



Lower Hudson Partnership for Regional Invasive Species Management 2015 Request for Proposals – *Hydrilla (Hydrilla verticillata)* Survey

Description

The Lower Hudson Partnership for Regional Invasive Species Management (Lower Hudson PRISM) is a group of organizations, agencies and individuals that work cooperatively to promote prevention, early detection and rapid response, and strategic management of invasive species to protect conservation targets. In addition to conducting public outreach and management activities, we support research involving citizen scientists regarding ecological impact and effective control of invasive species.

The Lower Hudson PRISM is one of eight Partnerships for Regional Invasive Species Management or PRISMs in New York State. These partnerships are supported by the New York Invasive Species Council and Invasive Species Advisory Committee and are funded by the Environmental Protection Fund through contract with the New York State Department of Environmental Conservation (NYSDEC).

As the host organization for the Lower Hudson PRISM, the NY-NJ Trail Conference has a contract with NYSDEC to coordinate and administer the Partnership. In order to supplement the work being done by our partners, we are able to offer sub-contracts to the NYSDEC contract through this RFP process to complete projects that further our goals as outlined in our 2015 Action Plan. This is not a grant program and all project proposals are subject to NYSDEC approval prior to being awarded a final sub-contract.

Objectives

The Lower Hudson PRISM Steering Committee has identified areas of work that are needed to move our 2015 work plan along and position our partners for work in 2016. The Steering Committee would like to sub-contract the following project which is in support of our Strategic Invasive Species Management goal and objective 3.2 (Have the capacity/ability to detect new introductions). See Action Plan at <http://LHprism.org> under the Strategy page. The Steering committee chose to fund the implementation of a *Hydrilla (Hydrilla verticillata)* survey at priority waters in the vicinity of the Croton River and Bay hydrilla infestation, at the request of the NYSDEC, to provide information regarding current status. The results from this RFP will help inform potential management decisions by key stakeholders.

Surveys will be conducted for the target species at the Very High priority waters (as determined by NYSDEC) listed in Table 1. The work conducted under this RFP will complement work conducted under a companion RFP issued by the Hudson River Estuary Program to survey Croton Bay and priority waters upstream.

Table 1. Priority waters in the Hudson River vicinity selected for *Hydrilla* survey work to be conducted during the 2015 field season.

Priority	Work	Method	Candidate Sites	
			West Shore	East Shore
Very High	Survey for <i>Hydrilla</i> at likely sites within ~ 10 river miles of Croton Bay; include upstream sites in tribs include ponded waters within 2 miles of River (Piermont to Bear Mtn) [See Candidate Sites]	Visual survey (look for SAV bed) Rake toss, 2 tosses per sample Sample frequency 1 per acre or other acceptable procedure (minimum 6 samples per waterbody)	Nyack Memorial Park BLS Piermont Pier / Marsh Haverstraw Marina Minisceongo Yacht Club Haverstraw Bay Park BLS Cedar Pond Brook (Stony Pt) Popolopen Creek (2 – 3 sites) Iona Is. State Park Bowline Pt. Park Rockland Lk Congers Lk Brooks Lk Hessian Lk Peck's Pd (Haverstraw)	Croton: Halfmoon Bay Marina Verplanck: George's Is Co Park Viking Boat Yard Lk. Meahagh LaFarge Gypsum Pd Lents Cove Park Dickie Brook Buchanan BLS Peekskill: Boat Launch Annville Creek (2 – 3 sample sites)

Background

In late October 2013, a New York Botanical Garden Project survey team discovered *Hydrilla* in the Croton River System while conducting a rare species inventory. *Hydrilla* is a highly invasive submerged aquatic plant that can result in significant negative ecological, recreational and economic impacts. *Hydrilla* is a relatively new invader to New York, with known populations on Long Island (8-10 sites), in a small pond in Orange County, and several small private ponds in Broome County. Extensive infestations have been documented in the Cayuga Lake Inlet (Tompkins County) and the Erie Canal/Tonawanda Creek (Tonawanda, Erie and Niagara Counties).

Following a site visit, in early 2014 Allied Biological, Inc. applied to the Lower Hudson PRISM and was awarded a contract to conduct a detailed aquatic macrophyte inventory of the Croton River System, located in the Village of Croton-on-Hudson (Westchester County). During the survey, 354 GPS-referenced locations (divided into nine sections) were sampled for the presence of aquatic macrophytes. In addition, two other sections Croton Gorge and South of Silver Lake Beach were surveyed on foot or via kayak. All surveys were conducted in late August or early September. The southeast corner of the New Croton Reservoir was sampled from the shoreline in late October.

A full report is available on the Lower Hudson PRISM web site on the Information Exchange page.

