Region 2
University Transportation Research Center

RFP Cover Sheet

Title: Shared Agency Management Plan for the Protection of Rare Fen- Dependent Species and their Habitat
RFP Number: C-17-10
Sponsor: New York State Department of Transportation
Date Issued: November 10, 2017
Final Proposal Due at UTRC: February 28, 2018 (COB). *Please submit electronically through the UTRC online submission system at UTRC Submission System.* Do not send electronic copies directly to NYSDOT.

Ten hard copies are also required within one week of your electronic submission. Please send the hard copies to:

Ms. Deborah Mooney
Head, Research & Policy Studies Section
Statewide Planning Bureau | Policy & Planning Division
New York State Department of Transportation
50 Wolf Rd, 6th Floor, Albany, NY 12232

RFP Closing Date: Wednesday, February 28, 2018

If you plan to apply:
Please contact Penny Eickemeyer at peickemeyer@utrc2.org to let us know you are assembling a proposal. We will make sure you receive any additional information that becomes available about this RFP.

Proposal submission guidelines:
Please submit your technical and budget proposals electronically to UTRC. All proposals must include the UTRC cover page, http://www.utrc2.org/resources.
Budget forms can be downloaded at http://www.utrc2.org/sites/default/files/budget-Template.xls

Funding available:
Up to $200,000, exclusive of administrative fees, is available from NYSDOT.

For questions about this proposal, please contact:
Deborah Mooney, Deborah.Mooney@dot.ny.gov

For questions about budget preparation, please contact:
Penny Eickemeyer, peickemeyer@utrc2.org

New York State Department of Transportation
Request for Proposals
SPR # C-17-10: Shared Agency Management Plan for the Protection of Rare Fen-Dependent Species and their Habitat
November 10, 2017

RESEARCH PROBLEM STATEMENT

Junius Ponds Unique Area supports a rare wetland ecosystem; this important area is owned and managed by the New York State Department of Environmental Conservation (NYSDEC). The wetland is bisected by I-90 and Route 318 and bordered by Bostwick Road, a local road, to the north.

Several fens (Rich Shrub, Rich Graminoid and Marl) have been identified at the site. A fen is a rare, low shrub- and herb-dominated wetland that is fed by calcareous groundwater seepage. Fens are highly vulnerable to degradation from direct disturbance and from activities in nearby upland areas. Nutrient and salt pollution from septic systems, fertilizers, or road runoff, disruption of groundwater flow by new wells or nearby excavation, sedimentation from construction activities or direct physical disturbance can lead to changes in the character of the habitat, including a decline in overall plant diversity and invasion by invasive species and tall shrubs. Such changes can render the habitat unsuitable for endangered/threatened species and other rare and protected fen endemic species. Fens appear to be somewhat resilient if their chemical and hydrologic conditions are kept intact, which makes restoration of these habitats possible in some cases.[1]

The Junius Ponds Unique Area contains habitat for 10 species of endangered or rare vascular plants and eight significant natural communities (NYS Natural Heritage). Evidence of sediment filled culverts under I-90 are likely inhibiting the natural drainage regimes and causing I-90 to function as a connective barrier. Disconnection between the ponds south of Route 318 to the ponds north of Route 318 due to fill placed for road construction is also likely inhibiting the natural drainage.

Intermittent high water levels are a threat to the exemplary natural communities found in Junius Ponds. Additionally, invasive common reed (*Phragmites australis*) and narrowleaf cattail (*Typha angustifolia*) are invading the site. The common reed infestation is exacerbated by proximity to the transportation corridors.[2] The common reed and cattail are outcompeting suitable habitat used by rare and protected fen endemic species.

OBJECTIVE(S)

The goal of this project is to develop a shared agency management plan for three New York State (NYS) agencies [NYS Department of Transportation (NYSDOT), NYSDEC, NYS Thruway Authority (NYSTA)] to work cooperatively to protect state and federally protected fen-dependent species and their habitat through proper water-level management, and roadside maintenance practices. The objective is to identify Best Management

[1] http://hudsonia.org/wp-content/uploads/2008/09/Fen.pdf
[2] https://www.phragmites.crad.ulaval.ca/files/phragmites/publications/brisson_et_al_ispm.pdf

Practices (BMPs) for the maintenance and operational needs of the transportation corridor with minimal impact on the unique and valuable natural resources. These BMPs may include, but are not limited to: managing water-levels for optimal conditions for water conveyance through system, invasive species management, water quality management, protection of ground water sources, and prevention of nutrient loading. The developed BMPs are intended to help maintain and/or restore a functional fen ecosystem for aiding with endangered/threatened species recovery efforts.

