

This presentation premiered at WaterSmart Innovations

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Water Conservation in a Land of Plenty

WaterSmart Innovations
Las Vegas, Nevada
October 10, 2008

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Overview

- Background – Wisconsin/Great Lakes Water Resources
- The Great Lakes Compact
- Water Conservation and Efficiency Program - Wisconsin's Pilot Project

Surrounded by water...



- 32 inches of annual precipitation
- 32,000 miles of rivers
- 15,000 inland lakes
- 1.2 quadrillion gallons of groundwater
- Lake Superior, Lake Michigan, Mississippi River

...yet water concerns exist

**Global warming to
deplete Great Lakes**

Reuters – May 28, 2008



Milwaukee agrees to sell water

New Berlin to negotiate buying water from Milwaukee

Milwaukee Journal Sentinel - July 29, 2008

Water wake-up for region

Water supply, policy dictate
future development

*The Business Journal of Milwaukee –
June 15, 2007*

**Central Brown County Water
Authority Pipeline Dedicated**
Serves six area communities

Green Bay Press Gazette - July 31, 2008

Two Great Lakes losing water quickly
Dredged river draining 2.5 billion gallons a day

Milwaukee Journal Sentinel - Aug. 14, 2007

**Wisconsin's silent springs:
Demand is reducing water levels**

Wisconsin State Journal - Aug. 17, 2007

**Higher water
rates OK'd**

Regulators welcome
Waukesha plan as
model for state

*Milwaukee Journal
Sentinel - May 24, 2007*

**As lakes dry up,
concern swells**

Water tables dropping as
drought stretches on

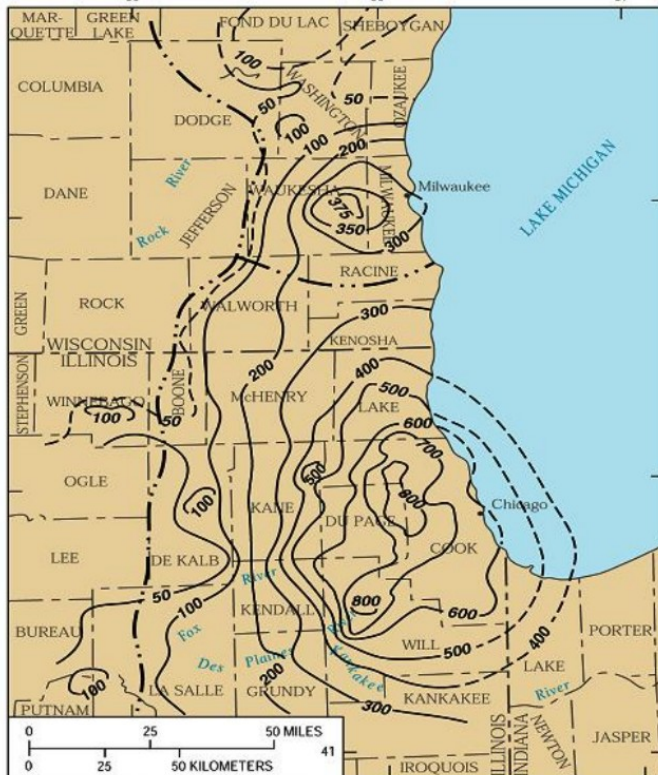
*Milwaukee Journal Sentinel
– Aug. 6, 2007*

**Mayors want more
help on
water conservation**

*Racine Journal Times –
July 12, 2007*



Groundwater Depletion



Base from U.S. Geological Survey 1:2,000,000 Digital Data
 Albers Equal-area Conic projection
 Standard parallels 33 and 45, central meridian -89

EXPLANATION

- 700 — Line of equal water-level decline, 1864–1980—Dashed where approximate. Interval, in feet, is variable
- ... Major ground-water divide