Summary of 2014 findings:

- In late August-early September, 2014 three hundred and fifty four GPS-referenced sites were surveyed for aquatic macrophytes throughout nine sections of the Croton River and neighboring locations. These sites range from the Croton Bay (A), to sites along the Croton River (B1-B6), as well as parks and beaches along the river (C-E) and the New Croton Reservoir Dam (F).
- The primary goal was the delineation of *Hydrilla* in the river system, but using point intercept methods, all SAV was surveyed.
- *Hydrilla* was documented in all survey sections in Croton River, and based on these results, the project expanded to on-foot visual surveys of additional sites (section B6, and E).
- On October 30, 2014 during a site visit with a group of scientists, rooted *Hydrilla* with tuber production was confirmed in the New Croton River. Additional surveys conducted by NYDEP in November confirmed scattered established beds of *Hydrilla* throughout the southern/western part of the reservoir.
- *Hydrilla* is well established throughout the entire length of the Croton River. Overall, it occurred at 150 (or 42.3%) of the total sites surveyed.
- *Hydrilla* was most common in sections B1, B3, B4 and D. Its distribution could be described as scattered low-growing patches, consistent with recent invasion growth.
- Twenty submersed macrophytes (plus benthic filamentous algae) were collected during the survey. No floating leaf aquatic macrophytes (water lilies or duckweeds) were observed at any sites.
- Eurasian water milfoil was the dominant submersed macrophyte collected during the survey, occurring at 60% of the sites.
- Invasive species collected during the survey included Eurasian water milfoil, brittle naiad, *Hydrilla*, curly-leaf pondweed and southern naiad. Water chestnut is documented to occur in the Hudson River, but was not observed during our survey in the Croton River.
- Wild Celery is a highly desirable native submersed aquatic macrophyte was also considered a target due to recent reductions in biomass following several large storm events. Wild celery occurred at 53% of the total sites surveyed in varying abundances.
- Five native pondweeds were collected during the survey.
- Three naiad species were collected during the survey.
- Two species of special concern were collected and observed during the survey: plantain shoreweed (Endangered, state rank S1) and giant arrowhead (Threatened, state rank S2).

Technical details

The sub-contractor should demonstrate a knowledge of previous hydrilla survey work conducted in the Hudson River region and other NYS locations, be proficient with GIS and GPS, have an applied working knowledge of aquatic macrophytes, invasive species and standard sampling techniques.

The sub-contractor will be required to attend a kick-off meeting with NYS DEC which will review the past *Hydrilla* survey work conducted during 2014 and the scope of work for the proposed 2015 survey effort.

Timeline

- Surveying is expected to be conducted between the middle of August and middle of October, 2015.
- Data should be reported weekly, with all field data and a draft final report to be submitted no later than November 15, 2015.
- A final written report must be submitted no later than December 15, 2015.

Scope of Work

- Prior to beginning surveys, the sub-contractor will meet with Lower Hudson PRISM coordinator and NYSDEC to discuss survey protocols, data collection details, report formats, deadlines, schedules and lines of communication for the project.
- The sub-contractor should expect to provide his/her own reliable transportation to and from the work sites.
- The sub-contractor should expect to provide his/her own tools and instruments to accomplish the work including but not limited to, GPS units, digital camera, and vegetation sampling equipment.
- All applicable permissions and permits will be obtained by the contractor.
- Aquatic macrophyte sampling will be conducted using scientifically accepted methods (i.e. 1 sample site per 200x200 m grid overlay or other agreed upon technique, with a minimum of 6 sample locations per waterbody, using rake toss method using a minimum of 2 rake tosses per sample site) at Very High priority waters in the vicinity of Croton Bay on the Hudson River as noted in Table 1.
- For all positive detections for *Hydrilla*, specimens will be collected (tuber, leaves, turions) and submitted to NYSDEC for verification.
- Assess *Hydrilla* tuber bank status at any positive waters using scientifically acceptable methods (minimum 6 sediment core samples per site) as described in Racine-Johnson Aquatic Ecologists 2014, to determine emergence time-frame and germination rates for *Hydrilla*.
- The sub-contractor will submit field data summaries weekly and produce a final report, along with 5 copies, summarizing survey findings. The final report will be posted publicly on the Lower Hudson PRISM web site.
- At all steps of the project, the sub-contractor will work closely with the Lower Hudson PRISM coordinator (Linda Rohleder) and NYSDEC (Invasive Species Coordination Unit and Division of Water).

Who is Eligible?

Non-profit organizations, local governments, businesses and institutions located in or serving areas within the boundary of the Lower Hudson PRISM (see map on <http://lhprism.org>) may apply. Lower Hudson PRISM steering committee members may apply but will be required to recuse themselves from the selection process and the evaluation of proposals.

Sub-contractors are required by our contract with NY State to meet insurance requirements including general liability, workers compensation and auto liability (details below).

