



LAKE COUNTY FOREST PRESERVES  
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Preservation, Restoration, Education and Recreation

**DATE:** April 4, 2016  
**MEMO TO:** Bonnie Thomson Carter, Chair  
Planning and Restoration Committee  
S. Michael Rummel, Chair  
Finance and Administrative Committee  
**FROM:** James L Anderson  
Director of Natural Resources

**Agenda Item#** 9.7

**RECOMMENDATION:** Recommend approval of a Resolution awarding a Contract for Wildlife Re-Introduction and Post-Release Monitoring within the Lake County Forest Preserves in 2016 to Lincoln Park Zoo, Chicago, Illinois, in a Contract Price not to exceed \$45,000.00.

**STRATEGIC DIRECTION SUPPORTED:** Conservation, Leadership

**FINANCIAL DATA:** The total cost of this project is \$88,609.00, of which \$45,000 was obtained from the Forest Preserve Foundation, \$12,360.00 is provided by an Illinois State Wildlife Grant and the Lincoln Park Zoo will contribute in-kind expenses of \$31,249.00 for personnel and other related costs. The contractual cost, up to \$45,000.00, will be charged to the Natural Resources Grant Fund (69644000-709000-56033). No District Funds are being expended.

**BACKGROUND:** The District has restored forested flatwoods wetlands and grassland habitats for many decades, supporting greater biodiversity. The District's Wildlife Monitoring Program, implemented in 2008, provides the groundwork for identifying which species have not recolonized restoration sites, and for identifying rare species that are in need of further habitat management or population supplementation. Through a conservation partnership with Lincoln Park Zoo, the District and Zoo Researchers have, since 2010, contributed to the supplementation and reestablishment of locally rare and extirpated species including the wood frog, spring peepers, the smooth greensnake, and the meadow jumping mouse. The previous work of the partnership has focused on identifying and monitoring remnant populations of these rare species, establishing protocols for zoo breeding programs, evaluating efficacy of wildlife head-starting and translocation techniques, and monitoring the preliminary outcomes of such applied wildlife conservation approaches.

Because intensive follow-up monitoring data is necessary to evaluate the success of reintroduction and head-starting projects, especially for species with complex life cycles, the proposed work will build on the previous work of the Conservation Partnership, examining the persistence of reintroduced forest amphibian, smooth greensnake, and meadow jumping mice populations, increasing population monitoring efforts in release sites, and expanding head-starting and reintroduction efforts to additional locations within the District.

The District has negotiated previous contracts with the Lincoln Park Zoo to develop captive breeding programs, species recovery plans, and population supplementation and/or reintroduction plans to aid in the recovery of animal species in Lake County. This multi-year effort has been primarily funded through grants totaling \$244,000.

**REASON FOR RECOMMENDATION:** Committee recommendation and Board approval are required.

**REVIEW BY OTHERS:** Chief Operations Officer, Director of Finance, Corporate Counsel

**PRESENTER:** James L. Anderson

**LAKE COUNTY FOREST PRESERVE DISTRICT  
LAKE COUNTY, ILLINOIS**

**A RESOLUTION AWARDING A CONTRACT TO THE LINCOLN PARK ZOO FOR  
WILDLIFE RE-INTRODUCTION AND POST-RELEASE MONITORING**

**WHEREAS**, the wood frog, spring peeper, the smooth green snake, and the meadow jumping mouse (the "Species") are rare wildlife species native to the prairie, savanna, wet meadow habitats and flatwoods of Lake County; and

**WHEREAS**, the Species have lost a significant amount of their historic range through habitat destruction, conversion of grassland to agriculture, and habitat fragmentation; and

**WHEREAS**, the Lake County Forest Preserve District (the "District") contains suitable habitat for the Species, and is aware of several small populations at various forest preserves, but that habitat is lacking in the composition and diversity of wildlife; and

**WHEREAS**, the Lincoln Park Zoo, through its Urban Wildlife Institute, has provided technical and field assistance to the District for the recovery of wildlife populations in urban settings; and

