Great Lakes Restoration and Protection

Wisconsin Lakes Convention
April 14, 2011

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WISCONSIN DEPT. OF NATURAL RESOURCES

Overview

- Importance of the Great Lakes
- The Great Lakes Restoration Initiative & how it came about
- The Great Lakes Water Resources Compact


The Great Lakes Basin
ONTARIO
QUÉBEC
MINNESOTA
Lake Superior
WISCONSIN
Lake Michigan
Lake Huron
St. Lawrence River
MICHIGAN
Lake Ontario
NEW YORK
Lake Erie
PENNSYLVANIA
OHIO
ILLINOIS
INDIANA
Legend
Lake Erie Basin
Lake Huron Basin
Lake Michigan Basin
Lake Ontario Basin
Lake Superior Basin
St. Lawrence River Basin

Great Lakes Basin

- **20% of the world's surface freshwater**
- **90% of US surface freshwater**
- **Home to 35 million people**
  - **25 million US**
  - **10 million Canada**

Great Lakes Basin

- Unique ecology
- Important for the economy

Wisconsin's Great Lakes Basins

Data Sources: Wisconsin Department of Natural Resources, U.S. Geological Survey, GeoGratis

Wisconsin Department of Natural Resources
Water Division
Office of Great Lakes

The Great Lakes Restoration Initiative

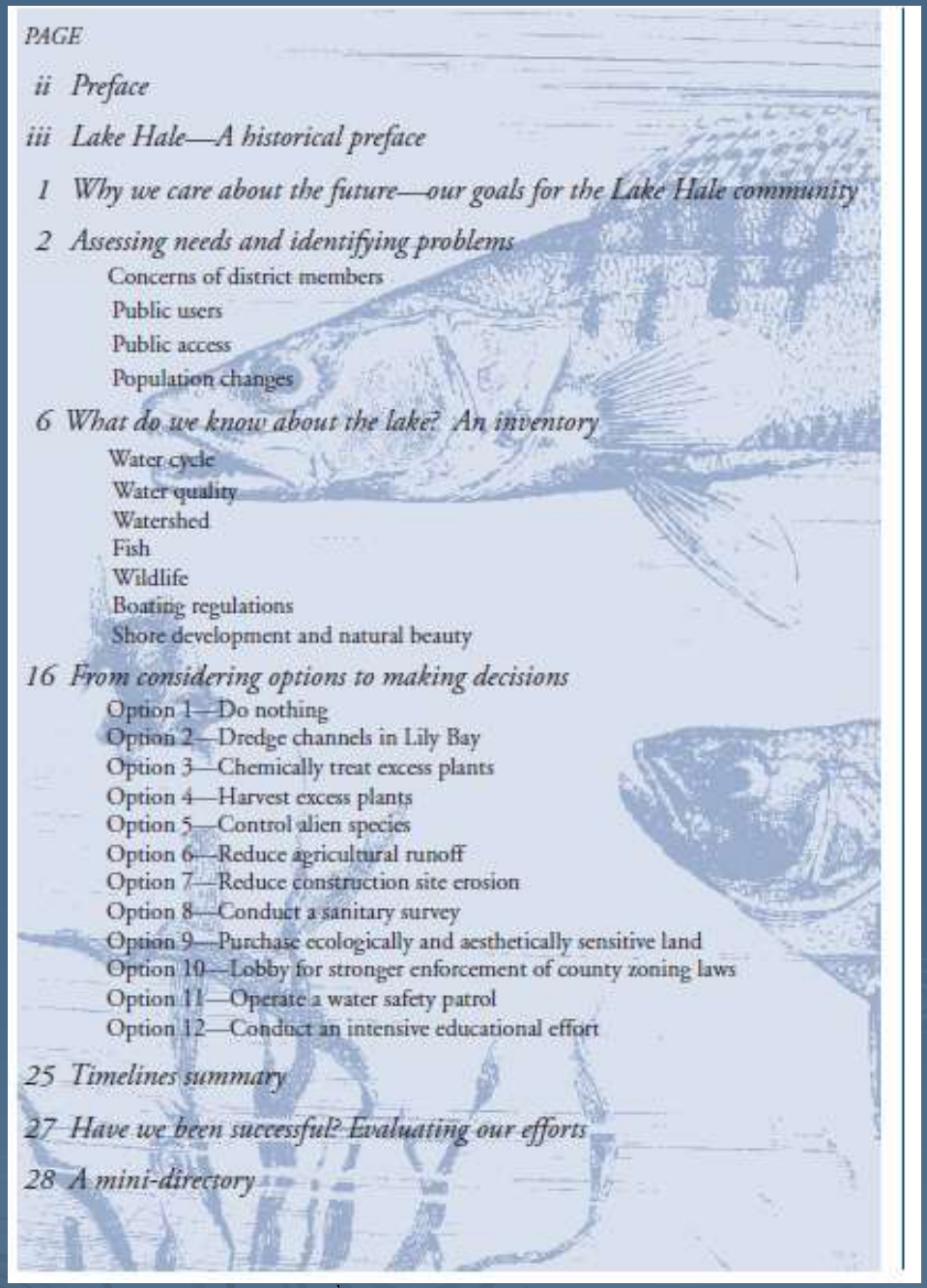
A Success Story for the Great Lakes States

