



Environment and Natural Resources Trust Fund (ENRTF) M.L. 2011 Work Plan

Date of Status Update:

Date of Next Status Update: 1/1/2012

Date of Work Plan Approval: 6/23/2011

Project Completion Date: 6/30/2014

Is this an amendment request? _____

Project Title: Golden Eagle Survey

Project Manager: Scott Mehus

Affiliation: National Eagle Center

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Location:

Counties Impacted: Hubbard, Goodhue, Houston, Olmsted, Wabasha, Winona

Ecological Section Impacted: Paleozoic Plateau (222L)

Total ENRTF Project Budget:	ENRTF Appropriation \$:	60,000
	Amount Spent \$:	<u>0</u>
	Balance \$:	60,000

Legal Citation: M.L. 2011, First Special Session, Chp. 2, Art.3, Sec. 2, Subd. 03e

Appropriation Language:

\$30,000 the first year and \$30,000 the second year are from the trust fund to the commissioner of natural resources for an agreement with the National Eagle Center to increase the understanding of golden eagles in Minnesota through surveys and education. This appropriation is available until June 30, 2014, by which time the project must be completed and final products delivered.

I. PROJECT TITLE: Golden Eagle Survey Project

II. PROJECT SUMMARY:

The Golden Eagle Survey Project aims to better understand the numbers, distribution, habitats, habitat use, migration routes, breeding areas and management needs of the population of golden eagles that winter in Minnesota. The project also plans to educate the public about the presence of golden eagles in Minnesota and their habitat needs.

The Golden Eagle Survey Project represents ground breaking research on a bird that was previously not thought to be a regular inhabitant of Minnesota. Surveys coordinated by the Golden Eagle Survey Project have documented a regular wintering population using the bluffland subsection of the Paleozoic Plateau in southeast Minnesota. Using satellite telemetry to track golden eagles, the Project is discovering the range, the location of breeding territories, and migration routes of this population.

Education and outreach to landowners, wildlife managers and the general public is an important component of the Golden Eagle Survey Project. Through data collection, education and conservation efforts, the Project hopes to ensure that golden eagles can continue to find suitable winter habitat in Minnesota's bluffland subsection.

III. PROJECT STATUS UPDATES:

Project Status as of January 2012:

Project Status as of June 2012:

Project Status as of January 2013:

Project Status as of June 2013:

Project Status as of January 2014:

Project Status as of June 2014:

IV. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Wintering Golden Eagle Survey

Description:

The Golden Eagle Survey Project will conduct a Wintering Golden Eagle Survey each January. Since 2004, the Golden Eagle Survey Project has recorded the consistent presence of golden eagles in Minnesota's bluffland region. Volunteer observers log thousands of miles each year to document the presence of golden eagles in the blufflands in areas outlined by the Project as likely habitat. Coordinating the survey and collecting the data involved staff time, as well as travel to investigate potential survey areas and habitats.

The Project will continue this survey and expand the coverage area to include areas adjacent to the current survey area (see attached map) and cover more completely the likely habitat of Minnesota's wintering golden eagles. (The attached map outlines current survey areas and some potential survey areas.)

Summary Budget Information for Wintering Golden Eagle Survey:

ENRTF Budget: \$ 5,600

Amount Spent: \$ 0

Balance: \$ 5,600

Activity Completion Date: March, 2014

Outcome	Completion Date	Budget
1. Collect population data on golden eagles in Minnesota's bluffland subsection by coordinating annual winter surveys and conducting field observations	March 2014	\$2,600
2. Expand golden eagle survey area to include likely habitat in in southeast Minnesota and ensure more complete coverage of likely golden eagle habitat in the state.	June 2014	\$3,000

Activity Status as of January, 2012:**Activity Status as of June, 2012:****Activity Status as of January, 2013:****Activity Status as of June, 2013:****Activity Status as of January, 2014:****Activity Status as of June, 2014:****Final Report Summary:****ACTIVITY 2: Trapping and Tracking****Description:**

The Golden Eagle Survey project will continue to track golden eagles #42 and #46, who were released in previous years with GPS linked-satellite transmitters. Inputting GPS data into ArcGIS software will create a fuller picture of the range, habitat type, migration routes and timing of golden eagles that winter in the blufflands. The project will purchase additional GPS transmitters to track more golden eagles. These transmitters will provide data 365 days/year from anywhere on the globe, for up to seven years. Data collected from these golden eagles will contribute to a better understanding of the range, habitat use and management needs of golden eagles in Minnesota.

