Illinois Coastal Management Program
DRAFT Program Assessment and Strategy 2026-2030

Prepared by

Illinois Department of Natural Resources
Coastal Management Program
160 N. LaSalle, S-703
Chicago, IL 60601

October 27, 2025

Table of Contents

Introduction

The U.S. Congress passed the Coastal Zone Management Act (CZMA) in 1972. The goal of the Act is to preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's Coastal Zone. This Act, administered by the National Oceanic and Atmospheric Administration (NOAA), provides for the management of the nation's coastal resources, including the Great Lakes.

The CZMA outlines the National Coastal Zone Management Program (NCZMP), which comprehensively addresses the nation's coastal issues through a voluntary partnership between the federal government and coastal and Great Lakes states and territories. There are 34 coastal states and island territories that participate in the National Coastal Zone Management Program. The NCZMP outlines basic requirements that the states must follow and gives states the flexibility to design unique programs that best address their coastal challenges and regulations. The program provides the basis for protecting, restoring, and responsibly developing the nation's coastal communities and resources. By leveraging both federal and state expertise and resources, the program strengthens the capabilities of each to address coastal issues.

The State of Illinois joined the NCZMP on January 31, 2012, establishing the Coastal Management Program (CMP). The Illinois Department of Natural Resources (IDNR) is the lead agency administering the Illinois CMP (IDNR-CMP) and coordinating with a network of other state agencies to ensure program compliance.

Section 309 Process

Section 309 of the CZMA established a voluntary Coastal Zone Enhancement Program to encourage states and territories to strengthen and improve their federally approved coastal management programs in one or more of nine areas. These "enhancement areas" include:

- Wetlands
- Coastal hazards
- Public access
- Marine debris
- Cumulative and secondary impacts
- Special area management plans
- Great Lakes resources
- Energy and government facility siting
- Aquaculture

Every five years, states and territories are encouraged to conduct self-assessments of their coastal management programs (Section 309 assessment) to identify challenges and opportunities within each of the nine enhancement areas. During the assessment, coastal management programs identify high-priority management issues and then develop strategies intended to improve the coastal management program's operations and needs. The strategies provide a stepwise approach to reach a stated goal and lead to enhancement. Assessment and strategy development follows a process outlined in NOAA's

guidance document, *Coastal Zone Management Act, Section 309 Program Guidance, 2026 to 2030 Enhancement Cycle*. Submittal of a comprehensive Section 309 Assessment and Strategy and approval of the Section 309 Assessment and Strategy by NOAA will make IDNR-CMP eligible to receive Section 309 funds, including competitive funds for Projects of Special Merit, to implement strategies for the 2026-2030 fiscal years.

The Section 309 process requires that all strategies lead to a program change. A program change is a change to a state's or territory's federally-approved coastal management program. Defined in 15 CFR 923.123, program changes include the following:

- A change to Coastal Zone boundaries that will improve a state's ability to achieve one or more of the enhancement objectives.
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement or understanding, that will improve a state's ability to achieve one or more of the enhancement objectives.
- New or revised local coastal programs and implementing ordinances that will improve a state's ability to achieve one or more of the enhancement objectives.
- New or revised coastal land acquisition, management, and restoration programs that improve a state's ability to attain one or more of the enhancement objectives.
- New or revised special area management plans or plans for areas of particular concern (APC), including enforceable policies and other necessary implementing mechanisms or criteria and procedures for designating and managing APCs that will improve a state's ability to achieve one or more of the enhancement objectives.
- New or revised guidelines, procedures, and policy documents that are formally adopted by a state and provide specific interpretations of enforceable coastal policies to applicants, local governments, and other agencies that will result in meaningful improvements in coastal resource management and that will improve a state's ability to attain one or more of the enhancement objectives.

The following actions are not considered to be program changes:

- Increased staffing or staff reassignments that will not support or result in a program change as defined above.
- Administrative or organizational changes that do not change or improve the state's coastal management program.
- Educational and outreach materials that are not part of a larger strategy to achieve a program change as defined above.
- Research or mapping efforts that are not part of a larger strategy to achieve a program change as defined above.
- Participation in coordination groups that are not part of a larger strategy to achieve a program change as defined above.
- Technical or financial assistance to local governments that is not part of a focused strategy to develop new or revised local coastal programs or implementing ordinances to achieve a specified enhancement objective.
- Actual land acquisition or low-cost construction projects.

The Section 309 assessment process is broken down into a high-level Phase I evaluation performed for all nine enhancement areas, followed by an in-depth Phase II assessment of high priority areas. Following Phase II, one or more strategies are developed to address high priority issues. The Phase I and Phase II assessment was completed by the IDNR-CMP staff using templates and resources provided by NOAA. Key stakeholder input and IDNR-CMP knowledge of the enhancement area are also reflected in the assessment. Where feasible, IDNR-CMP attempted to analyze data for the resources located within the Coastal Zone boundary. If that level of detail was not available, data was analyzed at the county level (Cook and Lake Counties) and the extent of analysis has been noted in the assessment tables.

As part of the Phase I assessment, IDNR-CMP assigned a priority level to the nine enhancement areas as presented in **Table 1**. Factors influencing the prioritization of enhancement areas include the immediacy, scope, and magnitude of the management challenge, as well as stakeholder input. Enhancement areas ranked as "High Priority" were then further assessed during the Phase II evaluation process. Following the Phase II assessment, IDNR-CMP developed strategies to address high priority issues identified in the assessments. The strategies are intended to improve the coastal management program's operations and needs, to reach a stated goal and lead to enhancement in a stepwise approach.

Enhancement Area	Phase I Priority
Wetlands	High
Coastal hazards	High
Public Access	Medium
Marine debris	Medium
Cumulative and secondary impacts	Medium
Special Area Management Plans	Medium
Great Lakes resources	Medium
Energy and government facility siting	Low
Aquaculture	Low

Table 1: Enhancement area prioritization for the Illinois Coastal Zone.

The last assessment conducted by IDNR-CMP occurred in 2015, as such, some of the reports, statutes, laws, and updates discussed in this assessment cover a time period longer than the last 5 years in order to accurately capture the changes that have occurred since.

Stakeholder Input

IDNR-CMP staff prepared this document and determined the level of priority for each enhancement area with a combination of internal and external stakeholder input. Internal stakeholders included

IDNR-CMP staff as well as staff from different divisions within the Illinois Department of Natural Resources (IDNR). External coastal stakeholders consisted of IDNR-CMP partners with a working knowledge of the program, core understanding of IDNR-CMP's mission and objectives, and having worked with the IDNR-CMP on recent project efforts. IDNR-CMP manages several networks of peer stakeholder groups and was able to gather input from these groups as well, including: the Beach Managers Working Group, the Shoreline Management Working Group and the Coastal Clean Waters Advisory Group.

The Beach Managers Working Group was developed in 2017 and is an informal network of local beach managers collaborating to address public access and coastal resilience issues in the Illinois Coastal Zone. The Shoreline Management Working Group was developed in 2015 following the previous 309 assessment and strategy and is a network of local, state, and federal leaders and land managers – both public and private partners – collaborating to address shoreline change on Illinois' Lake Michigan shoreline. The Coastal Clean Waters Advisory Group was developed in 2024 following the approval of IDNR-CMP's nonpoint source pollution prevention program and is a network of local and state public, academic and nonprofit leaders collaborating to address water quality issues in Illinois' Coastal Zone.

Phase I Input

Initial stakeholder input during the Phase I assessment was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of coastal partners including Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals. Responses covered a range of aspects and identified wetlands, coastal hazards, and public access as priorities. The results of this survey are attached as Appendix A at the end of this document.

Phase II Input

Focused stakeholder input was sought during the Phase II assessment and strategy development through a web-based survey, facilitated exercises during meetings with the Beach Managers Working Group and Coastal Clean Waters Advisory Group, and through one-on-one calls with partners. The survey was distributed via email to representatives of the Shoreline Management Working Group, internal IDNR staff, the Coastal Clean Waters Advisory Group, and partners with a core understanding of coastal hazards and wetland issues. The survey was sent out in two emails and open for three weeks and received responses from eight individuals. One-on-one calls were held with representatives from the Lake County Stormwater Management Commission, Lake County Forest Preserves District, The Wetlands Initiative, IDNR Office of Water Resources, IDNR Wildlife Biologists, and the Metropolitan Planning Council. Responses from the survey and interviews covered a range of aspects and identified upstream and urban stressors, such as urbanization, hydrologic modifications, and invasive species, as undermining coastal wetland health and water quality. Results from the online survey are shown as Appendix B at the end of this document.

Public Comment Period

The Draft Enhancement Assessment and Strategy for 2026-2030 was made available on the IDNR-CMP website for 33 days from October 30, 2025, to December 2, 2025, for public input. An online form was published to receive public comment. IDNR-CMP responses to the public comment period will be updated as Appendix C following the public comment period.

Summary of Recent Section 309 Achievements

IDNR-CMP developed five strategies for the 2016-2020 Assessment and Strategy. The 2016-2020 Assessment and Strategy cycle was the first time that IDNR-CMP participated in the Section 309 process and resulted in multiple strategies focused on coastal hazards and public access. Coastal erosion became a pressing issue prior to the 2016-2020 strategy due to rising lake levels and intense storm events. As such, most of the Section 309 resources were dedicated to the Shoreline Erosion and Accretion Strategy, with other strategies becoming a lower priority. IDNR-CMP did not submit a program change for two strategies, Coastal Hazards – Groundwater Hydrology and Public Access – Inventory and Needs Assessment. IDNR-CMP did not develop a strategy for the 2021-2025 cycle; the updates below are from the 2016-2020 cycle.

Coastal Hazards - Shoreline Erosion and Accretion Strategy

With the support of Section 309 funding, IDNR-CMP established a Coastal Geology Research Program in order to work towards sustainable solutions to erosion issues. IDNR-CMP hired a coastal geologist in partnership with the Illinois State Geological Survey (ISGS), and Section 309 funds were used to support extensive research and monitoring performed by ISGS. IDNR-CMP also established the Sand Management Working Group, now the Shoreline Management Working Group, a network of partners focused on regional collaboration on public shoreline management.

Illinois had a very active shoreline research program in the 1970's and 1980's, but since that time, new research had been solely lacking. Partnership with ISGS allowed IDNR-CMP to implement numerous research and monitoring activities that inform the Illinois coastal program. ISGS staff monitor coastal erosion and accretion through high-precision GPS surveys, unmanned aerial vehicles, coastal monitoring cameras, bathymetric surveys, deployment of wave and water level sensors and acoustic and electromagnetic methods to quantify sand thickness. Community scientists gathered erosion and accretion data at sites that could not be monitored by the ISGS. Staff also compiled and analyzed data from past studies performed by state and federal agencies and academic researchers.

Data related to coastal erosion and accretion has been used extensively by IDNR for management at Illinois Beach State Park. Informed by ISGS research, IDNR designed and implemented erosion protection projects to protect the critical habitat found at the park. One of the projects, known as the "Rubble Ridges," is an experimental approach that brought together numerous partners, including state and federal agencies, and that has the potential to be a lower cost solution that can be

implemented throughout the region. Using a less intensive approach than traditional armoring or breakwaters, the Rubble Ridges reduce wave energy in the nearshore environment without disturbing longshore sediment movement by creating sequential underwater ridges made out of smaller stone. At Illinois Beach State Park, three ridges were installed five hundred feet offshore and each ridge works sequentially to dissipate wave action. This innovative approach also created habitat features such as tern nests, limestone ledges, and driftwood habitat salvaged from the area. ISGS has also worked with communities and public landowners to supply them with data for their shoreline protection projects.

Through the Shoreline Management Working Group, IDNR-CMP and partners have been working on analyzing existing permitting policies and regulations to identify opportunities for improvement; explore new shoreline management practices and projects; and gather and share data. Data gathered by ISGS supports the group in gaining a better understanding of the shoreline dynamics and management decisions.

The Coastal Geology Research Program enables IDNR-CMP to work with communities and other partners to identify sustainable solutions to shoreline management. This work has led to updates of community plans and ordinances and updates to permitting processes, developing concepts for resilient shoreline solutions and enhanced regional coordination among communities to implement resiliency related projects. One of the projects to come out of this work is the Coastal Resilience Guide for North Shore Communities, which was developed through a partnership with the Great Lakes and St. Lawrence Cities Initiative (GLSLCI). Combining guidance documents for municipal staff and an online GIS Hub, called I-SHORE, the Coastal Resilience Guide for Illinois North Shore Communities is a roadmap for coastal resilience.

Coastal Hazards – Ravine Management Program

In Illinois, ravines are primarily located in the northern part of the Illinois Coastal Zone. The topography of the ravine system provides unique growing conditions and microclimates for several threatened and endangered plant and tree species. Ravines were identified in the previous assessment as an area of particular concern due to erosion and impervious surfaces. Managing the ravine system to address the erosion associated with stormwater runoff due to the increase in impervious surfaces is a significant challenge in the Illinois Coastal Zone.

IDNR-CMP developed a strategy to gather information on the ravine system through the coordination with partners on research needs for the assessment of biological and ecological conditions of the ravines. IDNR-CMP supported an assessment of aquatic communities within the ravine habitat (fish and macroinvertebrates) and an assessment of terrestrial plant communities. Partner organizations conducted assessments of physical characteristics, slope stability, and constructed features within the ravines. IDNR-CMP shared the results of this research with relevant stakeholders, however, a ravine management plan has yet to be developed. IDNR-CMP continues to support partners managing and focusing on the inventory and risk assessment of Lake Michigan ravines, particularly on stabilizing and protecting ravines.

Coastal Hazards – Prioritizing Wetlands

IDNR-CMP developed and refined a process to create detailed, high-resolution maps of wetlands in and around Illinois Beach State Park. Satellite imagery as well as other ancillary data have been used to obtain refined wetland occurrence maps that are significantly more specific than prior, broad characterizations of the landscape. Wetland maps were also supplemented by hydrological data obtained by ISGS as part of Project of Special Merit funding received in 2019.

Phase I Assessment

Wetlands

Section 309 Enhancement Objective: Protection, restoration, or enhancement of the existing coastal wetlands base, or creation of new coastal wetlands. §309(a)(1)

Note: For the purposes of the Wetlands Assessment, wetlands are "those areas that are inundated or saturated at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." [33 CFR 328.3(b)]. See also pg. 14 of the CZMA Performance Measurement Guidance [1] for a more in-depth discussion of what should be considered a wetland.

Phase I (High-Level) Assessment: (Must be completed by all states.)
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. Using the tables below as a guide, provide information on the status and trends of coastal wetlands. Be as quantitative as possible using state or national wetland trend data. [2] The tables are information presentation suggestions. Feel free to adjust column and row headings to align with data and time frames available in your state or territory. If quantitative data is not available for your state or territory, provide a brief qualitative narrative describing wetlands status and trends and any significant changes since the last assessment.

   Current state of wetlands in 2024 (acres): 56,269 acres of wetlands in Cook and Lake County

Current Wetlands Status for Illinois Coastal Counties

Wetland Type	Acres of Wetland
Woody Wetlands	34,515
Emergent Herbaceous Wetlands	21,754

Table 2: Cook and Lake County wetland acreage based on the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool, accessed October 15, 2025, based on 2024 data.

[1] coast.noaa.gov/data/czm/media/czmapmsguide.pdf

[2] National data on wetlands status and trends include NOAA's Land Cover Atlas (coast.noaa.gov/digitalcoast/tools/lca.html), the U.S. Geological Survey's National Land Cover Database (usgs.gov/centers/eros/science/national-land-cover-database), and the U.S. Fish and Wildlife Service's National Wetland Inventory data (fws.gov/program/national-wetlands-inventory).

Coastal Wetlands Status and Trends

Below tables provide data broken down by coastal counties, Cook and Lake Counties for 2011-2024.

Cook County Change in Wetlands	from 2011-2024
Percent net change in total wetlands (% gained or lost)*	0.11%
Percent net change in freshwater (palustrine wetlands) (% gained or lost)*	0.11%
Percent net change in saltwater (estuarine) wetlands (% gained or lost)*	N/A

Table 3: Changes in wetlands for Cook County based on data from the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool.

Lake County Change in Wetlands	from 2011-2024
Percent net change in total wetlands (% gained or lost)*	-0.07%
Percent net change in freshwater (palustrine wetlands) (% gained or lost)*	-0.07%
Percent net change in saltwater (estuarine) wetlands (% gained or lost)*	N/A

Table 4: Changes in wetlands for Lake County based on data from the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool.

The above data regarding wetlands is representative of Illinois' coastal counties (Lake and Cook Counties) as a whole. The wetlands in the Illinois Coastal Zone are concentrated in the northern and southern portions of the zone.

