

# Increasing Illinois and Indiana Shoreline Resilience

## Information A to Z



With varying lake levels in the Great Lakes, especially on Lake Michigan, issues such as coastal erosion and coastal flooding regularly occur. Municipalities are looking for assistance to increase their resilience to coastal hazards and to adapt to varying lake levels in the southern Lake Michigan region that continue to impact their communities.

The groups listed below assist with mitigating issues along the coastline. Descriptions of each organization, as well as links to available resources, are included. Many of these resources are related to permitting, funding, and visualizing and predicting changing lake levels and associated impacts.


















































This publication was created in response to feedback received during workshops hosted by Illinois-Indiana Sea Grant, where attendees voiced a need to create a document that provides a clear outline of the work that several organizations undertake.

To learn more about the workshop that inspired this publication, please read the report from IISG's Virtual Workshop Sessions: [Improving Communication About Changing Lake Michigan Water Levels in the Chicago Metropolitan Area](#).



To view other publications created in response to the workshop, visit IISG's [Southern Lake Michigan Water Level Variability](#) initiative page.

# Resources At-A-Glance

	Assistance	Technical Assistance	Disaster Assistance	Physical Construction	Grants	Funding	Permits	Permitting	Information	Outreach	Education	Programming, Trainings, Meetings	Public/Community Involvement	Investment (data, maps, etc.)	Questions? Click the icon to learn more.	
<b>Federal</b>																
<a href="#">Federal Emergency Management Agency [pg_1]</a>	●	○	○	●	○	○	●	○	○	○	○	○	○	○	○	   
<a href="#">International Joint Commission [pg_2]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	  
<a href="#">National Oceanic and Atmospheric Administration [pg_2]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">U.S. Army Corps of Engineers [pg_4]</a>	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">U.S. Environmental Protection Agency [pg_4]</a>	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<b>Illinois</b>																
<a href="#">Department of Natural Resources-Coastal Management Program [pg_5]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">Department of Natural Resources-Office of Water Resources [pg_6]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">Department of Transportation [pg_6]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">Emergency Management Agency [pg_7]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">Environmental Protection Agency [pg_7]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">State Geological Survey [pg_7]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	 
<a href="#">State Water Survey [pg_8]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   
<a href="#">Illinois-Indiana Sea Grant [pg_8]</a>	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	   

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Please click on the organization name to visit the website or click on the icons to go directly to a social media platform.

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	Assistance	Technical Assistance	Disaster Assistance	Physical Construction	Grants	Funding	Permits	Permitting	Information	Outreach	Education	Programming, Meetings	Public/Community Involvement	Inv'tment Tools (data, maps, etc.)	Learn More...
<b>Indiana</b>															
<a href="#">Department of Environmental Management [pg.8]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Department of Homeland Security [pg.9]</a>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Department of Natural Resources [pg.9]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Department of Transportation [pg.9]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Geological and Water Survey [pg.10]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Lake Michigan Coastal Program [pg.10]</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Northwestern Indiana Regional Development Authority [pg.10]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Non-Profit/Independent</b>															
<a href="#">Great Lakes and St. Lawrence Cities Initiative [pg.10]</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Lake County Stormwater Management Commission [pg.11]</a>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Metropolitan Water Reclamation District of Greater Chicago [pg.11]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Openlands [pg.11]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Park Districts [pg.12]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<a href="#">Private Engineering Firms [pg.12]</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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## Federal

### Federal Emergency Management Agency (FEMA)

*A federal agency that provides assistance to people before, during, and after disasters*

