

Release Date: December 11<sup>th</sup>, 2012

## Lake Champlain Basin Program Announcement

### Request for Proposals

#### *Stormwater Infrastructure Inventory, Mapping, and Vulnerability Assessment and Identification and Demonstration of Green Stormwater Infrastructure Retrofit Opportunities for the Lake Champlain Basin – New York*

The Lake Champlain Basin Program (LCBP) is pleased to announce a Request for Proposals (RFP) for technical services to inventory and map stormwater infrastructure systems, assess vulnerability, and identify and demonstrate opportunities for retrofits to reduce stormwater volumes utilizing green stormwater infrastructure within the New York sector of the Lake Champlain Basin. Up to \$200,000 is available for this project. This project will support the reduction of phosphorus loadings and contaminants generated from developed lands by aiding planning and prioritization efforts as outlined in the LCBP's long-term management plan: *Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin*. This RFP is supported by US EPA funds provided to the Lake Champlain Basin Program.

This project seeks to develop and execute a repeatable methodology for inventorying and mapping the stormwater infrastructure and associated sub-catchment areas within an urbanized stormwater collection system, assessing vulnerabilities to future storm events associated with anticipated climate change and identifying and demonstrating appropriate green stormwater infrastructure retrofitting technologies intended to reduce stormwater volume entering and being conveyed by the stormwater system.

This Request for Proposals is available from the Lake Champlain Basin Program website. Look for the link [www.lcbp.org](http://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:

**January 18<sup>th</sup>, 2013**

LATE OR INCOMPLETE PROPOSALS WILL NOT BE CONSIDERED.

The successful applicant will be notified by early March 2013.

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## Request for Proposals

*Stormwater Infrastructure Inventory, Mapping, and Assessment, and Identification of Green Stormwater Infrastructure Opportunities for the Lake Champlain Basin – New York*

### **I. Background**

Basin-wide phosphorus runoff from developed lands contributes a significant proportion of non-point source nutrient pollution to Lake Champlain, often exceeding contributions from agricultural land use on a per-acre basis. In addition to gathering phosphorus-rich sediments and organic matter from paved surfaces and rooftops, stormwater runoff from impervious surfaces also speeds the delivery of dissolved and sediment-bound phosphorus to the Lake, and slows the rate at which ecosystems can absorb and process phosphorus.

In addition to conveying pollutant loadings, stormwater systems may contribute to localized flooding. Flooding may result from inadequate stormwater collection and may contribute to downstream flooding by passing flows more quickly than would natural systems. These problems are likely to be exacerbated with anticipated increases in both the frequency and intensity of storm events associated with climate change. A geographically referenced stormwater inventory and mapping, together with a vulnerability assessment, will be useful in informing future stormwater policy decisions that may both reduce pollutant loadings and flooding damages.

This project will research existing stormwater mapping methodologies and develop and execute a repeatable methodology for inventorying and mapping the stormwater infrastructure and associated sub-catchment areas within an urbanized stormwater collection system. It will assess vulnerabilities to future storm events associated with anticipated climate change and will identify and demonstrate appropriate green stormwater infrastructure retrofitting technologies intended to reduce stormwater volume entering and being conveyed by the stormwater system.

### **II. Project Tasks and Deliverables**

The Lake Champlain Basin Program (LCBP) seeks proposals for technical services to inventory, map, and assess a stormwater collection system within an urban area(s) and to develop a suite of green stormwater infrastructure practices intended to reduce volume in the stormwater system by intercepting stormflows and managing them on-site, and demonstrating at least one effective practice. Anticipated tasks include the following workplan components:

1. Inventory and map the stormwater infrastructure of the selected urban system, identifying stormwater inlets, manholes, outfalls and associated connecting network of piping, ditching, culverts, etc.
2. Delineate and map sub-catchment areas within the project area.
3. Calculate storm runoff volumes, peak discharge rates and required storage volumes for storm events that include the general range of precipitation experienced in recent years.
4. Identify and assess infrastructure vulnerabilities for predicted future storm events based on projections of climate change.
5. Based on the built landscape of the selected urban area(s), propose and execute a model to describe a suite of ranked or prioritized green stormwater infrastructure retrofits, matching potential practices with locations.
  - Examples of suitable green stormwater practices can be found at:

- NYS DEC webpage for green infrastructure:  
<http://www.dec.ny.gov/chemical/68199.html>
  - NYS DEC stormwater design manual chapter 5, Sections 5-2 and 5-3:  
[http://www.dec.ny.gov/docs/water\\_pdf/swdm2010chptr5.pdf](http://www.dec.ny.gov/docs/water_pdf/swdm2010chptr5.pdf)
  - EPA Green Infrastructure webpage:  
<http://water.epa.gov/infrastructure/greeninfrastructure/index.cfm>
6. Install at least one practice as a demonstration. Conduct a public outreach workshop with educational materials suitable for homeowners, businesses, and the selected municipality(ies), describing opportunities for low-tech green retrofits to reduce stormwater volumes.
  7. Deliver the resulting spatial datasets to the LCBP at the end of the project, for distribution and public use. Requirements for the final datasets include the following:
    - the final datasets must be in the projected coordinate map system NAD83 UTM 18N.
    - the final infrastructure mapping layers must be delivered in GIS ArcMap 10-compatible file formats.
    - All datasets submitted must include FGDC-compliant metadata files anticipated in the Quality Assurance Project Plan described below.
  8. Produce a final report that:
    - clearly details the methods used, including justification for those methods, auxiliary datasets used, processing steps, a model of the workflow, QA/QC sampling procedures, estimates of classification error, FGDC-compliant metadata, and bibliographic references used in the project.
    - describes the findings of the infrastructure vulnerability assessment described in #4 above.
    - provides a ranked/prioritized list of potential green infrastructure projects described in #5 above, and describes the criteria used to rank or prioritize the projects.
    - describes the demonstration project and associated outreach effort described in #6 above.

### **III. Summary of Other Requirements for the Selected Proposal**

The selected proposal 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 grant agreement can be executed and the work begun. The workplan will detail the logistical elements of the project, including deliverables, project timeline, and budget. Information about the LCBP grant process, workplan development guidelines, and reporting requirements can be found on the LCBP website at: [www.lcbp.org/granttool.html](http://www.lcbp.org/granttool.html).
2. Once the grant agreement has been executed, the contractor must develop a data Quality Assurance Project Plan (QAPP) to be approved by the LCBP and US EPA before the beginning of any data collection. More information about LCBP Quality Assurance Plans can be found at: <http://www.lcbp.org/qapp.htm>.
3. The successful applicant will be required to pilot their methods and provide the output to the LCBP Project Officer for review and approval prior to completing the project. Any changes to the methodology required at any time may only be applied subject to prior approval from the LCBP Project Officer and appropriate revision of the QAPP.
4. The successful applicant will prepare brief quarterly reports documenting progress on each objective and task in the project (see attached Proposal Format Requirements). A final report

fully documenting the project's results will be required at project completion, no later than December 31<sup>st</sup>, 2014.

5. When approved, the final report will be edited for content and style in consultation with the successful applicant and may be published as part of the Lake Champlain Basin Program's Technical Report Series, located at: [http://www.lcbp.org/publication\\_search.aspx](http://www.lcbp.org/publication_search.aspx).

#### **IV. Eligibility**

Eligible organizations include colleges, universities, nonprofit organizations, for-profit companies, and 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 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 geospatial analysis methodologies and urban hydrology methodologies.
2. Current status of stormwater infrastructure assessment. Municipalities without existing stormwater infrastructure assessments will be more competitive.
3. Technical merit and feasibility of the proposed methods for identifying, delineating and assessing a stormwater infrastructure system.
4. Potential for the project to enhance the technical capabilities and infrastructure evaluation and retrofitting within the Lake Champlain Basin. Proprietary products are not acceptable as deliverables. All products and data developed as part of this project should be made available to LCBP upon completion of the project.
5. Demonstrated ability to create documents and products that are accessible to and can be used by local partners working to decrease nutrient pollution in the Lake Champlain Basin.
6. Demonstrated support of the participating municipality(ies), if municipality is not the primary applicant.
7. 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 \$200,000 is available for this project. No match is required.

#### **VII. Period of Performance**

Work is to be completed no later than December 31<sup>st</sup>, 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 **January 18<sup>th</sup>, 2013**. Please submit paper copies bound only with a single staple or binder clip.
3. *In addition*, an editable ELECTRONIC VERSION must be submitted either on disk or via e-mail in Microsoft Word or Word-compatible format. Letters of support may be provided in pdf format. Electronic versions also must be RECEIVED by 4:30pm on **January 18<sup>th</sup>, 2013**.

**IX. Contact Information**

Direct all proposals and other inquiries to:  
Eric Howe, Technical Coordinator  
Lake Champlain Basin Program  
54 West Shore Road, Grand Isle, VT 05458  
(802) 372-0218 / [ehowe@lcbp.org](mailto:ehowe@lcbp.org)