Leadership on Regional Issues

Request for Qualifications

NASSAU COUNTY WATER QUALITY MONITORING, ANALYSIS, & REPORTING

Release: June 18th, 2018

A PROJECT OF THE

LONG ISLAND NITROGEN ACTION PLAN

NYSDEC, LIRPC, SUFFOLK & NASSAU COUNTIES

http://www.NYSDEC.ny.gov/lands/103654.html

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NOTICE OF REQUEST FOR QUALIFICATIONS

Project Name: Nassau County Water Quality Monitoring, Analysis, & Reporting

Agency: Long Island Regional Planning Council
1864 Muttontown Road
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Project Intent: As part of the Long Island Nitrogen Action Plan (LINAP), the Long Island Regional Planning Council (LIRPC) is seeking information from citizen science and environmental organizations, municipalities, and colleges that are interested in participating in projects to collect, analyze, and report on water quality data from Nassau County's surface waters as described in Section 3. Responses will be evaluated based on their relevance to relevant LINAP goals and their 'value' in terms of quality and cost.

Release Date: June 18, 2018

Proposal Due: July 30, 2018

Submission to: Elizabeth Cole
Deputy Executive Director
Long Island Regional Planning Council
(516) 571-7613
ecole@lirpc.org

Technical Contact: David Berg, AICP
LINAP Program Manager
Long Island Regional Planning Council
(516) 571-7613
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1 QUALIFICATIONS SUBMISSION

1.1 Project Background

1.1.1 Project Goals and Objectives

The Long Island Regional Planning Council (LIRPC) issues this Request for Qualifications (RFQ) from organizations and institutions that can assist LINAP with surface water sampling, analysis, and reporting for the south shore waters of Nassau County. Water Quality Monitoring project goals are two-fold: 1) expand water quality monitoring, and 2) provide uniform analysis and reporting.

Specific water quality monitoring objectives include: a) fill water quality data gaps identified in modeling work, b) document water quality in areas planned for bio-extraction and bio-harvesting initiatives, c) document conditions in anticipation of planned WWTP nitrogen load reductions, and d) identify locations for bioremediation initiatives. Respondents may submit any water or sediment quality monitoring project that best represent the submitter's interests and expertise and that add value to LINAP's overall goals.

Specific analysis and reporting objectives include: a) provide uniform data recording and storage mechanisms b) analyze historic water quality data for trends and gaps, c) identify location and parameter data gaps based on research, d) prepare uniform format biannual reports, e) prepare biannual print and electronic media communications for public dissemination.

1.2 Submission Information

1.2.1 Eligible Applicants

Eligible applicants include non-profit organizations including watershed protection and environmental groups, government entities and agencies including Nassau County townships, advisory groups, and higher education and research institutions. Partnerships are encouraged.

1.2.2 Submission Requirements

Respondents should submit their qualifications to pursue either 1) water quality monitoring, or 2) analysis and reporting, or both. Submissions should be limited to 30 pages and should include at least the following:

- For all submissions:
  - Organization mission, relevant history, related past or current projects
  - Statement of potential contributions to the project(s)
  - Key personnel with resumes
  - List of partner organizations and their role in project(s)

- For monitoring submissions:
  - Overall monitoring goals
  - Monitoring locations, parameters, and schedule for 2018/2019
  - Statement of how and why existing monitoring locations were selected
  - Statement as to whether the organization has or will participate in the Unified Water Study and whether it will pursue Tier 1 and/or Tier 2 sampling
  - Monitoring capability and capacity including frequency and parameters
  - Available equipment (sampling and measuring)
  - Access to a boat or boats for sampling
  - Access to laboratory for Tier 2 analysis
  - Unit costs (e.g., sample collection, staff and boat time, supplies, etc.)
  - Desired additional supplies, equipment, boat time, laboratory access
  - Desired additional staff, analysis, reporting, or other needs
- For analysis and reporting submission
  - Data analysis, storage, and mapping (ArcGIS) capacity
  - Potential water and sediment analyses and trends
  - Potential undergraduate and/or graduate student participation
  - Relevant past/current/planned research
  - Surface water and sediment research capacity and interests
  - Existing laboratory certification or potential for Environmental Laboratory Approval Program (ELAP) certification
  - Potential reporting capacity and type(s)
  - Capacity for public communication via print and electronic media with examples
  - Unit costs per project and participant

Respondents should submit rates, not cost proposals. Full cost proposals will be requested only after project and participant selections are made. Respondent submissions should be directed to Elizabeth Cole, Deputy Director of the LIRPC, at ecole@lirpc.org. Qualifications must be signed by an individual authorized to bind the respondent to all commitments made in the qualifications.