**WHEREAS**, the District has collaborated with the Lincoln Park Zoo since 2010 to recover the Species in its forest preserves through the development of a recovery, captive breeding, and population supplementation and/or reintroduction plan (the "Program"); and

**WHEREAS**, the Program is locally and regionally important for the recovery effort of the Species, which is in greatest need of conservation; and

**WHEREAS**, the District desires to purchase services to further the Program and assess and provide consulting services for the recovery of populations of the Species (the "Services"); and

**WHEREAS**, the Director of Natural Resources and the Purchasing Manager have determined that the Services require personal confidence; and

**WHEREAS**, the Purchasing Manager has solicited a proposal for the Services from the Lincoln Park Zoo; and

**WHEREAS**, the District's staff; the Purchasing Manager; the Director of Natural Resources; the Planning and Restoration Committee; and the Finance and Administrative Committee have reviewed the proposal and recommend that the Board of Commissioners (i) find that the proposal submitted by Lincoln Park Zoo be determined to be the proposal that is most advantageous to the District; and (ii) award a contract for the Services to Lincoln Park Zoo (the "Contract") in an amount not to exceed \$45,000.00 (the "Contract Price"); and

**WHEREAS**, the Board of Commissioners hereby finds that the proposal for the Services submitted by the Lincoln Park Zoo is the proposal that is most advantageous to the District;

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Commissioners of the Lake County Forest Preserve District, Lake County, Illinois THAT:

Section 1. Recitals. The recitals set forth above are incorporated as a part of this Resolution by this reference.

**Lake County Forest Preserves**

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CONTRACT BETWEEN

LAKE COUNTY FOREST PRESERVE DISTRICT

AND

LINCOLN PARK ZOO

FOR THE

WILDLIFE REINTRODUCTION AND MONITORING 2016

**WILDLIFE REINTRODUCTION & POST-RELEASE MONITORING IN  
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**WILDLIFE REINTRODUCTION & POST-RELEASE MONITORING IN  
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**1.3 Required Submittals**

A. Submittals Required. Consultant shall submit to Owner all reports, documents, data, and information required to be submitted by Consultant under this Contract ("Required Submittals").

B. Time of Submission and Owner's Review. All Required Submittals shall be provided to Owner no later than the time, if any, specified in Attachment A, or otherwise in this Contract. If no time for submission is specified for any Required Submittal, then that Submittal shall be submitted within a reasonable time in light of its purpose and, in all events, in sufficient time, in Owner's opinion, to permit Owner to review that Submittal same prior to the commencement of any part of the Services to which that Submittal may relate. Owner shall have the right to require such corrections as may be necessary to make any Required Submittal conform to this Contract. No Services related to any Required Submittal shall be performed by Consultant until Owner has completed review of such Required Submittal with no exception noted. Owner's review and approval of any Required Submittal shall not relieve Consultant of the entire responsibility for the performance of the Services in full compliance with, and as required by or pursuant to this Contract, and shall not be regarded as any assumption of risk or liability by Owner. The Consultant shall not be held liable for claims of delay caused by the Owner's failure to timely review and approve any Required Submittal.

C. Responsibility for Delay. Consultant shall be responsible for any delay in the Services resulting from Consultant's, or its Sub-consultant's, delay in providing Required Submittals conforming to this Contract.

**1.4 Review and Incorporation of Contract Provisions**

Consultant represents and declares that it has carefully reviewed, and fully understands, this Contract, including all of its Attachments, all of which are by this reference incorporated into and made a part of this Contract.

**1.5 Financial and Technical Ability to Perform**

Consultant represents and declares that it is financially solvent, and has the financial resources necessary, and has sufficient experience and competent, and has the necessary capital, facilities, organization, and staff necessary to provide, perform, and complete the Services in full compliance with, and as required by or pursuant to, this Contract.

**1.6 Time**

Consultant represents and declares that the Contract Time is sufficient time to permit completion of the Services in full compliance with, and as required by or pursuant to, this Contract for the Contract Price.