- [FEMA Grants](#)
  - Available for both pre- and post-emergency or disaster-related projects
    - Awarded at many levels including state, local, tribal, territorial, certain private non-profit organizations, individuals, and institutions of higher learning
    - Type of grants include:
      - [Hazard Mitigation](#): reduce or remove risk before disasters
        - [Building Resilient Infrastructure and Communities \(BRIC\)](#)
          - Supports states, communities, tribes and territories with hazard mitigation projects
          - This is a pre-disaster hazard mitigation program that shifts the focus to proactive measures
        - [Flood Mitigation Assistance \(FMA\) Grant](#)
          - Provides funding to states, communities, federally recognized tribes, and territories
          - Funds can be used for projects with goals of reducing or eliminating the risk of repetitive flood damage to buildings that are covered by the National Flood Insurance Program
        - [Hazard Mitigation Grant Program \(HMGP\)](#)
          - Provides funding to state, local, tribal, and territorial governments to rebuild land and property to reduce the risk for future losses in their community (post-disaster funding)
          - Available after a presidentially declared disaster
          - Available on the local community level but not for homeowners and businesses
      - [Preparedness Grants](#): supports citizens and first responders, not directly related to disasters
      - [Emergency Food and Shelter Program](#): provides funding to support those experiencing hunger and homelessness
      - [Dam Safety](#) and [Earthquake Risk](#) Resilience Grants
    - [The Grant Lifecycle](#): learn more about the timeline for the steps of pre-application, the application process, and post-application
- [National Flood Insurance Program \(NFIP\)](#)
  - Provides information about the importance of flood coverage, if flood insurance is right for you, which flood insurance program may be the best option, and how to purchase flood insurance
  - [Flood Mapping](#): flood risk data and hazard resources
  - [Find a Flood Insurance Provider](#): information on where to look for flood insurance
  - [ICC Coverage Fact Sheet](#): information about the Increased Cost of Compliance claim (ICC) if additional financial assistance is necessary after flood insurance is applied

- [Community Rating System \(CRS\)](#)
  - Voluntary FEMA incentive program to encourage management practices that surpass those outlined in the National Flood Insurance Program
  - CRS can help to lower insurance rates and plan for flood control
  - In communities with a CRS plan, the flood insurance premium rates will be discounted
  - [CRS Fact Sheet](#) and [CRS Brochure](#) provide more information
- [Disaster Assistance Improvement Program \(DAIP\)](#)
  - Provides services to disaster survivors to access and apply for disaster assistance
  - Eligibility is contingent on a disaster declaration in the resident’s area
    - [Currently Declared Disasters](#): provides updated information about disasters
  - [Find Disaster Assistance](#): fill out the questionnaire to determine the disaster assistance programs for which you are eligible to apply
    - [Disaster Assistance Application](#)
    - Any questions? [Contact FEMA Disaster Assistance](#)
- [Risk Mapping, Assessment and Planning \(Risk MAP\)](#)
  - FEMA works with federal, state, tribal, and local partners to identify flood risk and works to promote informed planning and development practices that reduce risk through the Risk MAP program
  - Risk MAP supports community resilience by providing data and information to support overall hazard mitigation strategies
  - [National Risk Index](#): Online tool and dataset that shows the risk communities face from 18 natural hazards and other risk factors for all U.S. counties and census tracts
  - [Risk MAP Success Stories](#): provides examples of communities that have successfully used the Risk MAP program to protect themselves from the changing climate
- Outreach: [FEMA Community Programs and Guidance](#)

Questions? Contact [FEMA Region 5](#)

### [International Joint Commission \(IJC\)](#)

*An organization between the United States and Canada to work together to ensure cooperative management of shared water ways*

- The IJC reviews projects that affect water levels or water flow
- [Application Process](#) for uses, obstructions, or diversions of boundary water

Questions? Contact [U.S. Section Staff Members](#)

### [National Oceanic and Atmospheric Administration \(NOAA\)](#)

*A federal agency that conducts science, service, and stewardship and contains a variety of programs and components, including the National Weather Service, Great Lakes Environmental Research Lab, Office of Coastal Management, and many others*

- [NOAA Coastal Resilience Grants](#)
  - The grant program will work to implement projects that build resilient U.S. coastal communities and ecosystems
  - Eligible applicants are nonprofit and for-profit organizations, higher education institutions, states, tribes, and local governments that are proposing projects that will

