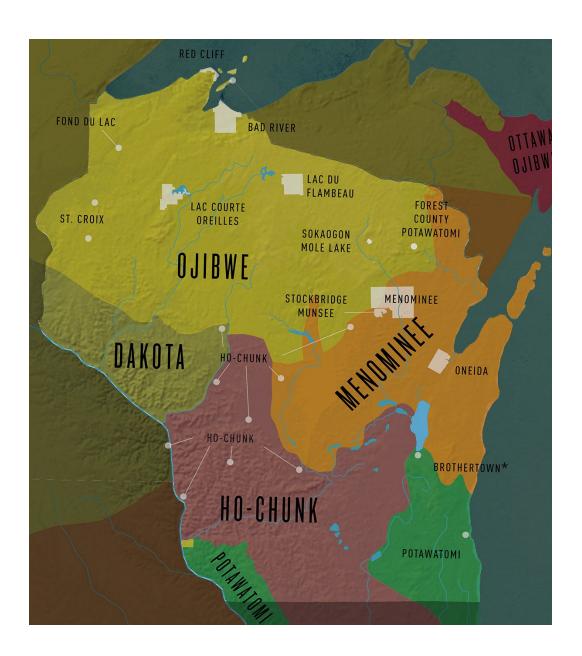




# Oceans of Possibilities In Our Own Backyard

Anne Moser Senior Special Librarian Wisconsin Water Library UW-Madison Jenny Van Sickle Outreach Specialist Great Lakes Indian Fish & Wildlife Commission Odanah, WI



Source: WisconsinFirstNations.org
This map is an adaptation of the
Native Nations Map from The Ways



Photo: GLIFWC





Photo: Wisconsin Sea Grant



Photo: Anne Moser

# Wisconsin Water [nibi] Library



Lake Michigan by Sarah FitzSimons Photo by Bonnie Willison

#### Wisconsin Sea Grant



"Science serving America's coasts" research, outreach and education



Jenny Van Sickle, BSW Outreach Specialist, Great Lakes Indian Fish and Wildlife Commission



#### boozhoo.



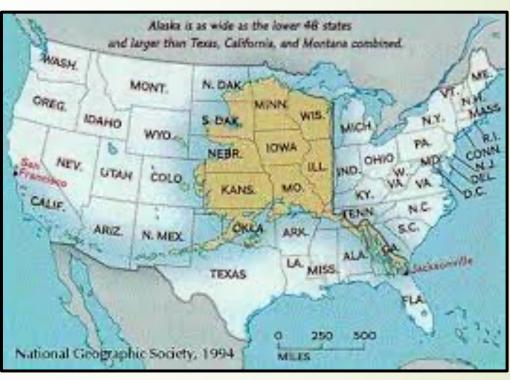






#### alaska





#### nice to meet you.

- GLIFWC co-manages natural resources with cultural expertise and pairs that knowledge with cutting edge technology and modern sciences
- To protect Tribes' long-term ability to hunt, fish and gather on Ceded Territory
- Traditional Ecological Knowledge (TEK) complementing, not competing concepts

Board
11 tribal seats

Voigt & Lakes

GLIFWC

Treaties
1836, 1837, 1842, 1854





hunting

fishing



gathering





#### membership.

#### Michigan (3)

- Bay Mills
- Lac Vieux Desert
- Keweenaw Bay

#### Wisconsin (6)

- Lac du Flambeau
- Red Cliff
- Bad River
- Lac Courte Oreilles
- > St. Croix
- Mole Lake/Sokaogon

#### Minnesota (2)

- Fond du Lac
- Mille Lacs





#### five divisions



#### BIOLOGICAL SERVICES

- Scientific, sampling, testing
- Forestry, invasive species, waterfowl



#### **ENFORCEMENT**

- Conservation Wardens
- ATV, Snowmobile, firearm, hunter's safety classes
- Laws on and off reservation



#### PLANNING & DEVELOPMENT

- Grants
- Admin, youth education
- Internships



#### INTERGOVERNMENTAL AFFAIRS

- Legal
- Legislation
- Environmental policy and threats, challenges



#### PUBLIC INFORMATION

- Outreach
- Videos, booths, events
- Mazina'igan

#### the bar

#### monitoring

- Permits
- Registration
- Precise counting
  - GLIFWC's staff jumps from around 80 staff to ~160 to help with boat landing counts + measuring stations
  - LFD hires an additional 20 ppl to help with their counts

#### attentive audiences

- Ojibwe communities have a clear, vested interest in keeping populations healthy
- Broad partnerships with DNR, conservation agencies, offreservations wardens
- native and non-native local, state, federal and seven generations

#### quick check: which came first?

- The creation of states
  - Michigan, Minnesota & Wisconsin
- Their boundaries, laws and governments

