

Release Date: July 22, 2013

Lake Champlain Basin Program Announcement

Request for Proposals

Municipal-Level Assessment of the Social, Environmental and Economic Benefits of River Corridor and Floodplain Protection Programs in the Lake Champlain Basin

The Lake Champlain Basin Program (LCBP) is pleased to announce a Request for Proposals (RFP) for services to assess the economic and environmental benefit of river corridor and floodplain protection programs at the municipal level within the U.S. portion of the Lake Champlain Basin. Up to \$100,000 is available for this project. This project will identify the long-term benefits of river restoration programs given the expected increase in the severity and frequency of storm events due to climate change as outlined in Chapter 8 of the LCBP's long-term management plan - *Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin*. This project is supported by funds awarded to the New England Interstate Water Pollution Control Commission (NEIWPCC) by the U.S. EPA in support of the Lake Champlain Basin Program.

This Request for Proposals is available from the Lake Champlain Basin Program website. Look for the link on our homepage at www.lcbp.org. To receive a copy of the RFP via US Postal Service, contact the Lake Champlain Basin Program office at (802) 372-3213 or toll free at (800) 468-LCBP in New York and Vermont.

To facilitate the review process, applicants must submit proposals in both paper and electronic format. Please see the RFP and the attached proposal format information for complete details.

DEADLINE NOTICE:

Hardcopy (10 copies) and electronic versions (no facsimiles) of proposals must be RECEIVED by the Lake Champlain Basin Program office by 4:30pm on:

August 20, 2013

LATE OR INCOMPLETE PROPOSALS WILL NOT BE CONSIDERED.

The successful applicant will be notified by late September, 2013. LCBP anticipates granting one (1) award from this RFP.

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I. Background

The 2011 flooding events in the Lake Champlain Basin made flood resilience a high priority for regional communities. Due to the damages incurred to homes and infrastructure in 2011, protection of flood-prone areas and evaluation of the potential hazard of new and existing development are critical steps towards flood preparedness. The hardest hit areas are frequently located within a flood zone and the costs to repair these areas often falls on the communities and taxpayers. Floodplain and shoreline protection standards vary by municipality and state, and in many cases the minimum guidelines may be insufficient to accommodate modern flood events. While there is general consensus that people must be protected from floodwaters, there are myriad reasons why development continues to occur within flood-prone areas. Predictions of more severe storm events in the region necessitate a comprehensive analysis of the costs and benefits of floodplain, river corridor, and shoreline protection programs.

The scope of this Request for Proposals is to develop a model to analyze the social, environmental and economic benefits of floodplain and river corridor protection programs at the municipal level. The project will first quantify the benefits derived from the natural and beneficial functions of wetlands, river corridors, floodplains and riparian areas by assessing the value of resource protection in avoidance of flood damages, public health and safety benefits, and water quality improvements. Second, the project will select and use at least one representative municipality in both Vermont and New York for the development of a vulnerability model. The model will assess the costs of repairing damages incurred due to both inundation and fluvial erosion resulting from flooding by:

- (a) Assessing build-out scenarios onto the mapped floodplain and, if available, State-mapped river corridors, based on selected municipalities' current National Flood Insurance Program (NFIP) minimum flood hazard area regulations and,
- (b) Running a generalized hydrologic and hydraulic (H&H) model precipitation and runoff scenarios, focusing on floodwater heights and velocities derived from USGS gauging stations; and,
- (c) Evaluating the vulnerabilities of the build-out scenario within the river corridors.

The successful proposal will include careful selection of at least one municipality in both Vermont and New York (a total of two or more), and development of a working relationship with the selected municipalities and appropriate resource managers for those municipalities. Selected municipalities should be located in flood-prone areas with a detailed flood insurance study (FIS) in place. Inclusion of letters of support from the municipalities and documented costs from previous floods are recommended in the proposal to justify the need for this analysis and commitment from those municipalities to participate in the project. Understanding of current local, state and federal flood hazard area regulations must be made apparent in the proposal. The highest priority of this RFP is to develop a user-friendly model that can easily be modified to accommodate varying hydraulic scenarios and may eventually be made available directly to other municipalities in the region by LCBP and our partners.