- In the southern portion of the Coastal Zone, known as the Calumet Region, many of the marshes have been historically degraded due to the industrial history of the area. Over the past 5 years, agencies and non-profits have worked in a coordinated effort to restore the regions' wetlands. A specific focus in the area is the creation of hemi-mash habitats from the current state of open water where the depth of pools is too great to support wetland plants. This habitat is crucial habitat for many species of marsh birds; an ongoing monitoring program is tracking the use of these marshes by birds, including species that have been missing from the region in decades. Another wetland restoration focus is the management of invasive vegetation, especially *Phragmites australis* (common reed).
- While Lake County contains wetlands outside of the Coastal Zone, wetlands within the northern region of the Coastal Zone are predominantly located in and around Illinois Beach State Park. Wet prairie, forested, panne, and freshwater marsh are among the types to be found at the park. In 2024, IDNR-CMP supported the development of a proposal for a hydrologic and vegetative study of IBSP, which was awarded Bipartisan Infrastructure Law funding to the University of Illinois' Prairie Research Institute. The results of this study will serve as a baseline of which effects of current and planned restoration efforts can be monitored for success. This work will build off of a 2022 study by the Illinois State Geological Survey that used monitoring wells to identify and study hydrologic connections between Lake Michigan and the deeper groundwater system.

Changes in wetlands at the county level do not fully represent what occurs within the Illinois Coastal Zone. The Cook County portion of the Coastal Zone is predominantly developed with the exception of the wetlands in the Calumet Region, where the focus over the last 5 years has been centered around the restoration and creation of wetlands that have historically been impacted by industry. Lake County is similar to Cook in that most of the Coastal Zone is developed and not experiencing change, however, wetlands in Lake County are threatened from the impacts of stormwater runoff and erosion due to upstream development. The remaining pockets of wetlands in the coastal zone are at risk as development continues in the northern and southern portions of the coastal zone.

How Wetlands Are Changing

Land Cover Type	Area of Wetlands Transformed to Another Type of Land Cover between 2011-2024 (Sq. Miles) in Coastal Counties
Development	0.56
Agriculture	0.14
Grassland	0.02
Forest	0.01
Barren Land	0.05
Open Water	0.53

Table 5: Wetland changes due to land use changes for Cook and Lake County are based on information developed through the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool.

Management Characterization

1. Indicate any significant changes at the state or territory level (positive or negative) since the last assessment that could impact the future protection, restoration, enhancement, or creation of coastal wetlands.

Significant Changes in Wetland Management

Management Category	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y
Wetlands programs (e.g., regulatory, mitigation, restoration, acquisition)	Y

Table 6: Significant changes in wetland management are based on information from the Illinois Department of Natural Resources.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

While not a state regulation, the recent Sackett v. EPA ruling will potentially have state level implications for the Illinois Coastal Zone, and the state as a whole. With the Sackett decision, 72% of Illinois wetlands will lose federal protection. In the State of Illinois, legislation exists that offers some level of protection to these wetlands, but is not broad, overarching coverage as was prior to the Sackett decision. Some wetlands are protected by state and/or county-level regulation or through stormwater management ordinances, as is the case in Cook and Lake County in the Illinois Coastal Zone. The Sackett decision reduces federal protection for wetlands and increases the reliance on state and local protections for wetlands. While Illinois does not currently have broad, state level, protections for wetlands however there are some regulations that may provide some level of protection. One regulatory change, described below, was not specifically driven by IDNR-CMP, but by other divisions of the Illinois Department of Natural Resources, which houses the program.

Forests, Wetlands, and Prairies Act:

a. This act, which became effective January 1, 2025, established the Forests, Wetlands, and Prairies Grant Program. This program will help to advance the State's goal of no overall net loss of the State's existing forest, prairie, or wetland acres or their functional value due to State-supported activities.
b. This was not a 309 or CZM-driven change.
c. The increase in funding opportunities for restoration and preservation of Illinois' forests, wetlands, and prairies will provide local governments and other agencies funding to support the protection and restoration of forests, wetlands, and prairies.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High	__X__
Medium	_____
Low	_____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Great Lakes coastal wetlands support numerous ecosystem services for the Illinois Coastal Zone. The diversity of wetlands in the Coastal Zone includes wet prairie, forested, panne, freshwater marsh, and hemi-marsh wetlands. The diversity of wetland habitat encourages high biodiversity as coastal wetlands provide important nesting habitat for migratory and residential birds as well as necessary spawning and nursery habitat for Great Lakes fish. Coastal wetlands maintain water quality by capturing excess nutrients and pollutants such as nitrogen and phosphorous.

IDNR-CMP staff considered the decrease of wetland coverage across both Cook and Lake counties and the urgency of wetland protection following the Sackett v EPA determination. Illinois has yet to pass wetland protection legislation as of January 2025. In addition, an increase in frequency of extreme weather events – particularly long periods of severe drought followed by intense storms – has increased the demand for examining the ecosystem benefits of resilient coastal wetlands to mitigate coastal flooding from storms.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly

newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, the City of Chicago, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Survey respondents indicated that protecting, restoring, and preserving coastal wetlands are their highest priority. Education leading to changes of public perception of wetlands was considered an important strategy for IDNR-CMP from stakeholders.

IDNR-CMP is well positioned to provide a coordinated, inter-agency approach to protecting, restoring, and preserving coastal wetlands within the Illinois Coastal Zone.

Relevant Sources

Illinois General Assembly. 2025. *525 ILCS 22/ Healthy Forests, Wetlands, and Prairies Act.* Illinois Compiled Statutes. https://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=4543&ChapterID=44

Illinois General Assembly. 2024. *Bill Status of HB5386*. House Bills 103rd General Assembly. https://www.ilga.gov/legislation/BillStatus.asp?DocNum=5386&GAID=17&DocTypeID=HB&LegId=153648&SessionID=112&GA=103

Multi-Resolution Land Characteristics (MRLC) Consortium. *Land Cover* [Review of *2024 Land Cover*]. Accessed October 2025 at https://www.mrlc.gov/

National Oceanic and Atmospheric Administration, Office for Coastal Management. Illinois Coastal Change Analysis Program (C-CAP) Regional Land Cover. Charleston, SC: NOAA Office for Coastal Management. Accessed December 2024 at www.coast.noaa.gov/htdata/raster1/landcover/bulkdownload/30m_lc/.

Peterson, C. M., Nieset, J. E., Monson, J. L., Pociask, G. E., Wilm, B. W., Marcum, P. B., & Matthews, J. W. (2025). A national policy with local consequences: Quantifying the downstream effects of Sackett on Illinois wetlands and communities. *Journal of Environmental Management*, *392*(392), 126931–126931. https://doi.org/10.1016/j.jenvman.2025.126931

U. S. Fish and Wildlife Service. 2020. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Coastal Hazards

Section 309 Enhancement Objective: Prevent or significantly reduce threats to life and property by eliminating development and redevelopment in high-hazard areas, managing development in other hazard areas, and anticipating and managing the effects of potential sea level rise and Great Lakes level change. §309(a)(2)

Note: For purposes of the Hazards Assessment, coastal hazards include the following traditional hazards and those identified in the CZMA: flooding; coastal storms (including associated storm surge); geological hazards (e.g., tsunamis, earthquakes); shoreline erosion (including bluff and dune erosion); sea level rise; Great Lake level change; land subsidence; and saltwater intrusion.

Phase 1 (High-level) Assessment: *(Must be completed by all states.)*

Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization:

1. In the table below, indicate the general level of risk in the Coastal Zone for each of the coastal hazards. The following resources may help assess the level of risk for each hazard. Your state may also have other state-specific resources and tools to consult. Additional information and links to these resources can be found in the "Resources" section at the end of the Coastal Hazards Phase I Assessment Template:

    - The state's multi-hazard mitigation plan
    - Coastal County Snapshots: Flood Exposure
    - Coastal Flood Exposure Mapper
    - Sea Level Rise Viewer/Great Lakes Lake Level Change Viewer

General Level of Hazard Risk in the Coastal Zone

Type of Hazard	General Level of Risk [3] (H, M, L)
Flooding (riverine, stormwater)	High
Coastal storms (including storm surge)	High
Geological hazards (e.g., tsunamis, earthquakes)	Low
Shoreline erosion	High
Sea level rise	N/A
Great Lakes level change	High
Land subsidence	Low
Saltwater intrusion	N/A
Other (please specify)	N/A

Table 7: Level of hazard risk in the Illinois Coastal Zone (Lake and Cook Counties). Information is from the Illinois Coastal Geology Research Program, consisting of members of ISGS, INHS, IDNR-CMP, and the Prairie Research Institute.

2. If available, briefly list and summarize the results of any additional data or reports on the level of risk and vulnerability to coastal hazards within your state since the last assessment. The state's

[3] Risk is defined as "the estimated impact that a hazard would have on people, services, facilities and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage." *Understanding Your Risks: Identifying Hazards and Estimating Losses. FEMA 386-2. August 2001*

multi-hazard mitigation plan or risk assessment or plan may be a good resource to help respond to this question.

I. Illinois State Geological Survey (ISGS) Coastal Research and Monitoring: ISGS continues to study shoreline dynamics throughout the shoreline, expanding its study area from Illinois Beach State Park, Waukegan, and Fort Sheridan to include Chicago beaches and offshore bathymetry. Topographic data of beaches and bathymetry of the nearshore demonstrate the dynamics of sand movement in a highly urbanized setting that is expected to experience more frequent lake level fluctuations. This data will be utilized to aid public land managers in applying the best available science to decision-making regarding beach management.

II. Illinois Beach State Park (IBSP) Shoreline Stabilization Measures:

i. The installation of a coastal resilience pilot project offshore of Illinois Beach State Park was completed in 2021. The Rubble Ridge pilot project is a series of sequential barriers made of stones placed underwater, meant to reduce wave energy before they reach the shore. This project is an alternative solution to typical hardened shoreline structures with reduced costs, habitat protection and creation benefits, and preservation of the littoral drift system. ISGS and the Illinois Natural History Survey (INHS) are conducting a five-year monitoring study to quantify the hydrologic and habitat impacts of the intervention to help understand the potential for replication and scalability of this solution elsewhere.

ii. The Illinois Department of Natural Resources completed a large $73 million breakwater project at IBSP in 2024 to protect park and other critical infrastructure and reduce the loss of sand at high-erosion areas. This solution has garnered attention as a case study where critical infrastructure is at risk from shoreline erosion.

iii. ISGS and INHS monitoring at IBSP following the shoreline stabilization measures indicate that vegetation at the site appears to remain in a relatively stable state. Sequential orthoimages (2023–2025) illustrate the substantial addition of beach area post-construction, with no appreciable change in vegetated extent observed between August 2024 and June 2025.

III. Coastal Resilience Guide for Illinois North Shore Communities: IDNR-CMP partnered with the Great Lakes and St Lawrence Cities Initiative (GLSLCI) to create a coastal resilience guide for the Illinois North Shore region which includes the coastal municipalities north of Chicago to the Wisconsin border. The guide, currently in development, includes several outputs to improve coastal resilience in the region:

i. Highlights focus areas along the shoreline that have an elevated risk level to Lake Michigan coastal processes due to the presence of critical infrastructure and/or current erosion issues. Focus areas were identified through technical analysis and communications with municipal staff. Focus areas were ranked using metrics developed in collaboration with stakeholders.

ii. Creates a guidance document for municipal staff so they can better understand local shoreline dynamics, relevant solutions for the region, and funding opportunities.

iii. Documents pathways for improving state funding for coastal resilience projects in the region.

iv. Creates an online GIS Hub, called I-SHORE, to host coastal planning resources and GIS data.

IV. South Shore Community Resilience Plan: IDNR-CMP partnered with Delta Institute to engage the South Shore community of Chicago, which is one of two Chicago neighborhoods with private property along the city's 26-mile lakefront. Decades of erosion and flooding along the lakefront threatens both private property and public infrastructure. Public engagement efforts have led to the development of a resilience plan that will focus on a roadmap with an Existing Conditions Report, a summary of stakeholder priorities, and recommended strategies/next steps to help guide upcoming community-based efforts to build resiliency in the South Shore neighborhood.

V. FEMA Flood Insurance Rate Maps (FIRMs): Updated Cook County and Lake County FIRMs went into effect on 9/10/21 and 10/5/23, respectively, for Lake Michigan coastal areas. The updated FIRMs now contain VE zones, also known as Coastal High Hazard Areas, which is where wave action and fast-moving water can cause extensive damage during a base flood event. Construction in VE zones are regulated at the municipal level and has more stringent National Flood Insurance Program (NFIP) conditions.

VI. Hazard Mitigation Plans:

i. 2023 Illinois Natural Hazard Mitigation Plan: identifies the following hazards pertinent to the Illinois Lake Michigan Coastal Zone: Coastal Flooding, Flash Flooding, Riverine Flooding, and Winter Storms. Coastal Flooding is listed as a Very High risk for Cook County and a Medium Risk for Lake County. Flash Flooding has a Very High Risk for both Cook and Lake Counties. Riverine Flooding has a High Risk in Cook County and a Medium Risk in Lake County. Winter Storms have a High Risk in both Cook and Lake Counties.

ii. The 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP) ranks hazards using a *Total Risk Score* that is a measure of *Probability* and *Consequence.* The Total Risk Score falls into one of three ranges: Low, Medium, or High risk. Urban/Flash is designated High Risk and is the top ranked of all identified hazards. Riverine/Creek Flooding and Coastal/Shoreline Flooding are both listed as Medium Risk.

iii. The 2022 Lake County All-Natural Hazard Mitigation Plan identifies the following hazards pertinent to the Lake County shoreline: flooding, severe winter storms, shoreline erosion, coastal erosion, and ravine erosion.

Management Characterization

1. In the tables below, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred that could impact the CMP's ability to prevent or significantly reduce coastal hazards risk since the last assessment.

Significant Changes in Hazards Statutes, Regulations, Policies, or Case Law

Topic Addressed	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Elimination of development/redevelopment in high-hazard areas [4]	Y	N	N
Management of development/redevelopment in other hazard areas	Y	N	Y
Great Lakes level change	Y	N	N

Table 8: Significant changes in hazards, statutes, regulations, policies, or case law are for Lake and Cook Counties from 2019-2024 based on information from the IDNR-CMP.

Significant Changes in Hazards Planning Programs or Initiatives

Topic Addressed	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Hazard mitigation	Y	Y	Y
Great Lakes level change	Y	N	Y

Table 9: Significant changes in hazards planning programs or initiatives is for Lake and Cook Counties from 2019-2024 based on data from IDNR-CMP.

Significant Changes in Hazards Mapping or Modeling Programs or Initiatives

Topic Addressed	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Sea level rise or Great Lakes level change	Y	Y	Y
Other hazards	Y	N	Y

Table 10: Significant changes in hazards mapping or modeling programs or initiatives are for Lake and Cook Counties from 2019-2024 based on data from IDNR-CMP.

2. Briefly state how “high-hazard areas” are defined in your Coastal Zone.

   Illinois CMP does not currently have enough data to delineate high-hazard zones. Until a comprehensive dataset and methodology is available to inform this delineation, IDNR-CMP will pay particular attention to areas where people, property, infrastructure, and natural resources are at significant risk due to shoreline retreat, erosion, lake level fluctuations, and/or coastal storm damage.

[4] Use the state's definition of high-hazard areas.

FEMA defines Zone VE, also known as Coastal High Hazard Area, on FEMA FIRMs as "Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones."

3. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

Significant Changes in Hazards Statutes, Regulations, Policies, or Case Law

Public Act 103-095:

a. Amends the Rivers, Lakes, and Streams Act to require IDNR to ensure that all State agencies comply with the National Flood Insurance Program requirements and requires all State agencies to obtain a special flood hazard area development permit for development on State-owned property that is located in a special flood hazard area.
b. This was not a 309 or CZM-driven change.
c. This new law will ensure all state-owned property and development in the floodplain meets the minimum federal standards for the NFIP.

State Water Plan Task Force:

a. IDNR-CMP participates in this task force alongside other state agencies. The group meets quarterly and coordinates across state plans. The Illinois State Water Plan was released in 2022 and will be updated every ten years. The task force was recently codified into state law, effective January 1, 2025.
b. This was not a 309 or CZM-driven change.
c. The codification of the task force creates a more structured approach to managing the Illinois State Water Plan that will likely increase long-term planning and implementation with legally defined responsibilities, powers, and structure.

Significant Changes in Hazards Planning Programs or Initiatives

Coastal Resilience Guide for Illinois North Shore Communities and South Shore Community Resilience Plan:

a. See in section 2 above.
b. These were CZM-driven efforts.
c. The Coastal Resilience Guide for Illinois North Shore Communities and the South Shore Community Resilience Plan will provide frameworks for bolstering coastal resilience. The plans recommend strategies to guide community-based efforts based on stakeholder priorities within the respective communities.

