

# This presentation premiered at WaterSmart Innovations

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○ **SAVING INDUSTRIAL WATER IN THE  
GREAT LAKES:**

Opportunities and Challenges

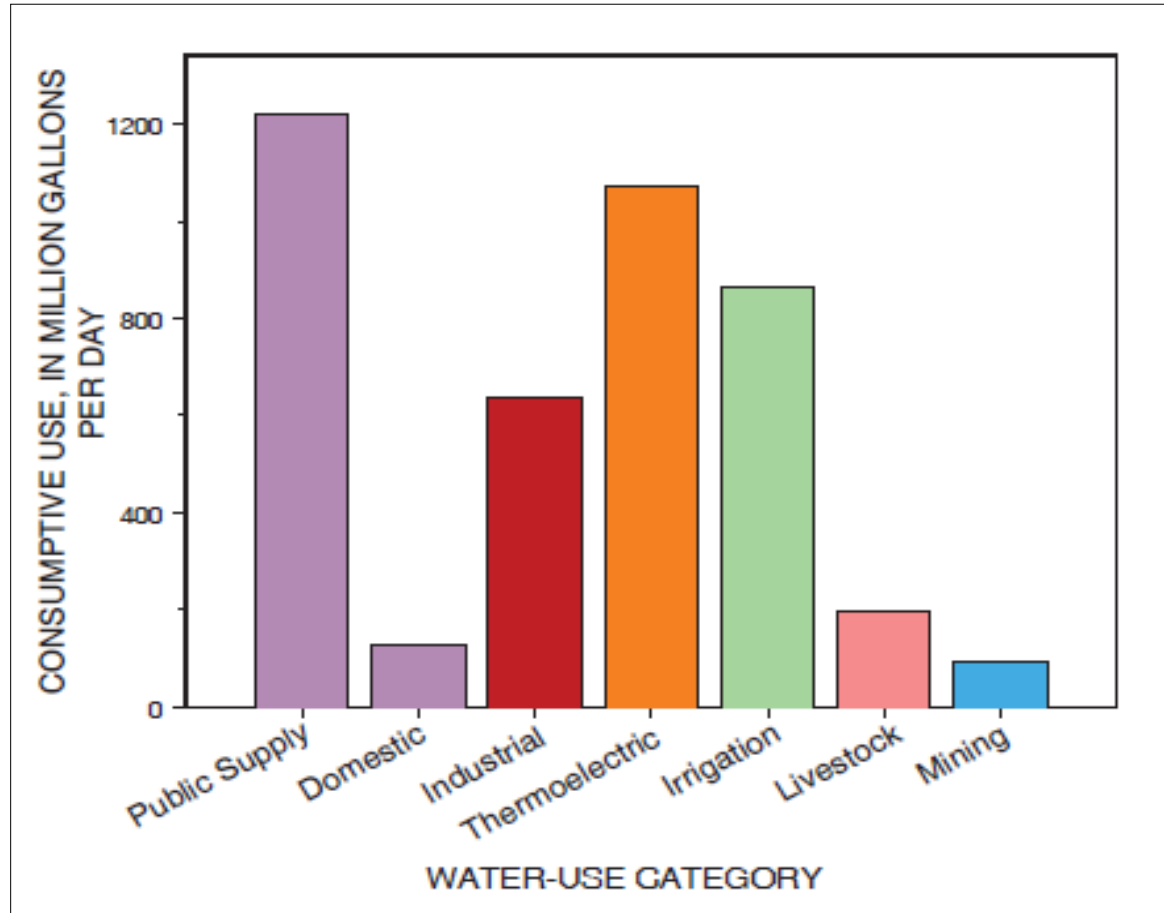


# Great Lakes Greatness

- Largest collection of fresh water
- 5,412 cubic miles of water
- 6,000,000,000,000,000 U.S. gallons
- 18,288,230,214 AF
- 21% of earth's fresh water
- 864,000gal/US citizen



# Consumptive Water Use\* by Sector



\* Consumptive = Withdrawal - Return

# Industrial Sector Major Water Users

- Food & beverage products
- Ceramics, clay, glass & stone, products
- Paper & pulp products
- Metal refining and plating
- Transportation equipment
- Chemicals



# Grant Project Team

1. Mary Ann Dickinson – Project Director
2. Thomas Pape – Project Manager
3. Ken Mirvis – Communications
4. William Hoffman – Project Engineer
5. Jeff Edstrom – Environmental Assessment Advisor
6. Townsend Albright – Loan Development Advisor
7. Jeffrey Hughes – Administration
8. Bill Christiansen – Research
9. Molly Garcia – Finance Administration