In order to track additional golden eagles known to use Minnesota's blufflands as winter habitat, individuals or teams will lure golden eagles, using traps that protect the health and safety of the bird, and attach a GPS satellite transmitter. Trapping involves significant preparation, equipment and driving time and requires items such as rocket nets, bow nets, other eagle traps, and field equipment. Compensation for time, mileage and equipment is a significant part of the budget for this activity.

Summary Budget Information for Trapping and Tracking:

ENRTF Budget: \$ 35,000
Amount Spent: \$ 0
Balance: \$ 35,000

Activity Completion Date: March, 2013

Outcome	Completion Date	Budget
1. Create interactive map in ArcGIS system that will visually represent the population and geographic data collected from annual surveys, field observations and tracking of golden eagles with satellite transmitters.	June 2014	\$5,400
2. Trap a golden eagle that uses Minnesota's Paleozoic Plateau	March 2014	\$21,500

bluffland subsection as part of winter range		
3. Release and track up to four golden eagles with GPS satellite transmitters	March 2014	\$8,100

Activity Status as of January, 2012:

Activity Status as of June, 2012:

Activity Status as of January, 2013:

Activity Status as of June, 2013:

Activity Status as of January, 2014:

Activity Status as of June, 2014:

Final Report Summary:

ACTIVITY 3: Public Education and Outreach

Description:

Education about the presence of golden eagles in Minnesota is a critical part of the Golden Eagle Survey Project. Now that the Project can confirm a regular winter population using Minnesota’s bluffland habitat, informing the public about the presence of these magnificent birds of prey may be critical to this population’s survival.

Through the National Eagle Center’s public programs, the Golden Eagle Survey Project can reach up to 100,000 annual visitors and share important information on golden eagles in Minnesota. Classes and field trips will be offered throughout the winter to help participants learn to identify a golden eagle and see them in their natural environment. The Golden Eagle Survey Project will continue to work with wildlife managers in the Minnesota Department of Natural Resources and area nature centers and parks in educating the general public. The Golden Eagle Survey Project will also create educational materials and A/V presentations about golden eagles to aid in outreach to landowners and the general public.

The Golden Eagle Survey Project encourages appropriate habitat conservation and restoration. The presence of remnant or restored bluff prairies is closely linked with the presence of wintering golden eagles in Minnesota. Conservation efforts related to bluff prairie habitat would have broad positive impacts for many of Minnesota’s rare, threatened and endangered species. The Golden Eagle Survey Project will collaborate with area landowners or wildlife managers on a habitat restoration project in one of Minnesota’s most threatened habitat types, the dry upland (or ‘goat’) prairie.

Summary Budget Information for Public Education and Outreach:

ENRTF Budget: \$ 19,400

Amount Spent: \$ 0

Balance: \$ 19,400

Activity Completion Date: June, 2013

Outcome	Completion Date	Budget
1. Educate the general public, landowners and wildlife professionals about golden eagles and their habitat needs through programs at the National Eagle Center, field trips and seminars, outreach programs and collaboration with landowners	June 2014	\$10,900

and wildlife managers on habitat restoration.		
2. Create educational materials and displays to further public understanding of golden eagles in Minnesota.	June 2014	\$8,500

Activity Status as of January, 2012:

Activity Status as of June, 2012:

Activity Status as of January, 2013:

Activity Status as of June, 2013:

Activity Status as of January, 2014:

Activity Status as of June, 2014:

Final Report Summary:

V. DISSEMINATION:

Description:

Interactive ArcGIS maps created from data collection through the surveys, field observations and tracking of golden eagles will be available to all partners in the Project. Maps showing migration routes and geographic location information on golden eagles being tracked by the Project will be available to the general public through the National Eagle Center's website (www.nationaleaglecenter.org) throughout the Project duration. Results of the Annual Survey will be publicly available each year through the website and regional media outlets.

Data collected throughout the Golden Eagle Survey project will be freely available to all partners in the Project. Additionally, some data and field observations may be shared with colleagues studying golden eagles in other regions of the US, and around the world.

As more data is gathered, the Project will look for opportunities to present the preliminary data and observations to interested organizations and at academic conferences.