Significant Changes in Hazards Mapping or Modeling Programs or Initiatives

United States Army Corps of Engineers (USACE) Great Lakes Coastal Resiliency Study (GLCRS):

a. The GLCRS is an estimated six-year and $14.4 million cost-shared study with all eight Great Lakes States, which started in 2023. The GLCRS is a comprehensive watershed assessment of the Great Lakes coastal areas and identifies coastal areas that could be vulnerable to future storms, flooding, extreme low or high water levels, erosion, and accretion; the identification of a range of actions to improve coastal resiliency; and the development of a collaborative-risk informed-decision framework to support the identification and prioritize of coastal investments by federal, state, and local governments, Tribal Nations, and nongovernmental organizations. Illinois will receive two "Focused Evaluations" as part of the study which explores two resources in greater detail to evaluate their risk level. These will be selected by the IDNR-CMP using stakeholder input.
b. This was CZM driven among all Great Lakes CZMs, in collaboration with federal partners.
c. The GLCRS will identify high-risk coastal areas, produce risk-informed decision frameworks, increase regional collaboration, recommend a range of resilience strategies, increase access to federal and state funding, and provide long-term planning and policy support.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High	__X__
Medium	_____
Low	_____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Illinois' coastal communities have experienced significant challenges with coastal hazards, particularly in response to extreme lake level fluctuation. Increased damage from flooding and erosion, severe storm events, and shoreline erosion present an urgency and need for a regional strategy. Coastal hazards are a high priority for IDNR-CMP and strategies developed during the 2016 assessment and strategy phase have produced the Shoreline Management Working Group, innovative erosion protection projects protecting critical habitat, and the Coastal Geology Research Program. Despite these advancements, coastal hazards present high-risk levels across many categories including flooding, storms, erosion, and lake level change. IDNR-CMP staff considered coastal flooding and erosion in designating coastal hazards as a high priority enhancement area.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Survey responders indicated that coastal hazards were a high priority due to the increased challenges presented by lake level fluctuations and flooding. IDNR-CMP is well positioned to coordinate work among the region with federal, state, non-profit organizations, and community members to implement projects intended to increase coastal resilience.

Relevant Sources

Barnes, L. L. Illinois Sustainable Technology Center – Prairie Research Center – University of Illinois. (2022). *Underwater Innovation at Illinois Beach State Park to Help Mitigate Coastal Erosion*. ISTC blog. https://blog.istc.illinois.edu/2022/02/18/underwater-innovation-at-illinois-beach-state-park-to-help-mitigate-coastal-erosion/

Cook County Emergency Management and Regional Security, *Cook County Multi-Jurisdictional Hazard Mitigation Plan* (2024). Cook County Emergency Management and Regional Security. Retrieved from https://www.cookcountyemergencymanagement.org/sites/g/files/ywwepo281/files/document/file/2024-09/CookCounty.2024.MJ-HMP.Volume%201%20%287-12-2024%29-PUBLIC%20VERSION.pdf.

Delta Institute. (2024). *Community-led Planning to Reduce Shoreline Flooding in the South Shore Neighborhood of Chicago*. Delta Institute. https://delta-institute.org/project/south-shore-planning/

Federal Emergency Management Agency. *FEMA Flood Map Service Center*. FEMA Flood Map Service Center. https://msc.fema.gov/portal/home

Great Lakes and St. Lawrence Cities Initiative. (2024). *Resilient Coastal Projects Initiative*. Initiatives. https://glslcities.org/initiatives/resilient-coastal-projects-initiative/

Illinois Capital Development Board. (2024). *Illinois Beach State Park Shoreline Stabilization Project Earns Waterfront Edge Design Guidelines Verification*.

Illinois Department of Natural Resources - Coastal Management Program. (2024). *I-Shore Illinois Shoreline Resource Explorer*. https://i-shore-idnr.hub.arcgis.com/

Illinois Department of Natural Resources. *State Water Plan Task Force*. Illinois Department of Natural Resources. https://dnr.illinois.gov/waterresources/statewaterplantaskforce.html

Illinois Emergency Management Agency and Office of Homeland Security. (2023). *2023 Illinois Hazard Mitigation Plan*. Retrieved from https://iemaohs.illinois.gov/content/dam/soi/en/web/iemaohs/recovery/documents/plan-illmitigationplan.pdf.

Illinois State Geological Survey - Prairie Research Institute - University of Illinois. *Coastal Habitat Maps along Illinois Beach State Park, derived from aerial and drone imagery, 1939-2020*. https://clearinghouse.isgs.illinois.edu/data/coastal/habitat

Lake County Hazard Mitigation Planning Committee, Lake County All-Natural Hazards Mitigation Plan (2022). Lake county Stormwater Management Commission and Lake County Emergency Management Agency. Retrieved from https://www.lakecountyil.gov/DocumentCenter/View/52360/ANHMP-2022-FINAL-PLAN?bidId=.

National Oceanic and Atmospheric Administration. (2025). *Framework for Resilient GLRI Investments*. Regional Collaboration Network. https://www.noaa.gov/framework-for-resilient-glri-investments

U.S. Army Corps of Engineers. (2024). *Great Lakes Coastal Resiliency Study*. Great Lakes and Ohio River Division. https://www.lrd.usace.army.mil/Mission/Programs/Article/3646559/great-lakes-coastal-resiliency-study/

Public Access

Section 309 Enhancement Objective: Attain increased opportunities for public access, taking into account current and future public access needs, to coastal areas of recreational, historical, aesthetic, ecological, or cultural value. §309(a)(3)

Phase 1 (High-level) Assessment: *(Must be completed by all states.)*
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. Use the table below to provide data on public access availability within the Coastal Zone.

Public Access Status and Trends

Type of Access	Current number[5]	Changes or Trends Since Last Assessment[6] (↑, ↓, –, unknown)	Cite data source
Beach access sites	Total 65	↓, The Coastal Zone lost 9 beaches due to erosion from near-record lake levels.	Illinois Department of Public Health Visit Lake County Chicago Park District
Shoreline (other than beach) access sites	Not Measured	Unknown	-
Recreational boat (power or non-motorized) access sites	Total 45	↑, As part of statewide efforts to reclaim the rivers and lakes as a major system of parks and water-based recreation, new boat launch sites are being created according to demand and suitability.	Illinois Department of Natural Resources Visit Lake County Chicago Park District
Designated scenic vistas or overlook points	Total 13	↑, An increase of designated scenic vistas contributes significantly to the quality of life, adds to the value of property, and enhances the desirability and livability of a community.	Visit Lake County Chicago Park District
Fishing access points (i.e. piers, jetties)	35	↑, Expanding the availability of locations where people can legally fish, offers anglers a variety of experiences from shore fishing in the bustling harbors and lagoons of Chicago to launching a day's adventure from one of many marinas.	Illinois Department of Natural Resources

Coastal trails/ boardwalks *(Please indicate number of trails/boardwalks and mileage)*	Trails Total 72 Boardwalks Total 17 Mileage Not Measured	↑, More broadly, trails and boardwalks aim to increase access to waterfront areas for a range of activities including walking, hiking, biking, fishing, etc.	Lake County Forest Preserves District Chicago Park District Visit Lake County
Acres of parkland/open space	269,540 Acres	↑, An increase in parks and open space play a vital role in the social, economic, and environmental well-being of communities and the health of their residents.	Chicago Metropolitan Agency for Planning
Access sites that are Americans with Disabilities Act (ADA) compliant[7]	Beaches Total 27 Trails Total 13	↑, ADA access sites expansions can promote equitable access to the outdoors for people of all ages and abilities, bringing together people.	Visit Lake County Lake County Forest Preserves District Chicago Park District
Other	-	-	-

Table 11: Public access status and trends data are from a variety of sources in the Illinois Coastal Zone including the Illinois Department of Public Health, Visit Lake County, Chicago Park District, Illinois Department of Natural Resources, Lake County Forest, and Chicago Metropolitan Agency for Planning. Public access status and trends are for Cook and Lake counties in the Illinois Coastal Zone for 2024.

2. Briefly characterize the demand for coastal public access and the process for periodically assessing demand. Include a statement on the projected population increase for your coastal counties. There are several additional sources of statewide information that may help inform this response, such as the Statewide Comprehensive Outdoor Recreation Plan, [5] the National Survey on Fishing, Hunting, and Wildlife Associated Recreation, [6] and your state's tourism office.

   As reported by the Illinois Department of Public Health, the population within the state's coastal shoreline counties is projected to increase by 6% between 2020 and 2030, thus increasing the demand of natural resources and recreational access.

[5] Most states routinely develop "Statewide Comprehensive Outdoor Recreation Plans", or SCROPs, that include an assessment of demand for public recreational opportunities. Although not focused on coastal public access, SCORPs could be useful to get some sense of public outdoor recreation preferences and demand. Download state SCROPs at *recpro.org/resources--reports/scorp-resources.*

[6] The National Survey on Fishing, Hunting, and Wildlife Associated Recreation produces state-specific reports on fishing, hunting, and wildlife associated recreational use for each state. While not focused on coastal areas, the reports do include information on saltwater and Great Lakes fishing, and some coastal wildlife viewing that may be informative and compares 2016 data to 2011, 2006, and 2001 information to understand how usage has changed. The most recent survey was conducted for 2022 but due to a change in methodology, results cannot be compared to previous reports. See *fws.gov/program/national-survey-fishing-hunting-and-wildlife-associated-recreation-fhwar.*

3. If available, briefly list and summarize the results of any additional data or reports on the status or trends for coastal public access since the last assessment.

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is developed every five years to evaluate the outdoor recreation needs of Illinois residents while considering the state's natural resources, recreational lands and facilities, and evaluating economic impacts to outdoor recreation within the state. The 2021-2025 SCORP demonstrates IDNR's commitment to the federal Land and Water Conservation Fund program and its conservation and outdoor recreation legacy in Illinois. It is important to mention that there has been a notable gain in trails, mapping, and connectivity in the Coastal Zone since the last assessment. Maintenance of existing parks and acquisition of land and water for parks and recreation are listed as priorities in Illinois. Illinois commits at least 50% of its annual Land and Water Conservation Funds (LWCF) to local government land acquisition projects.

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) that could impact the future provision of public access to coastal areas of recreational, historical, aesthetic, ecological, or cultural value.

Significant Changes in Public Access Management

Management Category	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	N	N
Operation/maintenance of existing facilities	Y	N	N
Acquisition/enhancement programs	Y	Y	Y

Table 12: Significant changes in public access management data for Cook and Lake Counties in the Illinois Coastal Zone

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

Acquisition/enhancement programs

Open Space Lands Acquisition and Development (OSLAD) Act [525 ILCS 35]

a. The OSLAD program is a state-financed grant program, administered by the IDNR, providing up to 50% (100% for distressed communities for FY'25 only) funding assistance to eligible, local government agencies for acquisition and/or development of land for public parks and open

space. It is important to note that an increase of 10% will be allocated to distressed communities for this fiscal year compared to the 90% provided in previous years.

b. This was not a 309 or CZM-driven change
c. As more funding becomes available, it is foreseeable that additional public access projects in public parks and beaches will be completed in the future.

Boat Access Area Development (BAAD) Program

a. The BAAD program is a state-financed program, administered by the IDNR, providing financial assistance to local government agencies for the acquisition, construction, and expansion/rehabilitation, including necessary A/E services, of public boat and canoe access areas on Illinois' lakes and rivers. For State Fiscal Year 2024, the approximate amount available was $1,000,000, an increase of $275,000 compared to previous years.
b. This was not a 309 or CZM-driven change
c. As more funding becomes available, it is foreseeable that additional public access projects in public parks and beaches will be completed in the future.

Illinois Recreational Access Program (IRAP)

a. The IRAP administered by the IDNR, leases private land for limited access to outdoor activities like hunting and fishing. Landowners who lease their property to IRAP receive assistance with habitat restoration projects and a comprehensive habitat/forestry management plan.
b. This was not a 309 or CZM-driven change.
c. As more funding becomes available, it is foreseeable that additional public access projects in public parks and beaches will be completed in the future.

3. Indicate if your state or territory has a publicly available public access guide. How current is the publication and how frequently it is updated? [7]

The Illinois Coastal Zone does not have a state guide; however, guides are available from Lake County, Lake County Forest Preserves District, the Forest Preserves District of Cook County, and Chicago Parks District. The available guides are listed in **Table 13.**

[7] Note some states may have regional or local guides in addition to state public access guides. Unless you want to list all local guides as well, there is no need to list additional guides beyond the state access guide. You may choose to note that the local guides do exist and may provide additional information that expands upon the state guides.

Publicly Available Access Guide

Public Access Guide	Printed	Online	Mobile App
State or territory has? (Y or N)	Y	Y	Y
Web address (if applicable)	https://issuu.com/lcfpd/docs/exp-2024-web https://issuu.com/visitlakecountyil/docs/11358_visitors_guide_f https://fpdcc.com/places/pdf-maps/ https://assets.chicagoparkdistrict.com/s3fs-public/documents/stewardship/map-NAStewardship-11x17-20240618.pdf	https://www.visitlakecounty.org/outdoor-guide https://www.lcfpd.org/things-to-do/recreation/ https://fpdcc.com/ https://www.chicagoparkdistrict.com/natural-areas	https://dnr.illinois.gov/press-release.21905.html
Date of last update	2024	2024	8/20/2024
Frequency of update	Annually	Annually	Annually

Table 13: Publicly available access guides for the Illinois Coastal Zone

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High ____
Medium __X__
Low _____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

One of the more challenging issues facing the IDNR is providing public outdoor recreational access and opportunities. According to the Illinois Forestry Development Council, Illinois ranks 46th in the nation for publicly owned land with more than 97% of the land privately owned. Through the provision of access to parks and recreation, IDNR continues the work of cultivating community ties through programs and services for all, which produces public benefits by connecting people more deeply to the fabric of community and land stewardship.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Survey responders indicated that public access was a medium priority enhancement area due to the restriction of Lake Michigan access from privately-owned lands, however, other enhancement areas were prioritized in the survey.

Public access is an important priority in the IDNR-CMP program, however, was determined to be a medium priority enhancement area during this assessment. The IDNR-CMP will continue to support increasing public access to Lake Michigan through 306 funding, through funding trail rehabilitation, funding staff at the two state parks in the Coastal Zone, facilitating the Beach Managers Working Group, and pass-through grant funding to organizations increasing public access.

Relevant Sources

Illinois Department of Public Health. *Illinois Beaches*. Illinois Beachguard System. https://idph.illinois.gov/envhealth/ilbeaches/public/Default.aspx

Lake County, Illinois Convention and Visitors Bureau. *Lake County Beaches*. Visit Lake County Illinois. https://www.visitlakecounty.org/beaches

Chicago Park District. *Beaches*. Parks & Facilities. https://www.chicagoparkdistrict.com/parks-facilities/beaches

Illinois Coastal Management Program. *Lake Michigan Water Trail*. Illinois Department of Natural Resources. https://dnr.illinois.gov/cmp/lake-michigan-water-trail.html

Illinois Natural History Survey - Prairie Research Institute - University of Illinois. *Lake Michigan: Where to Fish*. Illinois Department of Natural Resources. https://www.ifishillinois.org/lmich/index.php

Lake County Forest Preserves District. *Try Some Trails*. Trails. https://www.lcfpd.org/things-to-do/recreation/trails/

Illinois Natural History Survey - Prairie Research Institute - University of Illinois. *Lake Michigan: Lake Michigan Salmon and Trout Stocking*. Illinois Department of Natural Resources. https://www.ifishillinois.org/lmich/index.php

Chicago Metropolitan Agency for Planning. (2020). 2020 Land Use Inventory for Northeastern Illinois. Chicago Metropolitan Agency for Planning. https://datahub.cmap.illinois.gov/datasets/CMAPGIS::cmap-land-use-inventory-2020/about

Illinois Department of Public Health. *Population Projections.* Illinois Department of Public Health Office of Policy, Planning and Statistics Division of Health Data and Policy. https://dph.illinois.gov/content/dam/soi/en/web/idph/files/publications/population-projections-report-2010-2030.pdf

Illinois Department of Natural Resources. *Statewide Comprehensive Outdoor Recreation Plan.* https://dnr.illinois.gov/content/dam/soi/en/web/dnr/publications/documents/00000823.pdf

Illinois General Assembly. *Conservation.* Title:17 part:3025. https://dnr.illinois.gov/content/dam/soi/en/web/dnr/adrules/documents/17-3025.pdf

Illinois Department of Natural Resources. *CSFA: Gata.* Illinois.gov. https://omb.illinois.gov/public/gata/csfa/Program.aspx?csfa=1095

IRAP Home. *Illinois Department of Natural Resources.* Illinois Recreational Access Program. https://dnr.illinois.gov/conservation/irap.html

Illinois Department of Natural Resources. *Coastal Grants.* Coastal Management Program. https://dnr.illinois.gov/cmp/coastalgrants.html

Illinois Forestry Development Council. *Illinois Forest Action Plan*. A Statewide Forest Resource Assessment and Strategy 2020-2030. http://ifdc.nres.illinois.edu/wp-content/uploads/2020-2030-Illinois-Forest-Action-Plan.pdf

Marine Debris

Section 309 Enhancement Objective: Reducing marine debris entering the nation's coastal and ocean environment by managing uses and activities that contribute to the entry of such debris. §309(a)(4)

Phase 1 (High-level) Assessment: *(Must be completed by all states.)*
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. In the table below, characterize the existing status and trends of marine debris in the state's Coastal Zone based on the best-available data.