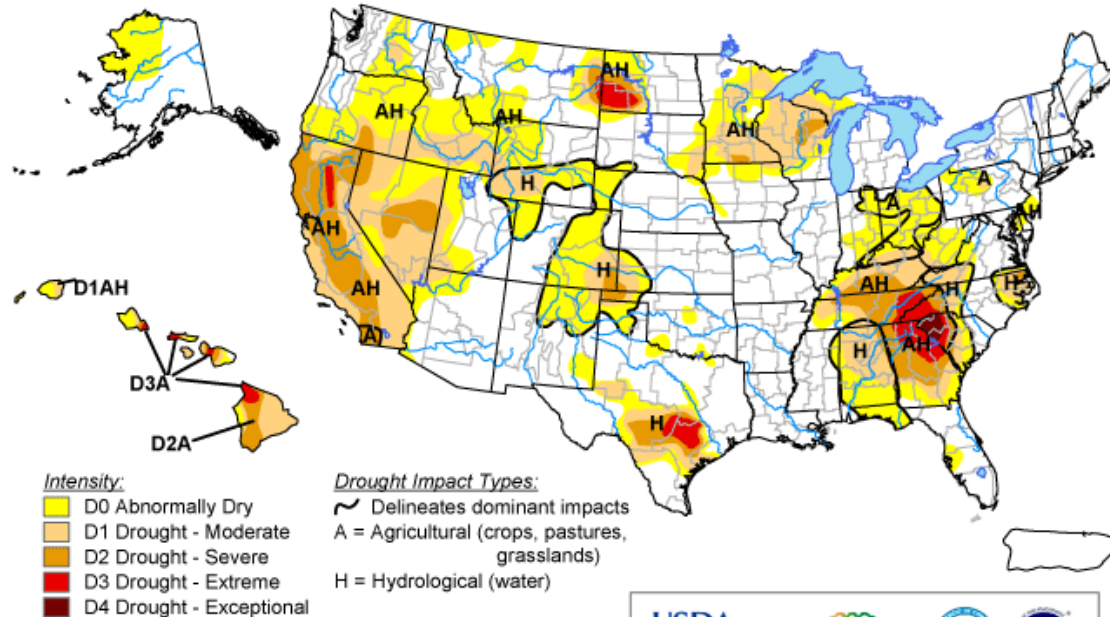
- Aquifer has declined nearly 500 feet in WI
- Water quality concerns (radium, arsenic)
- Regional issue – Milwaukee/Chicago
- Increasing interest in Lake Michigan as source of supply

