

**Environment and Natural Resources Trust Fund  
2011-2012 Request for Proposals (RFP)**

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**LCCMR ID: 205-G**

**Project Title:** Water Quality Smartphone Application

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**Category:** G. Environmental Education

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**Total Project Budget: \$**  \$52,500

**Proposed Project Time Period for the Funding Requested:**  3 yrs, July 2011 - June 2014

**Other Non-State Funds: \$**  0

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**Summary:**

Enhance and maintain a smartphone application that allows citizens to (1) access and (2) contribute to water quality-related information while they are at Minnesota's lakes and rivers.

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**Name:**  Annie   Levenson-Falk

**Sponsoring Organization:**  Citizens League

**Address:**  555 N Wabasha St, Ste 240   
 Saint Paul   MN   55102

**Telephone Number:**  651-293-0575 x16

**Email**  alevensonfalk@citizensleague.org

**Web Address**  www.citizensleague.org

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**Location**

**Region:** Statewide

**Ecological Section:** Statewide

**County Name:** Statewide

**City / Township:**

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|----------------------------------|---------------------------------|-------------------------------------|-------------------------------------|
| <u>      </u> Funding Priorities | <u>      </u> Multiple Benefits | <u>      </u> Outcomes              | <u>      </u> Knowledge Base        |
| <u>      </u> Extent of Impact   | <u>      </u> Innovation        | <u>      </u> Scientific/Tech Basis | <u>      </u> Urgency               |
| <u>      </u> Capacity Readiness | <u>      </u> Leverage          | <u>      </u> Employment            | <u>      </u> TOTAL <u>      </u> % |

**2011-2012 MAIN PROPOSAL**  
**PROJECT TITLE: Water Quality Smartphone Application**

**I. PROJECT STATEMENT**

SUMMARY: Enhancing and maintaining a smartphone application that will allow citizens to access and contribute to water quality-related information while they are at MN lakes and rivers.

THE NEED: The public must be brought more fully into water governance in a way that allows them to understand the issues as well as how they need to be part of solutions. Much of Minnesota's water pollution now comes from nonpoint sources, which we are struggling to address. Government alone will never have enough resources to address such widespread issues as nonpoint source pollution – we must engage the public as problem solvers.

Lack of information is a major barrier to public participation. Citizens often do not know how to find this information, must visit multiple websites to find what they're looking for, or have trouble understanding the data presented.

New technology is opening opportunities inform and engage the public, and Minnesota should harness these tools.

GOALS AND OUTCOMES:

1. *Make data that is relevant to water users available to them while they are at or on the water.* Such as: physical characteristics of water body, water quality conditions, government bodies involved with the water body and official processes underway, civic organizations involved with the water body, and user-generated content.
2. *Engage citizens to contribute information to public database.* Water users, for example, could report suspected invasive species and help to track their spread. The Citizens League is in conversations with the PCA and DNR to determine how citizen-generated information can be most useful for their purposes.

This project has multiple benefits under the LCCMR's 2011-2012 funding priorities. It adds an innovative method of sharing natural resource data and information statewide, while facilitating citizen contributions. It also engages citizens to better monitor and care for the state's water resources.

HOW: Simply by taking a picture of a water body, this project will allow users to access and contribute information. The project will use a smartphone application based on the concept of augmented reality. A smartphone can determine a user's location and direction, which can then be used as input to make a programmatic request for data that can be overlaid on the screen to augment the current view, which is being displayed by the camera.

This project will leverage an existing mobile application called Layar and will benefit from Layar's user-base. The Layar application is supported on both the iPhone 3Gs and Android platforms and has over 1,000,000 users.

The proposal assumes public data will continue in its current form and will be manually prepared for the application. However, bills currently in front of the Legislature open the possibility that public data will be made available in a format that would allow it to be fed automatically into the application. This would greatly increase the number of water bodies the application would cover.