PROPOSED RESEARCH TASKS

Task descriptions are intended to provide a framework for conducting the research. NYSDOT is seeking the insights of proposers on how best to achieve the research objectives. Proposers are expected to describe research plans that can realistically be accomplished within the constraints of available funds and research period. Proposals must present the proposer's current thinking in sufficient detail to demonstrate their understanding of the issues and the soundness of their approach to meeting the research objectives.

Tasks:

1) Establish baseline conditions by surveying current habitat conditions (e.g., wetland types and delineations, existing water-level management features, invasive species infestation and drainage patterns) in proximity to interstate, state and local highways in relation to transportation features.
2) Research drainage patterns and water levels from post-road construction activities to present.
3) Establish pre-construction conditions by researching historic natural drainage prior to road construction (State Route 318, I-90 and Bostwick Road crossings).
4) Field assess habitat fragmentation and potential for dispersal movements as a result of water-level changes with focus on a state and federally protected turtle species.
5) Search literature of highway underpass structure usage by wildlife, specifically the protected turtle in other parts of their range (e.g., New Jersey). Field assess existing structures in the Junius Ponds Unique Area for underpass usage by the protected turtle species and determine if more suitable structure design would be prudent.
6) Inventory ecological community classification of newly acquired state property to the south of State Route 318.
7) Develop recommendations for preferred water-level regime and determine best water-level conditions to maintain a fen wetland. This would include details such as: comparison of existing vs. desired invert elevations of structures for best function of connectivity and water flows for the protection of fen ecosystem.
8) Develop range of alternatives and solutions (culverts, gates, groundwater pumping, etc.) to mimic drainage patterns during periods of optimal habitat for the protected turtle species.
9) Develop habitat restoration plan that includes controlling invasive plants, to maintain habitat for rare and protected fen dependent species.

RESEARCH PRODUCTS

- Draft coordinated, shared agency management plan for water-levels at State Route 318, I-90 and Bostwick Road crossings for optimum wetland fen restoration and habitat for the protected species. The Plan shall include:

a. Roadside maintenance guidelines of Best Management Practices (BMPs) for work activities in proximity to fen habitat. These BMPs can be used for transportation activities throughout the protected species range. The BMPs will address such topics as salt application rates, ditching guidelines, drainage maintenance, mowing regimes, invasive species control, and required coordination between agencies, etc., for potential use in consultation as part of a formal Biological Assessment /Programmatic Agreement (BO/PA).

b. Management recommendations for improvements to drainage patterns such as structure (bridge/culvert) replacement size/type (if needed) or for use as an underpass for reptiles and medium-sized mammals and/or inclusion of North American beaver (*Castor canadensis*) control to discourage their use.

c. Invasive species control management plan that will be part of a BO/PA to prioritize treatment areas and establish a treatment regime that will result in maintainable suppression within 10 years.

- Draft Effect Analysis component of a BO/PA with United States Fish and Wildlife Service (USFWS) for routine maintenance activities and larger future road work activities to streamline regulatory process; ensure proper management of the unique area, minimize effects on endangered species and their habitats, and identify potential mitigation opportunities for future projects.

- Plant community restoration plan for future mitigation work.

- Quarterly project status reports, based on a calendar year basis.

- Annual interim technical reports summarizing project progress.

- Final report summarizing the research and results, including all tasks, deliverables, findings, recommendations and an implementation strategy, as applicable. Final reports are to adhere to **Attachment A**, ***Requirements for the Final Report*** (page 7).

URGENCY / EXPECTED BENEFITS

Aging infrastructure within the project area is likely to require repairs and/or replacements within the next 10-15 years. This research project will provide research-informed, science-based planning and management of the transportation facilities within the project area to ensure the repair and/or replacement activities can be done in an environmentally sound manner that will improve habitat and aid in the recovery of species. Components of the shared management plan can be used to develop a Programmatic Agreement (PA) with USFWS. The PA will streamline the permitting process and avoid permitting process delays associated with work near protected species and their habitats.

