



DATE: February 12, 2020

MEMO TO: Nels Leutwiler, Chair
Preservation Foundation Board

FROM: Jim Anderson
Director of Natural Resources

RECOMMENDATION: Recommend approval of a \$141,045.00 grant over three years from unrestricted funds for the reintroduction of Blanding's Turtles to unoccupied Forest Preserves.

FINANCIAL DATA: This grant would result in a \$141,045.00 reduction in unrestricted funds over a three-year period. Funding from other sources is being explored from state, federal and private sources. If funding is secured for 2021 and 2022 then Foundation funding would be reduced.

BACKGROUND: The Blanding's turtle (*Emydoidea blandingii*) is a long-lived reptile that is endangered throughout its range, which spans much of the Midwest. This semi-aquatic freshwater turtle faces a variety of threats, including loss of habitat, over-predation, and poaching.

Since, 2004, the Lake County Forest Preserves has monitored and managed Lake County's Blanding's turtle populations. In particular, the District has focused on the largest Blanding's turtle population in the state – likely one of the largest anywhere – which is found at Spring Bluff Forest Preserve and neighboring lands. In 2010, the Forest Preserves began working on its Blanding's Turtle Recovery Plan.

A key tactic in the plan is head-starting. Staff collected gravid (pregnant) females and transfer them to a wildlife facility in McHenry County, where the eggs are laid. The eggs are incubated and hatched in a controlled environment. Later, the turtle hatchlings are transferred to the Forest Preserves Wildlife Conservation Facility, where they are fed and cared for until they reach an appropriate size for release into the wild. The Preservation Foundation's Adopt-a-Turtle program has been a major funder of the head-starting strategy, providing annual support for turtle monitoring.

Head-starting has been shown to be an effective tool for Blanding's turtle conservation at Spring Bluff Forest Preserve. Current population viability analyses show the site now has a surplus of juveniles. Given these research results, the Forest Preserves proposed to establish a new populations of Blanding's turtles in Lake County using head-started turtles. This step represents a new chapter in Blanding's turtle conservation.

We propose a pilot project in which we use surplus animals from a Lake County Forest Preserve site to establish new populations of Blanding's turtles. The specific locations, as yet undetermined, will be one that has no known population of Blanding's turtles. We will initiate a monitoring program of the new population to evaluate the success of the reintroduction and to use adaptive management to optimize conservation actions.

Proposed Methods:

We will use a population viability analysis to design a release program. This will inform the number of releases needed in order to achieve our goal of having 50 adult turtles after 20 years.

During the spring of 2020, we will release 40 one-year old and 30 two-year old head-started turtles in wetlands throughout the core of the reintroduction site. These head-started turtles were reared in captivity as eggs, which were collected from adult females from a Lake County Forest Preserve. The individuals released will consist of equal numbers of male and females and be from a variety of mothers to increase genetic diversity. Prior to release, each turtle will be uniquely marked and measurement data will be recorded, which will be repeated upon recapture.

We will continue our collaboration with Northern Illinois University’s Institute for the Study of Environment, Sustainability and Energy for this project. Two graduate students from NIU will assist with research and monitoring for this project, which will be much more intensive as we attempt to establish a new population. Our goal will be to locate each turtle once or twice a week during the active season (May-August) and once every two weeks during the inactive season (September- April). Upon recapture, we will collect the GPS location, habitat data, and environmental data. This will provide us more detailed information about movement, survival, and overwintering of head-started turtles at the reintroduction site and we will be able to compare these numbers to the source site.

After the first season of releases, we will perform an annual program assessment. We will use the results of the data analysis to evaluate whether we continue the same methods for another year or if there are changes to the methodology that are necessary. For example, if the survival rates of released turtles are lower than expected, we might consider releasing more turtles to the reintroduction preserve or another preserve in the following year.

Project Budget:

Personnel (Senior Personnel, PhD student, 2 technicians)	\$28,034.00
Transportation (vehicle rental and mileage)	\$6,722.00
Equipment and Supplies (waders, bait, transmitters, etc.)	\$7,985.00
Facilities and Administrative Costs	\$4,274.00
Annual Total	\$47,015.00
Three-Year Total	\$141,045.00

Requested to the Preservation Foundation:

In order to begin this project in 2020, we request a contingent grant of \$47,015 to be paid annually in spring 2020, 2021, and 2022, for a total commitment not to exceed \$141,045. This will allow Forest Preserve staff to proceed with this exciting project while staff works to secure additional funding.

Staff has received an invitation to submit a request for funding in 2020 from an anonymous private foundation. It is expected that \$10,000 would be committed by this foundation and that similar amounts would be considered favorably in 2021 and 2022.

The Forest Preserve would like to develop a fundraising effort to match the funds from the anonymous donor. It is being recommended that the Preservation Foundation would seek a number of "Founders Circle" donors to the Adopt-a-Turtle program to match the anonymous donation at a 2:1 ratio.

In 2021 and 2022, funding is anticipated from the State of Illinois' State Wildlife Action Plan grant program, which has indicated a strong interest in funding this research-reintroduction effort.

REVIEW BY OTHERS: Chief Development Officer/Executive Director of the Preservation Foundation.

PRESERVATION FOUNDATION BOARD:

Date: _____ Roll Call Vote: Ayes: ____ Nays: _____

Voice Vote Majority Ayes; Nays: _____