Status as of January, 2012:

Status as of June, 2012:

Status as of January, 2013:

Status as of June, 2013:

Status as of January, 2014:

Status as of June, 2014:

Final Report Summary:

VI. PROJECT BUDGET SUMMARY: JULY 2011-JUNE 2014

A. ENRTF Budget:

Budget Category	\$ Amount	Explanation
Personnel:	\$ 26,400	Project Manager is responsible for overall project management, education and outreach, co-coordinating the annual survey and supervising

		trapping and field work. 41% FTE The Assistant Project Manager is responsible for co-coordinating the annual survey, data collection and ArcGIS mapping, as well as educational and outreach materials development. 38% FTE Staff Trapping Technician will assist with field set-up, maintenance of traps, and care of prey animals. 5% FTE
Service Contracts:	\$ 3,600	Trapping technician(s) – Occasional work during field season for set-up and monitoring of eagle traps. Qualified individuals with experience trapping raptors will be sought for this contract. 11%FTE
Equipment/Tools/Supplies:	\$ 9,500	Rocket net, eagle traps and materials, field data collection devices (e.g. digital cameras, trail camera, video camera, handheld GPS), walkie-talkies/2-way radios, prey animal supplies such as food, bedding, kennels, and captured eagle supplies such as hoods, kennels and materials for attaching transmitters.
Capital Equipment over \$3,500	\$ 7,500	2 GPS satellite transmitters
Travel Expenses in MN:	\$ 7,500	Travel to and from existing and potential survey areas and trap sites
Printing:	\$ 3,500	Brochures, educational materials
Other:	\$ 2,000	Purchase of travel display
TOTAL ENRTF BUDGET:	\$60,000	

Explanation of Use of Classified Staff: N/A

Explanation of Capital Expenditures Greater Than \$3,500: The Project will purchase two GPS satellite transmitters to track additional golden eagles. The current estimated cost of the transmitters is \$3,750 per transmitter.

Number of Full-time Equivalent (FTE) funded with this ENRTF appropriation: 0.84 FTE

Number of Full-time Equivalent (FTE) estimated to be funded through contracts with this ENRTF appropriation: 0.11 FTE

B. Other Funds:

Source of Funds	\$ Amount Proposed	\$ Amount Spent	Use of Other Funds
Non-state			
Audubon Minnesota	\$ 25,000	\$	In-kind donation of satellite data fees and data handling
State			
MN Conservation Corps	\$9,600		In-kind donation – contract trapping technicians (<i>anticipated</i>)
MN DNR	\$ 7,500	\$	In-kind donation of 2 GPS satellite tracking devices (<i>anticipated</i>)
TOTAL OTHER FUNDS:	\$42,100	\$	

VII. PROJECT STRATEGY:

A. Project Partners: National Eagle Center, Audubon Minnesota, Minnesota DNR Non-Game Wildlife Program and Minnesota Conservation Corps. All ENRTF dollars will go to National Eagle Center.

B. Project Impact and Long-term Strategy:

Golden Eagles in North America are primarily found in the western United States and Canadian Provinces. There have been occasional reports of golden eagles from most counties in Minnesota, and Hawk Ridge Bird Observatory in Duluth, Minnesota annually reports fall migration counts between 115 – 200 birds. In recent years, the Golden Eagle Survey Project has been able to document a regular winter population of golden eagles using the bluffland habitat of Minnesota’s Paleozoic Plateau.

A regular winter population of golden eagles in Minnesota raises new and important management questions. Because these birds were not previously thought to be regular residents, very little is known about their habitat needs and range in Minnesota. The Golden Eagle Survey Project aims to better understand golden eagles in the blufflands, in order to protect them and the habitat they require.

Knowing the breeding origin (or origins) of these birds is of high importance. Our preliminary data shows that golden eagles using Minnesota’s blufflands in winter spending the summer breeding months in northern Ontario and Quebec, where they are considered threatened and endangered. More data collected by the Project will show more clearly the breeding origin(s), migration patterns, habitat use and range of these birds.

Minnesota’s blufflands provide critical wintering habitat for these golden eagles. Just as we are concerned about habitat loss in Central and South America for many of Minnesota’s migratory songbirds, we should also be concerned about the winter habitat here in Minnesota for a species that many believe is in decline across North America.

The habitat type most closely associated with Minnesota’s wintering golden eagles is itself a critically endangered habitat. The dry, upland prairie, known locally as a ‘goat prairie’, is home to several of Minnesota’s threatened and endangered species. As the Project works to inform the public about the presence of golden eagles, and the need to conserve and restore this habitat type, many other less charismatic species will likely benefit.

Golden eagles moving from western breeding areas could be seriously impacted by wind generation projects proposed for the Great Plains and western Minnesota. Data from the Golden Eagle Survey Project will provide a better understanding of migration routes and habitat use which can inform planning for wind generation and power transmission projects for the benefit of all concerned.