Existing Status and Trends of Marine Debris in Coastal Zone

Source of Marine Debris	Significance of Source (H, M, L, unknown)	Type of Impact [8] (aesthetic, resource damage, user conflicts, other)	Change Since Last Assessment (↑, ↓, –, unknown)
Beach/shore litter	**M**	Aesthetic, wildlife impacts, resource damage (microplastics), public health hazard	–
Land-based dumping	**M**	Aesthetic, resource damage (hazardous materials), wildlife impacts	↑
Storm drains and runoff	unknown	Aesthetic, wildlife impacts, public health hazard	unknown
Land-based fishing (e.g., fishing line, gear)	**L**	Aesthetic, wildlife impacts, resource damage, public health hazard	–
Ocean/Great Lakes-based fishing (e.g., derelict fishing gear)	**L**	Aesthetic, wildlife impacts	–
Derelict vessels	**L**	Aesthetic, danger to navigation	–
Vessel-based (e.g., cruise ship, cargo ship, general vessel)	Unknown	Aesthetic, wildlife impacts, water quality impacts	unknown
Hurricane/Storm	**M**	Aesthetic, resource damage, wildlife impacts, public health hazard	↑

Table 14: Existing status and trends of marine debris in Coastal Zone data are from the Alliance for the Great Lakes Adopt-A-Beach community science program for 2019 - 2024 in Cook and Lake Counties.

Beach/shore litter, Land-based dumping, Land-based fishing, and Ocean/Great lakes-based fishing categories are based on data gathered by Alliance for the Great Lakes (AGL) during their Adopt-A-Beach litter cleanup events on Lake Michigan in Cook and Lake counties. Debris items and pieces are counted and recorded by volunteers during cleanup events. While not an exhaustive count, this data is used to provide a snapshot of marine debris for the Illinois Coastal Zone. For the last assessment, IDNR-CMP used data from AGL's 2013 and 2014 events and have compared them to data from the AGL 2019-2024 events. In 2013-2014, there were 167 Adopt-A-Beach cleanup events; In 2019, there were 260 events; in 2020, there were 26 events; in 2021, there were 96 events; in 2022, there were 146 events; in 2023, there were 164 events; in 2024, there were 191 events. To compare across data sets, the sum of trash collected per category was divided by the number of events to compare average amount of litter collected per event.

[8] You can select more than one, if applicable.

AGL defines gathered debris using different categories than those presented in the table above. Below is an outline of which of AGL's categories are included in the calculations for Land-based dumping, Land-based fishing, and Great Lakes-based fishing. The remaining debris collected by AGL is captured under Beach/shore litter.

Land-based dumping: appliances (refrigerators, washers, etc.), tires, cars/car parts, construction materials, building materials
Land-based fishing: fishing line (1 yard = 1 piece), fishing lures, bait containers
Great Lakes-based fishing: rope (1 yard = 1 piece), fishing net, fishing buoys

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends or potential impacts from marine debris in the Coastal Zone since the last assessment.

Alliance for the Great Lakes: *Adopt-A-Beach: 20 Years of Great Lakes Litter Data* (2024)

- Alliance for the Great Lakes has been leading and coordinating beach clean ups across all the Great Lakes through their Adopt-A-Beach program since 1991. In 2003, beach cleanup volunteers (community scientists) began categorizing the litter collected, resulting in the largest litter dataset exclusively for the Great Lakes.
- Between 1991 – 2024, Alliance for the Great Lakes hosted over 14,000 beach clean ups with over 200,000 participants, collected over 9 million pieces of litter, weighing over 500,000 pounds across the eight Great Lakes.
- On average, plastic comprises 86% of litter collected by community scientists in Adopt-A-Beach events across all the Great Lakes states over the past twenty years.
- The most collected litter items from 2014-2023 include, plastic pieces, cigarette butts, and foam pieces were the most collected litter items.
- The most collected litter items from 2003-2013 include, cigarette butts, food wrappers, and caps/lids were the most collected litter items.

Prairie Research Institute, Illinois Sustainable Technology Center: *Perfluoroalkylated Substances (PFAS) Associated with Microplastics in a Lake Environment* (2021)

- ISTC researchers collaborated with scientists at the Annis Water Resources Institute at Grand Valley State University (MI) to understand the interactions of PFAS on persistent organic pollutants in Lake Muskegon. Their results suggest that PFAS adsorbs onto plastics in Muskegon Lake at 24 to 259 times the background levels of laboratory water. Their results indicate that environmental conditions, including inorganic and/or organic matter in Muskegon Lake greatly enhance the adsorption of PFAS adsorption by microplastics, and could present an environmental hazard for aquatic species.

National Oceanic and Atmospheric Administration: *2020 Great Lakes Marine Debris Action Plan* (2020)

- The Great Lakes Marine Debris Action Plan established a framework for strategic action to reduce the impacts of marine debris in the Great Lakes through increased understanding of marine debris, preventative actions, and collaborative efforts from diverse groups.
- The action plan was drafted during a 2019 workshop with 40 participants at the Toledo Zoo & Aquarium in Ohio.

- The plan established four goals:
    - The research and monitoring of marine debris addresses knowledge gaps and informs action.
    - A science-based, strategic approach guides marine debris policy and management decisions in the Great Lakes.
    - Marine debris is prevented and reduced through an educated and involved community.
    - The marine debris that reaches the Great Lakes environment is removed to minimize adverse impacts.
- Results from this action plan include increased research into pollution prevention from the University of Wisconsin Sea Grant and increased education and community engagement efforts from the Alliance for the Great Lakes' Adopt-a-Beach program.

Rochester Institute of Technology study: *Inventory and Transport of Plastic Debris in the Laurentian Great Lakes* (2017)

- Models developed by the Rochester Institute of Technology estimate that roughly 22 million pounds of plastic debris enter the Great Lakes each year, more than half of that – 11.6 million pounds – is entering Lake Michigan.
- Their research indicates that population centers like Chicago and Milwaukee are large contributors to plastics pollution in Lake Michigan. In addition to trash that can drift into the water from beaches, wastewater treatment facilities are significant sources of microplastics.
- Once plastics enter the lake, they follow lake currents, potentially migrating to other states but largely remaining trapped at the southern end of Lake Michigan.

IL-IN Sea Grant-funded Loyola Study: *Microfibers are in the Food Web in Three Lake Michigan Rivers* (2018)

- A study published in 2018 by researchers from Loyola University found that approximately 85% of fish caught between 2016 and 2017 from three major tributaries of Lake Michigan – the Milwaukee, St. Joseph, and Muskegon rivers – contained microplastics in their digestive tracks.
- The study examined a sample size of 74 fish representing 11 different species. The invasive round goby showed the highest concentrations of microplastics, likely due to its diet of filter-feeding quagga mussels, which scientists believe may be accumulating these particles.

Journal of Great Lakes Research: *Pelagic plastic pollution within the surface waters of Lake Michigan* (2016)

- In a study funded by Illinois-Indiana Sea Grant, researchers collected surface water samples across Lake Michigan during the summer of 2013. Their results indicate that plastic is fairly evenly distributed over the entire Lake Michigan surface.
- An average of ~17,000 particles/km^2 indicates that there may be 1 billion plastic particles on Lake Michigan's surface. Their research indicates an environmental hazard for aquatic species as the majority of the particles collected are extremely small and easily ingested.

Management Characterization

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) for how marine debris is managed in the Coastal Zone.

Significant Changes in Marine Debris Management

Management Category	Employed by State/Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Marine debris statutes, regulations, policies, or case law interpreting these	Y	N	Y
Marine debris removal programs	Y	Y	N

Table 15: Significant changes in marine debris management for the Illinois Coastal Zone.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes and likely future outcomes of the changes.

Marine debris statutes, regulations, policies, or case law

Small Plastic Bottle Act — SB2960

a. Legislation was introduced prohibiting hotels with less than 50 rooms from providing small single-use plastic bottles containing personal care products to customers. Gov. Pritzker signed into law the bill on August 9, 2024.
b. These are not 309 or CZM-driven changes.
c. Reducing the production and distribution of small single-use plastic bottles may reduce the amount of plastic pollution entering the waterways.

Large Event Facility Recycling — SB2876

a. Legislation was introduced requiring large event facilities with legal occupancies of at least 3,500 people to provide attendees with recycling and composting bins, reducing single-use plastic and food scrap waste. Gov. Pritzker signed into law the bill on August 9, 2024.
b. These are not 309 or CZM-driven changes.
c. Requiring large event facilities to provide recycling and compost options will likely reduce single-use material and food scrap waste, reducing the amount of marine debris entering waterways.

Load Covers – HB4848

a. Legislation was signed into law on August 2, 2024, requiring covers for truck beds on the highway when they are filled with debris.
b. These are not 309 or CZM-driven changes.
c. Requiring trucks to cover their beds when carrying debris will likely reduce the amount of debris entering waterways.

Bottle Filling - SB1715

a. Effective January 1, 2024, legislation was enacted amending the Illinois Plumbing License Law and requiring that for each drinking fountain in any new construction shall also be a bottle filling station.
b. These are not 309 or CZM-driven changes.
c. Increasing access to bottle filling stations will reduce barriers to using re-usable bottles and may reduce plastic consumption that ultimately may enter waterways.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High	_____
Medium	__X__
Low	_____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Marine debris is an important priority in the IDNR-CMP, particularly considering the environmental and public health implications of microplastics in waterways and their interactions with emergent contaminants such as PFAS, however, was determined to be a medium priority enhancement area during this assessment due to sufficient funding and capacity levels. The IDNR-CMP will continue to support the prevention of marine debris through 306 funding, the Coastal Clean Waters program, the Clean Marinas Program, and supporting partner organizations in leading clean-up events.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Survey responders indicated that marine debris is a medium priority issue for the Illinois Coastal Zone. In open-response questions, stakeholders identified IDNR-CMP as potential educators to change public perceptions and encourage pollution prevention.

Relevant Sources

Alliance for the Great Lakes. (2025). Adopt-A-Beach Litter Data 2019-2024 [Unpublished raw data]. Litter counts from Adopt-A-Beach clean-up events in Cook and Lake Counties, IL. Alliance for the Great Lakes.

Hoffman, M. J., & Hittinger, E. (2017). Inventory and Transport of Plastic Debris in the Laurentian Great Lakes. *Marine Pollution Bulletin*, *115*(1–2), 273–281. https://doi.org/10.1016/j.marpolbul.2016.11.061

Illinois-Indiana Sea Grant. (2019). *Microfibers are in the Food Web in Three Lake Michigan Rivers*. Illinois-Indiana Sea Grant. https://iiseagrant.org/microfibers-are-in-the-food-web-in-three-lake-michigan-rivers/

Mason, S. A., Kammin, L., Eriksen, M., Aleid, G., Wilson, S., Box, C., Williamson, N., & Riley, A. (2016). Pelagic Plastic Pollution Within the Surface Waters of Lake Michigan, USA. *Journal of Great Lakes Research*, *42*(4), 753–759. https://doi.org/10.1016/j.jglr.2016.05.009

McNeish, R. E., Kim, L. H., Barrett, H. A., Mason, S. A., Kelly, J. J., & Hoellein, T. J. (2018). Microplastic in Riverine Fish is Connected to Species Traits. *Scientific Reports*, *8*(1). https://doi.org/10.1038/s41598-018-29980-9

National Oceanic and Atmospheric Administration Marine Debris Program (2020). 2020 Great Lakes Marine Debris Action Plan. Silver Spring, MD: National Oceanic and Atmospheric Administration Marine Debris Program.

Reda, O. (2024). *Adopt-A-Beach: 20 Years of Great Lakes Litter Data*. Alliance for the Great Lakes. Retrieved 2025, from https://greatlakes.org/wp-content/uploads/2024/04/AGL_AAB_VisReport_April2024_Final1.pdf.

Scott, J. W., Gunderson, K. G., Green, L. A., Rediske, R. R., & Steinman, A. D. (2021). Perfluoroalkylated Substances (PFAS) Associated with Microplastics in a Lake Environment. *Toxics*, *9*(5), 106. https://doi.org/10.3390/toxics9050106

Cumulative and Secondary Impacts

Section 309 Enhancement Objective: Development and adoption of procedures to assess, consider, and control cumulative and secondary impacts of coastal growth and development, including the collective effect on various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources. §309(a)(5)

Phase 1 (High-level) Assessment: *(Must be completed by all states.)*
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. Using National Ocean Economics Program Data on population and housing, [9] please indicate the change in population and housing units in the state's coastal counties between 2017 and 2021. You may wish to add additional trend comparisons to look at longer time horizons as well (data available back to 1970), but at a minimum, please show change over the most recent five-year period data is available (2017-2021) to approximate current assessment period.

Trends in Coastal Population and Housing Units

	2017	2021	Percent Change (2017-2021)
Number of people	6,028,323	5,893,489	-2.4%
Number of housing units	2,500,698	2,541,383	1.63%

Table 16: Trends in Coastal Population and Housing Units for Lake and Cook Counties using National Ocean Economics Program data for 2017 and 2021.

2. Using the tables below as a guide, provide information on land cover changes and development trends. Be as quantitative as possible using state or national land cover data. [10] The tables are a suggestion of how you could present the information. Feel free to adjust column and row headings to align with data and time frames available in your state or territory. If quantitative data on land cover changes and development trends are not available, provide a brief qualitative narrative describing changes in land cover, especially development trends, including significant changes since the last assessment.

[9] *www.oceaneconomics.org/*. Enter "Population and Housing" section and select "Data Search" (near the top of the left sidebar). From the drop-down boxes, select your state. Select the year (2021) then select "coastal zone counties." The default comparison year will be 2017 so no need to select a comparison year.

[10] National data on wetlands status and trends include NOAA's Land Cover Atlas (*coast.noaa.gov/digitalcoast/tools/lca.html*) and the U.S. Geological Survey's National Land Cover Database (*usgs.gov/centers/eros/science/national-land-cover-database).*

Distribution of Land Cover Types in Coastal Counties

Land Cover Type	Land Area Coverage in 2024 (Acres)	Gain/Loss Since 2011 (Acres)
Developed, High Intensity	109,549	4,307
Developed, Low Intensity	263,584	-4,416
Developed, Open Space	213,594	3,712
Cultivated Crops	121,075	5,888
Pasture/Hay	35,456	-7,891
Grassland	20,211	-29,498
Deciduous Forest	2,970	51
Evergreen Forest	59,418	-941
Mixed Forest	147	-6
Scrup/Shrub	864	-32
Woody Wetland	2,701	-442
Emergent Herbaceous Wetland	34,515	-1,011
Barren Land	21,754	1,171

Table 17: Distribution of Land Cover Types in Lake and Cook Counties from 2024 using data from the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool.

Development Status and Trends for Coastal Counties

Cook County	2011	2024	Percent Net Change
Percent land area developed	84.53%	85.19%	0.78%
Percent impervious surface area	42.01%	42.21%	0.46%

Table 18: Development Status and Trends for Cook County using the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool.

Lake County	2011	2024	Percent Net Change
Percent land area developed	59.86%	61.67%	3.02%
Percent impervious surface area	19.56%	20.09%	2.09%

Table 19: Development Status and Trends for Lake County using the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool.

How Land Use Is Changing in Coastal Counties

Land Cover Type	Areas Lost to Development Between 2011-2024 (Acres)
Cultivated Crops	5,363
Pasture/Hay	1,555
Grassland	435
Deciduous Forest	1,504
Mixed Forest	77
Shrub/Scrub	218
Woody Wetland	269
Emergent Herbaceous Wetland	160
Barren Land	326

Table 20: Land use change for Lake and Cook Counties between 2011-2024 using the U.S. Geological Survey's National Land Cover Database Enhanced Visualization and Analysis tool.

3. Briefly characterize how the coastal shoreline has changed in the past five years due to development, including potential changes to shoreline structures such as groins, bulkheads and other shoreline stabilization structures, and docks and piers. If available, include quantitative data that may be available from permitting databases or other resources about changes in shoreline structures.