**1.7 Consultant's Personnel and Sub-Consultants**

A. Consultant's Personnel. Consultant shall provide all personnel necessary to complete the Services, including without limitation, the "Key Project Personnel" identified in Attachment C. Consultant shall provide to Owner telephone numbers at which the Key Personnel can be reached on a 24-hour basis. Consultant and Owner may, by mutual agreement, make changes and additions to the designations of Key Project Personnel. Consultant shall have no claim for a Change Order, for compensation in excess of the Contract Price, or for a delay or extension of the Contract Time as a result of any such termination, reassignment, resignation, or substitution of Key Project Personnel.

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B. Payment for Completed Services. In the event of any termination pursuant to Subsection 1.9A above, Owner shall pay Consultant (i) such direct costs, including overhead, as Consultant shall have paid or incurred for all Services done in compliance with, and as required by or pursuant to, this Contract up to the effective date of termination; and (ii) such other costs pertaining to the Services, exclusive of overhead and profit, as Consultant may have reasonably and necessarily incurred as the result of such termination. Any such payment shall be offset by any prior payment or payments and shall be subject to Owner's rights, if any, to withhold and deduct as provided in this Contract.

**ARTICLE II - CHANGES AND DELAYS**

**2.1 Changes**

Owner shall have the right, by written order executed by Owner, to make changes to the timing or scope of the Services to be provided pursuant to this Contract (a "Services Change Order"). When a Change Order causes an increase or decrease in the amount of the Services, an equitable adjustment in the Contract Price or Contract Time may be made. No decrease in the amount of the Services caused by any Change Order shall entitle Consultant to make any claim for damages, anticipated profits, or other compensation. Consultant shall not undertake any change in the Services without receipt of an executed Change Order from Owner.

**2.2 Delays**

For any delay resulting from a cause that Consultant could not reasonably avoid or control, Consultant, upon timely written application, shall be entitled to issuance of a Change Order providing for an extension of the Contract Time for a period of time equal to the delay resulting from such unavoidable cause. No extension of the Contract Time shall be allowed for any other delay in completion of the Services.

**2.3 No Constructive Change Orders**

No claims for equitable adjustments in the Contract Price or Contract Time shall be made or allowed unless embodied in a Change Order. If Owner fails to issue a Change Order including or fully including an equitable adjustment in the Contract Price or Contract Time to which Consultant claims it is entitled or, if Consultant believes that any requirement, direction, instruction, interpretation, determination or decision of Owner entitles Consultant to an equitable adjustment in the Contract Price or Contract Time that has not been included or fully included in a Change Order, then Consultant shall submit to Owner a written request for the issuance of or revision of a Change Order including the equitable adjustment or the additional equitable adjustment in the Contract Price or Contract Time that Consultant claims has not been included or fully included in a Change Order. Such request shall be submitted before Consultant proceeds with any Work for which Consultant claims an equitable adjustment is due and shall, in all events, be submitted no later than two (2) business days after receipt of such Change Order or receipt of notice of such requirement, direction instruction, interpretation, determination or decision. Notwithstanding the submission of any such request, Consultant shall, unless otherwise directed by Owner within two (2) business days after receipt by Owner of such request, proceed without delay to perform the Work in compliance with the Change Order or as required, directed, instructed, interpreted or decided by Owner, and shall, pending a final resolution of the issue, keep a daily record of such Work. Unless Consultant submits such a request within two (2) business days after receipt of such Change Order or receipt of notice of such requirement, direction, instruction, interpretation, determination or decision, Consultant shall be conclusively deemed (i) to have agreed that such Change Order, requirement, direction, instruction, interpretation, determination or decision does not entitle Consultant to an equitable adjustment in the Contract Price or Contract Time; and (ii) to have waived all claims based on such Change Order, requirement, direction, instruction, interpretation, determination or decision.

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**4.2 Indemnification**

Consultant, without regard to the availability or unavailability of any insurance, either of Owner or Consultant, shall, to the fullest extent permitted by law, indemnify, save harmless, and reimburse Owner against any and all lawsuits, claims, demands, damages, liabilities, losses, and expenses, including reasonable attorneys' fees, that may arise or be alleged to have arisen out of or in connection with Consultant's negligent acts, errors, or omissions, except only to the extent caused by the negligence of Owner.