1.2.3 Project Schedule

This solicitation is for the second half of 2018 and into 2019. Project start times and durations will be negotiated with the selected respondents.

1.2.4 Amendments, Inquiries, and Contact with the LIRPC

The LIRPC is under no obligation to respond to any question, inquiry or assertion that is not received in writing via email. Violation of these provisions may result in immediate disqualification. Questions, requests for information pertinent to the preparation and submission of qualifications, and any other communications are to be directed to: Elizabeth Cole, Deputy Executive Director, ecole@lirpc.org no later than **July 23, 2018.**

Amendments, addenda, and responses to questions will be distributed to all who receive the RFQ and will be posted on the LINAP website within five business days of receipt of the inquiry. No other contact with the LIRPC concerning this RFQ is permitted until selections have been made. Violation of this provisions may result in immediate disqualification. Persons or organizations obtaining the RFQ documents from

sources other than the LIRPC are solely responsibility for obtaining any amendments, addenda, and responses to questions regarding the RFQ.

1.2.5 Due Date

To be considered, qualifications, amendments to qualifications, and all related materials must be received by **4:00 p.m. on July 30, 2018** by Elizabeth Cole, Deputy Executive Director, at ecole@lirpc.org.

1.2.6 Incurred Cost

All costs incurred in the preparation, submission, and/or presentation of qualifications to the *Selection Committee* or others, including, but not limited to the respondent's travel expenses to attend an interview or contract negotiation session, reproduction and delivery expenses, shall be the sole responsibility of the responding entity.

1.2.7 Non-Committal Clause

This RFQ does not commit the LIRPC to award a contract, pay any costs incurred in the preparation of qualifications in response to this RFQ, or to procure or contract for services or supplies. The LIRPC reserves the right to accept or reject any or all qualifications received in response to this RFQ, to negotiate with all qualified sources, or to cancel, in part, or in its entirety this RFQ if it is in the best interest of the LIRPC or its LINAP project partners to do so. The LIRPC reserves the right to select more than one respondent and split the assignment of services in any manner determined by LIRPC in its sole discretion.

1.2.8 Reserved Rights of the LIRPC

To enable the LIRPC and its LINAP project partners to acquire services at the lowest price or best value from responsible and responsive offers, the LIRPC reserve the right to:

1. Define requirements to meet LIRPC and its LINAP project partners' needs and to modify, correct and clarify requirements at any time during the process provided the changes are justified and maintain fairness in contracting;
2. Request additional data or oral discussions or presentations in support of written submissions from any and all of the responding organizations;
3. Make on-site visits to the submitters place of operation to assess and/or evaluate the organization's qualifications;
4. Accept and/or reject any or all submittals, and waive technicalities or portions of the submissions in the best interest of the LIRPC and its LINAP project partners;
5. Award a contract based upon materials received through this RFQ without discussion of such materials with the respondents. Each response, therefore, should be submitted in the most favorable terms that the respondents can offer the LIRPC from a price and technical standpoint.
6. Contract with the organization that best meets the requirements of the RFQ and not necessarily with the lowest cost respondent;

7. Require the selected respondent to participate in negotiation and to submit any price, technical, or other revisions, as may result from negotiations;
8. Establish terms and conditions which must be met by all respondents and/or, where permitted by the solicitation, eliminate mandatory requirements that are not met by any respondent;
9. Establish, where permitted by the solicitation, conditions under which the contract scope can be expanded and criteria for price increases or decreases during the contract period;
10. Award contracts for any or all parts of the RFQ;
11. Consider every offer as firm and not revocable for a period of up to 180 days from the due date or such other period specified in the solicitation. After the 180th day, or other specified period, an offer may be withdrawn in writing;
12. Have the option to require a bond or other guarantee of performance, and to approve the amount, form, and sufficiency thereof.