**POPULATIONS SERVED:** This project will primarily serve recreational water users (boaters, fishers, walkers, etc.) and shoreland property owners. Demographic data shows that iPhone and Android users are fairly evenly distributed across age groups, with a somewhat higher portion of users being male (AdMob Mobile Metrics Report, January 2010). We anticipate usage by a widespread demographic in Minnesota.

## II. DESCRIPTION OF PROJECT ACTIVITIES

April 2010-July 2011 (pre-LCCMR support): Develop pilot project around limited lakes in Twin Cities metropolitan area and Greater Minnesota.

### **Activity 1: Project Enhancement and Management Budget: \$ 48,300**

Geographic expansion from project pilot. Build mechanism for user feedback on application functionality. Management and maintenance of the application.

| Outcome                                                            | Completion Date  |
|--------------------------------------------------------------------|------------------|
| 1. Add 20 additional water bodies per year to application database | 7/12, 7/13, 7/14 |
| 2. Build participant evaluation tool                               | 7/12             |
| 3. Management and maintenance                                      | Ongoing          |

### **Activity 2: Increased usage Budget: \$ 5,175**

Demonstrate relevance through increased usage of the application.

| Outcome                                                                                                                                                    | Completion Date  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1. Measure percentage growth in unique users each year. Goals to be determined during 2011-2012 project year, once baseline established through 2010 pilot | 7/12, 7/13, 7/14 |
| 2. Partner groups engaged to help develop and/or promote the project. Year 1: 3 groups, Year 2: 8, Year 3: 12                                              | 7/12, 7/13, 7/14 |

## III. PROJECT STRATEGY

### A. Project Team/Partners

**Citizens League:** A nonpartisan, multi-issue, member-based policy nonprofit. The Citizens League will manage the project, promote it with participants, and coordinate with outside partners. The Citizens League will own the application.

**Inetium LLC:** An award-winning Gold Certified Microsoft Partner focused primarily on providing customers with strategic IT planning services as well as Customer Relationship Management, Business Productivity, IT Infrastructure, and Creative Services. Inetium is developing the application and will continue to provide support on a contract basis.

### B. Timeline Requirements

This proposal builds upon work anticipated to begin in April 2010. In the initial phase (April 2010 – July 2011), the team will develop a pilot application. The LCCMR proposal would allow for enhancement and continuation in the three years beginning in July 2011.

### C. Long-Term Strategy and Future Funding Needs

The Citizens League is currently exploring funding opportunities for the initial pilot development with private partners. This will be an ongoing project beyond the three years of LCCMR support. In the pilot and during the LCCMR support, we will explore potential long-term funding prospects, including through public support, private support, and the possibility of a revenue-generating model.

## 2011-2012 Detailed Project Budget

### Water Quality Mobile Application

#### IV. TOTAL TRUST FUND REQUEST BUDGET 3 years

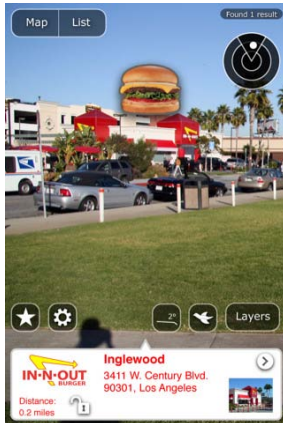
| <u>BUDGET ITEM</u>                                                                                                     | <u>AMOUNT</u>    |
|------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Personnel:</b><br>Policy Manager: 200 hours per year at \$25/hour (78% salary, 22% benefits)                        | \$ 15,000        |
| <b>Contracts:</b><br>Inetium: One to two developers, total 100 hours per year at \$125/hour (78% salary, 22% benefits) | \$ 37,500        |
| <b>Equipment/Tools/Supplies</b>                                                                                        | N/A              |
| <b>Acquisition (Fee Title or Permanent Easements)</b>                                                                  | N/A              |
| <b>Travel</b>                                                                                                          | N/A              |
| <b>Additional Budget Items</b>                                                                                         | N/A              |
| <b>TOTAL ENVIRONMENT &amp; NATURAL RESOURCES TRUST FUND \$ REQUEST</b>                                                 | <b>\$ 52,500</b> |