- take place on the coastal shoreline
- [FAQs](#) on NOAA Coastal Resilience Grants
- [NOAA Great Lakes Habitat Restoration Regional Partnership Grants](#)
  - The EPA will provide up to \$5 million towards the Great Lakes habitat restoration projects through its [Great Lakes Restoration Initiative](#)
    - Funding is provided to organizations and departments, not to individual projects
    - [Examples](#) of Great Lakes habitat restoration projects
- [NOAA Great Lakes Water Level Factsheet](#)
  - NOAA conducts water level research and creates many products linked in this factsheet
- Outreach: [NOAA Outreach and Communication](#)

» [NOAA Office of Coastal Management](#)

- Oversees the implementation of the coastal management processes that keep residents safe, the economy sound, and the natural resources functioning
- Provides technical assistance
- [Coastal Impact Stories](#)

» [NOAA Digital Coast](#)

- Provides data and tools for a specific area to see how to address climate change issues
  - Data examples include: land coverage, weather, climate, hazards, and imagery
  - Tool examples include: Beach Nourishment Viewer, [Coastal County Snapshots](#), [Great Lakes Hardened Shoreline Structure Inventory](#), [Coastal Flood Exposure Mapper](#), and [Lake Level Viewer](#)
  - [Funding and Financing Coastal Resilience](#) webinar series provides more information

» [National Weather Service](#)

- Provides information and data to the general public regarding weather-related events and climate change
  - [Great Lakes Beach Hazards Map](#) and [Great Lakes Portal](#)
- Flood Safety Products can warn you about hazards and provide up-to-date information
  - Examples include: lakeshore flood watches, warnings and advisories, marine forecasts, and rip current outlooks
- [Climate Prediction Center](#) delivers information to predict variations in the climate from several weeks to years
- Enter your [zip code](#) for specific information about current weather in your area
- Outreach: [Outreach and Education](#) and [Great Lakes Education](#)
- Questions? Contact your [Local NWS Office](#) by entering your zip code

» [Great Lakes Environmental Research Laboratory](#)

- Conducts scientific research in the Great Lakes area and develops products and services to inform the public of impacts to the region
- [Water Levels Fact Sheet](#) describes how observation and research drive forecasting efforts to assist agencies and industry to plan for management options
- [Water Levels Overview](#) provides information about the monitoring network of the Great Lakes region, lake level observations, and forecasting models



- [Water Levels in the Great Lakes StoryMap](#) explores the science, history, and importance of water levels in the Great Lakes
- Outreach: [Great Lakes Environmental Research Laboratory](#)

» [Center for Operational Oceanographic Products and Services \(CO-OPS\)](#)

- Provides accurate and timely oceanographic information about tides, currents, and water levels
  - [Great Lakes Operational Forecast System](#) is a model-based prediction system that improves predictions of Great Lakes water levels, currents, and temperatures
  - [Tides and Currents Data](#) for the 53 water level gauges throughout the Great Lakes
  - [International Great Lakes Datum](#) is a common reference system that measures water level height and waterways

Questions? Contact [NOAA Great Lakes Region](#)

[U.S. Army Corps of Engineers \(USACE\)](#)

*An engineer formation of the U.S. Army that provides engineering solutions to energize the economy and reduce disaster risk*

- Provides data and information regarding water levels, precipitation, runoff, [Six-Month Forecasts](#), [Weekly Great Lakes Water Level Updates](#), and [On the Level](#) YouTube series
- Permitting
  - Required for any work that is to be done in an area among the nation’s waterways
    - Examples: modifying existing structures, constructing revetments, reinforcing shoreline structures, and constructing hardened or living shorelines
  - USACE will review the permit and ensure that the proposed work will protect the aquatic ecosystems and any private owner’s property
  - Permits can be completed both on the individual level as well as a nationwide scale
    - [Obtain a Permit](#): information about the application process and instructions
    - [Illinois Regulatory Program](#): provides specific information relating to assistance for the Chicago District
      - This includes the Lake Michigan Regional General Permit, how to submit an application, and what warrants a permit
      - [Request support from USACE](#)
- Find your nearest USACE district within the [Great Lakes and Ohio River Division](#)
- Outreach: [Engineer Research and Development Center](#)

Questions? Contact [Chicago District](#) or [Detroit District](#)