- Ceded Territories
- Treaties, spearing and netting

#### which came first?

- The creation of statehood
- Their boundaries, laws and governments
  - State of Michigan
    - January 26, 1837
  - State of Wisconsin
    - May 29, 1848
  - State of Minnesota
    - May 11, 1858

- Ceded Territories
- Treaties, spearing and netting
  - Treaty of 1836
  - Treaty of 1837
  - **■** Treaty of 1842
  - Treaty of 1854

#### say hello.

- glifwc.org
  - Language
  - Videos, authentic + accurate
  - Activities, educational materials
  - Mazina'igan, seasonal publication
  - Links, pictures, stories and reports
  - Registration, maps, regulations

- In Community
  - Schools, booths, youth camps
- State Fairs, local events





Community. Agency. Education



Questions?



#### get involved.

■UP NEXT:

harvesting tools & activity





Oceans of Possibilities



# What makes our Great Lakes so great?

Fountain of the Great Lakes by Lorado Taft Chicago, Illinois

# If Lake Superior was emptied, how much land would be covered in one foot of water?

- A. North America
- B. California
- C. All of North and South America
- D. The eastern half of the US

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Eleven!

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Eleven!



What is the largest species of fish found in the Great Lakes?
Bonus: How large can they get?

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Lake Sturgeon / Name'

Figure 4. Radio tag in adult lake sturgeon ascending the White River during spawning 2001 (photo by Rick Huber).

Ojibwe tribes have \_\_\_\_\_ hunting, fishing, and gathering rights in ceded territory.

- 1. permanent
- 2. unlimited
- 3. no
- 4. regulated

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## Geography! Can you name this Great Lake city?



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**Answer: DETROIT** 



# Geography! Can you name this Great Lake feature?



Bonus: which two cities border this feature?

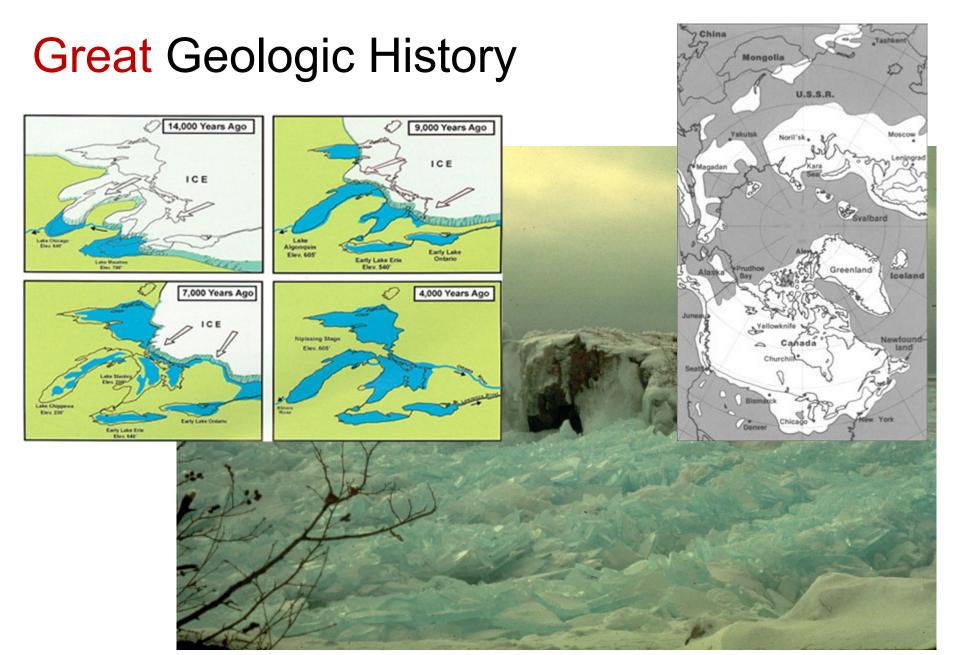
# Geography! Can you name this Great Lake feature?