#### V. OTHER FUNDS

| <u>SOURCE OF FUNDS</u>                                                                                                                                                    | <u>AMOUNT</u> | <u>Status</u>                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------------------|
| <b>Other Non-State \$ Being Applied to Project During Project Period:</b><br>Executive Director: 50 hours per year at \$60/hour (78% salary, 22% benefits)                | \$ 9,000      | Pending                                  |
| <b>Other State \$ Being Applied to Project During Project Period</b>                                                                                                      | N/A           |                                          |
| <b>In-kind Services During Project Period</b><br>Application and data management hosting provided by Inetium (\$75 per month)                                             | \$ 2,700      | Pledged                                  |
| <b>Remaining \$ from Current ENRTF Appropriation (if applicable)</b>                                                                                                      | N/A           |                                          |
| <b>Funding History:</b><br>* Private source funding for advancement of Citizens League water report<br>* Private source funding pending for pilot application development | \$ 20,000     | Additional funding pending for 2010-2011 |

## Graphic Water Quality Mobile Application

The following graphics depict two simplified examples of the possible look of this application.



The Layar platform adds content layers to your mobile phone screen to augment whatever you point your phone's camera towards. It also includes the ability to create custom layers that could be included in the browser, essentially allowing the development of a custom layer that could be included in the Layar application that would display water quality information.

This graphic shows a simple example (an application that locates In-N-Out Burger restaurants).



This is an alternative display option. The portion shown in black in this graphic would display the camera view of a water body.

The text in the gray box would display initial water quality information, with more detailed information available under the options at the bottom of the screen.

## Project Manager Qualifications and Organization Description

### Water Quality Mobile Application

**Citizens League:** Founded in 1952, the Citizens League is a nonpartisan, multi-issue, member-based nonprofit that organizes citizens around the policy issues most important to Minnesota.

The mission of the Citizens League is to build civic imagination and capacity by:

- Identifying, framing and proposing solutions to public policy problems;
- Developing civic leaders in all generations who govern for the common good; and
- Organizing the individual & institutional relationships to achieve these goals.

Operating at the intersection of policy idealism and political pragmatism, the Citizens League was founded on the principle that effective citizen involvement would not only produce better policy, but the leadership capacity to implement these systemic changes. This tradition of informing and engaging Minnesotans has resulted in one of the nation's public policy organizations, and real and lasting innovations on topics ranging from education (charter schools), health care (*Minnesota Care's* precursor), taxes (Minnesota Miracle), and regional governance (Metropolitan Council).

Over these last 57 years, much has changed. Technology, globalization, migration, and the shift to a knowledge economy have transformed our communities, our policy challenges, and our civic capacity. Current policies are neither fiscally sustainable, nor effective. Minnesotans are frustrated by the lack of action, and distrustful of our current systems. Our "civic infrastructure" – *how we solve problems* – must change with the times. The Citizens League's work to create "common ground for the common good" is more important than ever, and the Citizens League's work is evolving to meet this goal.

**Inetium:** Inetium will serve in a contract role to develop the application and provide ongoing support and enhancement. Inetium is an award-winning technology consulting firm, focused primarily on providing customers with strategic IT Planning services as well as Customer Relationship Management (CRM), SharePoint, Custom Development, Infrastructure, Business Intelligence and Creative Services.

**Project Manager:** Annie Levenson-Falk will serve as Project Manager for the water quality mobile application. Annie is the Policy Manager for the Citizens League. Her primary roles in this project will be to guide and oversee the process and to engage partners and promote the application to the public. Annie recently completed managing the Citizens League's Study Committee on Water Policy. In this project, she organized Citizens League members and outside partners to study water governance, culminating in the report, *To the Source*. She currently works with members and partners to advance the recommendations of this report in urban, agricultural, and governmental settings. Annie also manages the Citizens League's website and social media accounts.