

DATE: February 15, 2024

MEMO TO: Nels Leutwiler, Chair
Preservation Foundation Board

FROM: Dr. Pati Vitt
Director of Natural Resources

RECOMMENDATION: Recommend approval of a \$114,804 grant over three years (\$38,268.00/year) from unrestricted funds to hire two (2) Ecological Technicians for 900 hours per year to assist District staff with the collection of vegetation and wildlife monitoring data.

FINANCIAL DATA: As of December 31, 2023, the Foundation's total of unrestricted funding was \$317,637.26. Grants paid and payable from the unrestricted funds as of February 15, 2024, include:

Year	Amount
2024 (paid)	\$ 54,527.05
2024 (payable)	\$ 52,300
2025	\$ 31,000
Total Paid and Payable	\$ 137,827.05

The requested funds would be paid as an annual disbursement of \$38,268 in 2024, 2025, and 2026.

BACKGROUND:

The Lake County Forest Preserve District (District) was created to acquire, preserve, and manage lands “...for the purpose of protecting and preserving the flora, fauna, and scenic beauties within such district, and to restore, restock, protect and preserve the natural forests and such lands together with their flora and fauna, as nearly as may be, in their natural state and condition, for the purpose of the education, pleasure, and recreation of the public” (70 ILCS 805/5).

In order to preserve and protect Lake County's flora and fauna, it is essential to inventory and monitor these communities. As such, the Ecology Staff of the Natural Resource Department (NRD) has been collecting and analyzing comprehensive ecological monitoring data for almost 3 decades to support precision conservation of District Lands. This includes 28 years of vegetation data from the District's vegetation monitoring program, and 15 years of wildlife data as part of the District's Wildlife Monitoring Program.

Vegetation Monitoring Program

Beginning in 1996, vegetation monitoring transects were permanently established within high to medium quality plant community types throughout most District holdings. Transect locations were randomly established, stratified by community type to ensure sampling occurred within a specific community type. Square-meter plots are located at 5m intervals along the length of each transect and the absolute cover of all observed herbaceous and woody species under 1 meter tall is recorded. Vegetation quality analysis was accomplished with the Floristic Quality Assessment computer program (Wilhelm and Masters 1994). Absolute and relative frequency, cover and importance values (RIV), Floristic Quality Index (FQI), and mean coefficient of conservatism (C) were calculated for each quadrat and transect.

A total of 128,056 plots have been monitored at least twice and a total of 1,025 unique plant species have been detected since the inception of this program.

In 2019, the Natural Resources Department developed an innovative web-enabled database to collect and curate ecological monitoring data called mECO--LCFPD Mobile Ecologist. mECO provides the opportunity to include multiple protocols such as a Timed Meander Survey, General Plant Observations, Tree Canopy and Shrub Surveys, Plant-Pollinator Observations, and Herbaceous Nested Plots. These vegetation monitoring protocols in mECO were designed to assess the different aspects of plant communities in the same location and to analyze the effects of ecological management on the communities including prescribed burning and clearing of invasive woody species. With all of the protocols spatially bound to the same nested plots, Natural Resource Ecologists are better able to detect important trends in plant communities that help inform the efficacy of our management strategies. To date, we have collected 27,280,121,656 records of plant species using the mECO protocols alongside analysis that demonstrates the optimal prescribed burning frequency for native plants and pollinators.

Wildlife Monitoring Program

The District formally began its Wildlife Monitoring Program (WMP) in 2008 in an effort to better understand the occurrence, distribution, and status of the District's wildlife and evaluate the impacts on wildlife from District land management activities. The WMP was setup to include surveys of amphibians, reptiles, birds and mammals across 235 randomly distributed sampling points at 56 forest preserve sites throughout Lake County. Since the program began, the District has amassed over 1,292,039 records of 481 unique species of amphibians, reptiles, birds and mammals. This dataset is known to be one of the largest in the Midwest and has been cited in 13 articles in peer-reviewed journals.

Soon after establishment of the program in 2008, the District realized that the scale of the program was beyond the capacity of current staff. Thus, in 2009, the District established a relationship with Southern Illinois' Cooperative Wildlife Research Laboratory to provide Wildlife Technicians in an effort to increase capacity and more efficiently and effectively collect and analyze wildlife data. This relationship lasted until 2013 when, due to a change in the philosophy of the Laboratory, they were not interested in continuing the program at the current funding levels.

In 2014, the District issued a Request for Statement of Qualifications (SOQ) to several regional academic institutions to again provide assistance with the collection of wildlife monitoring data. Northern Illinois University's Institute for the Study of Environment, Sustainability and Energy (ESE) was the only institution to respond to the SOQ and relationship was established to provide technicians to continue to collect wildlife monitoring data and ultimately analyze the data with a Ph.D student. This relationship lasted until 2023 when, due to the retirement of a key faculty member, they were not able to continue the relationship.

Current Status

In 2024, the District issued a Request For Proposal (RFP) to find a new partner to help with the collection of ecological monitoring data, covering both our flora and our fauna. We are seeking a new collaborative relationship that will support our efforts to recruit and train new professionals in the fundamentals of wildlife and vegetation monitoring, provide oversight of these technicians, undertake the administrative tasks associated with this work and assist in the design and implementation of data analysis and interpretation of the results. While Natural Resources staff reached out to colleagues across the region to let them know of the opportunity,



only one (1) contractor submitted a proposal. It was rejected as it only included vegetation monitoring and the cost was considerably higher than what was budgeted for the entirety of the project.

Staff feels strongly that the only responsible path forward is to reevaluate our approach to our effort to develop a new collaboration. Most importantly, we feel that we need sufficient time to develop deeper relationships with individuals and organizations that have the capability to work with the District to create a long-term solution to fulfill our requirements. There are multiple organizations that are interested that were not able to commit at this time, and we are considering developing multiple relationships to fully operate our monitoring program. In the meantime, staff do not have the capacity to conduct the full breadth of field data collection that our monitoring efforts require. Therefore, we are requesting funds to recruit and train the necessary ecology field staff. The proposed grant will provide resources necessary to hire two (2) Ecological Technicians for 900 hours per year to assist District staff with the collection of vegetation and wildlife monitoring data. A multi-year commitment of \$114,804.00 is requested to allow Forest Preserve staff to proceed with collection of this critical data while a long-term solution is explored.

REVIEW BY OTHERS: Executive Director of the Preservation Foundation, Director of Community Engagement and Partnerships, Director of Administration, Acting Chief Operations Officer, and Forest Preserves Executive Director

PRESERVATION FOUNDATION BOARD:

Date: _____ Roll Call Vote: Ayes: _____ Nays: _____
 Voice Vote Majority Ayes: _____ Nays: _____

Exhibit A: Project Budget

Budget

The Natural Resources Department Requests funds to support 2 Ecological Technicians in each year over a period of 3 years, for a total of \$114,804.00. We are proposing to use existing funds and resources to provide transportation to field sites and Natural Resources staff will recruit and train the technicians each year. Staff will also be involved in data collection throughout the period.

Description	Year 1	Year 2	Year 3	Total
Wildlife Monitoring Technician (900 hours @ \$21.26)	\$19,134.00	\$19,134.00	\$19,134.00	\$57,402.00
Plant Monitoring Technician (900 Hours @ 21.26)	\$19,134.00	19,134.00	\$19,134.00	\$57,402.00
Total	\$38,268.00	\$38,268.00	\$38,268.00	\$114,804.00