Respondents to this RFP should clearly indicate in their proposal whether their project will use an existing model or develop a new one. Justification for proposed hydraulic scenario(s) should be carefully outlined along with the associated cost/benefit analyses. Proposals also should include references to existing NFIP flood hazard area regulations and State-level fluvial erosion hazard regulations to delineate preliminary priority protection areas. In addition to increasing awareness of floodplain and river corridor protection programs in the selected municipalities, the project also will promote sustainable economic development in the Lake Champlain Basin as outlined in LCBP's long-term management plan: *Opportunities for Action: an Evolving Plan for the Future of the Lake Champlain Basin (section 10.3.3)*. The final project deliverable will be a report documenting the outcome of the program and degree of interest from municipalities, as well as public presentations of the model to both municipalities participating in the project. Success of the project will be measured by the accessibility of the model to municipal engineers and regional planners, as well as the breadth of the model given the available budget.

II. Project Tasks and Deliverables

The Lake Champlain Basin Program (LCBP) seeks proposals for technical services to develop build-out simulations and cost/benefit analyses of municipal-level floodplain protection programs for at least two communities in the Lake Champlain watershed. The project should be set up as a model-based approach with a generalized hydraulic component capable of varying climatic and precipitation inputs. Expected model outputs include identification of priority areas for flood protection and cost/benefit analyses of protecting areas beyond the minimum standards within the selected municipalities. This program may eventually be expanded as a user-friendly tool for other municipalities in the Basin based on interest and availability of funds. Proposals should describe how the applicant plans to address the following project components:

1. A build-out scenario on mapped floodplain and river corridors for the selected municipalities based on minimum standards of the National Flood Insurance Program (NFIP) with no fluvial erosion hazard-based river corridor protection, or up to the minimum standards of the relevant state if the municipality does not participate in the NFIP.
2. Application of a generalized precipitation/runoff hydraulic model using accepted USGS gauge measurements on the build-out scenarios, focusing on floodwater heights and velocities under a variety of storm events and climatic scenarios.
3. A cost-benefit analysis of the build-out scenario with varying degrees of flood events, including:
 - Analysis of long-term cumulative impacts from anticipated, more frequent flood events;
 - Identification of priority areas for flood protection;
 - The cost of preparatory work and maintenance necessary to protect buildings and infrastructure anticipated to flood in the build-out scenario;
 - The cost of recovery borne by the municipality and its taxpayers from flood damages associated with each flooding scenario, including the costs of infrastructure, lost businesses and public building repairs.

4. A 'no development' scenario for comparison to the scenarios identified in Section 3, above, and a cost/benefit analysis in which any currently undeveloped river corridor, mapped floodplain and wetlands are protected that will include:

- Identification of selected economic, societal and environmental benefits of protected, natural areas including wetlands, floodplains, and open spaces;
- The cost to remove outdated or flood-prone infrastructure;
- The cost to municipalities, landowners and taxpayers of protecting any undeveloped river corridor, floodplain, and wetland assets, including property values for parcels protected as open space in flood corridors;
- The potential avoided costs of flood-proofing maintenance and reconstruction of damages associated with flood recovery.

5. Summary of specific recommendations for the selected Vermont and New York municipalities to improve flood resilience, and general recommendations for similar municipalities within the Basin.

6. Development of an interim report is to be submitted to the LCBP upon completion of Tasks 1-4; upon approval of this interim report, the successful applicant will then move forward with Task 5 and development of the final report. The final report will include requested revisions to the interim report, a user guide for the model, electronic data and maps generated, as well as presentations to the selected municipalities documenting the outcomes of the preceding steps.

III. Summary of Other Requirements for the Selected Proposal

The selected applicant will be required to complete the following additional tasks:

1. Following initial notification of the award, a workplan must be approved by the LCBP before a contract agreement can be executed and the work begun. The workplan will detail the logistical elements of the project, including deliverables, and project timeline. Information about the LCBP grant process, workplan development guidelines, and reporting requirements can be found on the LCBP website at: <http://www.lcbp.org/about-us/grants-rfps/grant-toolkit/>. The project timeline should be scheduled with an expected start date no sooner than **November 1, 2013**. The successful applicant will enter into a contract with NEIWPC in order to complete the work.
2. Once the contract has been executed, the contractor must develop a data Quality Assurance Project Plan (QAPP) to be approved by the LCBP and the US EPA before the beginning of any data collection or analysis. More information about LCBP Quality Assurance Plans can be found at: <http://www.lcbp.org/about-us/grants-rfps/grant-toolkit/qapp/>.
3. The successful applicant will prepare brief quarterly reports documenting progress on each objective and task in the project (see attached Proposal Format Requirements). The interim report described in Task 6 above should be completed no later than **September 30, 2014**. A final report fully documenting the project's results will be required at project completion, no later than **December 31, 2014**.

