA-accessible, designed to minimally impact prairie - to provide visitor field experiences to view bison and prairie at Blue Mounds SP.										\$80,000	\$0	\$80,000	\$80,000	\$80,000
Other														
Direct & Necessary Expenses* HR Support (~\$663), Safety Support (~\$164), Financial Support (~\$7,530), Communication Support (~\$1,141), IT Support (~\$1,137), Planning Support (~\$704), and Procurement Support (~\$235) necessary to accomplishing funded programs/projects.	\$5,787	\$0	\$5,787	\$1,157	\$0	\$1,157	\$1,157	\$0	\$1,157	\$3,472	\$0	\$3,472	\$11,573	\$11,573
COLUMN TOTAL	\$305,787	\$0	\$305,787	\$60,367	\$0	\$60,367	\$51,157	\$0	\$51,157	\$182,689	\$0	\$182,689	\$600,000	\$600,000

*Direct and Necessary expenses include both Department Support Services (Human Resources, IT Support, Safety, Financial Support, Communications Support, Planning Support, and Procurement Support) and Division Support Services. Department Support Services are described in the agency Service Level Agreement, and billed internally to divisions based on rates that have been developed for each area of service. These services are directly related to and necessary for the appropriation. Department leadership services (Commissioner's Office and Regional Directors) are not assessed. Division Support Services include costs associated with Division business offices and clerical support. Those elements of individual projects that put little or no demand on support services such as large single-source contracts, large land acquisitions, and funds that are passed-thru to other entities are not assessed Direct and Necessary costs for those activities.

Project Title: Reintroduction and Interpretation of Bison in Minnesota State Parks



Historic Range of Bison in MN and Locations of Blue Mounds and Minneopa State Parks



Example of Humane Bison Handling Facility to Manage Bison Population and Genetics
Serpentine passage is custom-built on-site. (Photo - <http://www.grandin.com>)



Example of Off-Road Safari Vehicle to Provide Close-up Observation of Bison and Prairie Ecosystems
ADA accessible, 12 passenger, minimal impact to prairie
(Photo – Cook Bison Ranch)