

SLEEPING BEAR DUNES NATIONAL LAKESHORE



Great Lakes Coastal Resilience

Image credit: NASA





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The Nature  
Conservancy



# Great Lakes Coastal Resiliency Study

## Great Lakes Coastal Resiliency Study

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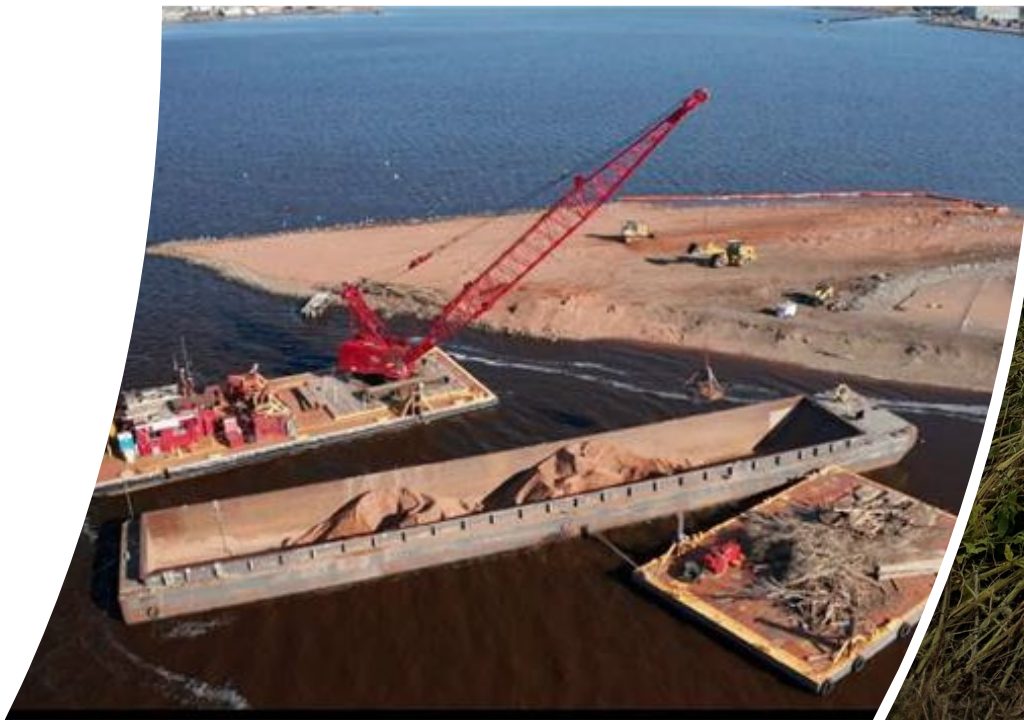
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DETROIT DISTRICT



## Other USACE Coastal Resilience Initiatives in the Great Lakes

- Framework for Resilient Great Lakes Restoration Initiative Investments
- Engineering with Nature
- Beneficial Use of Dredged Material
- Green Infrastructure



# NOAA OFFICE FOR COASTAL MANAGEMENT

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**Our Goal: Making Communities More Resilient**

Healthy Coastal Ecosystems

Resilient Coastal Communities

Vibrant and Sustainable Coastal Economies



**National Coastal Zone Management Program | National Estuarine Research Reserves**

**Coral Reef Conservation | Digital Coast**

**National Coastal Resilience Fund | Bipartisan Infrastructure Act Investments**

**Inflation Reduction Act**

**Great Lakes Restoration Initiative**

# Historic investments:

- Bipartisan Infrastructure Law (BIL)
- Inflation Reduction Act (IRA)
- Great Lakes Restoration Initiative (GLRI)



- NOAA Office for Coastal Management administering \$832 million in Bipartisan Infrastructure Law funds
  - Habitat Protection and Restoration Awards
  - National Coastal Resilience Fund
  - Regional ocean partnerships
- Additional capacity building with Inflation Reduction Act funds
- Climate Resilience Regional Challenge
  - Risk reduction
  - Regional coordination and collaboration
  - Equity and inclusion
  - Enduring capacity
- Great Lakes Restoration Initiative (since 2010)
  - Focus on habitats and species
  - Climate resilience
  - Science foundations for future restoration

# Data, Tools, Training, and Technical Assistance



*[coast.noaa.gov/digitalcoast](https://coast.noaa.gov/digitalcoast)*





# GREAT LAKES AND ST. LAWRENCE CITIES INITIATIVE



- Twenty-one years advancing environmental and socio-economic health on behalf of local governments
- Represent more than 20 million residents in the basin through 250 member communities
- Positioned for broad regional and multi-national impact
- Deliver programs and policy efforts across four focus areas

# CITIES INITIATIVE RESEARCH ON COASTAL RESILIENCE NEEDS



Low staff capacity, limited technical expertise and insufficient funding are the largest barriers to implementing coastal resilience action.

Most communities will need \$1,000,000 - \$10,000,000 over the next five years

# CITIES INITIATIVE COASTAL PROGRAMS

## Resilient Coastal Projects Initiative



- Capacity building & planning
- 30% engineering & design
- Cities Initiative membership priority
- Getting that funding

## Initiative for Resilient Great Lakes Coasts



- 60% engineering & design
- Education & training
- Competitive application process
- GLRI Focus Area 4: Habitat & Species

# The Nature Conservancy

To conserve the lands  
and waters on which all  
life depends.

We use science and  
partnerships to find solutions to  
environmental challenges.

# Key Considerations for Resilience

Long-term view

Accrual of protective benefits

- Reduced property damage

- Reduced social and economic disruptions

- Reduced negative health implications

Sustainability of a solution

Look across landscape rather than project by project

# Approaches to Climate Adaptation

Traditional



Defend



Accommodate



Retreat

New



Protect/Avoid



Retreat



Accommodate



Defend



# A resilient Great Lakes basin is...

one in which communities, infrastructure, ecosystems, and the economy can withstand, adapt to, and recover from climate-related stressors and changing conditions to ensure equitable and inclusive social, economic, and environmental well-being across the basin.





Audience Q & A

APOSTLE ISLANDS, WISCONSIN





# Wrapping up

Be in touch!

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ONTARIO SHORE, LAKE HURON