**ARTICLE V - PAYMENT**

**5.1 Contract Price**

Owner shall pay to Consultant, in accordance with and subject to the terms and conditions set forth in this Article V and Attachment A, and Consultant shall accept in full satisfaction for providing, performing, and completing the Services, the amount or amounts set forth in Attachment A ("Contract Price"), subject to any additions, deductions, or withholdings provided for in this Contract.

**5.2 Taxes, Benefits and Royalties**

The Contract Price includes applicable federal, state, and local taxes of every kind and nature applicable to the Services as well as all taxes, contributions, and premiums for unemployment insurance, old age or retirement benefits, pensions, annuities, or other similar benefits and all costs, royalties, and fees arising from the use on or the incorporation into the Services of patented equipment, materials, supplies, tools, appliances, devices, processes, or inventions. Consultant waives and releases any claim against Owner arising from the payment of any such tax, contribution, premium, benefit, cost, royalty, or fee.

**5.3 Progress Payments**

A. Payment in Installments. The Contract Price shall be paid in installments in the manner set forth in Attachment A ("Progress Payments").

B. Pay Requests. Consultant shall, as a condition precedent to its right to receive each Progress Payment, submit to Owner an invoice accompanied by such receipts, vouchers, and other documents as may be necessary to reasonably establish Consultant's prior payment for all labor, material, and other things covered by the invoice and the absence of any lien or other interest of any party in regard to the Services performed under this Contract. In addition to the foregoing, such invoice shall include (i) employee classifications, rates per hour, and hours worked by each classification, and, if the Services are to be performed in separate phases, for each phase; (ii) total amount billed in the current period and total amount billed to date, and, if the Services are to be performed in separate phases, for each phase; (iii) the estimated percent completion, and, if the Services are to be performed in separate phases, for each phase; and (iv) Consultant's certification that all prior Progress Payments have been properly applied to the Services with respect to which they were paid. Owner may, by written notice to Consultant, designate a specific day of each month on or before which pay requests must be submitted.

## **ARTICLE VI - REMEDIES**

### **6.1 Owner's Remedies**

If it should appear at any time prior to Final Payment that Consultant has failed or refused to prosecute, or has delayed in the prosecution of the Services with diligence at a rate that assures completion of the Services in full compliance with the requirements of this contract, or has attempted to assign this Contract or Consultant's rights under this contract, either in whole or in part, or has falsely made any representation or warranty in this Contract, or has otherwise failed, refused or delayed to perform or satisfy any other requirement of this Contract, or has failed to pay its debts as they come due ("Event of Default"), and has failed to cure any such Event of Default within five (5) business days after Consultant's receipt of written notice of such Event of Default, Owner shall have the right, at its election and without prejudice to any other remedies provided by law or equity, to pursue any one or more of the following remedies:

- A. Owner may require Consultant, within such reasonable time as may be fixed by Owner, to complete or correct all or any part of the Services that are defective, damaged, flawed, unsuitable, nonconforming or incomplete to accelerate all or any part of the Services, and to take any or all other action necessary to bring Consultant and the Services into strict compliance with this Contract.
- B. Owner may accept the defective, damaged, flawed, unsuitable, nonconforming, incomplete or dilatory Services as part thereof and make an equitable reduction in the Contract Price.
- C. Owner may terminate this Contract without liability for further payment of amounts due or to become due under this Contract.
- D. Owner may withhold from any Progress Payment or Final Payment, whether or not previously approved, or may recover from Consultant any and all costs including attorneys' fees and administrative expenses incurred by Owner as the result of any Event of Default or as a result of actions taken by Owner in response to any Event of Default.
- E. Owner may recover any damages suffered by Owner.

### **6.2 Terminations and Suspensions by Owner Deemed for Convenience**

Any termination or suspension by Owner of Consultant's rights under this Contract for an alleged Event of Default that is ultimately held unjustified shall automatically be deemed to be a termination or suspension for the convenience of Owner under Section 1.9 of this Contract.

## **ARTICLE VII - LEGAL RELATIONSHIPS AND REQUIREMENTS**

### **7.1 Binding Effect**

This Contract shall be binding on Owner and Consultant and on their respective heirs, executors, administrators, personal representatives, and permitted successors and assigns. Every reference in this Contract to a party shall also be deemed to be a reference to the authorized officers, employees, agents, and representatives of such party.