The education and outreach efforts of the Project are integral to ensuring a stable future for golden eagles in Minnesota. Most of habitat in which golden eagles have been documented is privately owned or under multiple agency jurisdictions. It will be critical to broadly inform and engage the public, landowners and wildlife managers about golden eagles in Minnesota in order to protect and preserve this magnificent species in the state.

C. Spending History:

Funding Source	M.L. 2005 or FY 2006-07	M.L. 2007 or FY 2008	M.L. 2008 or FY 2009	M.L. 2009 or FY 2010	M.L. 2010 or FY 2011
National Eagle Center		\$10,000	\$10,000	\$17,300	
Audubon Minnesota				\$11,285	
MN Department of Natural Resources				\$5,450	
US Fish and Wildlife Service				\$3,650	

VIII. ACQUISITION/RESTORATION LIST:

IX. MAP(S): See map attachment of MN Survey Routes

X. RESEARCH ADDENDUM: N/A

XI. REPORTING REQUIREMENTS:

Periodic work plan status update reports will be submitted not later than January 2012, June 2012, January 2013, June 2013, and January 2014. A final report and associated products will be submitted between June 30 and August 1, 2014 as requested by the LCCMR.

Attachment A: Budget Detail for M.L. 2011 (FY 2012-13) Environment and Natural Resources Trust Fund Projects											
Project Title: <i>Golden Eagle Survey Project</i>											
Legal Citation:											
Project Manager: Scott Mehus											
M.L. 2011 (FY 2012-13) ENRTF Appropriation: \$ 60,000											
Project Length and Completion Date: 3 years, June 2014											
Date of Update: June 2011											
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Activity 1 Budget	Amount Spent	Balance	Activity 2 Budget	Amount Spent	Balance	Activity 3 Budget	Amount Spent	Balance	TOTAL BUDGET	TOTAL BALANCE
BUDGET ITEM	<i>Wintering Golden Eagle Survey</i>			<i>Trapping and Tracking</i>			<i>Public Education and Outreach</i>				
Personnel (Wages and Benefits)	\$3,600.00		\$3,600.00	\$11,400.00		\$11,400.00	\$11,400.00		\$11,400.00	\$26,400.00	\$26,400.00
Scott Mehus, Project Manager: \$12,900 (100% salary) Responsible for overall project management, education and outreach programs, co-coordinating the annual survey and supervising trapping and field work. 41% FTE											
Eileen Hanson, Assistant Project Manager: \$12,000 (100% salary) Responsible for co-coordinating the annual survey, data collection and ArcGIS mapping, as well as educational materials development and assisting with project management. 38% FTE											
Trapping Technician(s): \$1,500 (100% salary) Assist with field set-up, maintenance of traps, and care of prey animals. 5%FTE											
Service contracts											
(TBD) Trapping Technician: \$3,600. Contract for set-up and monitoring of eagle traps. Qualified individual(s) with experience trapping raptors will be sought for this contract. 11% FTE				\$3,600.00		\$3,600.00				\$3,600.00	\$3,600.00
Equipment/Tools/Supplies											
Rocket Net				\$2,500.00		\$2,500.00				\$2,500.00	\$2,500.00
Eagle traps and materials				\$2,500.00		\$2,500.00				\$2,500.00	\$2,500.00
Field data collection devices - (handheld GPS, digital cameras, trail cameras, video camera)				\$1,200.00		\$1,200.00				\$1,200.00	\$1,200.00
Field Communication devices - 2 way radios/walkie-talkies				\$500.00		\$500.00				\$500.00	\$500.00
Prey animal needs - food, bedding, kennels				\$2,550.00		\$2,550.00				\$2,550.00	\$2,550.00
Captured eagle needs - hoods, kenels, materials to attach transmitter				\$250.00		\$250.00				\$250.00	\$250.00
Capital equipment over \$3,500											
GPS satellite transmitter (2 @ estimated \$3,750 each)				\$7,500.00		\$7,500.00				\$7,500.00	\$7,500.00
Printing							\$3,500.00		\$3,500.00	\$3,500.00	\$3,500.00
Travel expenses in Minnesota	\$2,000.00		\$2,000.00	\$3,000.00		\$3,000.00	\$2,500.00		\$2,500.00	\$7,500.00	\$7,500.00
Mileage for travel to and from survey areas and trap sites and outreach programs											
Other											
Travel display							\$2,000.00		\$2,000.00	\$2,000.00	\$2,000.00
COLUMN TOTAL	\$5,600.00	\$0.00	\$5,600.00	\$35,000.00	\$0.00	\$35,000.00	\$19,400.00	\$0.00	\$19,400.00	\$60,000.00	\$60,000.00

