



June 14, 2010

Optimizing Industry Water Use

Great Lakes Protection Fund Project # 926

Effective Application of Footprinting Methodologies to Industrial Operations in the Great Lakes Basin

Introduction:

Global concerns regarding water shortages have prompted advancement of methodologies to characterize water use practices. These protocols are sometimes referred to as “water footprints.” While these assessments focus attention on the need for sustainable management of water supplies, they may or may not be appropriate for describing or directing water uses on an individual industrial facility or even an entire sector. The objective of this project is to identify the best means to translate macro scale water use concerns into the most appropriate process or tool for characterizing, assessing, and optimizing water use at individual industrial facilities.

Project Objective and Approach:

The overall objective of this project is to conduct an in-depth assessment of water use practices within several specific industrial sectors that clearly identify where, how, and for what purpose water is used. Why it is needed, how it is re-used within industrial processes, what secondary activities needed to support these processes are also water dependent, what efficiencies accompany these uses, how these efficiencies can be increased and how each of these factors should all be accounted for when “water footprints” for these activities are considered.

Outcomes sought from this project include:

- Promote understanding within industry regarding efficient water use
- Lay out the need for, and nature of, water uses with various industry sectors
- Inform the development and implementation of water footprinting protocols applied towards the assessment of industrial water use practices.

Example industrial sectors that are to be examined for this project include:

- Pulp, paper, and forest products
- Petroleum refining
- Steel making
- Chemical manufacturing
- Mining and quarrying

Water footprinting or water accounting protocols that will be utilized or studied to determine how they characterize water uses associated with facilities for each of the studied industrial sectors include:

- The Alliance for Water Stewardship certification scheme
- The Corporate Water Gauge®
- The Global Environmental Management (GEMI®) water scarcity assessment
- The Global Reporting Initiative (GRI) identification of water performance indicators
- The Strategic Water Management Framework for the Minerals Industry (Australia)
- UK Federation House Commitment to Water Efficiency Guidelines
- The Water Footprint Network
- The Water Footprint Working Group
- Life Cycle Analysis (LCA) approaches practiced via United Nations Environmental Program (UNEP), Society of Toxicology and Chemistry (SETAC) initiatives, World Business Council for Sustainable Development (WBCSD)
- Others

Work on this project will be conducted by a contractor guided by an expert panel that will provide information and experience regarding the industries and water assessment tools studied, peer review of project documentation, and final distribution of project results. The project will be managed by the Council of Great Lakes Industries (CGLI). CGLI is appreciative of support from the Great Lakes Protection Fund (GLPF) that will get this project underway.

Project work elements include:

1. Establish the project expert panel.
2. Establish an email or web based communications system for project participants
3. Post links to project materials for use by project participants
4. Prepare summaries of project materials and descriptions of industry sectors included in the project
5. Prepare and distribute RFP for retaining project contractor
6. Select and engage project contractor
7. Prepare detailed assessments of water use practices within project industry sectors
8. Describe in detail the project water footprinting tools
9. Utilize the expert panel to explore nexus between industry water use and water footprinting tools
10. Prepare project report, conduct expert panel, and perhaps external peer review events.

Elements 1 through 5 will be completed as Phase 1 of the project. Funding for Phase 1 has been provided by the GLPF. Prior to proceeding on Phase 2 of the project (project elements 6 through 10) additional funding will have to be obtained.

Establishing the Project Expert Panel:

A primary purpose of this project scope paper is to solicit members for the Project Expert Panel. Organizations from which experts are sought include industry trade associations, individual companies, academic institutions, environmental and resource protection advocacy groups, and government. Individuals sought must have experience and expertise in one or more of the following areas:

- Industrial processes and practices
- Water dependent resource management and protection
- Water quality assessment and protection
- Water treatment (for water supply and wastewater management)
- Water footprinting
- Water policy and regulatory development
- Water resource permitting and compliance
- Economic development
- Industrial policy

Organizations solicited and to whom this project description is being directed include:

- CGLI Members
- American Chemistry Council
- American Forest and Paper Association
- National Council of the paper industry for Air and Stream Improvement
- American Petroleum Institute
- Canadian Petroleum Products Institute
- The Sustainable Water Resources Roundtable
- The Alliance for the Great Lakes
- The Nature Conservancy
- The National Wildlife Federation
- The Water Environment Federation
- The Water Environment Research Foundation
- University of Michigan School of Natural Resources and Environment
- Wayne State University Law School
- Michigan Department of Natural Resources
- Indiana Department of Environmental Management
- Pennsylvania Department of Natural Resources
- New York Department of Environmental Quality
- Ontario Ministry of Environment

In total, approximately 25 persons will be sought to serve as expert panelists.

Phase 1 Project Schedule:

The schedule for this project calls for completion of Phase one by October 1, 2010. To accomplish this, the following schedule will be followed:

- Solicit members and establish project expert panel – **Complete by June 15, 2010**
- Establish an email or web based communications system for project participants – **Complete by May 31, 2010**
- Post links to project materials for use by project participants – **Complete by May 31, 2010**
- Hold meeting of expert panel to seek input for project material summaries – **July 16, 2010**
- Complete (including opportunities for expert panel review) summaries of project materials and descriptions of industry sectors included in the project – **Complete by August 16, 2010**
- Select (following expert panel consultation) project contractors from whom to solicit project proposals – **Complete by July 30, 2010**
- Prepare (including opportunities for expert panel review) and distribute RFP for retaining project contractor – **Complete by August 1, 2010**
- Received RFPs from potential project contractors – **August 20, 2010**
- Review proposals and select contractor with whom project completion proposal will be prepared – **September 15, 2010**
- Submit project Phase 1 report and proposal for funding of project Phase 2 – **October 15, 2010**

Project Contact Information

Project Director:

George H. Kuper, President and CEO
 Council of Great Lakes Industries
 3600 Green Court, Suite 710
 Ann Arbor, MI 48105-1570
 Phone: 734 663-1944
 Fax: 734 663-2424
 Email: ghk@cgli.org

Project Manager:

Dale K. Phenicie
 Council of Great Lakes Industries
 3600 Green Court, Suite 710
 Ann Arbor, MI 48105-1570
 Phone: 770 487-7585
 Fax: 770 631-7729
 Email: dkphenicie@mindspring.com

Communications Director:

Evelyn Strader
 Strader & Company
 3716 Sleepy Fox Dr.
 Rochester Hills, MI 48309
 Phone: 248 340-7062
 Fax: 248 340-8712
 Email: StraderCo@aol.com