Procedure and Requirements

1. Review the attached project selection criteria.
2. Complete and submit the attached application along with any relevant supporting materials as a single PDF file no larger than 5MB in size by **Monday July 20, 2015 at 8:00 am** Eastern, emailed to: Lrohleder@nynjtc.org
3. We expect that the funded project will be between \$5,000 and \$15,000.
4. Projects do not require any matching funds, but contributed funding will be taken into account when ranking proposals.
5. All applicant proposals will be ranked and selected by the members of the Lower Hudson PRISM Steering Committee based on the criteria approved by our Partners (given below), and the proposal that best meets our priorities will be selected. The applicant selected to receive the contract will be notified by **July 24** and the Trail Conference will begin the contracting process right away.
6. For more information about the Lower Hudson PRISM or this RFP, contact Linda Rohleder at 201-512-9348 or Lrohleder@nynjtc.org

Details on the PRISM Contracted Funds

Allowable expenditures include: salary & wages, fringe benefits, travel, supplies and equipment.

Reasonable Indirect costs are allowed according to the appropriate U.S. OMB circulars (A-122, A-21, A87, etc.).

PRISM funds may not be used to purchase food or beverages.

Equipment purchased with PRISM funds is the property of the NYSDEC. Equipment is considered "durable" lasting a number of years, while Supplies need to be renewed.

Project documents and data are the property of NYSDEC. The following language shall be included in the contract:

A. All Services performed by the Contractor must conform to the Scope of Work, attached hereto as Schedule 1, and shall be subject to acceptance of the Department. Evidence of the Department's acceptance shall be a required document in all payment requests. The Contractor shall revise and correct, without additional compensation therefore, any required work of this Contract until the same shall be accepted by the Department.

B. All accepted original and other drawings, as well as all notes computations, if applicable, and reports prepared by the Contractor, or other products of the services performed under this Contract, which are required deliverables under this Contract, shall become the property of the Department.

C. The Contractor may publish papers or other material pertaining to the work performed or to be performed under the Contract after first providing the Department a copy of the proposed publication for review and comment. The Department will provide

its comments within 30 days and the Contractor agrees to consider these comments. The Department has the right to require the Contractor to withhold from publication any data that impacts on enforcement issues until resolution of enforcement action. The Contractor will give the Department credit for the support provided to the Contractor in any publication or other copy resulting from this work.

D. Title to, and the right to determine the disposition of any copyrights, or copyrightable material, first produced or created in the performance of this work shall remain with the Department; provided that the Department shall grant to the Contractor an irrevocable, royalty-free, non-exclusive right to reproduce, translate, and use all such copyrighted material for its own purposes.

E. Any invention or discovery made or conceived in the performance of this Contract shall be the property of the Department. The Contractor shall be entitled to a non-exclusive royalty-free license under any patent.

Money will be awarded via contract which will be contingent on NYSDEC Invasive Species Coordination Unit approval of scope of work and budget. Reimbursement requests will be submitted to the NY-NJ Trail Conference with final invoices due no later than **December 15, 2015**. NY-NJ Trail Conference will submit to NYSDEC ISCU quarterly. Once funds are received from NYSDEC ISCU, the NY-NJ Trail Conference will forward to awardee. This process is expected to result in reimbursement within 90 days.

As required by the Lower Hudson PRISM contract, all those receiving funds from the PRISM through this process are considered subcontractors and are required to show proof of insurance as follows:

- Workers Compensation
- Disability coverage
- Commercial General Liability coverage in an amount not less than \$1,000,000 each occurrence
- Comprehensive Business Automobile Liability in an amount not less than \$1,000,000 each occurrence (there is a process for obtaining a waiver for the automobile coverage)

Lower Hudson PRISM 2015 Proposal Selection Criteria

1. Does the proposal fit into one or more of the categories of PRISM deliverables (early detection/rapid response, eradication and control, education and outreach, research via citizen science), or address at least one of the prioritized objectives of the Lower Hudson PRISM? If yes, go to question 2. If no, reject the proposal.
2. Is the work plan feasible and does the organization have the capacity to complete the proposal? If clearly no, reject the proposal.
3. How high does the proposal score (maximum of 100 points)?

Proposals will be scored by the Steering Committee according to the Proposal Selection Criteria in Appendix A approved by the partners of the Lower Hudson PRISM. These

scores will guide the selection of the applicant by the Steering Committee. Since the Scope of Work for this project is pre-determined, it is expected that all applications will receive similar or equal scores in categories that deal with Importance, Breadth, and Innovation and that the other categories will consequently assume greater weight in the selection process.

Proposals should take the form outlined in the Application given in Appendix B.