IL Shoreline Structure Permits

Year	Breakwaters	Groins	Revetments	Pier	Seawall
2020	4	1	25	0	3
2021	10	4	27	0	1
2022	5	1	7	3	1
2023	5	3	15	4	1
2024	1	1	8	0	0

Table 21: Illinois Shoreline Structure Permits for Lake and Cook Counties using permit data from IDNR Office of Water Resources from 2020-2024.

The majority of the Illinois shoreline is either protected or developed. Protected areas include parks such as Illinois Beach State Park in the northern portion of the Coastal Zone and numerous smaller beaches run by municipalities. The northern portion of the coastline is developed by housing, mostly single-family homes, in the bluff and ravine region. The central and south region, spanning the City of Chicago, is predominantly hardened. As the majority of the shoreline is already protected or developed, a majority of the permits captured in the table above are for replacements or repairs to existing structures, not solely the instillation of new structures.

4. Briefly summarize the results of any additional state- or territory-specific data or reports on the cumulative and secondary impacts of coastal growth and development, such as water quality, shoreline hardening, and habitat fragmentation, since the last assessment.

   The reports and state specific data surrounding secondary and cumulative impacts listed below are closely related to the reports and data provided under the Coastal Hazards Worksheet.

   - USACE Great Lakes Coastal Resiliency Study
   - Illinois State Geologic Survey (ISGS) Coastal Research and Monitoring
   - Illinois Beach State Park Shoreline Stabilization Measures

<u>Water Quality Trends Analysis</u>

The Illinois State Water Survey (ISWS) leads this project which developed out of a regional need for better understanding of water quality data availability and an overall assessment of the water quality status of the Illinois Coastal Zone. The first phase of this project began in 2020 with Phase I and Phase II. In Phase I, ISWS developed the Illinois Coastal Zone Database (ICoastalDB), a compilation of 254 water quality and related parameters from a total of 144 monitoring sites in the coastal zone. Phase II consisted of an exploratory data analysis in preparation of Phase III, the Water Quality Trends Analysis. In Phase III, seven water quality parameters (phosphorus, chloride, nitrates/nitrogen, fecal coliform, dissolved oxygen, turbidity, and conductivity) were selected and assessed via a trends analysis to better understand water quality trends and to identify data gaps in the Illinois Coastal Zone. The project led to the creation of database where the abovementioned data will be stored. Phase III consisted of an extensive exploratory data analysis (EDA) of water quality data from 314 monitoring sites (84 inland and

230 Lake Michigan assessment units) over a 25-year period (1998–2022), which revealed significant variability in data availability and trends. Water quality parameters selected by the project advisory group—total phosphorus, chloride, fecal coliforms, dissolved oxygen, and nitrogen species—mostly aligned with those parameters in Illinois' 303(d) List of impaired waters in the Illinois Coastal Zone. The Illinois Coastal Zone's water quality trends reflect complex interactions between natural processes and anthropogenic impacts. Total phosphorus and chloride remain critical concerns, with seasonal and long-term trends underscoring the need for adaptive management strategies. Nitrogen dynamics vary widely, with some sites signaling localized pollution hotspots requiring targeted nutrient management. Fecal coliform variability highlights seasonal influences, while dissolved oxygen improvements validate ongoing restoration efforts but necessitate sustained monitoring. The specific conductance trends may indicate the need to address road salt use and urban runoff. Recommended strategies would prioritize reducing road salt applications, implementing nutrient management plans at nitrogen hotspots, and strengthening stormwater controls to mitigate fecal coliform and phosphorus loads.

Management Characterization

1. Indicate if the approach is employed by the state or territory and if there have been any significant state-level changes (positive or negative) in the development and adoption of procedures to assess, consider, and control cumulative and secondary impacts of coastal growth and development, including the collective effect on various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources, since the last assessment.

Significant Changes in Management of Cumulative and Secondary Impacts of Development

Management Category	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	N	Y
Guidance documents	Y	N	Y
Management plans (including SAMPs)	Y	N	N

Table 22: Significant changes in management of cumulative and secondary impacts are for Lake and Cook Counties from 2019-2024 based on data from IDNR-CMP.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

Statutes, regulations, policies, or case law

USACE (Chicago District) Shoreline Regional General Permit:

a. The permit, effective April 1, 2022, authorizes a group of activities which would have minimal individual and cumulative impacts on aquatic resources with the purpose of providing a simplified and expeditious means for review of activities under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Activities include:

- Installation, repair, modification, and removal of permanent and seasonal piers/docks, boat hoists, and lifts;
- Maintenance dredging for navigational access to existing facilities; and
- Expansion and construction of commercial maritime facilities and associated dredging.

b. This was not a 309 or CZM-driven change.
c. The streamlining of the permitting process may result in increased compliance for water-based infrastructure, however, there may also be a potential for cumulative impacts from many small projects that may significantly impact water quality and habitat.

USACE (Chicago District) Letter of Permission:

a. This proposed new Letter of Permission (LOP) for activities which would have minimal individual and cumulative impacts on aquatic resources would cover activities in Section 10 waterways including piers, minor dredging, and other activities that do not meet the terms of a general permit, as well as commercial, institutional, and recreational developments in Section 404 waters of the United States within the State of Illinois with the purpose of providing a simplified and expeditious means for review of activities under 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act that meets the specified terms and conditions of the permit.
b. This was not a 309 or CZM-driven change.
c. The streamlining of the permitting process may result in increased compliance for water-based infrastructure, however, there may also be a potential for cumulative impacts from many small projects that may significantly impact water quality and habitat.

USACE Regional Categorical Permission:

a. The Great Lakes and Ohio River Division (LRD) of the U.S. Army Corps of Engineers (USACE) issued a Regional Categorical Permission for certain categories of alterations that have been determined to, individually and cumulatively, be similar in nature, have less than significant impacts to USACE projects and the environment, not impair the usefulness of USACE projects, and not be injurious to the public interest. The purpose of the RCP is to expedite and streamline qualifying Section 408 reviews by eliminating the need for alteration-specific public notices and review plans, and by programmatically making certain findings under the National Environmental Policy Act. The RCP has been signed by the LRD Commanding General and will be effective for an initial period of five years, ending November 17, 2028.
b. This was not a 309 or CZM-driven change.
c. The streamlining of the permitting process may result in increased compliance for water-based infrastructure, however, there may also be a potential for cumulative impacts from many small projects that may significantly impact water quality and habitat.

Guidance documents and management plans

Illinois International Port District (IIPD) Master Plan:

a. This plan serves as a comprehensive look at the current state of the IIPD, and what it can be in the future. The plan touches on ways that the IIPD can develop recreational and conservation areas, including Calumet River shoreline which primarily consists of seawall banks.
b. This was not a 309 or CZM-driven change.

c. The IIPD Master Plan provides a framework to modernize port infrastructure and will likely increase economic growth in the Calumet Area while developing publicly accessible recreational and conservation facilities and restore habitat.

USACE Chicago Waterways Restoration Framework Plan:

a. This plan supports and integrates ongoing and future ecological rehabilitation and community and industrial initiatives across the city that are being conducted by citizens, businesses, non-governmental organizations, and local, state, and federal partners. Chicago's rivers are divided into 5 regions. For each region, the plan highlights, among other details, problems, potential opportunities, and possible constraints. This information can be used in guiding future land use and shoreline decisions along the waterways in the Coastal Zone.
b. This was not a 309 or CZM-driven change.
c. The Chicago Waterways Restoration Framework Plan increases the ability of planners, developers, and community organizations to understand the aquatic and riparian habitat impacts from future development plans and provide a framework for increasing aquatic and riparian restoration and strengthen community engagement.

Lake County Lake Michigan Watershed Based Plan:

a. This is a plan to reduce the impacts of water pollution and stormwater runoff; restore watershed streams, ravines, and wetlands to a healthy condition, and to provide opportunities for watershed stakeholders to have a significant role in that process. The plan sets up six "Watershed Goals" most of which include information such as acres of natural area protected, number of flood problem areas, and miles of Lake Michigan shoreline protected. The information in this plan could potentially be used to inform planning in the northern region of the Coastal Zone.
b. This was not a 309 or CZM-driven change.
c. The Lake County Lake Michigan Watershed Based Plan provides resources and information to integrate multi-objective watershed management decisions that will likely lead to increased coastal wetland habitat restoration and protection, water quality improvements, and reduced flooding.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High _____
Medium __X__
Low _____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

While development was identified as a significant challenge by IDNR-CMP stakeholders, much of the Illinois shoreline is already developed with limited potential for new development. The Illinois Coastal Zone is impacted by cumulative and secondary impacts, namely the loss of grassland, shrub, forested, woody wetland, and emergent wetland due to development. However, cumulative and secondary impacts could be addressed in the wetlands and coastal hazards enhancement areas.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Survey responders indicated that cumulative and secondary impacts were a medium priority for the Illinois Coastal Zone. Through open-response questions, stakeholders identified development as one of the main challenges to building coastal resilience. The IDNR-CMP will continue to protect habitat and issue guidance towards development using 306 funding.

Relevant Sources

Chicago District, Chicago Waterways Restoration Framework Plan (2023). US. Army Corps of Engineers - Chicago District. Retrieved from https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/24046.

Chicago District, Department of the Army Permit: Shoreline Activities Regional General Permit (2022). U.S. Army Corps of Engineers. Retrieved from https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll11/id/6330.

Chicago District, Department of the Army Letter of Permission. (2024). U.S. Army Corps of Engineers.

Great Lakes and Ohio River Division (LRD), Department of the Army Regional Categorical Permission. U.S. Army Corps of Engineers.

Illinois International Port District, Illinois International Port District Master Plan (2022). Retrieved from https://engage.cmap.illinois.gov/4688/widgets/14884/documents/32132.

Multi-Resolution Land Characteristics (MRLC) Consortium. *Land Cover* [Review of *2024 Land Cover*]. Accessed October 2025 at https://www.mrlc.gov/

National Oceanic and Atmospheric Administration, Office for Coastal Management. “Cook County, Illinois, 2016 Land Cover.” Coastal Change Analysis Program (C-CAP) Regional Land Cover. Charleston, SC: NOAA Office for Coastal Management. Accessed December 2024 at www.coast.noaa.gov/htdata/raster1/landcover/bulkdownload/30m_lc/.

National Oceanic and Atmospheric Administration, Office for Coastal Management. “Lake County, Illinois, 2016 Land Cover.” Coastal Change Analysis Program (C-CAP) Regional Land Cover. Charleston, SC: NOAA Office for Coastal Management. Accessed December 2024 at www.coast.noaa.gov/htdata/raster1/landcover/bulkdownload/30m_lc/.

Stormwater Management Commission, Lake Michigan Watershed-Based Plan (2023). Lake County Stormwater Management Commission. Retrieved from https://www.lakecountyil.gov/2418/Lake-Michigan-Watershed.

Special Area Management Planning

Section 309 Enhancement Objective: Preparing and implementing special area management plans for important coastal areas. §309(a)(6)

The Coastal Zone Management Act defines a special area management plan (SAMP) as "a comprehensive plan providing for natural resource protection and reasonable coastal-dependent economic growth containing a detailed and comprehensive statement of policies; standards and criteria to guide public and private uses of lands and waters; and mechanisms for timely implementation in specific geographic areas within the coastal zone. In addition, SAMPs provide for increased specificity in protecting natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, including those areas likely to be affected by land subsidence, sea level rise, or fluctuating water levels of the Great Lakes, and improved predictability in governmental decision making."

Phase 1 (High-level) Assessment: *(Must be completed by all states and territories.)*
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. In the table below, identify geographic areas in the coastal zone subject to use conflicts that may be able to be addressed through a SAMP. This can include areas that are already covered by a SAMP but where new issues or conflicts have emerged that are not addressed through the current SAMP.

Geographic Area	Opportunities for New or Updated Special Area Management Plans Major conflicts/issues
Northern Coastal Area (including Waukegan, North Chicago, and Illinois Beach State Park)	Erosion, shoreline change, lake-level fluctuations, invasive species, history of contamination, sensitive and threatened species, public access/private land, loss of recreational beach space
Calumet Region (including William Powers State Recreation Area and Lake Calumet)	Needs for protecting natural resources (invasive species management, marsh bird habitats), reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas (flood-prone areas, brownfield areas), restoration of park facilities, and user-identified improvements for wayfinding, educational, and recreational access.

Table 23: Opportunities for new or updates Special Area Management Plans and geographic area are based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of SAMPs since the last assessment.

   The Illinois Coastal Zone does not have a Special Area Management Plan, however there are two notable regions in the coastal zone: the Northern Coastal Area and the Calumet Region. Within these two regions are two state-owned properties: Illinois Beach State Park and William Powers State Recreation Area.

In the North Coastal Area:

The following data and reports relevant to the SAMP worksheet are summarized in the Coastal Hazards worksheet:
United States Army Corps of Engineers (USACE) Great Lakes Coastal Resiliency Study (GLCRS)
Great Lakes Restoration Initiative (GLRI) Framework
Illinois State Geological Survey (ISGS) Coastal Research and Monitoring
Illinois Beach State Park (IBSP) Shoreline Stabilization Measures
North Shore Plan Coastal Resilience Plan

At Illinois Beach State Park (IBSP), the Illinois Coastal Geology Research Group, established through the last assessment, focuses on developing sustainable shoreline management strategies through research, monitoring, education, collaboration, and coordination. The Illinois Coastal Geology Research Group is a partnership with the IDNR-CMP, the Prairie Research Institute (PRI) at the University of Illinois, the Illinois State Geological Survey (ISGS), and the Illinois Natural History Survey (INHS). The Illinois Coastal Geology Research Group has been mapping habitat loss due to shoreline erosion since 2017 using high-precision GPS surveys, unmanned aerial vehicles, coastal monitoring cameras, bathymetric surveys, deployment of wave and water level sensors and acoustic and electromagnetic methods to quantify shoreline changes. In collaboration with Healthy Port Futures, Great Lakes Protection Fund, U.S. EPA, INHS, U.S. Army Corps of Engineers, and NOAA, several shoreline stabilization efforts have been completed off the shore of IBSP. The innovative Rubble Ridge Pilot Project may provide more affordable shoreline protection alternatives by dissipating wave energy while creating underwater offshore habitat. The recently installed breakwaters, led by the Illinois Capital Development Board, provides underwater habitat and shoreline protection for 2.2 miles of IBSP shoreline. The Illinois Coastal Geology Research Group will monitor the shoreline dynamics in partnership with IDNR-CMP.

Additionally, IDNR-CMP received funding from NOAA as a Project of Special Merit (PSM) resulting from the previous assessment to support the determination of wetland management goals by identifying hydrologic connections of coastal wetlands to Lake Michigan and the deeper groundwater system and providing hydrologic characteristics to support the assessment of wetland function. Water levels, water quality, and soil samples were monitored from March 2020 through September 2022 through wells installed in the North Unit of IBSP and Spring Bluff Nature Preserves. Results from the water quality component of this study confirm that wetland areas are affected by pollutants upstream land uses. Hydrologic functions include groundwater recharge, coastal floodwater storage, and carbon storage. The soil chemical analysis shows elevated levels of elements associated with the past military, industrial, and residential land uses within and near IBSP.

Building from the PSM, IDNR-CMP supported the development of a project awarded to the University of Illinois' Prairie Research Institute for $2.3 million from NOAA for the "Combined Hydrology, Water Quality, and Botanical Characterization to Guide Coastal Wetland Restoration and Management" study in 2024. Over the course of three years, PRI staff scientists and local partners will assist resource managers with hydrologic restoration plans for IBSP by assessing hydrology, water quality, and plant communities. This project will also provide outreach and education

opportunities for students, interns, and the public through the partnership with Lake Forest Open Lands Association.

The Waukegan Harbor was designated as an Area of Concern (AOC) in accordance with the Great Lakes Water Quality Agreement in 1987. Areas of Concern are rivers and harbors within the Great Lakes that are the focus of targeted environmental remediation and cleanup through the Great Lakes Restoration Initiative due to significant environmental degradation. Industrial activities in the Waukegan Harbor contributed to the environmental contamination of land and water during manufacturing processes, resulting in the proliferation of contaminants such as polychlorinated biphenyls (PCBs), heavy metals, phenols, and polycyclic aromatic hydrocarbons (PAHs) in the harbor's sediment. Chemical contaminants can bioaccumulate in living organisms, such as fish, which can pose significant hazards to human health. The International Joint Commission (IJC) designated different types of significant environmental degradation as Beneficial Use Impairments (BUIs). The USEPA determined that six BUIs were present in the Waukegan Harbor, five of which have been removed:

- Beach closings (removed September 2011)
- Loss of fish and wildlife habitat (removed August 2013)
- Restrictions on dredging activities (removed July 2014)
- Degradation of benthos (removed December 2017)
- Degradation of phytoplankton and zooplankton populations (removed August 2020)
- Restrictions on fish and wildlife consumption

Since the last Section 309 assessment, three BUIs have been removed: restrictions on dredging activities, degradation of benthos, and degradation of phytoplankton and zooplankton populations. One BUI, restrictions on fish and wildlife consumption, remains. Contamination levels of PCB in fish samples have decreased since the last environmental dredging performed in 2014, however some species still exhibit contaminant levels higher than the reference sites. The IDNR-CMP is working closely with the U.S. EPA Great Lakes National Program Office (GLNPO), U.S. Geological Survey (USGS), and IDNR Fisheries (IDNR Fish) to determine where the contamination persists to remove the final BUI.