Niagara Falls, Niagara Falls

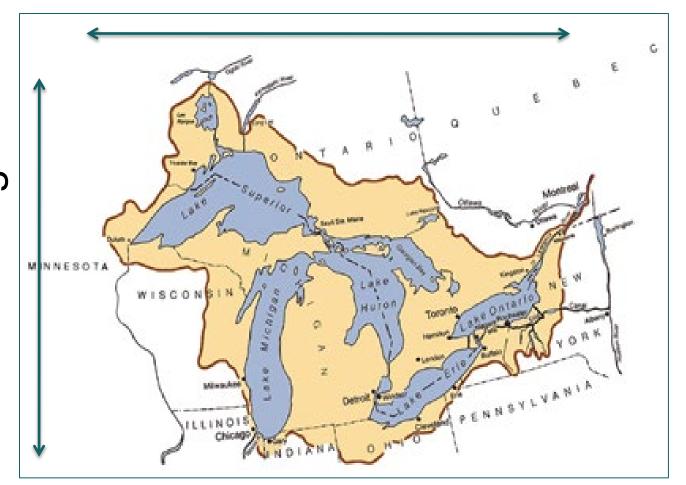


Source: NASA



## **Great Watershed**

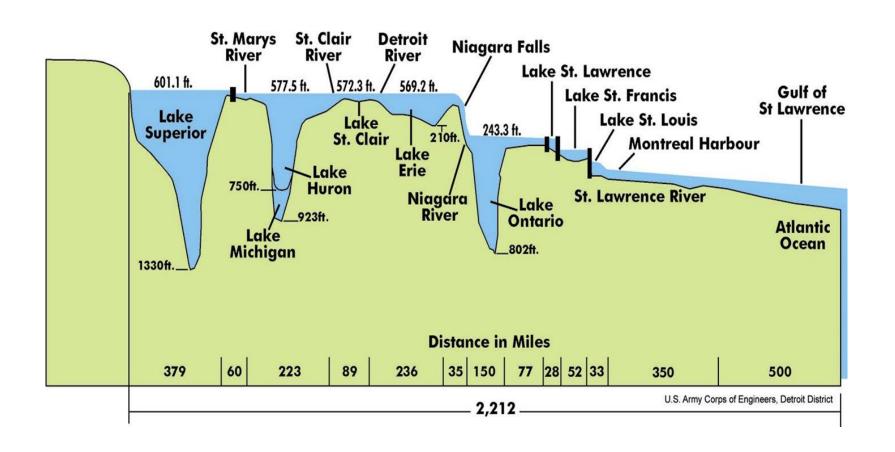
### ~16° of latitude



7°30" of longitude

### **Great Watershed**

### **Great Lakes System Profile**



## **Great Ecology**

Forests, marshes, wetlands, and dune communities with a wide range of mammals, amphibians and reptiles, birds and around 170 species of fish.



## **Great Risk**



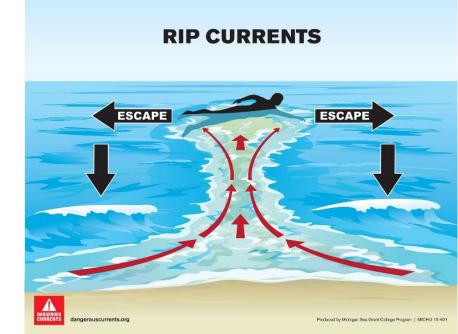
The three most common dangerous currents in the Great Lakes include rip, structural and longshore currents.

98 Great Lakes Drownings in 202147 of those in Lake Michigan1,044 Great Lakes Drownings since 2010

(Last updated 12/31/2021, 10:00 a.m. CST) source: GLSPR.org



Freshwater freezes more quickly than ocean saltwater and a heavy coat of ice can easily capsize and sink a ship.



## **Great** for the Economy

Source: NOAA

331,000 jobs directly tied to marine industries \*construction, mineral extraction, tourism, ship building, transportation, etc.

\$8.8 billion in wages

\$21 billion in Gross Domestic Product

For \$1 spent of the GLRI, \$3.35 is returned

15 to 20 commercial fishers = \$3 million in catch

Aquaculture industry = \$21 million annually

## **Great People**



Michael "Mic" Isham Jr., Great Lakes Indian Fish and Wildlife Commission



Packer fan



John Karl Wisconsin Sea Grant

# What are the greatest challenges facing the Great Lakes today?

- Changing food web
- Invasive species
- Water level extremes and climate change
- Storms, erosion, and high waves
- Spills and persistent toxic chemicals
- Habitat destruction
- Threats to water quantity and quality
- Plastics, microplastics
- Oil transport into and around the watershed
- Pharmaceuticals and personal care products

But what may be the <u>biggest</u> challenge...

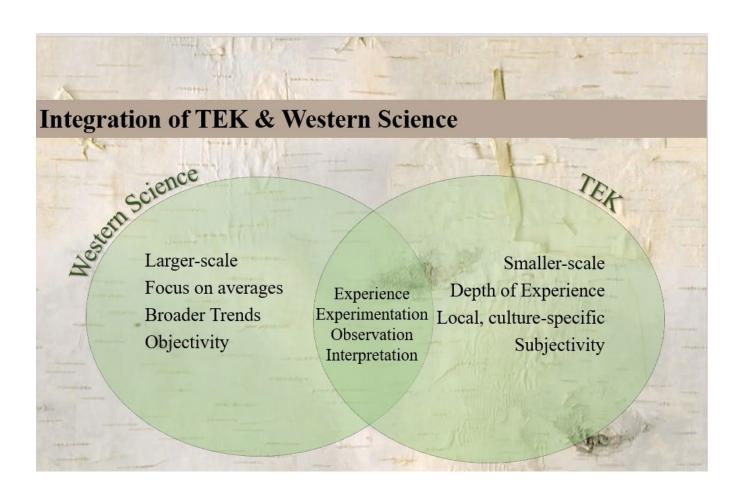
humankind's disconnection from water...

our lakes, our beaches, nature, the outdoors....