The applicant chosen for this project should possess the academic and/or professional expertise in the relevant subject areas, and have a strong track record in delivering projects of this nature and facilitating successful working relationships with municipal and state governments. Attention to detail in documenting qualifications that meet the scoring requirements in the Capacity section is strongly advised. The Capacity section, including resumes, CVs, descriptions of past projects, etc. must not exceed 3 pages. This section should include a summary of experience in conducting aquatic plant surveys generally, experience conducting surveys in estuary systems, with a highlighted focus on experience conducting surveys for monoecious *Hydrilla* in ponded, flowing, and/or tidal settings. It should also include a summary of how the applicant will distinguish monoecious *Hydrilla* from other physiologically similar submerged aquatic vegetation species in the field, and a priority order of which botanical and/or habitat traits will be used to determine which collected or observed plants are monoecious *Hydrilla*, and which subsampled plants need to be archived and submitted for verification. The applicant should also identify, if appropriate, the timetables within the sampling window for collecting tuber and plant samples, respectively.

References

Allied Biological. 2014. Croton River: 2014 Delineation of *Hydrilla* and other Submerged Aquatic Vegetation (SAV) in the Croton River System.

Gettys, L.A., et. al. 2009. Biology and Control of Aquatic Plants: A Best Management Practices Handbook.

Johnson, R.L. 2014. 2013 Monitoring Report of the Cayuga Inlet and Southern Cayuga Lake Monoecious *Hydrilla* Eradication Project. Racine-Johnson Aquatic Ecologists, Ithaca, NY.

Madsen, J.D. 1999. Point and Line Intercept Methods for Aquatic Plant Management. APCRP Technical Notes Collection (TN APCRP-M1-02), US Army Engineer Research and Development Center, Vicksburg, MS.

NYFOLA. 2009. Diet for a Small Lake: The Expanded Guide to New York State Lake and Watershed Management. New York State Federation of Lake Associations, Inc.

Appendix A - Proposal Selection Criteria

Points Possible	Criteria
0-20	<p>A1. Importance (0-10 points) Does the proposal address an important invasive species, an important process (like vector management), an important impact, or an important audience (in the case of education/outreach)?</p> <p>A2. Priority Objectives (0-10 points) Does the proposal address one or more priority objectives in the PRISM's Action Plan?</p>
0 - 15	<p>B. Breadth of application Does the proposal have broad implications or applications, as shown for example by relevance to the entire PRISM region (and other regions), a wide range of species, and/or a wide range of audiences?</p>
0 - 5	<p>C. Innovation Does the proposed work address the objective in an innovative way?</p>
0 - 15	<p>D. Feasibility of work plan Is the proposed work likely to meet its stated goals and objectives?</p>
0 - 15	<p>E. Capacity Do the organization and key personnel have the capacity/ability to complete the proposed project well?</p>
0 - 10	<p>F1. Partnership (0-5 points) Does the proposed work involve multiple partners? (higher points for more organizations and stronger partnerships)</p> <p>F2. PRISM Partner Involvement (5 points) Is the applicant a PRISM partner?</p>
0 - 10	<p>G. Budget Is the funding request cost effective? (high score can be awarded for low overall budget and/or if substantial matching funds are proposed.)</p>
0 - 10	<p>H. Timeframe Is the proposed timeframe reasonable? Is it in line with the timeframe of the PRISM objectives?</p>

Appendix B – Application

Application for Lower Hudson PRISM 2015 Project Sub-contract

(a Word document version of this application can be obtained from Linda Rohleder, lrohleder@nynjtc.org)

I. Project Title: Invasive Species Surveying

Applicant Contact Person:

Telephone Number:

Organization/Entity Applying:

Tax ID:

Applicant is a non-profit organization? (y/n):

Applicant is a minority- or women-owned business? (y/n)

Address:

City:

State:

Zip:

Fax #:

Email:

Estimated Start and Completion Dates:

Total amount requested:

Total Cash Match:

Total In-Kind Match:

II. Partnering Organizations:

III. Section - N/A

IV. Budget form (either the form attached or a more detailed breakdown):

Budget Category	Project Total	Requesting	Match
Personal Service: Salary, wages			
Fringe benefits			
Equipment			
Materials and Supplies			
Outside Services			
Printing and Postage			
Travel			

Other (explain below)			
Indirect costs			
TOTAL:			

V. Budget justification:

- Please include in your justification hourly rates of each contract worker.

VI. Project Narrative: (no longer than 4 pages single-spaced, times new roman 12 pt, 1” margins) that describes your project. All aspects of the evaluation criteria should be addressed.)

A. Justification of project and its importance – N/A

B. Breadth of application

- Clearly identify survey sites you expect to complete

C. Detailed scope of work:

- Clearly identify methods and approach to addressing the scope of work
- Describe contributions to be made to the project by each partner/contract worker
- Clearly identify schedule of deliverables

VII. Documentation supporting applicant’s capacity to perform the proposed work

- Please include resumes of proposed ecologists
- At least 2 references with phone numbers for clients for whom they have completed recent projects.
- Additional supporting documentation may also be included.