RESEARCH PERIOD

Approximately 3 years and 4 months, with a completion date no later than May 2021.

FUNDING

$200, 000 has been budgeted for this project, exclusive of administrative fees. New York State believes this is a reasonable estimate for the total cost of the work being requested.

The net cost to New York State is one of the selection criteria. When compared to competing proposals, a proposal that requires fewer New York State dollars will receive a higher score on the cost component of the selection criteria. The value of New York State funds required could be reduced through efficiencies (fewer hours per task and / or lower cost per hour) or through cost-sharing where other funds substitute for New York State funds.

Proposals with a New York State cost over the budgeted amount will also be considered, provided the New York State cost, exclusive of administrative fees, does not exceed the budget estimate by more than 10%. (Note: Cost-sharing funds may increase the total project cost further.)

If a sufficient number of potential Principal Investigators indicate in writing that they believe the research cannot be reasonably conducted within these funding constraints and there are only a limited number of proposals submitted within the funding constraints, New York State reserves the option of not proceeding with the work or revising the budget estimate and issuing a new Request for Proposals. Potential Principal Investigators who believe the budget estimate is unreasonable should write to:

Deborah L. Mooney, SPR Program Administrator
Head, Research and Policy Studies Section, 6th Floor
Statewide Planning Bureau, Policy and Planning Division
New York State Department of Transportation
50 Wolf Road, Albany, NY 12232

SPECIAL NOTES

- **Proposals are due by close of business, January 31, 2018.** This Request for Proposals (RFP) is being offered to the University Transportation Research Center (UTRC) members only**.** UTRC members must submit both a technical and a cost proposal through the UTRC research consortium RFP online submission system. The receipt of an electronic PDF copy of the proposal by NYSDOT on or before the above due date is satisfactory, providing hard copies follow within a week.

- **Ten hard copies** of the proposal should be provided.

- NYSDOT and the City University of New York Research Foundation (RF-CUNY) on behalf of the UTRC have an executed University Transportation Research Consortium Agreement, Contract #C030793, in place. RF-CUNY/UTRC is the prime consultant for NYSDOT Task Assignments executed under this prime contract agreement. All sub-consultants (UTRC consortium members included) and sub-contractors performing work under the prime consultant contract shall be bound by the same required contract provisions as the prime Consultant. All sub-agreements between UTRC and a sub-consultant or sub-contractor shall include all standard required contract provisions, and such agreements shall be subject to review by the State.

- Publicity, including any material, data, information or analyses other than Confidential Information, that derive from activity under the Project; State materials; the State's name or other references to the State or NYSDOT ("Project Information"), in any document or forum disclosed to the public, is subject to the publicity and disclaimer terms and conditions of the NYSDOT/RF-CUNY UTRC prime contract agreement #C030793-01, Supplemental Agreement #1, Article 8, Section 8.05, Publicity, and Article 2, Section 2.03, Disclaimer.

- Proposals should indicate direct and indirect costs, hourly rates and hours by task, travel costs, and material costs to assist NYSDOT in understanding how the total cost for the work was estimated. The winning proposal will result in a **fixed cost contract** based on the details provided in a supporting detailed budget.

- Please provide a Budget Chart which shows for each task the deliverable and cost. Task headings in the Budget Chart are to match the scope task headings.

- Please include a Gantt Chart, showing the duration (start to finish) for each task in terms of months (i.e. Month 1, Month 2, etc.) since the actual start date is an estimate. This can be combined on one page with the Budget Chart.

- If the proposal involves a joint venture or sub-consultants, it must be clear as to how tasks will be distributed or shared in the scope of work.

- The Principal Investigator is required to submit quarterly project status reports to the NYSDOT Project Manager, as specified in the Task Assignment.

- The Principal Investigator is required to submit all project task deliverables, first, in draft formats for review and comment by the NYSDOT Project Manager and Technical Working Group (TWG). The Principal Investigator is required to revise draft task deliverables, based upon comments, as needed, and re-submit to the NYSDOT Project Manager for review. Upon acceptance by the NYSDOT Project Manager, the Principal Investigator is required to submit draft task deliverables to the NYSDOT Project Manager in final formats, as specified in the Task Assignment.

- The Principal Investigator is required to submit annual interim task reports to the NYSDOT Project Manager, as specified in the Task Assignment.