<u>In the Calumet Region:</u>

The Calumet Region is known for its industrial heritage, with remnant chemicals associated with the production of steel manufacturing impacting soil and water quality. Now, the Calumet Region is the site of multiple habitat restoration projects by agencies and non-profits working in coordination to restore the regions' wetlands and marshes, including at William Powers State Recreation Area (WPSRA). Much of this work is directed through IDNR-CMP funded projects such as the Calumet Conservation Action Plan in 2017.

Since the last assessment in 2015, twenty-four acres at WPSRA and Lake Calumet have received heavy focus on invasive species management, targeting phragmites on approximately 14 acres and woody invasive species. These efforts have been managed through grants from the Calumet Conservation Compact and IDNR-CMP. In coordination with state partners, IDNR-CMP is developing a habitat management plan addressing invasive species at WPSRA.

In 2021, with funding from NOAA, the Great Lakes Commission, and the GLRI, the Forest Preserves of Cook County and IDNR-CMP connected and restored hydrology and flow regime between Powderhorn Lake and Lake Calumet to improve wildlife habitat, improve water quality, and address local flooding issues. This project restored more than 100 acres of wetlands, dune, and swale habitat that many migratory bird species rely on. Fish habitat structures were constructed in Powderhorn Lake to provide cover and protect small fish, bolstering populations of game and non-game fish including Northern Pike and Largemouth Bass.

Management Characterization

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) that could help prepare and implement SAMPs in the coastal zone.

Significant Changes in Special Area Management Planning

Management Category	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
SAMP policies, or case law interpreting these	N	N	N
SAMP plans	N	N	N

Table 24: Changes in Special Area Management Planning, state employment, IDNR-CMP assistance, and significance are based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

SAMP policies, or case law interpreting these

Waukegan Harbor AOC – BUI removal:

a. As of 2025, there is only one remaining BUI for Waukegan Harbor AOC. Since the last assessment, 3 BUIs have been removed: Restriction on dredging activities (2014), degradation of benthos (2017) and degradation of phytoplankton (2020). IDNR-CMP, IEPA, and IDPH are currently monitoring fish populations in Waukegan Harbor.
b. These are CZM-driven changes.
c. IDNR-CMP are working closely with state and federal agencies to monitor the final BUI on fish and wildlife consumption through fish monitoring. Once the final BUI is removed, the Waukegan Harbor AOC will be eligible for delisting. This is the only AOC in Illinois.

SAMP plans

Waukegan Lakefront Activation Plan - Economic Development:

a. The CMP worked with the City of Waukegan Lakefront Activation Plan (2015) to support economic development, preserve environmental and economically-valuable natural resources, and improve public perception and access to the lakefront.

b. This was a CZM driven change.
c. A direct outcome of the Waukegan Lakefront Active Implementation Plan was the Waukegan Harbor Master Plan (2017), identifying best management practices and future infrastructure needs. Beginning in 2019, the Waukegan Waterfront Working Group added a permanent Lakefront Manager position to encourage partnerships across city agencies to leverage resources.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High	_____
Medium	__x__
Low	_____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

The IDNR-CMP is structured on program issues (e.g., habitat, water resources, coastal resilience, access and education, and economic development) rather than specific geographic regions of the coast. This management approach enables IDNR-CMP to distribute funds and resources towards issues of need throughout the Illinois Coastal Zone.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Survey responders indicated that special area management plans were a medium priority for the Illinois Coastal Zone. The IDNR-CMP will continue to protect habitat and issue guidance towards development using 306 funding.

Relevant Sources

Bernard, K., & Pahre, E. (2024, October 24). *Powderhorn Lake Habitat Restoration*. Audubon Great Lakes. https://storymaps.arcgis.com/stories/8761f0b9c0d44095a3cbeb1e66bb7317

United States Environmental Protection Agency. (2024, August). *Waukegan Harbor AOC*. Great Lakes AOCs. https://www.epa.gov/great-lakes-aocs/waukegan-harbor-aoc

Great Lakes Resources

Section 309 Enhancement Objective: Planning for the use of ocean [and Great Lakes] resources. §309(a)(7)

Phase 1 (High-level) Assessment: *(Must be completed by all states and territories.)*
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. Understanding the ocean and Great Lakes economy can help improve management of the resources it depends on. Using Economics: National Ocean Watch (ENOW), [11] indicate the status of the ocean and Great Lakes economy as of 2021 (the most recent data) in the tables below. Include graphs and figures, as appropriate, to help illustrate the information. Note ENOW data are not available for the territories. The territories can provide alternative data, if available, or a general narrative, to capture the value of their ocean economy.

Status of Great Lakes Economy for Coastal Counties (Cook and Lake counties, combined) (2021)

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	64,127	836	685	N/A	13,631 (Cook) N/A (Lake)	214	46,370
Establishments (# of Establishments)	3,296	75	89	N/A	259 (Cook) N/A (Lake)	52	2,764
Wages (Millions of Dollars)	$2.6 Billion	$51.5 M	$54.2 M	N/A	$591.1 M (Cook) N/A (Lake)	$14.5 M	$1.7 Billion
GDP (Millions of Dollars)	$6.5 Billion	$138.7 M	$94.9 M	N/A	$759.3 M (Cook) N/A (Lake)	$25.0 M	$4.0 Billion

Table 25: Status of Great Lakes economy for coastal counties is from Economics: National Ocean Watch from NOAA for Cook and Lake counties in 2021.

[11] *coast.noaa.gov/digitalcoast/tools/enow.html*. If you select any coastal county for your state, you are directed to various data displays for that county. In the upper left of the screen, click the "State" box, to the left of the county box so that the state name will be highlighted. Now the data will reflect statewide data for all of the state's coastal counties. Make sure "2021" is selected for the year (top right corner). You can then click through the sector types by selecting the icons along the top and the type of economic data (employment, wages, GDP, etc.), by clicking through the icons on the left.

Change in Great Lakes Economy for Cook County (2005-2021)[15]

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	↓ 12,675	↑ 382	↓ 59	N/A	↓ 4,497	↓ 292	↓ 7,755
Establishments (# of Establishments)	↑ 950	↑ 25	↓ 31	N/A	↑ 62	↑ 14	↑ 857
Wages (Millions of Dollars)	↑ 702.8 M	↑ 33.4 M	↑ 22.9 M	N/A	↑ 0.9 M	↓ 17.0 M	↑ 452.1 M
GDP (Millions of Dollars)	↑ 1138.1 M	↑ 92.2 M	↑ 31.1 M	N/A	↓ 311.6 M	↓ 57.4 M	↑ 1,134.4 M

Table 26: Change in Great Lakes economy for Cook County is from Economics: National Ocean Watch from NOAA from 2005-2021.

Change in Great Lakes Economy for Lake County (2005-2021)[15]

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	↑ 3,271	N/A	↓ 16	N/A	N/A	N/A	↑ 1,270
Establishments (# of Establishments)	↑ 165	N/A	↓ 7	N/A	N/A	N/A	↑ 145
Wages (Millions of Dollars)	↑ 220.7 M	N/A	↑ 0.6 M	N/A	N/A	N/A	↑ 94.4 M
GDP (Millions of Dollars)	↑ 368.9 M	N/A	↑ 0.2 M	N/A	N/A	N/A	↑ 216.7 M

Table 27: Change in Great Lakes economy for Lake County is from Economics: National Ocean Watch from NOAA from 2005-2021.

Summary of Economic Resources

According to the data from Economics: National Ocean Watch, the majority of the Great Lakes economic indicators for Illinois Coastal Counties increased in 2021 compared to 2005 (Table 11, Table 12, and Table 13). The tourism and recreation sector, followed by the marine transportation sector occupy the highest percentage of establishments, employment, annual wages, and GDP, indicating that tourism, recreation, and transportation are significant sectors in the Great Lakes economy of Illinois coastal counties. Offshore mineral extraction occupy the smallest percentage of employment, number of establishments, annual wages, and GDP, indicating that offshore mineral extraction is not a significant sector in the Great Lakes economy of Illinois counties.

In Cook County, employment decreased in 2021 compared to 2005 for all sectors except living resources (including, fish hatcheries, fishing, seafood processing, and seafood markets), which increased. In Cook County, the number of establishments increased in 2021 compared to 2005 for all sectors except marine

construction, which decreased. In Cook County, the wages increased in 2021 compared to 2005 for all sectors except offshore mineral extraction, which decreased. In Cook County, the GDP increased in 2021 compared to 2005 for all sectors except marine transportation and offshore mineral extraction, which decreased. Much of the data for Lake County was suppressed. In Lake County, the employment and number of establishments for tourism and recreation increased in 2021 compared to 2005, while the employment and number of establishments decreased for marine construction. In Lake County, the wages and GDP increased for tourism and recreation and marine construction in 2021 compared to 2005.

2. Understanding existing uses within ocean and Great Lakes waters can help reduce use conflicts and minimize threats when planning for ocean and Great Lakes resources. Using Ocean Reports, [12] indicate the number of uses within the ocean or Great Lakes waters off of your state. To avoid duplication, energy uses (including pipelines and cables) are reported under "Energy and Government Facility Siting" in the following template. However, feel free to include energy uses in this table as well if listing all uses within ocean and Great Lakes waters in one place is preferred. Add additional lines, as needed, to include additional uses that are important to your state. Note: The Ocean Reports tool does not include data for the Great Lakes states. Great Lakes states should fill in the table as best they can using other data sources.

Uses within Great Lakes Waters

Type of Use	Number of Sites
Federal sand and gravel leases *(Completed)*	N/A
Federal sand and gravel leases *(Active)*	N/A
Federal sand and gravel leases *(Expired)*	N/A
Federal sand and gravel leases *(Proposed)*	N/A
Beach Nourishment Projects	(16) beach nourishment permits were issued by IDNR-OWR for Lake and Cook Counties between 2019-2024. Beaches include, Highland Park, Lake Forest, Waukegan, Zion, Chicago, Evanston, Winnetka, Lake Bluff.
Ocean Disposal Sites	N/A
Principle Ports *(Number and Total Tonnage)*	(2) Illinois International Port District *(10,400,000 tons)*, Waukegan Port District *(223,000 tons)*
Coastal Maintained Channels	(3) Calumet Harbor, Chicago Harbor, Waukegan Harbor
Designated Anchorage Areas	(4) Designated Anchorage areas include Calumet outer harbor basin, 3 miles east to south of Calumet Harbor Breakwater South End Light, Chicago outer harbor and in the small-craft basin at the southwest corner of the outer harbor.
Danger Zones and Restricted Areas	N/A

Table 28: Uses within Great Lakes waters for Cook and Lake counties in the Illinois Coastal Zone. Beach nourishment projects for Lake and Cook Counties from 2019-2024 data is from IDNR – Office of Water Resources permits. Illinois International Port

[12] *coast.noaa.gov/digitalcoast/tools/ort.html*. Select the "view quick reports" button and enter the name of your state or territory in the search bar. Some larger states may have the "quick reports" for their state waters broken into several different reports. Click on the "state waters" reports to view. Note the Ocean Reports tool also generates "quick reports" for national estuarine research reserve boundaries in your state. These reports are just a subset of the "state waters" report(s) so you can ignore the reserve "quick reports." Use the icons on the left hand side to select different categories: general information, energy and minerals, natural resources and conservation, oceanographic and biophysical, transportation and infrastructure, and economics and commerce. Scroll through each category to find the data needed to complete the table. The top six categories in the table above are in the "energy and minerals" section while the other information to complete the table can be found under the "transportation and infrastructure" section.

District and Waukegan Port District tonnage data is for 2022 from U.S. Army Corps of Engineers Great Lakes Navigation Project Reports.

3. In the table below, characterize how the threats to and use conflicts over ocean and Great Lakes resources in the state's or territory's coastal zone have changed since the last assessment.

Significant Changes to Great Lakes Resources and Uses

Resource/Use **Change in the Threat to the Resource or Use Conflict**	**Since Last Assessment** (↑, ↓, –, unknown)
Benthic habitat (including coral reefs)	↑
Living marine resources (fish, shellfish, marine mammals, birds, etc.)	↑
Sand/gravel	↑
Cultural/historic	↑
Other (please specify)	
Transportation/navigation	↑
Offshore development [13]	N/A
Energy production	N/A
Fishing (commercial and recreational)	↑
Recreation/tourism	↑
Sand/gravel extraction	N/A
Dredge disposal	↑
Aquaculture	N/A

Table 29: Changes to Great Lakes resources and uses for the Illinois Coastal Zone. Data is informed by Lake Michigan's Lake-wide Action and Management Plan (LAMP) 2020 update and the Cooperative Science & Monitoring Initiative (CSMI) Lake Michigan 2020 report.

4. For those ocean and Great Lakes resources and uses in the table above that had an increase in threat to the resource or increased use conflict in the state's or territory's Coastal Zone since the last assessment, characterize the major contributors to that increase. Place an "X" in the column if the use or phenomenon is a major contributor to the increase.

[13] Offshore development includes underwater cables and pipelines, although any infrastructure specifically associated with the energy industry should be captured under the "energy production" category.

Major Contributors to an Increase in Threat or Use Conflict to Ocean and Great Lakes Resources

	Land-based development	Offshore development	Polluted runoff	Invasive species	Fishing (Commercial and Recreational)	Aquaculture	Recreation	Marine Transportation	Dredging	Sand/Mineral Extraction	Ocean Acidification	Other (Specify)
Benthic habitat (including coral reefs)			X	X								
Living resources (fish, shellfish, birds, etc.)			X	X			X					
Sand/gravel			X	X			X					
Cultural/historic			X	X								
Transportation/ navigation				X					X			
Fishing (commercial and recreational)			X	X								
Recreation/ tourism			X	X			X					

Table 30: Major contributors to an increase in threat or use conflict to Great Lakes resources. Data is informed by the Great Lakes Restoration Initiative Action Plan IV (2024), Lake Michigan's Lake-wide Action and Management Plan (LAMP) 2020 update (unpublished) and the Cooperative Science & Monitoring Initiative (CSMI) Lake Michigan 2020.

Results from the 2019 Illinois updates to the Lake Michigan Lakewide Action and Management Plan (LAMP) indicate that invasive species may be contributing to an impending collapse of the food web within Lake Michigan. Quagga mussels have become a much larger threat than zebra mussels since the last assessment, with more widespread populations found in deeper waters outcompeting the phytoplankton and zooplankton that form the base of the food chain. Mussels have filtered the water, making it noticeably clearer, allowing sunlight to react with nutrients in the lake and creating more incidents of algal blooms and toxic algae. With less benthic habitat for native species and the loss of the base of the food chain, a trophic cascade may start impacting higher-level aquatic life, as well as the fishing and tourism industry.

However, this may also create an inhospitable environment for the invasive carp, as there is less habitat for its prey. In 2019, the U.S. Army Corps of Engineers approved the Brandon Road Lock and Dam Project in Joliet, Illinois, south of the Illinois Coastal Zone, to prevent invasive carp from entering Lake Michigan through the Chicago Sanitary and Ship Canal. In 2024, Governor Pritzker signed an agreement committing the state to its share of the project's funding. The project employs a multi-layered approach to deter invasive carp, including acoustic deterrents, air bubble curtains, electric barriers, and a flushing lock. Each of the deterrents are designed to prevent invasive carp from advancing upstream and protect Lake Michigan.

