**Gulf of Maine
Council on the
Marine Environment**

**Organization Background:**

**Gulf of Maine Council on the Marine Environment**
The Gulf of Maine Council on the Marine Environment (GOMC) was established in 1989 by the Governments of Nova Scotia, New Brunswick, Maine, New Hampshire, and Massachusetts to foster cooperative actions within the Gulf watershed. Its mission is to maintain and enhance environmental quality in the Gulf of Maine to allow for sustainable resource use by existing and future generations. Visit www.gulfofmaine.org for further information. The Gulf of Maine Association is a 501(c)(3) nonprofit that supports the activities of the Gulf of Maine Council on the Marine Environment.

**EcoSystem Indicator Partnership**
The EcoSystem Indicator Partnership (ESIP) was established by the GOMC to help coastal managers and decision-makers assess the health of the Gulf of Maine through the use of indicators. ESIP was created out of an identified need to better understand and convey information on the status and trends of ecosystem health and the impacts of human use in the Gulf of Maine. Through collaboration with regional experts, from local, state, provincial and federal governments along with academia and members of non-government organizations, ESIP has developed a suite of indicators to scientifically assess changes in the ecosystem. ESIP's initial focus has been on identifying and compiling data for key indicators under seven (7) themes: Aquaculture; Aquatic habitats; Climate Change; Coastal Development; Contaminants; Eutrophication; and Fisheries. To make information more easily accessible and usable by practitioners and decision-makers, ESIP has also developed a set of tools for conveying information and providing access to indicator data. Through a web-based monitoring map, ESIP provides information on current monitoring activities in the region (e.g. locations, organizations, monitoring parameters and contacts) as well as shares its indicator data (e.g. locations, data parameters, and trends) via a web-based indicator reporting tool.

**Project Background:**

ESIP is embarking on a new project to raise awareness and engage a broader audience in monitoring and tracking ecosystem changes in the Gulf of Maine. Until now, ESIP has relied on traditional forms of media to educate and engage its audiences, such as its website, fact sheets, workshops and presentations.  Recognizing that people who have a better understanding of their local environment also have a stronger sense of place and are more interested in helping to conserve and protect that environment, ESIP wants to engage citizen scientists from the Gulf of Maine by developing a smart phone application (App) designed to both provide scientific information about the health of the Gulf of Maine ecosystem and encourage their input to help monitor and track changes.

The App should enable citizens to quickly and easily access monitoring data on environmental conditions in the Gulf of Maine from ESIP's existing web-based monitoring map and, using location based services available on their mobile devices, enable citizens to input observations via photographs and text about environmental conditions at particular locations. Input to the App will provide valuable local information for monitoring local and regional environmental conditions in the Gulf of Maine. To help build and maintain a community that regularly input to the App, sharing updates or challenges by linking with social media sites (e.g., Facebook, Twitter, and Tumblr) should also be an implicit part of the App design.

**Contract Overview**

The GOMC's ESIP is seeking contractor/s to develop a smart phone application (App) that will:
1. Enable users to search the existing web-based ESIP Monitoring Map (http://www.gulfofmaine.org/2/esip-monitoring-organizations-2/) to locate and receive information about nearby monitoring sites with appropriate technology to meet both the needs of internal employees as well as external individuals.

2. Allow users to upload georeferenced and time stamped images from both ESIP-designated sentinel sites and user choice sites within the Gulf of Maine to an on-line ESIP photo library (cloud hosted)
3. Allow users to link to a webpage on the ESIP website which provide background information on the project and/or App tutorial
4. Enable links to social media sites that will provide both automatic and user generated notifications and updates

The App should be easy to use and visually appealing. It should be designed to function on multiple platforms and require minimal updating/maintenance (e.g., does not require maintenance when platforms are updated).

**Preferred Qualifications**

Previous experience in developing iPhone/iPad and Android apps, preferably in the development of citizen science Apps (links to Apps recommended). In addition, prospective individuals should have a stong iOS and Android programming background along with existing knowledge of the mobile smartphone market. Prospective individuals should also have the ability to effectively work and communicate technical concepts to a diverse team. The prospective individuals should have experience building features and solutions end to end – from the client to the server.

**Tasks:**

1. Work with the ESIP ICUC App Team to visually conceptualize the App including main features, approximate layout and structure.

2. Work with the ESIP ICUC App Team and GOMC IT contractor to develop an App design and framework that includes but is not limited to:
   - Simplicity in design
   - Focus on user experience
   - Behaviour Driven Development - the solution is aligned with user stories and creates identified value for the client and the user community and is not developed in isolation
   - HTML5 - the solution leverages HTML5 to ensure rich web experience and to ensure a universal experience across a wide spectrum of devices
   - Cross-platform - the solution is useable by multiple app platforms (e.g. iOS, Android, Windows Mobile, BlackBerry/RIM) but requires minimal updating when a mobile operating system is updated.
   - Web Frameworks - the solution leverages existing web design frameworks to maximize versatility and maximize visual design (e.g., Bootstrap, Angular.js)
   - Responsive - the interface can be easily accessed on a variety of web-enabled devices
   - Open Source - the solution uses open source software to maximize accessibility, interoperability, versatility while reducing operating costs
   - Interoperability - the solution is designed to be easily connected to other existing components or future components (e.g., database, API, 3rd party mobile app etc.)
   - Scalability - the solution is scalable to allow for significant growth in usage overtime as per the client needs without degradation of service
   - Effective Offline Synchronization - the solution effectively addresses offline synching of data collected on device with database
   - Hosting - the solution leverages the cloud to minimize cost of operation, maintenance, and security
   - Other technical requirements as identified

3. Work with the ESIP ICUC App Team and the GOMC IT contractor to create a wireframe/mock-up based on the design and framework developed in Task 1, as well as a storyboard to demonstrate usage/navigation of the App and how it links to the ESIP Monitoring Map and website.

4. Work with GOMC IT contractor to develop and implement an abstraction layer (e.g. REST, JSON) to access data from the ESIP database

5. Work with the ESIP ICUC App Team and the GOMC IT contractor to test the functionality of the prototype and make necessary modifications/revisions.

6. Once the final App has been reviewed and approved by the ICUC App Team and the GOMC IT contractor, support the submission, publishing and release of the App with key App marketplaces

7. Provide well documented information on the development process and ensure the code is archived.

8. Provide a simple to follow user guide for the App.

**Deliverables:**

1. App visual concept and mock-up on or before June 12, 2015.

2. App prototype on or before July 17, 2015.

3. All App documentation including archived code and user guide on or before September 1, 2015

4. App launch no later than September 1, 2015.

5. Post-launch modifications with revised documentation (as necessary) no later than September 15, 2015

**Term of contract**

June 1, 2015 – September 15, 2015.

**Other requirements**

Applicants cannot be debarred or suspended from receipt of federal funds. The applicant should have a proven track record of developing apps that fill similar specifications noted above (with viewable examples).

**Compensation**

The consultant will be on contract with the Gulf of Maine Association. This is a fee for service contract with no benefits or additional costs provided by the Gulf of Maine Association. As part of application, please provide contract fee requirement.

**Location**

The contractor will work from his/her own office.

**Proposal procedure**

Submit cover letter, resume, and contract fee requirement in PDF format via an email to Cindy Krum, Executive Director, Gulf of Maine Association at ckrum@gulfofmaine.org by 5:00 PM EDT on May 22, 2015. Please label the e-mail with Contractor last name or company name and "ESIP APP Application." A confirmation e-mail will be sent when applications are received. For clarification/process questions, contact Christine Tilburg at ctilburg@securespeed.us.