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**7.6 No Waiver**

No examination, inspection, investigation, test, measurement, review, determination, decision, certificate or approval by Owner, nor any order by Owner for the payment of money, nor any payment for or use, occupancy, possession or acceptance of the whole or any part of the Services by Owner, nor any extension of time granted by Owner, nor any delay by Owner in exercising any right under this Contract, nor any other act or omission of Owner shall constitute or be deemed to be an acceptance of any defective, damaged, flawed, unsuitable, nonconforming or incomplete Services, nor operate to waive or otherwise diminish the effect of any warranty or representation made by Consultant or of any requirement or provision of this Contract or of any remedy, power or right of Owner.

**7.7 No Third Party Beneficiaries**

No claim as a third party beneficiary under this Contract by any person, firm, or corporation (other than Owner and Consultant) shall be made or be valid against Owner or Consultant.

**7.8 Notices**

All notices required or permitted to be given under this Contract shall be in writing and shall be deemed received by the addressee thereof when delivered in person on a business day at the address set forth below or on the third business day after being deposited in the United States mail, for delivery at the address set forth below by properly addressed, postage prepaid, certified or registered mail, return receipt requested.

Notices and communications to Owner shall be addressed to, and delivered at, the following address:

Lake County Forest Preserve District  
1899 West Winchester Road  
Libertyville, Illinois 60048  
Attention: Gary Glowacki

Notices and communications to Consultant shall be addressed to and delivered at the following address:

NAME LINCOLN PARK ZOO  
ADDRESS 2001 North Clark Street  
CITY STATE Chicago, Illinois 60614  
Attention: Dr. Allison Sacerdote-Velat

The foregoing shall not be deemed to preclude the use of other non-oral means of notification or to invalidate any notice properly given by any such other non-oral means.

By notice complying with the requirements of this Section 7.8, Owner and Consultant each shall have the right to change the address or addressee or both for all future notices to it, but no notice of a change of address or addressee shall be effective until actually received.

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**7.15 Entire Agreement**

This Contract sets forth the entire agreement of Owner and Consultant with respect to the accomplishment of the Services and the payment of the Contract Price therefore, and there are no other understandings or agreements, oral or written, between Owner and Consultant with respect to the Services and the compensation therefore.

**7.16 Amendments**

No modification, addition, deletion, revision, alteration, or other change to this Contract shall be effective unless and until such change is reduced to writing and executed and delivered by Owner and Consultant.

IN WITNESS WHEREOF, Owner and Consultant have caused this Contract to be executed as of the day and year first written above.

(SEAL)

Attest/Witness

LAKE COUNTY FOREST PRESERVE DISTRICT

By: \_\_\_\_\_  
Julie A. Gagnani  
Title: Secretary

\_\_\_\_\_  
Alex Ty Kovach  
Title: Executive Director

Attest/Witness

LINCOLN PARK ZOO

By: \_\_\_\_\_  
Dr. Seth Magle  
Title: Director of Urban Wildlife Institute

By: \_\_\_\_\_  
Dr. Lisa Faust  
Title: Vice President of Conservation and Science

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when any loss covered by the primary policy exceeds the limits under the primary policy, the excess or umbrella policy becomes effective to cover such loss.

E. Owner as Additional Insured. Owner shall be named as an Additional Insured on all policies except for:

❖ Worker's Compensation Policy

F. Other Parties as Additional Insured. In addition to Owner, the following parties shall be named as Additional Insured on the following policies:

Additional Insured	Policy or Policies
N/A	N/A

6. Contract Price:

A. Schedule of Prices - Not to Exceed:

For providing, performing, and completing all Services, Consultant shall be compensated for all services rendered by principals and employees directly on the Project at the following hourly rates for the following projects:

POSITION	HOURLY RATE
Forest Amphibian Project	\$20,084.00
Smooth Greensnake Project	\$15,621.00
Meadow Jumping Mouse Project	\$8,926.00

Owner shall also reimburse Consultant for the following (and no other) reimbursable costs and expenses in the following amounts, which shall be reimbursed at the actual out of pocket cost to Consultant:

REIMBURSABLES	AMOUNT
Intern Mileage (54%) 647 miles @ \$0.57/mile	\$368.00

Notwithstanding the foregoing, the total portion of the Contract Price based on performance of services shall not exceed \$ 44,631.00 and the total portion of the Contract Price based on reimbursable expenses shall not exceed \$ \$368.00.