In 2022, the Illinois Coastal Nonpoint Pollution Control Program was approved by the National Oceanic and Atmospheric Administration and the U.S. Environmental Protection Agency. As part of the requirements of the Coastal Zone Act Reauthorization Act (CZARA) of the Coastal Zone Management Act

(CZMA), each coastal management program is required to develop a program to reduce pollution of the state's coastal waters from nonpoint sources. The nonpoint source pollution programs are to reduce pollutants from the following categories: agriculture; forestry; urban areas; marinas and recreational boating; hydromodification; and wetlands, riparian areas, and vegetated treatment areas. Urban areas are identified as a priority focus for the IDNR-CMP's Coastal Clean Waters program (the nonpoint pollution program) as the Illinois shoreline is highly urbanized and subjected to considerable stress from intense land use and competition to serve the economic and workforce needs and demands of this densely populated area. Sources of nonpoint pollution in urban areas include runoff from developed and developing areas; runoff from construction sites; runoff from existing developments; general sources like household and landscaping; and pollutants from roads, highways, and bridges. The hydrology and quality of runoff in the Illinois Coastal Zone are impacted by the abundance of impervious surfaces, such as roadways, parking lots, and building rooftops, which reduce infiltration, increase runoff speed, and increase direct stormwater volume and storm-related pollutant loadings to waterways. The City of Chicago uses a combined sewer system, in which stormwater runoff is carried in the same piping system as sewage. During high precipitation events, the combined sewer system may become overloaded causing combined sewer overflows (CSOs) to occur and untreated effluent enters the Chicago River and under extreme precipitation events, Lake Michigan.

To better understand the impacts of nonpoint pollution in the Illinois Coastal Zone, the Illinois State Water Survey began the Water Quality Trends Analysis (WQTA) in 2020 to establish a baseline understanding of water quality. Discussed in the Cumulative and Secondary Impacts worksheet, the WQTA analyzes seven key water quality parameters: phosphorus, chloride, nitrates/nitrogen, fecal coliform, dissolved oxygen, turbidity, and conductivity. The results of this analysis are expected to be available in 2025. Additionally, in 2020, the nonprofit Current, in partnership with the City of Chicago and Lake County, began a pilot project using real-time monitoring for fecal coliform. Real-time monitoring enables the efficient evaluation of river and beach health, with rapidly available data helping improve transparency and public health communication relevant to beach closures. Next steps for the Coastal Clean Waters program include evaluating other appropriate monitoring strategies to collect applicable data that will help make better decisions for planning and evaluation purposes.

5. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of ocean and Great Lakes resources or threats to those resources since the last assessment to augment the national data sets.

   The bulleted reports and state-specific data related to Great Lakes resources listed below are summarized under the Coastal Hazards and Cumulative and Secondary Impacts Worksheets.

   - USACE Great Lakes Coastal Resiliency Study (GLCRS)
   - Water Quality Trends Analysis
   - USACE (Chicago District) Shoreline Regional General Permit
   - USACE (Chicago District) Letter of Permission
   - USACE Regional Categorical Permission
   - Illinois International Port District (IIPD) Master Plan
   - Chicago Waterways Restoration Framework Plan
   - Lake County Lake Michigan Watershed Based Plan

   <u>Great Lakes Restoration Initiative (GLRI) Action Plan IV (2024)</u>

- The Great Lakes Restoration Initiative (GLRI) is a bipartisan federal program launched in 2010 to address the environmental, economic, and social issues of the Great Lakes. Released in November 2024, Action Plan IV produces a guiding framework for federal, state, tribal, and local partners to collaborate effectively. The GLRI consists of five focus areas: toxic substances and areas of concern; preventing, detecting, and controlling invasive species; reducing nonpoint source pollution; protecting and enhancing habitat for species; and foundations for future restoration.

Cooperative Science & Monitoring Initiative (CSMI) Lake Michigan 2020 Report (2024)

- The CSMI 2020/2021 field year targeted four science priorities: 1) addressing nutrient-food web dynamics in a changing ecosystem, 2) addressing contaminants/bacteria, 3) addressing watershed/tributaries connections to lake water quality, and 4) aiding in connecting with stakeholders.

Illinois State Water Plan (2022)

- IDNR-CMP participates in the Illinois State Water Plan Taskforce alongside other state agencies. The Illinois State Water Plan was published in 2022 and will be updated every ten years.
- The Lake Michigan section of the Illinois State Water Plan includes issues such as water allocation, allocation fees, deteriorating water supply infrastructure, Lake Michigan diversions, water rates, water conservation and reuse, tourism, commercial navigation, economic development and recreation, coastal resilience, protecting and improving coastal habitats, and offshore wind energy.

Management Characterization

1. Indicate if the approach is employed by the state or territory and if any significant state- or territory-level changes (positive or negative) in the management of ocean and Great Lakes resources have occurred since the last assessment?

Significant Changes to Management of Ocean and Great Lakes Resources

Management Category	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	N	Y
Regional comprehensive ocean/Great Lakes management plans	Y	Y	Y
State comprehensive ocean/Great Lakes management plans	N	N	N
Single-sector management plans	Y	Y	N

Table 31: Significant changes to management of Great Lakes resources in Illinois Coastal Zone.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

Statutes, regulations, policies or case law interpreting these

Water Plan Task Force Act – SP2743

a. This bill establishes the State Water Plan Task Force to identify critical water issues and their solutions in the State Water Plan and publish an updated Plan at least every ten years. The Plan guides agency action, funding, and legislation related to water issues in Illinois
b. These were not 309 or CZM-driven changes.
c. The expected outcome of this bill is increased agency action and funding related to water issues in Illinois. Additionally, IDNR-CMP and the Office of Water Resources holds a position on the task force.

Water Reuse – HB3046

a. This bill allows the adoption of rules regarding recycling sewage treatment plant effluent reuse.
b. These were not 309 or CZM-driven changes.
c. The expected outcome of this bill is conservation of freshwater resources by enabling the use of treated wastewater.

Exotic Weed Act – SB2747

a. This bill allows the Department of Natural Resources to add species to the Exotic Weed Act by rule, which should make IDNR much more responsive to emerging invasive species threats.
b. These were not 309 or CZM-driven changes.
c. The expected outcome of this bill is to make the Illinois Coastal Zone more resilient to emerging invasive species threats through improved invasive species management.

Forests, Wetlands, and Prairies Grant Program — SB2781

a. This bill creates a Forests, Wetlands, and Prairies Grant Program to restore degraded lands and promote the growth of native vegetation.
b. These were not 309 or CZM-driven changes.
c. The expected outcome of this bill is increased funding for the restoration of degraded forests, wetlands, and prairies with native plants. Native plants reduce soil erosion from entering the waterway, which may carry nutrients or pollutants that impact water quality.

Homeowners' Native Landscaping Act — HB5296

a. This bill prevents Homeowners Associations from restricting resident's ability to plant native landscapes within their yards, as long as they do not infringe on neighboring properties and ensure the plants are native species.
b. These were not 309 or CZM-driven changes.
c. The expected outcome of this bill is increased native plant landscapes, reducing fertilizer and pesticide inputs from reaching waterways.

Toxic Water (PFAS) SB561

a. The PFAS Reduction Act prohibits the use of Per- and polyfluoroalkyl substances (PFAS) in firefighting foam. Effective on August 6, 2021.
b. These were not 309 or CZM-driven changes.
c. The expected outcome of this act is the prevention of PFAS from entering the waterways via leeching or direct discharge.

Regional comprehensive Great Lakes management plans

Great Lakes Restoration Initiative Action Plan IV Fiscal Years 2025-2029

a. The Great Lakes Restoration Initiative Action Plan IV Fiscal Years 2025-2029 has been published since the last assessment. The purpose of the GLRI is to strategically target threats to the Great Lakes ecosystem in support of the Great Lakes Water Quality Agreement through funding and federal and state agency coordination.
b. These were not 309 or CZM driven changes, however, CZM staff are the State's lead for GLRI.
c. The expected outcomes are the continued implementation of strategies to protect the Great Lakes ecosystem, including water quality improvements, invasive species control, a more resilient ecosystem, investments for communities, habitat protection, and economic revitalization.

Lake Michigan Lakewide Action and Management Plan *(Illinois contribution to regional, 4-state team)*

a. Updates have been made to the Lake Michigan Lakewide Action and Management Plan since the last assessment.
b. These were not 309 driven changes, but CZM staff are currently working on a regional team to write the updated 2020 LAMP.
c. LAMP updates will likely guide in the decision making and planning for invasive species and non-point pollution impacts on water quality, ecology, and economic factors for communities, tourism, and habitats of Lake Michigan in the coastal area.

3. Indicate if your state or territory has a comprehensive Great Lakes management plan.

Comprehensive Ocean/Great Lakes Management Plan	State Plan	Regional Plan
Completed plan (Y/N) (If yes, specify year completed)	(N)	(Y) LAMP (2008)
Under development (Y/N)	(N) However, the Illinois State Water Plan includes a section on Lake Michigan	(Y) LAMP is on a 5-year update cycle
Web address (if available)	https://iwrc.illinois.edu/wp-content/uploads/2023/01/SWPTF_Report_Dec2022.pdf	https://www.epa.gov/greatlakes/lake-michigan-lamps
Area covered by plan	State of Illinois	The Lake Michigan watershed – in IL, IN, MI, and WI

Table 32: Management plans affecting Lake Michigan in the Illinois Coastal Zone.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High	_____
Medium	__X__
Low	_____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Protecting Great Lakes resources will continue to be a priority for IDNR-CMP through the Coastal Clean Waters program, economic development programs, and invasive species removal in restoration efforts. IDNR-CMP staff considered the impacts of coastal hazards and invasive species on Great Lakes resources and determined that a strategy could be developed to protect Great Lakes resources through the wetlands and coastal hazards enhancement areas.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Responders indicated that Great Lakes resources are considered a low priority enhancement area.

Relevant Sources

Egan, D. (2018). *The Death and Life of the Great Lakes*. W.W. Norton & Company.

Foley, C.J., Milanovich, J.M., TePas, K.M., Collingsworth, P.D. (Eds). 2024. *Cooperative Science & Monitoring Initiative (CSMI) Lake Michigan 2020 Report.* Prepared for the Great Lakes Water Quality Agreement Annex 2 Lake Michigan Partnership by Illinois-Indiana Sea Grant. 238 p.

Great Lakes Interagency Task Force, *Great Lakes Restoration Initiative Action Plan IV* (2024). Great Lakes Restoration Initiative. Retrieved from https://www.glri.us/sites/default/files/glri-action-plan-4-202411-43pp_0.pdf.

Illinois Department of Natural Resources Office of Water Resources, *Illinois State Water Plan* (2022). Illinois Department of Natural Resources Office of Water Resources. Retrieved from https://dnr.illinois.gov/content/dam/soi/en/web/dnr/waterresources/statewaterplantaskforce/documents/swptf_report_dec2022.pdf.

Illinois Department of Natural Resources Office of Water Resources - Coastal Management Program, *Illinois Coastal Nonpoint Pollution Control Program* (2014). Illinois Department of Natural Resources Coastal Management Program. Retrieved from https://dnr.illinois.gov/content/dam/soi/en/web/dnr/cmp/documents/projects/il-cnpcp-final.pdf.

National Oceanic and Atmospheric Administration. (2024). *Economics: National Ocean Watch (ENOW) Explorer*. Digital Coast. https://coast.noaa.gov/enowexplorer/#/employment/total/2021/17000/

United States Environmental Protection Agency. (2024). *Lake Michigan*. The Great Lakes. https://www.epa.gov/greatlakes/lake-michigan

U.S. Army Corps of Engineers. *U.S. Army Corps of Engineers Digital Library*. USACE Institute of Water Resources. https://usace.contentdm.oclc.org/

U.S. Army Corps of Engineers, Institute for Water Resources. (2024). *Value to the nation fast facts: USACE Great Lakes Navigation 2022 Project Report Illinois International Port District, IL*.

U.S. Army Corps of Engineers, Institute for Water Resources. (2024). *Value to the nation fast facts: USACE Great Lakes Navigation 2022 Project Report Waukegan Port District, IL*.

Energy and Government Facility Siting

Section 309 Enhancement Objective: Adoption of procedures and enforceable policies to help facilitate the siting of energy facilities and government facilities and energy-related activities and government activities which may be of greater than local significance. §309(a)(8) [14]

Phase 1 (High-level) Assessment: *(Must be completed by all states and territories.)*
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. In the table below, characterize the status and trends of different types of energy facilities and activities in the state's or territory's coastal zone based on best-available data. If available, identify the approximate number of facilities by type. For ocean-facing states and territories (not Great Lakes states), Ocean Reports [15] includes existing data for many energy facilities and activities.

[14] CZMA § 309(a)(8) is derived from program approval requirements in CZMA § 306(d)(8), which states:
"The management program provides for adequate consideration of the national interest involved in planning for, and managing the coastal zone, including the siting of facilities such as energy facilities which are of greater than local significance. In the case of energy facilities, the Secretary shall find that the State has given consideration to any applicable national or interstate energy plan or program."
NOAA regulations at 15 C.F.R. § 923.52 further describes what states need to do regarding national interest and consideration of interests that are greater than local interests.

[15] *coast.noaa.gov/digitalcoast/tools/ort.html.* Select the "view quick reports" button and enter the name of your state or territory in the search bar. Some larger states may have the "quick reports" for their state waters broken into several different reports. Click on the "state waters" reports to view. Note the Ocean Reports tool also generates "quick reports" for national estuarine research reserve boundaries in your state but this is just a subset of the "state waters" report(s) so you can ignore the reserve "quick reports." Click on the wind turbine icon on the left ("energy and minerals") for information on energy production. While outside your coastal zone, you may also want to consider facilities/activities in "federal waters" that may have effects on your coastal zone.

Status and Trends in Energy Facilities and Activities in the Coastal Zone

Type of Energy Facility/Activity	Exists in Coastal Zone (# or Y/N)	Change in Existing Facilities/Activities Since Last Assessment (↑, ↓, –, unknown)	Proposed in Coastal Zone (# or Y/N)	Change in Proposed Facilities/Activities Since Last Assessment (↑, ↓, –, unknown)
Pipelines	Y - 2	-	Y	↑
Electrical grid (transmission cables)	Y	unknown	unknown	unknown
Ports	Y - 2	-	N	-
Liquid natural gas (LNG)	Y	unknown	N	-
Electric Power Facilities (Oil)	Y - 4	↑	unknown	unknown
Electric Power Facilities (Gas)	Y - 18	↑	unknown	unknown
Electric Power Facilities (Coal)	N	↓ - NRG Waukegan Generating Station closed in 2022	N	-
Electric Power Facilities (Nuclear)	N	-	N	-
Electric Power Facilities (Wave)	N	-	N	-
Electric Power Facilities (Tidal)	N/A	-	N/A	N/A
Electric Power Facilities (Current, ocean, lake, river)	N	-	N	-
Electric Power Facilities (Hydropower)	N	-	N	-
Electric Power Facilities (Ocean thermal energy conversion)	N/A	-	N/A	N/A
Electric Power Facilities (Solar)	Y - 6	↑	unknown	-
Electric Power Facilities (Biomass)	Y - 2	↑	unknown	-

Table 33: Status and trends in energy facilities and activities in the Illinois Coastal Zone. Data is sourced from the U.S. Energy Information Administration (EIA), Federal Energy Regulatory Commission (FERC), and Illinois Environmental Protection Agency (IEPA) for 2024 in Cook and Lake Counties in Illinois.

2. If available, briefly list and summarize the results of any additional state- or territory-specific information, data, or reports on the status and trends for energy facilities and activities of greater than local significance in the Coastal Zone since the last assessment.

   2024 Illinois State Profile and Energy Estimates (U.S. Energy Information Administration, link)

   - Illinois is a major energy producer and consumer, leading the nation in nuclear power generation and ranking among the top states for wind power production. The state's industrial sector, encompassing petroleum refining, coal mining, and agriculture, is the largest energy consumer within Illinois.

Cook County's Clean Energy Plan (2020)

- This plan lays the foundation to reduce carbon by 45% from a 2010 baseline by 2030, use 100% renewable electricity by 2030 and be carbon neutral by 2050. Actions are prioritized by their urgency, resiliency, reliability, cost-effectiveness, and the ability to create new renewable options at the local level that would not be possible without the County's efforts.

City of Chicago (2025)

- All municipal buildings in the City of Chicago are using renewable energy as of January 1, 2025.
- 70% of the renewable energy is sourced from Double Black Diamond, a 593-megawatt solar generation installation developed by Swift Current Energy in Sangamon and Morgan counties.
- 30% of the renewable energy is sourced by purchasing renewable energy credits.
- The City of Chicago uses approximately 800,000 megawatt hours, this transition is expected to cut Chicago's carbon emissions by 290,000 metric tons per year.

CEJA (2021)
The CEJA was signed into law by Governor Pritzker in 2021. This legislation:

- Incentivizes renewable energy development;
- Accelerates electric vehicle (EV) adoption and expands charging station infrastructure; and
- Creates statewide energy workforce training programs to ensure the workforce is prepared for the jobs of the future.

Lake County Net Zero Planning (2020)

- The Lake County Board approved a resolution committing the Lake County government to reduce greenhouse gas emissions from its operations to net zero by 2040. In order to achieve the net zero goal, Lake County government will reduce greenhouse gas emissions by 50% from 2014-2017 baseline levels by 2030. Additionally, Lake County convened a regional Solar Energy Task Force to update local regulations to increase the availability and use of solar power in the region.