The GLRI story is one chapter of a longer book…

- Great Lakes have been central to the development of the region's culture & economy
- Geographically and politically complex
  - Five lakes
  - Two countries
  - Eight states

The GLRI story generally looks like a Lake Management Plan:

- Describe a vision for the future
- Identify problems
- Identify strategies and carry out actions to address the problems
- Evaluate progress



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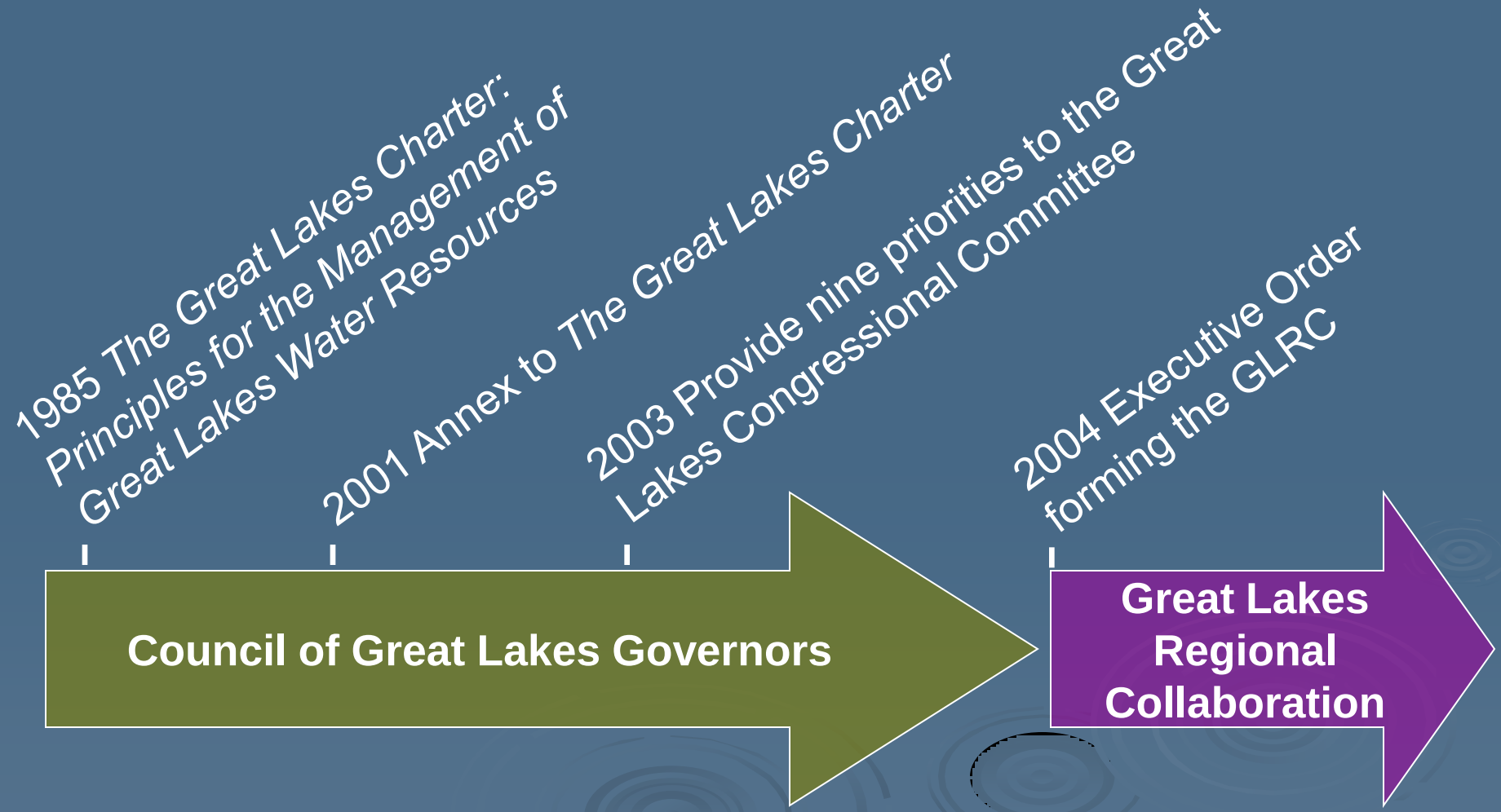
Source: Klessig et al., *A Model Lake Plan for a Local Community,* 2004, UW-Extension publication no. G3606.