[U.S. Environmental Protection Agency \(EPA\)](#)

*A federal agency that protects human health and the environment*

- [Great Lakes Restoration Initiative \(GLRI\)](#)
  - Provides funds to 16 federal organizations to strategically target the biggest threats to the Great Lakes ecosystem
  - EPA administers these funds to federal agencies to support projects with goals that fall under the GLRI mission and align with its Action Plan, such as a USACE coastal

- resilience project to address issues associated with erosion and rising water levels
- Partnership with NOAA's [Great Lakes Habitat Restoration Initiative](#)
- Technical Assistance
  - [Superfund Technical Assistance Communities](#)
    - This assistance allows people to better understand technical assistance issues and how to conduct the most productive cleanup based on their site
    - Example include:
      - [Technical Assistance Needs Assessments](#) determine if a particular site will need additional support
      - [Technical Assistance Services for Communities](#) provides independent assistance through an EPA contract to get communities to understand more of the EPA actions
      - [Technical Assistance Grant \(TAG\) Program](#) provides funding to community groups to find a technical advisor to assist in the cleanup process after a disaster
      - [Technical Assistance Plan](#) helps communities to make a plan to speak and plan with an independent technical advisor to understand technical site information
- [Lake Michigan Lakewide Action and Management Plans \(LAMPs\)](#)
  - The governments of the United States and Canada, as part of the [Great Lakes Water Quality Agreement](#), created action plans and reports to assess, monitor, protect, and restore Great Lakes ecosystems
  - [Lake Michigan LAMP Annual Report 2019](#) offers the latest report
- Outreach? [Resources for Collaboration and Outreach](#)

Questions? Contact the [Environmental Protection Agency](#)

## Illinois

### [Illinois Department of Natural Resources \(IDNR\)](#)

- » [Coastal Management Program \(IL CMP\)](#)
  - A non-regulatory division of the IDNR dedicated to protecting and enhancing the environmental, economic, and social values of the Illinois coast
  - Technical Assistance
    - IL CMP helps coastal communities improve their capacity to protect natural, cultural, and economic resources. It also fosters coordination and collaboration among communities to achieve shared goals
    - Strategies IL CMP employs in meeting their goals include:
      - Evaluate the hazard vulnerability of shore protection and coastal infrastructure
      - Increase the capacity of coastal communities to protect coastal infrastructure, shorelines, and community resources
      - Improve public shoreline and sand management by communities through research, coordination, technical assistance, and communication
      - Increase coastal community preparedness and capacity to manage stormwater and address flooding and groundwater recharge



- Grants
  - Accept pre-applications for federal pass-through grants that range in monetary amounts from \$1,000 – \$150,000
  - Eligible projects must fall under the guidelines of protecting, preserving, and restoring natural and cultural resources
    - Examples include advancing coastal community resilience, enhancing the recreation and economic development along the Great Lakes, and improving the health of the coast and Lake Michigan
  - Eligible applicants include local government units, universities, and non-profit organizations; individuals are NOT eligible
  - [Grant Program](#): provides more details on the program
- Permitting
  - Anyone submitting an individual permit to USACE must complete a Federal Consistency Review Procedure Form
    - [ICMP Federal Consistency Review Procedure](#) provides an overview
  - Provides assistance in the process of applying for a permit in partnership with USACE
- [Sand Management Working Group](#) is an informal network of local, state, and federal leaders and land managers engaged in regional collaboration to address shoreline change and management on public lands along the Illinois Lake Michigan coast
- [Geology of Shoreline Factsheet](#)
  - Provides information about three coastal zones and reflecting on the past shoreline structure, where it currently stands, and what is predicted for the future
- Questions? Contact [Illinois Coastal Management Program](#)

» [Office of Water Resources \(IL OWR\)](#)

