



Environment and Natural Resources Trust Fund (ENRTF)

M.L. 2020 ENRTF Work Plan (Main Document)

Today's Date: August 19, 2019

Date of Next Status Update Report: April 1, 2021

Date of Work Plan Approval:

Project Completion Date: June 30, 2024

Does this submission include an amendment request? No

PROJECT TITLE: Enhancing Bat Recovery and Survival by Optimizing Artificial Roosting Structures

Project Manager: Ed Quinn, Natural Resource Program Supervisor

Organization: MN Dept. of Natural Resources

College, Department, or Division: Parks and Trails

Mailing Address: 500 Lafayette Road, Box 39

City, State, Zip Code: St. Paul, MN 55155

Project Manager Direct Telephone Number: 651-259-5594

Email Address: Edward.Quinn@state.mn.us

Web Address: <https://www.dnr.state.mn.us/>

Location: State Park and State Recreation Area lands with influence statewide via recommendations for other landowners on artificial bat roost structure installation and maintenance.

Total Project Budget: \$190,000

Amount Spent: \$0

Balance: \$190,000

Legal Citation: M.L. 2020, Chp. xx, Sec. xx, Subd. xx

Appropriation Language:

PROJECT STATEMENT:

White-nose Syndrome (WNS) is a devastating disease responsible for the deaths of millions of bats in eastern North America. In Minnesota, WNS has caused declines of over 90% in Minnesota's populations of hibernating bats. Bats are infected during winter hibernation, but those that survive have a chance to recover and raise young during the summer. Summer roosting sites are one of the most important habitat components for Minnesota's hibernating bat species. Natural roosts typically consist of tree cavities or loose bark. Unfortunately, roost in dead trees and even live trees are ephemeral and not always in optimal locations. Artificial roost structures, appropriately designed and located, provide critical habitat where natural roosts have been lost or do not exist (Mering and Chambers, 2014).

This project will (1) assess bat use of existing artificial bat roost structures on state park and state recreation area lands; and (2) identify characteristics of successful bat roosts. Characteristics include such things as: artificial roost structure design, location and orientation, internal temperature and humidity, bat species utilization and approximate numbers. Results of this assessment will be used to install or relocate artificial bat roost structures in optimal locations for bat utilization and reproduction on state park and state recreation area lands.

Outcomes of this project will be shared with the North American WNS Conservation and Recovery Working Group which is developing best management practices for artificial bat roosts. Their findings will be distributed throughout the United States and Canada as part of accomplishing action item 3.4 (3.4.4) in Implementation of the National Plan for Assisting States, Federal Agencies and Tribes in Managing White-Nose Syndrome in Bats.

Results will also be shared by the MN Dept. of Natural Resources to aid citizens and staff in construction, placement and maintenance of artificial roost structures for maximum benefit to Minnesota's hibernating bats. This effort will help landowners and land managers by providing strategies to relocate bats roosting in structures which need to be demolished or renovated.

Mering, E. D. and C. L. Chambers. 2014. Thinking outside the box: a review of artificial roosts for bats. Wildlife Society Bulletin 38: 741-751.

Multi-Agency, 2014 - Implementation of the National Plan for Assisting States, Federal Agencies and Tribes in Managing White-Nose Syndrome in Bats.

<https://s3.amazonaws.com/org.whitenosesyndrome/assets/prod/2aa0e9e0-8122-11e8-a212-178e58894de5-WNS%20Implementation%20Plan%202016.pdf>. Accessed 4/10/19.

II. OVERALL PROJECT STATUS UPDATES:

First Update April 1, 2021

Second Update October 1, 2021

Third Update April 1, 2022

Fourth Update October 1, 2022

Fifth Update April 1, 2023

Sixth Update October 1, 2023

Seventh Update April 1, 2024

III. PROJECT ACTIVITIES AND OUTCOMES:

Activity 1: Assessment and Analysis of Artificial Roost Structures, and Application of Information to Optimize Bat Occupancy and Reproduction

Description: *This project will collect and analyze data on existing artificial bat roost structures on state park and state recreation area lands. These data will be used to install or relocate existing roosting structures to maximize bat utilization. Best management practices for constructing, installing and maintaining bat roosting structures will be communicated to the public via the DNR website and other outreach products. The information will also be shared with the North American WNS Conservation and Recovery Working Group which is assembling similar data from across the United States and Canada.*

ACTIVITY 1 ENRTF BUDGET: \$190,000

Outcome	Completion Date
1. Inventory of existing artificial bat roosting structures on state park and SRA lands.	Fall 2020
2. Summarize data and identify locations of structures to monitor	Spring 2021
3. Construct and install certain structure styles, locations or orientations if needed	Spring 2021
4. Collect environmental and bat utilization data	Fall 2021
5. Analyze data to identify optimal roost structure parameters for bat utilization	Spring 2022
6. Install or relocate structures at optimal locations, orientation and style	Fall 2022
7. Continue data compilation and initiate web page and outreach products	Spring 2023
8. Monitor structures installed to provide optimal conditions for bat utilization	Fall 2023
9. Summarize findings and finalize web page and outreach products	June 2024

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Fourth Update October 1, 2022

Fifth Update April 1, 2023

Sixth Update October 1, 2023

Seventh Update April 1, 2024

Final Report between project end (June 30) and August 15, 2024

IV. DISSEMINATION:

Description:

Best management practices for constructing, installing and maintaining bat roosting structures will be communicated to the public via the DNR website and other outreach products. The information will also be shared with the North American WNS Conservation and Recovery Working Group which is assembling similar data from across the United States and Canada

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](#).