The Road to the GLRI
International Context

The Road to the GLRI
U.S. Regional Activities



The Road to the GLRI
From Strategy to Action

Great Lakes Restoration Initiative

- 2010: $475 million
- Distributed through:
  - Existing federal programs
  - State capacity funds
  - Competitive grants
- $31 million dollars to WI for 65 projects
- 2011: $300 million proposed

Sheboygan River Mouth

A Few Wisconsin GLRI Projects

Toxics and Areas of Concern	e.g.,	Contaminants of Emerging Concern Product Stewardship Initiative
Invasive Species	e.g.,	Development of Optics to Quantify Organisms in Ballast Water
Habitat & Wildlife Protection & Restoration	e.g.,	Clearing a Path: Revitalizing Lake Michigan's Sturgeon
Nearshore Health & Non-Point Source	e.g.,	Installation of Barnyard Runoff Controls in Manitowoc County

WDNR's Office of the Great Lakes

Atwater Beach, Milwaukee, WI
Photo by Jill Anderson

- Facilitates the development of consistent water resource policy positions
- Represents WI in regional decision-making forums
- Provides leadership for addressing Areas of Concern and implementing Lakewide Management Plans

The Great Lakes Water Resources Compact


The Great Lakes Basin
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Legal Framework

- **Boundary Waters Treaty (1909)**
- **State and Provincial Programs**
- **Great Lakes Charter (1985)**
- **Water Resources Development Act (1986)**
- **Great Lakes—St. Lawrence River Basin Sustainable Water Resources Agreement and Compact (2005)**

Great Lakes Water Resources Implementing Agreements

- Protect Basin waters and related resources
- Recognize Basin waters as precious public natural resources
- Balance lasting economic development with sustainable water use
- Commit to continued public involvement

Agreement Significance

- 10 jurisdictions across international boundaries agreeing to manage largest surface freshwater resource in the world collectively. First multi-jurisdictional agreement of this magnitude in the world.