- The final report on the results of the research is to contain, at a minimum, the information described in **Attachment A**, ***Requirements for the Final Report***.

- Proposals should include the qualifications of team members.

- Proposals should include provisions to obtain necessary work permits to work within NYSDOT & NYSTA's Right-of-way, and confidentiality agreements with NYSDEC and United States Fish and Wildlife Service (USFWS).

- Proposals should include awareness of disinfecting protocols to be used while working within NYSDEC's Unique Area.

- Principal Investigators should be familiar with and follow the requirements of New York State with regard to the *Compliance Procurement Lobbying Law* and consultant contract procurement. Information can be found on the NYSDOT website under Business Center / Doing Business with NYSDOT / Consultants / Non-Architectural Engineering Information / Active Solicitations: https://www.dot.ny.gov/main/business-center/consultants/non-architectural-engineering/active-solicitations

- **The designated contact for this solicitation is Deborah L. Mooney**. Questions seeking clarification on the RFP will be accepted up to three (3) weeks prior to the due date for proposals and should be e-mailed to: Deborah.Mooney@dot.ny.gov

CRITERIA FOR SELECTION

- **Expertise / Understanding / Approach (**Weight: 70 %)
  Expertise: What is the extent of the relevant expertise of the Principal Investigator? What is the extent of the relevant expertise of others who will be involved in the research? We anticipate an interdisciplinary team approach will be utilized to satisfy the requirements of this project.

  Understanding of the Problem: Does the proposal reflect an understanding of the problem and its relevance to New York State? Does the proposal reflect an understanding of existing data and the current state of knowledge in New York State?

  Approach: Is the proposed approach clear, especially in how it will build upon and enhance the state of knowledge in New York State? Will it yield the deliverables called for in the RFP? Does the approach show insight that will lead to results that will sufficiently assist New York State in addressing the problem? Is the proposed approach practical given the schedule and total budget? Will the proposed research draw upon all critical sources of pertinent information?

- **Investigators Previous Experience with Similar Projects** (Weight: 10 %)
  Successful completion of previous NYSDOT projects by the Investigator(s) will be considered. These projects should be in the area of expertise required for successful completion of this project, such as biological surveys, ecological classifications, habitat management planning, etc.

- **Cost to New York State** (Weight: 20 %)
  The lower the New York State cost, the greater consideration a proposal will receive.

Attachment A

Requirements for the Final Report

Copies of Final Report – **Ten (10)** color, hard copies of a bound, final report are required at the completion of the research study. An electronic PDF copy of the final report is required, as well. In addition to the final report, a one page document or research brief, summarizing the project and project findings, shall be provided for technical transfer purposes. This is required in PDF format only.

Required Organization for the Final Report

Title Page (front cover) - that contains:

- The research number (C#) assigned by the Research & Policy Studies Section;
- The title of the research study as stated in the Task Assignment (contract);
- The words "Final Report;"
- The date (month & year) the final report is completed;
- The name(s) of the Consultant(s) / Principal Investigator(s), along with the name(s) of the organization(s) they represent and their address(es);
- A color photograph or design on cover to add professional appearance; and,
- If the final report has a security classification, it shall be noted on the title page.

Disclaimer (inside cover) - as follows:

DISCLAIMER

This report was funded in part through grant(s) from the Federal Highway Administration, United States Department of Transportation, under the State Planning and Research Program, Section 505 of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the United States Department of Transportation, the Federal Highway Administration or the New York State Department of Transportation. This report does not constitute a standard, specification, regulation, product endorsement, or an endorsement of manufacturers.

Form DOT F 1700.7 – complete the standard form used throughout the country to summarize federally funded transportation research

Table of Contents

Executive Summary - a non-technical summary of the research and its findings

Introduction – a discussion of the problem, its background, and a concise history of research previously completed on the topic, and a discussion of what NYSDOT policies, procedures, and practices are currently in place related to the research topic.

Research Method – a description of the methods used in conducting the research

Findings and Conclusions – a discussion on the analysis of the data (findings) and the conclusions reached based on the findings. Suggestions for additional research, if appropriate, would appear in this section.

Statement on Implementation – a brief discussion on what would need to occur to introduce the results into practice, and a discussion on possible technology transfer activities

Appendices – as appropriate