- A state agency that provides resources for water planning, navigation, and floodplain management with opportunities and educational resources for residents
- A joint permit with the Illinois Environmental Protection Agency is needed to complete any work in the Lake Michigan area
  - Examples of these projects include beach nourishment, adding on to existing structures on the coastline, revetments, and many others
- [Water Resources](#) includes permit applications and descriptions regarding the information for the Great Lakes area
- [FAQs](#) regarding permitting, where to target specific questions, and information about construction in the area
- [Floodplain Management](#) provides information regarding floodplain maps, flood insurance, floodplain regulations, and more
- Outreach: [Outreach Programs](#)
- Questions? Contact [Office of Water Resources](#)

## Illinois Department of Transportation (IDOT)

*A state agency that works to ensure safety and efficiency within Illinois' transportation systems*

- With construction on roadways, IDOT progresses with [Erosion and Sediment Control](#) plans

to implement temporary and permanent measures

- IDOT and the Chicago Department of Transportation have begun a study to improve [North Lake Shore Drive](#)
- Outreach: [Program Outreach](#)

Questions? Contact [Illinois Department of Transportation](#)

### [Illinois Emergency Management Agency \(IEMA\)](#)

*A state agency that prepares the state of Illinois for disasters and hazards*

- There are many [mitigation programs](#) through which local authorities, state governments, and private organizations can receive grants
  - Hazards Mitigation Grant: provides funding for implementation of mitigation strategies
  - Pre-Disaster Mitigation Program to implement hazard mitigation
    - [Building Resilient Infrastructure and Communities \(BRIC\)](#) Program supported by FEMA that works to reduce risks certain communities may have in the time of a disaster or natural hazards
      - BRIC applications are submitted to the state EMA department, which then will submit to FEMA on the applicant's behalf
      - To ensure that the application is ready for the FEMA BRIC deadline, IEMA has an earlier deadline for municipalities to first submit the application
  - Severe Repetitive Loss Program: available under the Flood Mitigation Assistance Program
- [Application Checklist](#): use this checklist before completing the application

Questions? Contact [Illinois Emergency Management Agency](#)

### [Illinois Environmental Protection Agency \(IEPA\)](#)

*A state agency that works to ensure a healthy environment for all Illinois citizens to protect the social and economic needs of Illinois*

- Required to submit a permit if the work will disrupt the waterways and lead to water quality concerns
- [401 Water Quality Certification Program](#): any work that affects water quality requires authorization by the IEPA
- [Permits, Forms and Fees](#): provides an overview of the permitting requirements and applications
- Outreach: [Outreach Meetings](#)

Questions? Contact [Illinois Environmental Protection Agency](#)

### [Illinois State Geological Survey \(ISGS\)](#)

*A state scientific survey that provides the state of Illinois with information regarding earth science and uses research in geology to produce geological data and maps*

- Partners with other organizations (such as the IL CMP) to determine changes to existing conditions and understand the effects of coastal processes on the Great Lakes shoreline
- [Statewide Maps](#) are a primary resource

- [Illinois Historical Aerial Photography](#): provides aerial photographs of areas in Illinois from a range of years that illustrate the changes in the environment and structures
- [Great Lakes Geologic Mapping Coalition](#): provides detailed three-dimensional maps
- [Geospatial Data Clearinghouse](#) includes datasets such as Great Lakes Restoration Initiative habitat mapping, drone data, and many more
- StoryMaps of specific examples:
  - [A Dynamic Coast](#): provides an overview of changing shorelines at IL Beach State Park
  - [A Vanishing Coast](#): provides information about habitat loss at IL Beach State Park
- Outreach: [Geoscience Outreach](#)

Questions? Contact [Illinois State Geological Survey](#)

### [Illinois State Water Survey \(ISWS\)](#)

*A state scientific survey that conducts research and produces data that is accessible to the public, particularly citizens and policymakers of Illinois to make decisions*

- Provides data from climate change in many areas, including: [Monthly and Daily Climate Data](#), [7-Day 10-Year Low Flow Maps](#), [Statewide Maps of Water Use](#), and many more
- [Flood Insurance Rate Maps](#) and Digital Flood Insurance Rate Maps are provided for the counties in Illinois
- Outreach: [Outreach Services](#)

Questions? Contact [Illinois State Water Survey](#)

### [Illinois-Indiana Sea Grant \(IISG\)](#)

*A university-based program that provides research, education, and outreach to empower people to resolve problems sustainably and create a healthy economy and environment*