1.2.9 Proprietary Material and Confidentiality

The contents of each organization's submission will be held in strict confidence during the evaluation and selection process. Respondents may request that portions of their submission be considered proprietary and not subject to disclosure under the Freedom of Information Law (FOIL). Respondents should separate information deemed proprietary or FOIL-exempt from non-confidential sections of the submission. Should the LIRPC determine that the law requires disclosure of confidential information, the LIRPC will notify the respondent so that it may take appropriate steps. Ownership of all data, written materials, and documentation originating and prepared for the LIRPC pursuant to this RFQ shall belong exclusively to the LIRPC and will not be returned.

1.2.10 Independent Price Determination

By submission of its qualifications, the respondent certifies (and in the case of a joint submission, each party thereto certifies as to its own organization) that, in connection with this RFQ:

1. Proposed prices have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition, as to any matters relating to such prices with any other proposer or competitor;
2. Unless otherwise required by law, the prices which have been quoted in this offer have not been knowingly disclosed by the respondents prior to award, directly or indirectly, to any other respondent or competitor;
3. No attempt has been made or will be made by the respondent to induce any other person or firm to submit or not to submit an offer for the purpose of restricting competition;
4. No elected or appointed official or employee of the LIRPC shall benefit financially or materially from this contract. The LIRPC may terminate this contract if gratuities were offered or given by the proposer or his or her agency to any such official or employee.

1.2.11 Examination of Records

In submitting a response to this RFQ, the successful respondent agrees that the LIRPC shall have access to and the right to examine directly all pertinent documents, papers and records of the respondent and/or any sub-contractor as related to any contract and/or subcontract resulting from this RFQ until six years after final payment has been made pursuant to any contract awarded because of the LIRPC's acceptance of a response to this RFQ.

1.2.12 Subcontracting

The respondent will be responsible for the entire contract performance that may result from this RFQ. The respondent must indicate in the RFQ if it intends to use a subcontractor for any part of the work and provide full disclosure of the entire team at the time of its submittal. The respondent shall identify each subcontractor by name, address, and expertise, and must include the name(s) of the principal(s) of the subcontracting entity. A full description of the tasks to be performed by the subcontractor must be included at the time of contracting. The respondent will not be permitted to subcontract any part of the contract or any of the rights and obligations thereunder without the prior written approval of the LIRPC.

1.2.13 Negotiated Changes

Should negotiated changes occur after the awarding of a contract, the same pricing policies called for in the original contract will remain in effect.

1.2.14 Disclaimer

The LIRPC and its respective officers, directors, agents, members and employees make no representation or warranty and assume no responsibility for the accuracy of the information set forth in this RFQ. Further, the LIRPC does not warrant, nor make any representations as to the quality, content, accuracy or completeness of the information, text, graphics, links or other facets of this RFQ once it has been downloaded or printed from any server, and hereby disclaims any liability for technical errors or difficulties of any nature that may arise in connection with the LIRPC or other website on which this RFQ may be posted, or in connection with any other electronic medium utilized by respondents or potential respondents in connection with or otherwise related to the RFQ.

2 SUBMITTAL EVALUATION AND SELECTION PROCESS

2.1 Review and Selections

A *Selection Committee* will be formed and made up of staff and advisors to the LIRPC.

Members of the *Selection Committee* will independently review the requested submittals and will contact selected respondents for an interview and negotiations based on the following overall criteria: 1) potential contributions to the project(s), 2) technical expertise and experience, 3) material and personnel capacity and 4) proposed costs.

Following the interview and negotiations the LIRPC will prepare written preliminary contracts to provide funding for what the *Selection Committee* considers the most appropriate scope items given LINAP priorities and the selected organizations capabilities, capacity, background, and research interests.

This RFQ is for the first phase of what may be a longer water quality data collection and analysis initiative. Only the first phase is currently funded.

3 PRELIMINARY SCOPE OF SERVICES

3.1 Part 1 - Water Quality Monitoring

3.1.1 Background

This project is a part of the Long Island Nitrogen Action Plan, a multiyear effort funded by New York State to: 1) identify sources of nitrogen to the various waters of Long Island through Nitrogen Load Modeling, 2) identify ecological endpoints, 3) establish embayment or estuarine-specific nitrogen loading targets, and 4) take action that will reduce nitrogen loads to Long Island's groundwater and surface waters. This Request for Qualifications (RFQ) focuses primarily on goal four – nitrogen reduction in surface waters and the measurements needed to document current and future water and sediment quality.