4. When approved, the final report will be edited for content and style in consultation with the successful respondent and may be published as part of the Lake Champlain Basin Program's Technical Report Series, located here: <http://www.lcbp.org/media-center/publications-library/technical-reports/>. Some aspects of this report may be used for future LCBP public outreach materials.

IV. Eligibility

Eligible organizations include colleges, universities, nonprofit organizations, for-profit companies, and non-federal government agencies. The selected contractor will be responsible for the completion of all project tasks, though subcontracted work may be permitted by the LCBP Project Officer upon written request. Individuals and representatives from organizations that participated in the development or review of this RFP and its contents are ineligible to apply.

V. Proposal Evaluation and Selection Criteria

Proposals will be judged according to the following criteria:

1. Demonstrated knowledge of existing floodplain protection standards in Vermont and New York, as well as familiarity with the National Flood Insurance Program (NFIP).
2. Demonstrated knowledge of regional climate patterns and historic flood events in the Lake Champlain Basin to inform reasonable precipitation model inputs and flood scenarios.
3. Suitability of the selected Vermont and New York municipalities and ability to maintain a close relationship with the municipalities throughout the duration of the project.
4. Technical merit and applicability of the proposed product toward the priority objectives identified in this RFP, including justification of the chosen modeling approach for the build-out scenario.
5. Demonstrated ability to accomplish the deliverables outlined in Section II.
6. Potential for the project to enhance the technical capabilities that support municipal-level flood preparedness within the Lake Champlain Basin. Proprietary products are not acceptable project deliverables.
7. Clarity, conciseness and adherence to the proposal guidelines.
8. Demonstrated ability to create documents and user-friendly products that are accessible to and can be used by local partners working to address flood resilience in the Lake Champlain Basin.
9. Appropriateness of budget and budget justification, describing how the funds awarded will be used to produce the set of deliverables described in Section II.

VI. Available Funds and Match Requirements

A total of \$100,000 may be made available for this project. No direct match is required. LCBP anticipates granting one (1) award from this RFP.

VII. Period of Performance

Work is to be completed no later than **December 31, 2014**.

VIII. Schedule and Requirements for Proposal Submission

1. Please follow the format outlined in the attached Technical Proposal Format Requirements.
2. Ten (10) paper copies of each proposal must be RECEIVED by the LCBP office by 4:30pm on **August 20, 2013**. Please submit paper copies bound only with a single staple or binder clip.
3. *In addition*, an editable ELECTRONIC VERSION of the proposal, either on disk or via e-mail must be submitted. Electronic versions also must be RECEIVED by 4:30pm on **August 20, 2013**.

IX. Contact Information

Direct all proposals and other inquiries to:

Stephanie Castle
NEIWPC Environmental Analyst
Lake Champlain Basin Program Technical Associate
54 West Shore Rd., Grand Isle, VT 05458
p: 802-372-3213; f: 802-372-3233
scastle@lcbp.org ; www.neiwpc.org ; www.lcbp.org

Technical Proposal Format Requirements

Proposals should adhere to the following format and should not exceed a 10 page maximum length (font size 12), NOT including budget information, references cited and investigator resumes.

TITLE: - Concise and descriptive.

POINT OF CONTACT: Name, position, organization, address, telephone, fax and email of the person who will be the point of contact.

AUTHORIZED REPRESENTATIVE: Name, position, organization address, telephone, fax and email of the person who is authorized to sign the contract.

ABSTRACT: Brief description of proposed work.

INTRODUCTION: Overview of what the project is and what it will accomplish in relation to the RFP.

OBJECTIVES AND TASKS: List the project's objectives and describe in detail the tasks that will be performed relative to each objective, including methods and approaches.

DELIVERABLES: Detailed description of the planned products from each task of the project. Quarterly progress reports and a final report are required deliverables.

SCHEDULE: Timeline showing anticipated dates for completion of the major tasks and deliverables. Quarterly progress reports are due on the last day of December, March, June, and September. Work is to be completed within the specified performance period in the RFP.

DETAILED BUDGET JUSTIFICATION: Cost breakdown by major budget categories (i.e. personnel, equipment), linking costs to specific tasks/deliverables wherever possible. Breakdown should show costs to be covered by the LCBP award and other sources (if applicable), as well as any match amounts and totals. (1 page, not included in the 10 page maximum total for the proposal).

TECHNICAL REFERENCES CITED: List all references used for the proposal (not included in the 10 page maximum total for the proposal).

CURRICULUM VITAE/RESUME OF PRINCIPAL INVESTIGATORS: Include up to 3-5 references for prior work pertinent to the proposed project. Please limit to one page per investigator; not included in the 10 page maximum total for the proposal.