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## Methods of thinking



# Dibaginjigaadeg Anishinaabe Ezhitwaad (Caring for Those Who Take Care of Us) A Tribal Climate Adaptation Menu

- Framework to integrate indigenous and traditional knowledge, culture, language and history into the climate adaptation planning process
- Based on Ojibwe and Menominee perspectives, languages, concepts and values, it was intentionally designed to be adaptable to other indigenous communities
- may be useful in bridging communication barriers for non-tribal persons or organizations interested in indigenous approaches to climate adaptation and the needs and values of tribal communities.



#### Water oh wonderful water

Buoyancy

Water Cycle

Sticky water!

Protecting water

#### Who lives in the water?

Fish

**Turtles** 

Waterfowl

Insects

**Plants** 

#### Fun in & around water

Fishing!

Boats and boating

Going to the beach

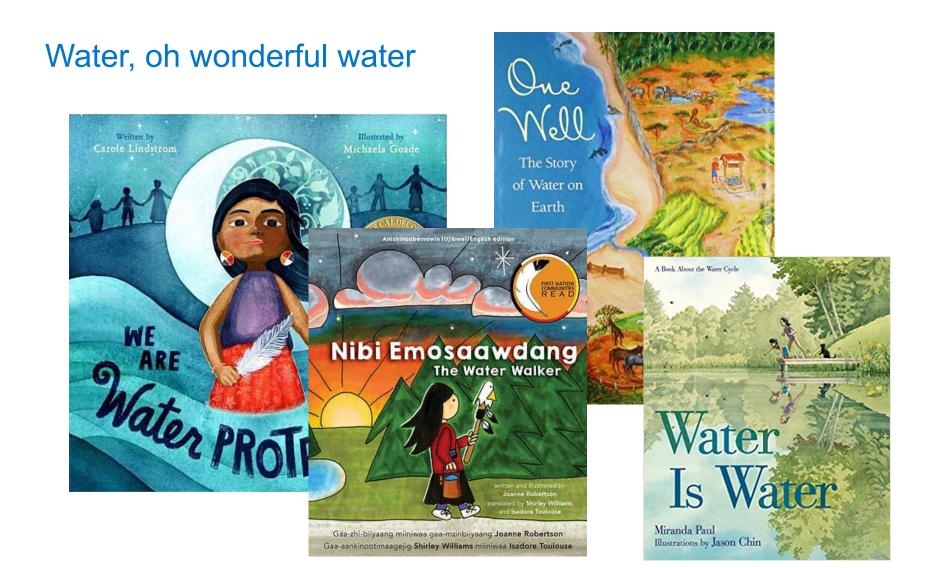
**Exploring shipwrecks** 

#### Water bodies!

Oceans, lakes, rivers, streams ponds, puddles, wetlands

Water, oh wonderful water
Buoyancy
Water Cycle
Sticky water!
Protecting water





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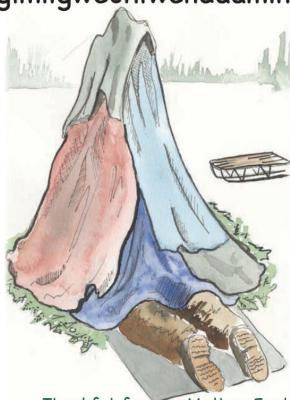
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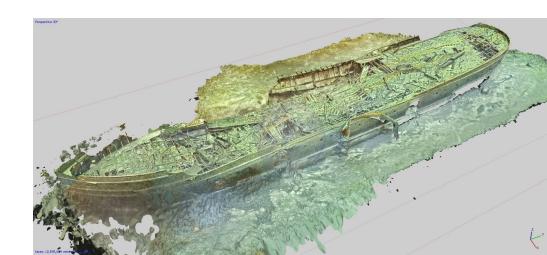


Thankful for our Mother Earth
Spearing through the ice
activity booklet



Fun in and around the water
Fishing!
Boats and boating
Going to the beach
Explore shipwrecks







BY KATHY-JO WARGIN & ILLUSTRATED BY GIJSBERT VAN FRANKENHUYZEN

Fun in and around the water Fishing!

Boats and boating Going to the beach

**Explore shipwrecks** 



#### Water bodies!

Oceans

Lakes

Rivers

**Streams** 

**Ponds** 

**Puddles** 

Wetlands



#### Water bodies!

Oceans

Lakes

Rivers

**Streams** 

**Ponds** 

**Puddles** 

Wetlands

## Thank you!

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