Future load reduction measures include new and expanded sewering, replacement of cesspools and septic systems with Innovative/Advanced (I/A) onsite wastewater treatment (OWTS) systems, fertilizer reductions, and improved stormwater collection and treatment. It is important to measure existing surface water quality so that changes resulting from future load reductions can be documented. This RFQ addresses the need to adequately document existing surface water quality for that purpose. This first phase of the project will focus exclusively on Nassau County's south shore embayments.

Existing (legacy) nitrogen from stormwater, fertilizer, and wastewater effluent entered groundwater years ago from past land uses. Groundwater travels on average one foot per day. Thus, groundwater nitrogen from land uses one mile from the shore could take 15 years to reach the bay. Consequently, groundwater entering the bays today contains nitrogen from land uses as far back as 100 years depending on location. Reducing that nitrogen in the bays will require measures such as bio-extraction and bio-harvesting, hydro-modifications, *in situ* bioremediation, and permeable reactive barriers.

A major nitrogen source will soon be removed from the western bays of the south shore – treated effluent from the Bay Park and Long Beach Waste Water Treatment Plants (WWTP). That effluent will be redirected to the ocean via the Cedar Creek WWTP ocean outfall. That diversion along with possible sewering of Point Lookout will have major impacts to the water quality and ecology of the Western Bays.

Water quality data needed to fine tune the models, to site possible treatments, and to monitor progress are described below. The following scope items may change as LINAP implementation requirements are defined. The scope items described below are preliminary and not all will be needed for this first phase of the project. The focus of the first phase are scope items 3.1.2 Data Gathering in Priority Area and 3.1.3 Impact of Nitrogen Load Reductions from Effluent Diversion. Respondents are not required, but may submit any water quality monitoring project relating to scope items 3.1.4 and 3.1.5. The *Selection Committee* in coordination with the organizations selected through this RFQ will determine which of the scope items should be pursued in the first phase.

3.1.2 Data Gathering in Priority Areas

Numerous watershed plans have been completed for south shore waters and many are available at the South Shore Estuary Reserve (SSER) website. Water quality monitoring information is also available through the SSER's mapping portal developed by the USGS.

Respondents should propose a monitoring scheme that would assess water quality in areas within the South Shore Estuary Reserve.

3.1.3 Impact of Nitrogen Load Reductions from Effluent Diversion

Monitoring water quality in the embayments of the north and south shores is critically important to tracking nitrogen load reductions over the coming years that result from LINAP implementation. One particularly large nitrogen load reduction to the Western Bays will almost certainly occur in three or four years as the County redirects treated effluent to the ocean. The Long Beach WWTP may be converted to a pump station and wastewater will be pumped to the Bay Park WWTP for treatment. Point Lookout may eliminate their onsite systems and pipe wastewater to the future Long Beach pump station. Effluent from the Bay Park WWTP will be pumped to the Cedar Creek WWTP ocean outfall. These projects will eliminate the annual discharge of approximately 19 billion gallons of treated sewage into the Western Bays.

Eliminating these discharges will alter the water quality and ecology of the Western Bays. That change should be measured by sampling before and after the projects are implemented. Starting now will make data available as a 'baseline' prior to the elimination of the discharges. Respondents should propose a monitoring scheme that would assess the impacts of this change. The final monitoring program required for this project will be determined by the *Selection Committee* in conjunction with successful respondent.

3.1.4 Water Quality Data for Bioextraction Initiative

Bio-extraction refers to the use of shellfish and seaweed to remove nitrogen from surface waters. A Bioextraction Coordinator began work for LINAP in March of 2018 to determine how bioextraction through seaweed and shellfish cultivation and harvest could help remove nitrogen loads from marine waters. Siting these operations will depend in large part on water and sediment quality, but also on adapting to other uses of the marine environment such as boating and fishing.

One of the tasks of the Bioextraction Coordinator will be to build a Siting Tool that incorporates water and sediment quality information as well as existing and planned embayment and open water uses to identify the most appropriate location, configuration, and size of new bio-extraction / aquaculture operations. The Coordinator will need assistance assembling this information from the groups that do or can collect the necessary information for the waterbodies under consideration. Respondents may contact the Bioextraction Coordinator, **Nelle D'Aversa at Nelle.daversa@dec.ny.gov**, for further information.