- Provides extensive programming on a number of issues surrounding environmental change and sustainability
- Provides funding to researchers working on environmental issues in the southern Lake Michigan region
  - [Funding Opportunities](#): Check here for current openings
- The [Southern Lake Michigan Water Level Variability](#) initiative presents information and next steps following IISG's workshops on changing and varying lake levels
  - [Ready for Lake Michigan Highs and Lows: Strategies and Case Studies](#): features several successful mitigation actions and strategies communities have adopted
- [Wisconsin Sea Grant](#) has additional relevant information, including:
  - [Great Lakes Coastal Engineering Firms and Contractors](#) list
  - [Nature-based Shoreline Options for the Great Lakes Coasts](#) guide

Questions? Contact [Illinois-Indiana Sea Grant](#)

## Indiana

### [Indiana Department of Environmental Management \(IDEM\)](#)

*A state agency that structures and implements programs with the goals of protecting the human health and environment of Indiana*

- [Lakewide Action and Management Plan](#) forms partnerships and collaborates with others to work and ensure the protection of the Lake Michigan shoreline and ecosystem
  - [Watershed Success Story](#): Examples of work done in many areas to address water quality issues
  - Outreach: [Meetings, Trainings, and Outreach](#)
  - [Contacts in Indiana](#): For information about the EPA sector in Indiana
- Questions? Contact [Indiana Department of Environmental Management](#)

### [Indiana Department of Homeland Security \(IDHS\)](#)

*A state agency that plans and operates programs and assistance to mitigate emergencies in Indiana*

- Work alongside the Indiana Department of Natural Resources to create the Indiana Waterways website and also provide information regarding applications and permitting
  - See Indiana Department of Natural Resources section
  - [Applications, Forms and Permits](#)
- [Individual Disaster Assistance](#) provides grants for home repair, rental assistance, and personal property lost or damage during disasters
- [FAQs Regarding Lake Michigan Water Levels](#): Information about climate change effects on Lake Michigan
- Outreach: [Trainings and Educational Opportunities](#)

Questions? Contact [Indiana Department of Homeland Security](#)

### [Indiana Department of Natural Resources \(INDNR\)](#)

*A state agency that works to preserve, protect, and enhance the resources in Indiana*

- Provides information involving permitting questions
  - [Indiana Waterways Inquiry Request](#): Check to see if a permit applies to your project
  - [Permit Information](#) includes links to applications and the required materials
- [Indiana Floodplain Information Portal](#): Provides floodplain mapping and risk information for permitting needs across the state
- [Great Lakes Compact](#): An agreement with all of the states that border a Great Lake
- Outreach: [Public Outreach](#) and [Education Programs](#)

Questions? Contact [Indiana Department of Natural Resources](#)

### [Indiana Department of Transportation \(INDOT\)](#)

*A state agency that provides planning, building, and maintenance of innovative and safe transportation infrastructure that can enhance quality of life*

- [Erosion Control](#): INDOT works to mitigate challenges from erosion on roadways through construction projects
- [Restrictions and Closings](#): Provide information regarding road conditions, which is especially important during natural weather hazards
- [Major Projects](#)
- Outreach: [Public Involvement](#)

Questions? Contact [Indiana Department of Transportation](#)

### [Indiana Geological and Water Survey \(IGWS\)](#)

*A state-sponsored organization that provides earth science information through directed research, service, and education*

- Provides data and tools to help with visualizing the changing land
  - [Maps](#)
  - [Outreach Resources Specific Project Examples](#)
- Outreach: [Outreach Resources](#)

Questions? Contact [Indiana Geological and Water Survey](#)

### [Indiana Lake Michigan Coastal Program \(LMCP\)](#)

*A program that provides advice, guidance, partnership, and financial support to municipalities, county, and state governments*

- Receives a monetary award from NOAA that is used to provide funding to communities and organizations to protect Lake Michigan shorelines
  - [Lake Michigan Coastal Program Grants](#)
- Outreach: [Outreach and Education](#)