Source: USGS

http://wi.water.usgs.gov/glpf/cs_pmp_wls.html

Drought/Climate Change

U.S. Drought Monitor September 30, 2008 Valid 8 a.m. EDT



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>



Released Thursday, October 2, 2008

Authors: Richard Heim/Liz Love-Brotak, NOAA/NESDIS/NCDC

Great Lakes Diversions

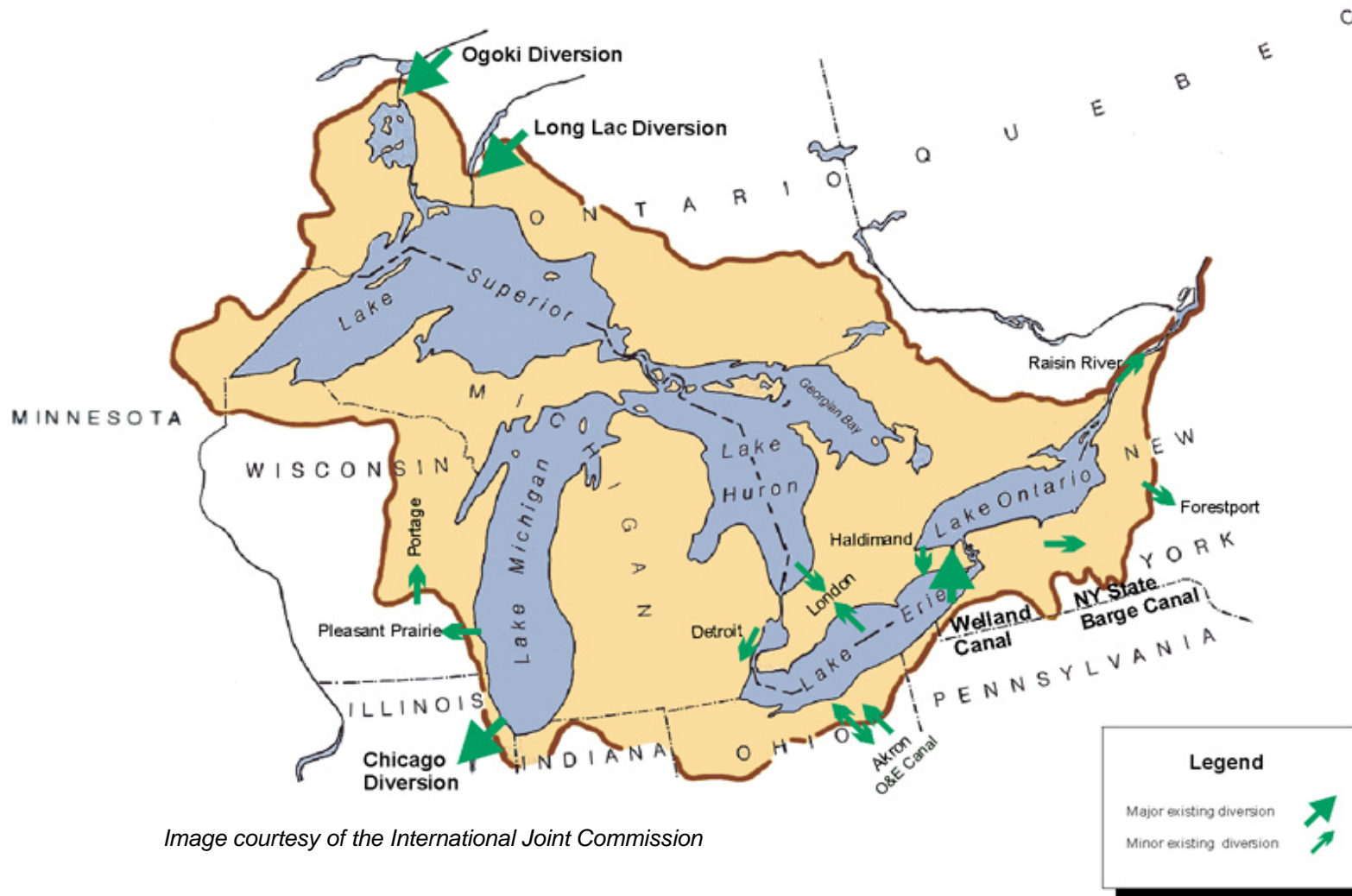


Image courtesy of the International Joint Commission

The Great Lakes Basin



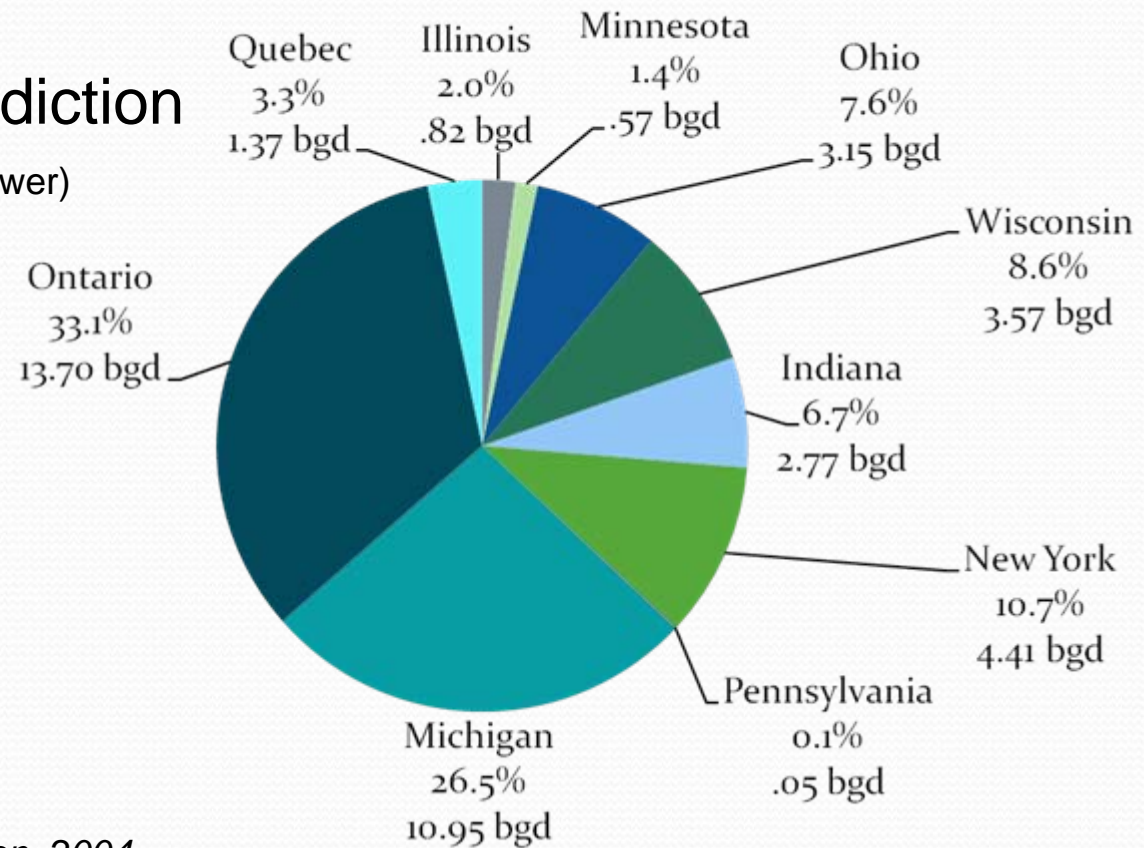
- Unique global resource containing 20 percent of world's fresh surface water
- Shared by 8 U.S. states and 2 Canadian provinces
- Home to 35 million people