3.1.5 Water Quality Data to Locate Bioremediation Initiatives

In situ bioremediation refers to technology designed to remove nitrogen by stimulating the growth of groundwater denitrifying bacteria. Bioremediation can be accomplished through groundwater injection

and by installing permeable reactive barriers. Injection bio-remediation involves the introduction of substances into groundwater that stimulate the growth of denitrifying bacteria. Permeable reactive barriers are bioremediation structures installed to intercept groundwater and remove nitrogen through the action of denitrifying bacteria. Identifying potential sites requires locating where high nitrogen groundwater plumes enter receiving waters. Water quality sampling will be required for these initiatives. Respondents interested in bioremediation should indicate how they would identify potential project sites.

3.1.6 Required Resources

The addition of new sampling locations and/or parameters can tax the resources available to monitoring groups. Responding organizations should indicate whether they would require additional volunteer or paid staff time, equipment, supplies, boat related resources, or general financial assistance to participate in any of the LINAP-related monitoring work described above or other work that they believe would be beneficial. Detailed unit costs should be provided.

3.1.7 Procedures and Parameters

Monitoring organizations will be required to use the Standard Operating Procedures (SOPs) established under the Unified Water Study (UWS) for field methods and sample handling. The SOP proscribes how sampling stations are selected and details the sampling plan.

Sample parameters are also standardized under the UWS for participating organizations. Initial (Tier 1) sampling parameters include: dissolved oxygen, chlorophyll-a, salinity, temperature, macrophytes, water clarity, and depth. More advanced (Tier 2) sampling includes: continuous dissolved oxygen, nutrients including nitrogen, and advanced macroalgae surveys.

Additional sample parameters (*i.e*. sediment nitrogen) may be requested to meet the potential scope items described above. Respondents should indicate which parameters in addition to those listed in the UWS they are prepared to (or could be prepared to) measure or collect for laboratory analysis.

3.1.8 Personnel

Volunteers are often in short supply for regularly scheduled early morning water quality monitoring. Undergraduate and graduate college students may benefit from the interactions with monitoring organizations. Stipends may be available through LINAP to support a limited number of students. Colleges should indicate the number of students interested, and their availability. Preference will be given to students that are also involved in the analyses and reporting of the data (see below).

3.1.9 Equipment

Water quality equipment has been procured for participating groups through grants from the National Fish & Wildlife Foundation and the Long Island Sound Funders Collaborative. Equipment is owned by Harbor Watch, a Connecticut citizen science non-profit, and loaned to organizations that wish to participate in the sampling program. Harbor Watch calibrates and maintains all equipment. Additional equipment needs, if any, should be described in the response to this RFQ.

3.1.10 Data Delivery

The Long Island Regional Planning Council will consult with the UWS to establish uniform field data recording formats. Respondents should include their current data collection methodology in their submissions.

3.2 Part 2 – Laboratory Analysis

Tier 1 data collection is performed in the field and does not require laboratory analysis (other than for equipment calibration and standardization). Some Tier 2 data collection, such as nitrogen concentrations, requires laboratory analysis. Other possible scope items such as sediment quality would require laboratory analysis.

Responding institutions should describe the type of analyses they conduct or could perform. In addition, they should indicate what, if any, laboratory certifications they have and whether they possess or could obtain an Environmental Laboratory Approval Program (ELAP) certification.

3.3 Part 3 – Data Analysis and Reporting

3.3.1 Background

All water quality monitoring reports are to be prepared in a similar fashion, with similar data analyses and evaluations. The reports will document observed and measured conditions and will become the basis for recommended mitigation measures, particularly those significant to LINAP.

3.3.2 Data Analysis, Mapping, and Reporting

Data analysis, GIS mapping, and preparation of biannual reports can be accomplished through the participation of area colleges and their undergraduate and graduate students. Colleges should submit departmental and individual researchers' qualifications to participate in the analyses, GIS mapping, data storage, and reporting of the water quality data collected by their personnel or by participating monitoring organizations.

College respondents should describe the type of analyses that they would perform, correlations, and associations with causative factors that may be considered, and how their analyses would contribute to the objectives outlined above in Part 1 - Water Quality Monitoring. Water and sediment quality research previously or currently conducted by respondents should be listed along with related research planned for the coming semesters.

Participation is encouraged by undergraduate and graduate students under the supervision of their professors for the data analysis, GIS mapping, data storage, and reporting. Respondents should discuss how students would participate, their qualifications (major, research experience, grade), and availability. Preference will be given to submissions that include students in both the data collection with monitoring groups (even if limited) and the subsequent analyses, mapping, and reporting. Respondents should submit estimated costs for participants' time, required equipment and supplies.