Questions? Contact [Indiana Lake Michigan Coastal Program](#)

### [Northwestern Indiana Regional Development Authority \(RDA\)](#)

*An organization that balances growth with preservation and provides updates to lakefront communities*

- Provides financial support in the form of grants
  - [List of Available Grants](#)
  - [Application Process](#)
- [Submit Application](#): Complete the grant process

Questions? Contact [Northwestern Regional Development Authority](#)

## **Non-Profit, Independent and Local Organizations**

### [Great Lakes and St. Lawrence Cities Initiative](#)

*A coalition between U.S. and Canadian mayors that strives to advance the restoration and protection of the Great Lakes and St. Lawrence River*

- The Great Lakes Cities Initiative partners with many other organizations, including the IJC, EPA, NOAA, state agencies, and provincial ministries, to promote clean and healthy water
- [Reported](#) the significant funding and investment needs of Great Lakes communities to increase coastal resiliency and water equity
- [Great Lakes and St. Lawrence Events](#)
  - Host webinar series several times each year
- Outreach: [Education, Outreach, and Communications](#)

Questions? Contact [Great Lakes and St. Lawrence Cities Initiative](#)

### [Lake County Stormwater Management Commission](#)

*A commission that coordinates stormwater activities to improve water quality, reduce flood damages, and enhance and restore the natural drainage system in Lake County, IL*

- Creates countywide floodplain and stormwater management standards
- Provides information about necessary mitigation efforts with increased flooding
  - [Flooding Information and Programs](#)
- [Flood Insurance Maps Permitting](#)
  - A Lake County Watershed Development Permit is needed for any development that will impact the waters
  - [Do I Need a Watershed Development Permit?](#)

Questions? Contact [Lake County Stormwater Management Commission](#)

### [Metropolitan Water Reclamation District of Greater Chicago \(MWRD\)](#)

*A special-purpose district that manages stormwater, cleans wastewater, and recovers valuable resources throughout Cook County, IL*

- [Stormwater Management Program](#) provides support to reduce stormwater damages and build resilient communities
- [Green infrastructure](#) investment by MWRD protects water quality and mitigates excess stormwater levels and flooding
- [Report an Incident](#)
- Project Examples:
  - [Lakefront Erosion Control Project](#)
  - [Tunnel and Reservoir Plan \(TARP\)](#)
- Outreach: [Education and Community Outreach](#)

Questions? Contact [Metropolitan Water Reclamation District of Greater Chicago](#)

### [Openlands](#)

*A non-profit organization that works to protect the natural and open spaces in Illinois*

- Works to increase nature-based solutions to solve climate change problems
  - [Combating Climate Change](#)
  - [Protecting Our Great Lakes](#)
- [Landowner's Guide](#): Provides information about ravine conditions and preservation strategies
- Provides updated stories on recent events and plans
  - [With more record rainfall, we need Nature-Based Solutions](#)
  - [Resolution to Action: 4 nature-based policy recommendations for Chicago's climate resilience](#)
  - [It's raining a lot more — and that's a problem](#)
- Outreach: [Educating Schools and Communities](#)

Questions? Contact [Openlands](#)



## Park Districts

*Independent units of local government that were designed by citizens to protect open spaces and provide recreation and educational opportunities*

- [Illinois Association of Park Districts](#) is a nonprofit service that serves park districts and works to provide park and recreation opportunities, preserve natural resources, and improve quality of life for all people in Illinois
- [Indiana Park and Recreation Association](#) is a professional association that includes park and recreation professionals that live throughout Indiana
- Outreach: Provide outreach and educational programs such as nature programs and park events to learn more about the natural environment and appreciate all the park has to offer

*Questions? Contact your local park district*

## Private Engineering Firms

*Consulting or planning firms that focus on providing engineering services to assist with larger public projects and individual projects*

- Survey areas, provide proposals for next steps to take, and provide construction for hazard mitigation and adaptation strategies

*Questions? For a list of some regional firms available in the Great Lakes area, check out [Great Lakes Contracting Firms and Engineers](#) from Wisconsin Sea Grant*



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