Image courtesy of the Great Lakes Information Network

Great Lakes Water Use

Withdrawals by Jurisdiction

(Excludes Hydroelectric Power)



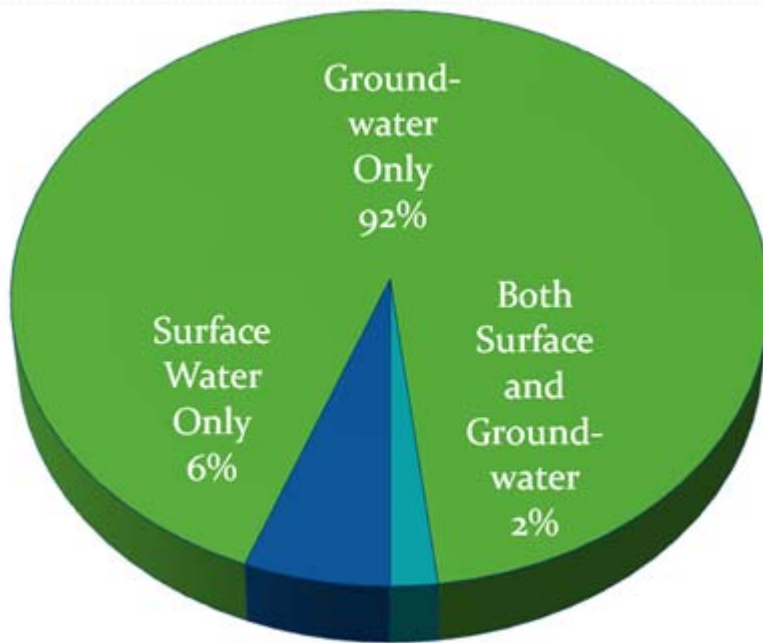
Source: Great Lakes Commission, 2004

<http://www.glc.org/wateruse/database/pdf/2004-gallons.pdf>

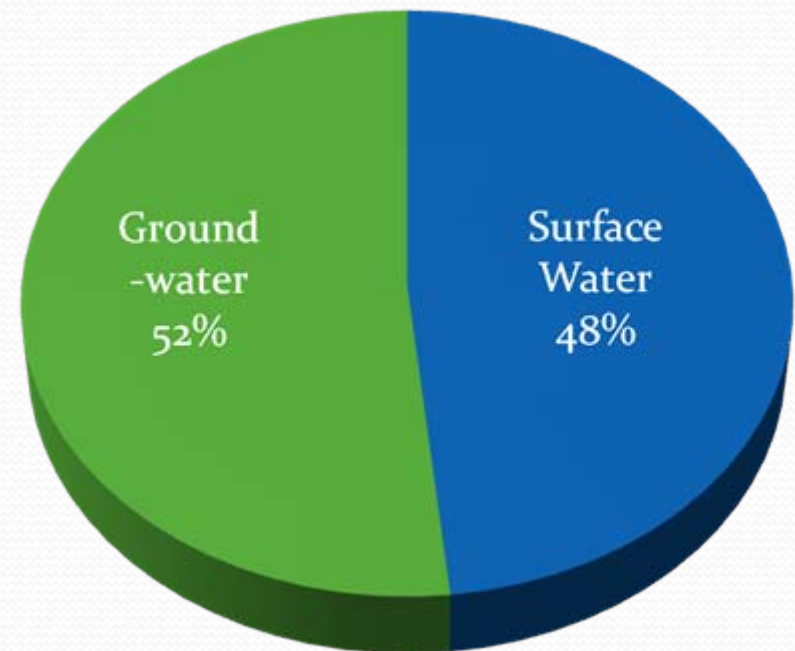
Source of Supply

585 Wisconsin Water Utilities

Percentage of Utilities



Percentage of Water Pumped



Source: Public Service Commission of Wisconsin, 2007

Regional Water Management

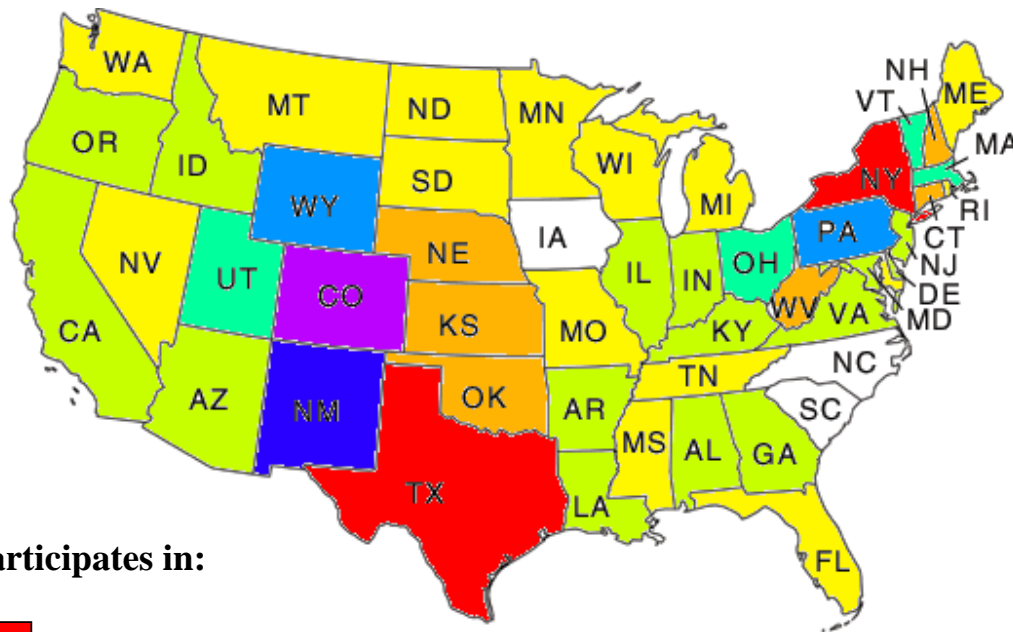
- **100 years** of regional and bi-national cooperation :
 - *Boundary Waters Treaty of 1909*
 - *Great Lakes Basin Compact (1968)*
 - *Great Lakes Charter (1985)*
 - *Water Resources Development Act (1986)*
 - *Great Lakes Charter Annex (2001)*
 - *Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (2005)*
 - *Great Lakes-St. Lawrence River Basin Water Resources Compact (2008)*

Great Lakes Compact

- Article 1, Section 10 of the U.S. Constitution
- Legally enforceable contract between states
- Ratified by all 8 Great Lake states
- Approved Oct. 3, 2008



Interstate Water Compacts



Number each State participates in:



Source: Council of Great Lakes Governors, 2008



Great Lakes Compact – Key Points

- Prohibits new or increased diversions, with exceptions for straddling communities and counties
- Requires regional review of new or increased consumptive uses and diversions



Great Lakes Compact – Key Points

- Establishes common procedures for state regulation of in-basin water uses
- Requires water use reporting and sharing of water use information



Great Lakes Compact – Key Points