First Update April 1, 2021

Second Update October 1, 2021

Third Update April 1, 2022

Fourth Update October 1, 2022

Fifth Update April 1, 2023

Sixth Update October 1, 2023

Seventh Update April 1, 2024

Final Report between project end (June 30) and August 15, 2024

V. ADDITIONAL BUDGET INFORMATION:

A. Personnel and Capital Expenditures

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

N/A

Explanation of Use of Classified Staff:

Any classified staff position paid for by ENRTF will either: 1) Be backfilled with a new position OR 2) the work done by this position will be delayed, eliminated, or completed by the start of the project.

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

Enter Total Estimated Personnel Hours for entire duration of project: 5,616	Divide total personnel hours by 2,080 hours in 1 yr = = TOTAL FTE: 2.7
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Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:

Enter Total Estimated Contract Personnel Hours for entire duration of project: N/A	Divide total contract hours by 2,080 hours in 1 yr = TOTAL FTE: N/A
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VI. PROJECT PARTNERS:

Partners outside of project manager's organization receiving ENRTF funding

N/A

Partners outside of project manager's organization NOT receiving ENRTF funding

WNS Conservation and Recovery Working Group

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

Outcomes from this project will increase the number of bats surviving WNS and raising offspring in state park and state recreation area lands. The Division of Parks and Trails has adequate funding and staffing to ensure that structures are regularly maintained so as to provide optimal roost sites for the foreseeable future. It will

also provide best management practices that can be utilized by citizens, other agencies and organizations to provide more and better summer roosting sites for Minnesota's hibernating bat species. Information developed as part of this project will be incorporated into the work of the North American WNS Conservation and Recovery Working Group to provide guidelines for artificial roosts that will be distributed by this group throughout the United States and Canada.

VIII. REPORTING REQUIREMENTS:

- Project status update reports will be submitted April 1 and October 1 each year of the project
- A final report and associated products will be submitted between June 30 and August 15, 2024

IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

A. Budget Spreadsheet

B. Visual Component or Map

C. Parcel List Spreadsheet - N/A

D. Acquisition, Easements, and Restoration Requirements – N/A

E. Research Addendum - N/A

Attachment A: Project Budget Spreadsheet
Environment and Natural Resources Trust Fund
M.L. 2020 Budget Spreadsheet

Legal Citation:

Project Manager: Ed Quinn

Project Title: Enhancing Bat Recovery and Survival by Optimizing Artificial Roost Structures