Wisconsin's Water

- 1,000 miles of Great Lakes shoreline
- Mississippi River
- 15,000 lakes
- 32,000 miles rivers and streams
- 5.3 million acres of wetlands
- 11,000 springs
- 1.2 quadrillion gallons of groundwater

Wisconsin's Great Lakes Basins

Data Sources: Wisconsin Department of Natural Resources, U.S. Geological Survey, GeoGratis

Wisconsin Department of Natural Resources
Water Division
Office of Great Lakes

Compact Fundamentals

- Act 227 Implements Compact
- Water Use Registration and Reporting
- Management of in-basin water use (Water Use Permitting)
  - Withdrawal
  - Consumptive Use
- Water Conservation & Efficiency
- Prohibition on diversions
  - Straddling community/county exceptions
- Effective Date Dec. 8, 2008

Wisconsin's Mission – Sustainable Water Use

- Understanding
- Managing
- Monitoring

Registration and Reporting

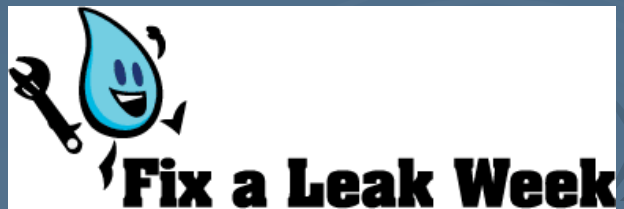
- New water use data system
- Online reporting
- Accurate location information
- Accurate/reliable pumping information
- Management activities, for example
  - new or increased withdrawal permits
  - drought circumstances
  - stream/spring impacts
- Water availability modeling

Water Use Permits

- Great Lakes Basin Only
- New or increased >1 MGD, environmental review

Water Conservation and Efficiency

- Voluntary
  - Statewide
  - Informational Campaign - Fix a Leak Week
- Mandatory
  - New or increased 2 MGD water loss
  - New or increased in Great Lakes Basin
  - Tier 1
    - Water audit
    - Measure all sources
    - Leak detection
    - Education



Fix a Leak Week

Winter months are the prime time to check water use and see if you may have a leak in your home plumbing system. If a family of four **exceeds 12,000 gallons per month** in the winter, you probably have leaks! Those leaks are costing you money and wasting water resources.

Use these pages to learn more about fixing leaks, take the Fix a Leak Challenge, or promote Fix a Leak Week from your own pages.

Every Drop Counts

More than **1 trillion gallons of water are wasted in U.S. homes each year from easy-to-fix leaks.** That's why the DNR, Public Service Commission [exit DNR] and Division of Safety and Buildings [exit DNR] are participating in Fix a Leak Week [exit DNR], March 14 -20, 2011. Join us!

- Find and fix leaks in your home!
- The average household's leaks can account for more than 10,000 gallons of water wasted every year - enough to wash nearly 10 months' worth of laundry!

What can I do?

Check for leaks:

- Check for dripping **faucets**, **showerheads**, and **fixture connections**.
- Check **toilets** for silent leaks. Put a few drops of food coloring into the tank, wait 15 minutes, and see if color appears in the bowl before you flush.
- Check **irrigation systems** and outdoor **spigots** too.
- Use your **water meter** to check your whole house. Read your water meter before and after a two-hour period when no water is being used. If the meter changes at all, you probably have a leak.

Twist and tighten pipe connections:

Some leaks can be fixed by tightening connections.

Find a Plumber [Exit DNR]
Plumbers around Wisconsin are partnering to find and fix leaks in your home.

En Espanol [Salida DNR]

Radio:
Fix-a-Leak 30 sec (English)
Fix-a-Leak 30 sec (Spanish)