- Requires “environmentally sound and economically feasible” water conservation and efficiency programs

Water Conservation Initiative

- Regional goals and objectives agreed to by all states and provinces
- State and provincial objectives consistent with regional goals and objectives required within 2 years
- State and provincial program implementation within 2 years (*voluntary or mandatory measures*)
- Report annually on program effectiveness to Great Lakes “Regional Body”

Regional Objectives

(Approved by Regional Body Dec. 2007)

1. Guide programs towards long-term sustainability
2. Adopt supply/demand management measures to promote efficient uses
3. Improve monitoring/standardize reporting among states and provinces
4. Develop science, technology, research
5. Develop education programs/information sharing for all water users

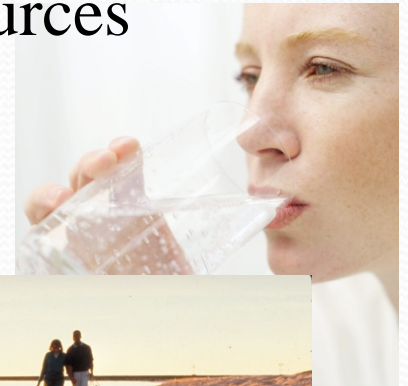
Wisconsin Pilot Project

- DNR leading interagency workgroup
 - *Wisconsin Department of Natural Resources*
 - *Public Service Commission of Wisconsin*
 - *Wisconsin Department of Commerce*
 - *Council of Great Lakes Governors*
- Includes tribes and diverse stakeholders: industry, environmental groups, municipalities, water users, etc.



Summary

The Great Lakes are a national treasure-
but with finite water resources



Water conservation and
efficiency will help ensure
sustainability

For more information...

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Council of Great Lakes Governors

<http://www.cglg.org>

Wisconsin Water Conservation Initiative

<http://dnr.wi.gov/org/water/dwg/WIGLObjectives.htm>



Pictured Rocks National Lakeshore, Lake Superior (Photo by J. Ripp, 2008)