Organization: MNDNR

Project Budget: \$190,000

Project Length and Completion Date: 4 years, June 30, 2024

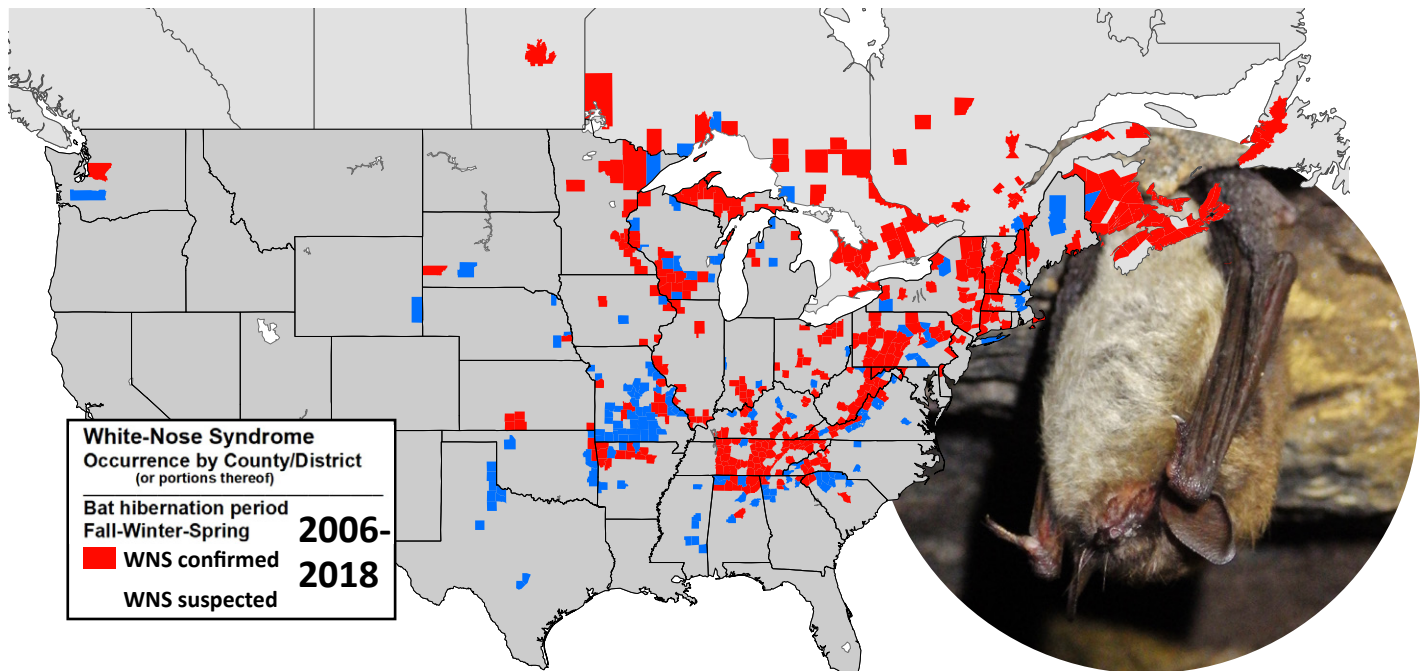
Today's Date: 8/19/2019



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
BUDGET ITEM				
Personnel (Wages and Benefits)		\$ 128,000	\$ -	\$ 128,000
Bat specialists, \$110,000 (75% salary, 25% benefits), 0.5 FTE each year for 4 years				
Park staff \$7,000 (70% salary, 30% benefits), 0.15 FTE each year for 4 years				
Info Outreach Specialist \$11,000 (64% salary, 36% benefits), 0.05 FTE each year for 2 years				
Professional/Technical/Service Contracts		N/A		
			\$ -	\$ -
Equipment/Tools/Supplies				
-Field equipment to monitor bat occupancy (bat detectors, night vision glasses, data loggers, associated supplies) (\$9k)		\$ 15,702	\$ -	\$ 15,702
-Supplies and materials to build artificial bat roosts (\$5k)				
-Outreach supplies (\$1,702)			\$ -	\$ -
Capital Expenditures Over \$5,000		N/A		
		\$ -	\$ -	\$ -
Fee Title Acquisition		N/A		
		\$ -	\$ -	\$ -
Easement Acquisition		N/A		
			\$ -	\$ -
Professional Services for Acquisition		N/A		
		\$ -	\$ -	\$ -
Printing				
Printing of outreach materials, roost building instructions		\$ 2,000	\$ -	\$ 2,000
Travel expenses in Minnesota				
Travel to monitor bat roosts, attend outreach events (mileage, lodging, meals) in accordance with Commissioner's Plan.		\$ 25,000	\$ -	\$ 25,000
Other				
Direct and necessary costs to cover HR support (\$4,138), Safety support (\$749), Financial support (\$2,042), Communication support (\$1,388), IT support (\$9,843), Planning support (\$1,138)		\$ 19,298	\$ -	\$ 19,298
COLUMN TOTAL		\$ 190,000	\$ -	\$ 190,000
SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT	Status (secured or pending)	Budget	Spent	Balance
Non-State:		\$ -	\$ -	\$ -
WNS Aid to States and Tribes (USFWS)	pending	\$ 10,000		
State:		\$ -	\$ -	\$ -
General Fund for zoologist supervision, oversight, guidance	secured	\$ 40,000		
General Fund and Parks & Trails Legacy for NR Program supv. oversight, direction.	secured	\$ 40,000		
General Fund and Parks & Trails Legacy for NR Program Coordinator - database development and administration.	secured	\$ 30,000		
In kind:		\$ -	\$ -	\$ -
Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS	Amount legally obligated but not yet spent	Budget	Spent	Balance
Reintro & Interp of Bison in State Park sM.L. 2015, Chp. 76, Sec. 2, Subd. 03h	\$106,011	\$ 600,000	\$ 486,989	\$ 113,011
SP's for Monarchs, other Pollinators M.L. 2017, Chp. 96, Sec. 2, Subd. 08d	\$182,623	\$ 672,000	\$ 159,585	\$ 512,415
Restoring Forests in SP's M.L. 2018, Chp. 214, Art. 4, Sec. 02, Subd. 08e	\$34,599	\$ 250,000	\$ 16,378	\$ 233,622
Save End. Poll. (partial) M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 08a	\$90,000	\$ 170,000	\$ -	\$ 170,000

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Minnesota's Bats Need Our Help to Fight White-nose Syndrome



White-nose Syndrome has caused declines of over 90% among Minnesota's hibernating bats.