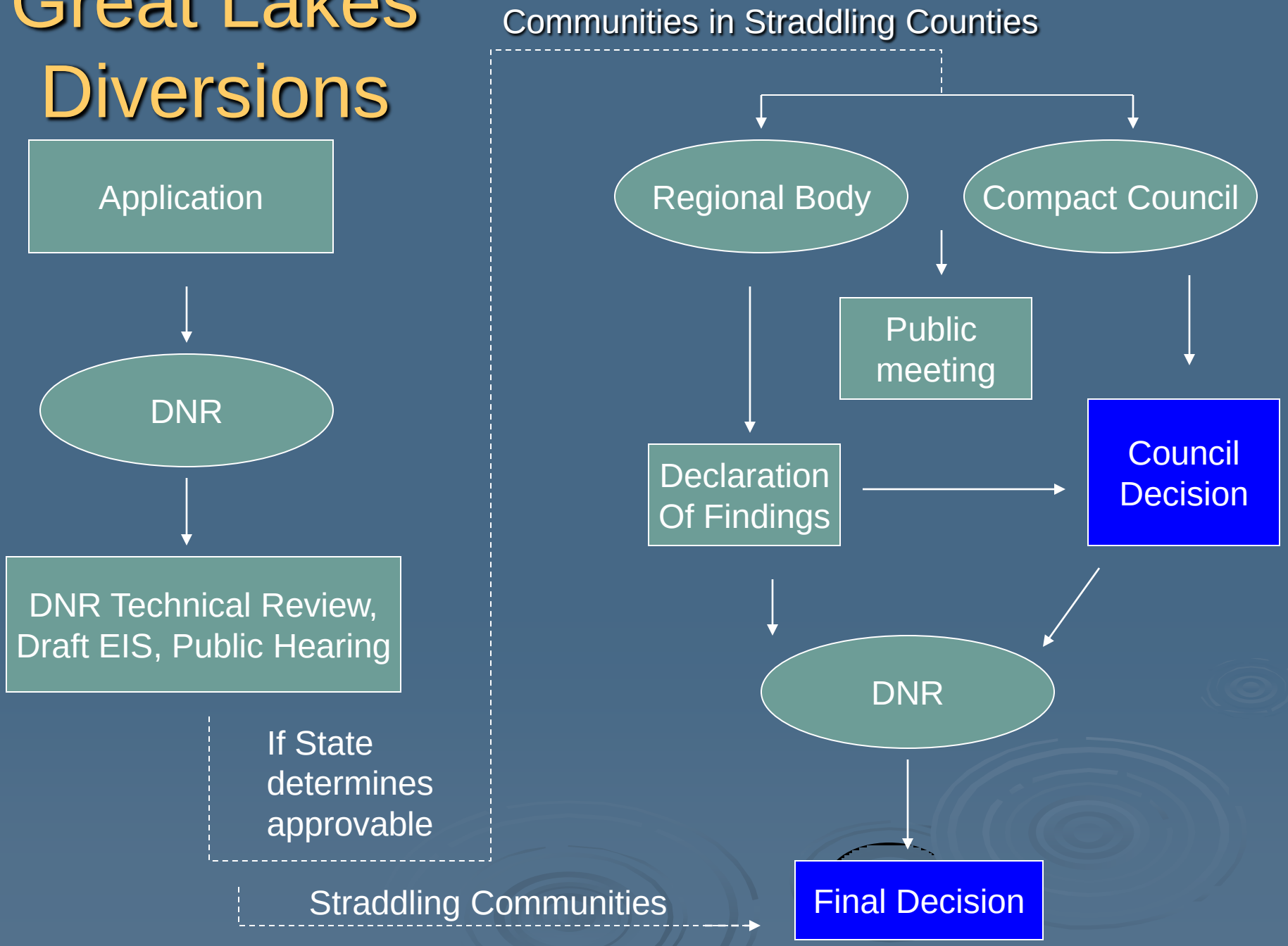
Videos: [Exit DNR]
How to Fix Toilet Leaks
How to Read your Water Meter
Irrigation Maintenance

Links:

New Requirements - Diversions

- Application process
- Application meets Compact Criteria
  - Lack potable water
  - Water conservation plan
  - Return flow
  - No significant adverse impact

Great Lakes Diversions



Future Directions

- Integrating programs
- Strengthening groundwater and surface water monitoring capacity
- Building water conservation and efficiency program
- Integrating water availability and supply information


Office of the Great Lakes –
http://dnr.wi.gov/org/water/greatlakes/
Water Use Section –
http://dnr.wi.gov/org/water/dwg/wateruse.html
Questions?