Forty-five thousand \_\_\_\_\_ Dollars and no \_\_\_\_\_ Cents  
(in writing)

\$45,000 \_\_\_\_\_ Dollars and 0 \_\_\_\_\_ Cents  
(in figures)

Lump sum amount includes all travel, living and direct project expenses including printing, postage and handling. There shall be no additional costs.

7. Payments:

Regardless of whether the Contract Price is based upon hourly rates or a lump sum, Consultant shall, not later than ten (10) days after execution of the Contract and before submitting its first pay request, submit to Owner a schedule showing the value of each component part or phase of the Services in form and with substantiating data acceptable to Owner ("Breakdown Schedule"). The sum of the items listed in the Breakdown Schedule shall equal the lump sum Contract Price or the not to exceed Contract Price, as the case may be. An unbalanced Breakdown Schedule providing for overpayment of Consultant on component parts or phases of the Services to be performed first will not

**ATTACHMENT B - CONSULTANT'S SCOPE OF WORK**

**RECOMMENDATION:**

Approve a grant of up to \$45,000 of unrestricted funds to Lincoln Park Zoo to provide wildlife research and monitoring work examining population dynamics of species of conservation concern, their response to restoration, and efficacy of previous reintroduction and supplementation effort in partnership with Lake County Forest Preserve District.

**PROPOSED PROJECT:**

The Lake County Forest Preserve District (The District) has restored forested flatwoods wetland and grassland habitats for many decades, supporting greater biodiversity. The District's Wildlife Monitoring Program, implemented in 2008, provides the groundwork for identifying which species have not recolonized restoration sites, and for identifying rare species that are in need of further habitat management or population supplementation. Through a Conservation Partnership with Lincoln Park Zoo, the District and Zoo Researchers have, since 2010, contributed to the supplementation and reestablishment of locally rare and extirpated species including the wood frog, spring peepers, the smooth greensnake, and the meadow jumping mouse. The previous work of the Partnership has focused on identifying and monitoring remnant populations of these rare species, establishing protocols for zoo breeding programs, evaluating efficacy of wildlife head-starting and translocation techniques, and monitoring the preliminary outcomes of such applied wildlife conservation approaches.

Because intensive follow-up monitoring data are necessary to evaluate the success of reintroduction and head-starting projects, especially for species with complex life cycles, the proposed work will build on the previous work of the Conservation Partnership, examining persistence of reintroduced forest amphibian, smooth greensnake, and meadow jumping mice populations, increasing population monitoring effort in release sites, and expanding headstarting and reintroduction efforts to additional locations within the District.

From 2007-2010, the District and Dr. Allison Sacerdote-Velat (formerly at Northern Illinois University, currently Reintroduction Biologist at Lincoln Park Zoo) carried out amphibian egg mass translocations in MacArthur Woods following hydrologic restoration. Translocated species included wood frogs, spring peepers, and spotted salamanders. Spring peepers established quickly in two ponds but population sizes are likely still small, and may benefit from additional supplementation. In 2014, District Wildlife Biologists and the Reintroduction Biologist documented the first evidence of successful reproduction and population persistence of reintroduced wood frogs in MacArthur Woods. At present, the Partnership has not observed evidence of spotted salamander establishment. By increasing focus on the population dynamics of the reintroduced amphibians, the Reintroduction Biologist will examine population trends to determine if more supplementation is necessary to maintain viable populations of these forest amphibians, or if they have established large enough populations to be a potential source for an expanded translocation effort to other flatwoods sites such as Ryerson Forest Preserve or Grainger Woods. Further, as the Southern Des Plaines Restoration Project progresses, detailed examination of amphibian response to restoration work will provide valuable management information to the District. With removal of invasive understory shrubs and creation of light gaps for oak regeneration, the partners anticipate improvements in amphibian migration among wetlands, hatching success, and larval survival.