# Advisory Committee

1. Lynn Broaddus, Johnson Foundation at Wingspread
2. Claus Dunkelberg, Milwaukee Water Council
3. Ed Glatfelter, Alliance for the Great Lakes
4. J.B. Hoyt, Whirlpool Corporation
5. Dale Phenicie, Council of Great Lakes Industries
6. Tim Loftus, Chicago Metropolitan Agency for Planning
7. Jeffrey Ripp, Wisconsin Public Service Commission
8. Karen Sands, Milwaukee Metropolitan Sewerage District
9. Adam Rix, Watermark Initiative
10. Shannon Donley, GLPF



# Grant Project Time Line

Task 1: Research and Discovery

*(Weeks 1-12)*

Task 2: Conduct Site Assessments

*(Weeks 12-40)*

Task 3: Develop Viable Financing Plan

*(Weeks 1-20)*

Task 4: Assess Environmental Benefits

*(Weeks 40-60)*

Task 5: Findings and Recommendations

*(Weeks 60-72)*

Final Report:

8/10/12





# Grant Project Goal

- Achieve environmental benefits in the Great Lakes ecosystem through demonstration of sustainable water use reduction in the industrial water use sector



# Project Method

- Reach out to industries to create awareness of proven technologies and opportunities for efficiency
- Offer technical assistance to conduct or verify benefit/cost analyses
- Identify barriers to implementing recommended efficiency actions
- Create structure for low interest loans to offset implementation costs



# The Target Market

- Industries common to Great Lakes area
- Industries receiving water from public utility sources in Great Lakes Basin
- Industries sustaining or growing in marketplace
- Industries or users that are high volume



# Assessment Factors

- Participation by target industries
- Implementation of measures
- Water use reductions
- Financing feedback
- Implementation results
- Benefit-cost assessment
- Environmental assessment



# Marketing Piece

## Seeking Industrial Partners

Are you an industry in the Great Lakes Basin drawing your water from public water supplies?

**We have an offer for you!**

**The Chicago-based Alliance for Water Efficiency is leading a team that will help industries like yours control costs and become more competitive through water-use-efficiency measures.**

We will select five Great Lakes industrial businesses to participate in this project from across a wide range of sectors. The main requirement is that your water comes from a treated public water supply source. The selected industries will receive a free in-depth and confidential water efficiency assessment aimed at saving water and reducing costs.

### Why this project?

Water use and wastewater treatment and disposal represent a significant expense for industry. This project will help you manage that cost.

Our team will work with industrial facility managers to identify areas and processes where water use may be reduced and process efficiencies improved. We will examine use of potable water, treatment and pretreatment technologies, and wastewater flows. In addition to lowering your costs, this effort will improve the overall health of the Great Lakes, thus helping to move the region toward a more economically sustainable future.

### Project goals

- to develop a framework for industrial water-use efficiency improvements and for estimating water savings
- to develop a viable long-term financing plan of revolving fund and low interest loans
- to analyze the beneficial effects of water efficiency on both the industry and the Great Lakes ecosystem

*Support for this project has been provided by the Great Lakes Protection Fund.*



### Your role

We will select industries based on potential water savings, diversity of sector, and overall positive benefits to the Great Lakes ecosystem.

Once selected, participating companies will receive a free detailed, comprehensive and confidential water use assessment, as well as recommendations for process improvements. You will be responsible for implementing these cost-effective recommendations. In the long-term, the project will include financing strategies for funding recommended changes.

### Next steps

#### Are you interested in participating in this project?

If so, please contact us and one of our project staff will be in touch to gather additional information.

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# Industries Marketed

- Pharmaceutical
- Agricultural products processing
- Beverage and food production
- Dairy products
- Appliance & electronics manufacturing
- Plastics molders
- Vehicle manufacturing
- Metal platers
- Others?



# Industries Visited on Site

- MI Bell's Brewery
- WI Diedrich Tanning
- OH Whirlpool
- OH Equastar
- WI Reliable Plating Works
- WI Harley-Davidson
- NY LaFarge Concrete
- WI Law Tanning
- WI Pho-Tronics
- WI Mickey's Linen Service



# Project Sites Chosen

- Tanning Industry
- Appliance Manufacturing
- Beverage Production
- Metal Plating
- Chemical Compounding





# Opportunities

- Many water intensive industries
  - *Attracted to plentiful water*
- Little water efficiency assistance
- Eager to be cost competitive
- Desire to preserve the resource
- Low prime rate
- The new greening of the industries



# Challenges

- Relocation of industry: Should they stay or go?
- Plentiful rainfall: 50+ inches/year
- Plentiful water: low water prices
- Plentiful infrastructure: high overhead costs
- Dwindling customer base: little utility support
- Greenwashing: uncertain level of commitment
- Very short payback required: cherry picking
- Regulations & rates: savings negated?



# Reasons for Optimism

- There is **HUGE** savings potential.
- Most measures are simple and fast.
- Sustainability Chiefs are enthusiastic to carry the ball.
- World competition requires lowering operating costs.
- Evolving use of Great Lakes requires sustainable consumption and better water quality.
- Plentiful rainfall to harvest.





# Alliance *for* Water Efficiency

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