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- (2) Increase Smooth Greensnake population monitoring efforts in Old School, Rollins Savanna, Lyons Woods, and Greenbelt Preserves, monitoring release sites and examining demography of additional remnant populations. Lincoln Park Zoo Animal Care staff will continue breeding and head-starting efforts with the goal of increasing the number of released snakes and expanding the number of release sites.
- (3) Conduct follow-up live trapping in Lakewood Preserve and Rollins Savanna for supplemented Meadow Jumping Mice populations. The Reintroduction Biologist will examine changes in jumping mouse abundance and population viability with zoo supplementation versus wild translocation to guide future conservation management for the species.

**DELIVERABLES:**

The Reintroduction Biologist will collect population data for reintroduced and resident forest amphibians in the Southern Des Plaines Restoration sites. These data will be used to generate estimates of population size, evaluate the need for further supplementation of reintroduced species, examine disease status of Lake County amphibian communities, and examine amphibian community response to restoration management. This information will inform future management efforts, allowing the District to mitigate persistent threats to amphibians and identify which techniques are most beneficial for amphibian communities.

Lincoln Park Zoo's Reintroduction Biologist and Animal Care staff will continue head-starting efforts for Lake County Smooth Greensnakes with the goals of increasing the number of hatchlings for future releases and the number of sites where releases will occur. Through intensified survey efforts, the Reintroduction Biologist aims to expand headstarting efforts to Lyons Woods and Greenbelt Preserve as nests or reproductive females are encountered in these preserves. Monitoring efforts will increase in Rollins Savanna to gather additional survival and reproduction data for previously released snakes.

The Reintroduction Biologist will provide the District with reports for each taxonomic group (amphibians, Smooth Greensnakes, and Meadow Jumping Mice). The reports will include summaries of demographic trends collected during monitoring, recommendations for future supplementation needs, recommendations for potential expansion of existing head-starting or translocation programs, amphibian community response to restoration management, and amphibian community disease status. The reports will provide guidance for future efforts to conserve these focal species through further beneficial restoration and zoo husbandry approaches.

Project results will be disseminated at professional wildlife conferences including the Society for the Study of Amphibians and Reptiles, and the Midwest Fish and Wildlife Conference. Results of the long-term amphibian restoration study will be submitted for publication in a peer-reviewed journal in collaboration with District Biologists.

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**Timeline:**

Field work for amphibian research will begin in late February/early March with installation of monitoring equipment in MacArthur Woods, Old School, Grainger, Ryerson, and Wright Woods. Amphibian monitoring will continue through the summer, ending in early September (or earlier in the event of drought conditions).

Smooth Greensnake head-starting is in progress at Lincoln Park Zoo. Field sampling will commence in late April and continue through early October. Releases of head-starts will occur in late June or early July, dependent on weather conditions. Egg collection for head-starting will commence in June and continue as nests are encountered, through the end of July.

Field Sampling for Meadow Jumping Mice will commence in early May, with four sampling sessions throughout the active season (early May, mid-June, mid-July, and mid-August). Sampling will consist of live-trapping for 8 nights per week for each sampling session.

The summary report for amphibian, Smooth Greensnake, and Meadow Jumping Mice projects will be submitted to The District by December 31<sup>st</sup>, 2016.

**IMPACT OF THE PROPOSED PROJECT:**

Anticipated impacts of this project include:

- Collection and analysis of demographic data to guide future amphibian conservation work in the Southern Des Plaines region, detail amphibian response to restoration measures, and evaluate the need for more supplementation of extirpated species, or the potential for expansion of egg mass translocation to additional flatwoods preserves.
- Follow-up monitoring to determine persistence and reproductive output of head-started Smooth Greensnakes released in Old School Preserve and Rollins Savanna, increased number of snakes for future releases, and potential expansion of releases to new preserves.
- Evaluation of two applied conservation techniques for conserving Meadow Jumping Mice in District sites.