3. Briefly characterize the existing status and trends for federal government facilities and activities of greater than local significance [16] in the state's Coastal Zone since the last assessment.

   There are no federal government facilities or activities greater than local significance in the coastal zone since the last assessment.

Management Characterization

1. Indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) that could facilitate or impede energy and government facility siting and activities have occurred since the last assessment.

[16] The CMP should make its own assessment of what government facilities may be considered "greater than local significance" in its coastal zone, but these facilities could include military installations or a significant federal government complex. An individual federal building may not rise to a level worthy of discussion here beyond a very cursory (if any at all) mention).

Significant Changes in Energy and Government Facility Management

Management Category	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpretations	Y	N	Y
State comprehensive siting plans or procedures	N	N	N

Table 34: Significant changes in energy and government facility management for Illinois Coastal Zone (Cook and Lake counties) in 2024.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

Statutes, regulations, policies, or case law

Governor J. B. Pritzker, signed legislation on Aug. 9, 2019 to convene a task force that was officially formed in 2013 to analyze and evaluate policies and economic options to facilitate offshore wind energy development. The law directs the IDNR to identify areas of Illinois' public trust lands of Lake Michigan for wind development, taking into account environmental, marine, and other uses and resources. The bill directs the agency to adopt rules to grant permits for offshore wind assessment and development. The task force must report its findings to the Governor and General Assembly within 12 months of convening.

a. IL HB2132 creates the Illinois Rust Belt to Green Belt Pilot Program Act and has been approved by the Illinois House on March 24, 2023, and is under consideration in the Illinois Senate. The Rust Belt to Green Belt Pilot Program Act creates a special fund in the State treasury to encourage and facilitate the employment of offshore wind construction workforces located in underrepresented populations.
b. These were not 309 or CZM-driven changes.
c. In 2024, the Illinois Power Agency conducted a comprehensive policy study that evaluated economic benefits, environmental impacts, and the feasibility of proposed offshore wind development in Lake Michigan. Their study also assessed policy proposals, including the Rust Belt to Green Belt Pilot Program and their implications for Illinois' environmental and energy landscape.

<u>Solar Rights HB644</u>

a. This act lowers barriers to rooftop solar, enabling Illinoisans to generate their own power.
b. These were not 309 or CZM-driven changes.
c. With the 2021 act in place, Illinois residents can produce their own renewable energy.

<u>CEJA (P.A. 102-0662)</u>

a. This act incentivizes renewable energy development; accelerates electric vehicle adoption and expands charging station infrastructure; creates statewide energy workforce training programs; and supports communities facing energy transitions.
b. These were not 309 or CZM-driven changes.
c. Signed into law in 2021, CEJA aims to build and train a workforce to support the State's energy transition.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High	_____
Medium	_____
Low	__X__

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Energy and government facility siting is no longer a high priority enhancement area, as indicated in the previous assessment because Illinois has passed legislation since the last assessment that addresses this area. Stakeholder feedback also indicated this area to be a lower priority.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Responders indicated that energy and government facility siting is a low priority enhancement area.

Relevant Sources

Chicago, Illinois Power Agency 2024 Policy Study (2024). Illinois Power Agency. Retrieved from https://ipa.illinois.gov/content/dam/soi/en/web/ipa/documents/ipa-policy-study-1-march-2024.pdf.

Cook County Government. *Cook County's Clean Energy Plan*. Environment and Sustainability: Clean Energy Plan. https://www.cookcountyil.gov/sites/g/files/ywwepo161/files/service/cook-county-clean-energy-plan.pdf

Federal Energy Regulatory Commission. *eLibrary*. FERC Online. https://ferconline.ferc.gov/FERCOnline.aspx

Illinois Environmental Protection Agency. *Bureau of Public Notices*. Illinois Environmental Protection Agency. https://epa.illinois.gov/public-notices/boa-notices.html

Illinois Department of Commerce and Economic Opportunity. (n.d.). *Climate and Equitable Jobs Act*. Illinois Department of Commerce and Economic Opportunity. https://dceo.illinois.gov/ceja.html

Illinois General Assembly. *Bill Status of HB2132*. HB2132/ Rust Belt to Green Belt Pilot Program Act. https://www.ilga.gov/legislation/billstatus.asp?DocNum=2132&GAID=17&GA=103&DocTypeID=HB&LegID=145649&SessionID=112

Lake County. *Future Planning*. Future Planning | Lake County, IL. https://www.lakecountyil.gov/4722/Future-Planning

U.S. Energy Information Administration. *U.S. Energy Information Administration - EIA - independent statistics and analysis*. Illinois State Profile and Energy Estimates. https://www.eia.gov/state/analysis.php?sid=IL

U.S. Energy Information Administration. *Energy Infrastructure and Resources Maps*. U.S. Energy Atlas. https://atlas.eia.gov/pages/energy-maps

Aquaculture

Section 309 Enhancement Objective: Adoption of procedures and policies to evaluate and facilitate the siting of public and private aquaculture facilities in the coastal zone, which will enable states to formulate, administer, and implement strategic plans for marine aquaculture. §309(a)(9)

Phase 1 (High-level) Assessment: *(Must be completed by all states and territories.)*
Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Resource Characterization

1. In the table below, characterize the existing status and trends of aquaculture facilities in the state's coastal zone based on the best-available data. Your state Sea Grant Program may have information to help with this assessment. [17]

Status and Trends of Aquaculture Facilities and Activities

Type of Facility/Activity	Number of Facilities [18]	Approximate Economic Value	Change Since Last Assessment (↑, ↓, –, unknown)
Fish Hatchery	1	Annual revenue less than $500,000	↑
Educational	2	Annual revenue less than $500,000	↑
Bait	1	Annual revenue less than $500,000	–

Table 35: Status and trends of aquaculture facilities and activities in the Illinois Coastal Zone (Cook and Lake Counties) for 2024. Data was obtained from IDNR fisheries specialists.

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends or potential impacts from aquaculture activities in the Coastal Zone since the last assessment.

The Illinois Department of Natural Resources (IDNR) maintains a list of private fish dealers which have obtained an Aquaculture Permit from the agency. As of 2024, there are 42 facilities currently operating in the State of Illinois. Four of these are sited within Lake and Cook counties within the Illinois Coastal Zone. According to the USDA 2023 Census of Aquaculture, the number of aquaculture farms in Illinois decreased in every category from 2018 to 2023.

Despite these downward trends, efforts have been undertaken to boost the aquaculture industry in the Illinois coastal region:

[17] While focused on statewide aquaculture data rather than just within the coastal zone, the *Census of Aquaculture* (*agcensus.usda.gov/Publications/Census_of_Aquaculture/)* may help in developing your aquaculture assessment. The census is conducted every 10 years and the last report was released in 2018. The report provides a variety of state-specific aquaculture data to understand current status and recent trends.

[18] Be as specific as possible. For example, if you have specific information of the number of each type of facility or activity, note that. If you only have approximate figures, note "more than" or "approximately" before the number. If information is unknown, note that and use the narrative section below to provide a brief qualitative description based on the best information available.

- In 2019, Illinois-Indiana Sea Grant (IISG) and other Great Lakes Sea Grant programs were awarded $1 million to form the Great Lakes Aquaculture Collaborative to lay the foundation for an environmentally responsible, competitive, and sustainable aquaculture industry in the Great Lakes region. This effort focuses entirely on land-based aquaculture systems, offering guidance on economics and cost analysis, aquaponics, farm management, marketing, processing, and technical assistance for Great Lakes states.
- A few miles outside of the Illinois Coastal Zone, the Chicago High School for Agricultural Sciences (3857 w. 111ths Street, Chicago IL 60655) offers a program in biotechnology that produces tilapia and educates students about the history and development of aquaculture. The program includes lab work and a job shadowing component, indicating potential development of an aquaculture workforce.
- Several small-scale urban farms operate throughout the Chicago region maintaining aquaponic and hydroponic systems to address food security. These farms serve as local food producers as well as provide community education and workforce development opportunities. These include Farm on Ogden, a partnership between the Chicago Botanic Garden and the Lawndale Christian Health Center; Metropolitan Farms; Plant Chicago; and Urban Eden Farms.

Management Characterization

1. Indicate if the approach is employed by the state or territory and if there have been any state- or territory-level changes (positive or negative) that could facilitate or impede the siting of public or private aquaculture facilities in the Coastal Zone.

Significant Changes in Aquaculture Management

Management Category	Employed by State or Territory (Y or N)	IDNR-CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Aquaculture comprehensive siting plans or procedures	Y	N	N
Other aquaculture statutes, regulations, policies, or case law interpreting these	N	N	N

Table 36: Significant changes in aquaculture management for the Illinois Coastal Zone (Cook and Lake counties) in 2024.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

As previously outlined, Illinois-Indiana Sea Grant helped establish the Great Lakes Aquaculture Collaborative to promote regional aquaculture. The Great Lakes Aquaculture Collaborative released a report in 2019 titled *Comparative Analysis of State Approaches to Regulating Direct Seafood Sales.* This report assessed states' legal frameworks for governing direct seafood sales, aiming to identify barriers to aquaculture and provide policy recommendations to best support direct seafood sales and models. Illinois was identified as one of 22 states which allows licensed aquaculture farmers to directly sell

farmed finfish to consumers. However, despite this ability, direct sale to consumers was found to still be an underutilized market. This research, in addition to other publications, ultimately helps facilitate the growth of aquaculture in the Illinois coastal region.

Additionally, Illinois-Indiana Sea Grant launched in 2020 a Walleye Aquaculture Working Group. This group aims to assess the viability of walleye as a fish species for regional aquaculture development, building upon feedback that a native fish species may be more successful in the market.

These efforts are not 309 or CZM-driven.

Enhancement Area Prioritization

1. What level of priority is the enhancement area for the coastal management program?

High	_____
Medium	_____
Low	__X__

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Given the economic importance of freshwater quality and sportfishing in the region, opportunities for aquaculture at this time are limited to land-based facilities. The Illinois Department of Natural Resources regularly stocks Lake Michigan and other water bodies and seeks to promote the sale of Great Lakes fish. Additionally, IDNR launched a campaign called *Choose Copi* to develop a seafood market for wild-caught Asian Carp to address the threat of these invasive carp species entering the Great Lakes. These recent state priorities around wild-caught fish may conflict with the growth of aquaculture markets.

Initial stakeholder input was sought during the Phase I assessment and was conducted through a web-based survey. The survey was sent out in three emails to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals.

Responders indicated that aquaculture is a low priority enhancement area.

Relevant Sources

Illinois Department of Natural Resources - Aquatic Nuisance Species and Aquaculture Program. (2024). Private Fish Dealer List. Springfield, IL.

Illinois Department of Natural Resources. *Choose Copi*. Introducing Copi. https://choosecopi.com/

Illinois-Indiana Sea Grant. (2025). *Walleye Aquaculture Working Group*. Programs & Initiatives. https://iiseagrant.org/publications/walleye-aquaculture-working-group-workshop-identifying-walleye-marketing-and-production-barriers/

Sea Grant Great Lakes Network. *Advancing Great Lakes Aquaculture through Science and Collaboration*. Great Lakes Aquaculture. https://greatlakesaquaculture.org/

Sea Grant Law Center, Comparative Analysis of State Approaches to Regulating Direct Seafood Sales (2024). Sea Grant Law Center. Retrieved from https://nsglc.olemiss.edu/projects/aquaculture/files/regulating-direct-seafood-sales.pdf.

USDA National Agricultural Statistics Service, 2022 Census of Agriculture (2024). United States Department of Agriculture. Retrieved from https://www.nass.usda.gov/Publications/AgCensus/2022/Online_Resources/Aquaculture/Aqua.pdf.

Phase II Assessment

Wetlands

In-Depth Resource Characterization

Purpose: To determine key problems and opportunities to improve the CMP's ability to protect, restore, and enhance wetlands.

1. What are the three most significant existing or emerging physical stressors or threats to wetlands within your coastal zone? Indicate the geographic scope of the stressor, i.e., is it prevalent throughout your coastal zone, or are there specific areas that are most threatened? Stressors can be development/fill; hydrological alteration/channelization; erosion; pollution; invasive species; freshwater input; sea level rise/Great Lakes level change; or other (please specify).

	Stressor/Threat	Geographic Scope (throughout Coastal Zone or specific areas most threatened)
Stressor 1	Invasive Species	Throughout the coastal zone
Stressor 2	Development	Northern and southern portion of coastal zone
Stressor 3	Degradation of functionality	Northern and Southern portions of the coastal zone

Table 37: Significant stressors/threats to wetlands and geographic scope was determined based on input from internal and external stakeholders and IDNR-CMP knowledge as well as the reports listed in Relevant Sources.

2. Briefly explain why these are currently the most significant stressors or threats to wetlands within your coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

Stressor 1: Invasive Species

Numerous invasive species can be found in the wetlands of the Illinois Coastal Zone, the most prevalent of which is *Phragmites australis*. Dense stands of this invasive reed dominate many of the wetlands in the southern portion of the coastal zone, known as the Calumet Region. In the northern portion of the coastal zone, the vast majority of wetlands are located within Illinois Beach State Park (IBSP). *Phragmites* can be found in patches here as well as on some of the industrial properties in this region, like along railway easements, however, it does not dominate the landscape there as it does in the Calumet. Narrow-leaf cattail (*Typha angustifolia)* is the more dominant invasive species within IBSP.

These species threaten existing high quality wetland habitat as they outcompete and then take over as the dominant species, in turn, threatening native wildlife that depend on a diverse, native, habitat. While not as dominant as *Phragmites* and narrowleaf cattail, purple loosestrife (*Lythrum salicaria) and* glossy buckthorn (*Frangula alnus)* are other common invasive species found in coastal zone wetlands. The populations of invasive species located on properties adjacent to state-owned land make it difficult to control population in the region. Even if invasives, specifically *Phragmites* are reduced to a manageable level on state lands, neighboring populations easily spread back to the site.

Habitat impacts by invasive species was identified as one of the top three challenges facing wetlands by stakeholders. Conversations with land managers have indicated that invasive species seeds are spreading onto protected wetlands from stormwater runoff. The need for management of invasive species, development, and hydrologic alteration has been identified as a priority in numerous regional plans including the Calumet Conservation Action Plan (2017) and Lake County's Lake Michigan Watershed Based Plan (2022).

Stressor 2: Development

The central area of the Illinois Coastal Zone (City of Chicago) does not contain wetlands as the majority of the area is completely developed. As development continues in the northern and southern portions of the coastal zone, and in areas adjacent to the coastal zone, the remaining pockets of wetlands are at risk. This concern was also made clear during Phase I stakeholder engagement activities. Development was one of the top three pressing challenges identified by stakeholders.

Development in and adjacent to the northern portion of coastal zone increases impervious surface, which results in increased volume and velocity of stormwater runoff; directly impacting the hydrology of wetlands. This can lead to a change in the assemblage of vegetation that can tolerate the change in both hydrology and water chemistry. The Lake County Lake Michigan Watershed Based Plan identifies this issue. For example, increased stormwater runoff quantity and velocity will impact receiving channels, in this case streams at the base of ravine systems. The increased flow erodes the stream banks, and with it, any associated wetland tracts.

In the Calumet Region, the historic legacy of industrial development followed by residential development has fragmented wetland ecosystems. Past industry in the region still impacts the remaining wetlands. Vacant sites still contain remnant pollutants which can impact the wetlands themselves and the organisms living in the ecosystems.

Development also threatens wetlands in the coastal zone due to lack of protections. Illinois does not have specific state protections for isolated wetlands; now that the U.S. Supreme Court has reversed federal protections, they may be more at risk to future development.

Stressor 3: Degradation of functionality

The Illinois Coastal Zone consists predominantly of urban and suburban areas. This type of land use impacts nearly all adjacent wetlands to a varying degree. These impacts, both historic and current lead to the degradation of the wetland in terms of both habitat quality, and the ecosystem services an intact/ unimpacted wetland provides. Degraded wetlands may no longer provide ecosystem services such as stormwater storage and pollutant/sediment filtration, carbon sequestration, and vital habitat for wildlife, among others. Stakeholders noted this stressor as one of the top three priorities for the wetland enhancement area.

Some of the degraded wetlands throughout the coastal zone are known, such as the ones identified in the Lake County Wetland Restoration and Preservation Plan (WRAPP) and the Calumet Conservation Action Plan, however there is no comprehensive list or unified methodology used across the entire coastal zone for distinguishing between wetlands that have been degraded and wetlands that are functioning more closely to what an unimpacted wetland would.

3. Are there emerging issues of concern but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Actively changing regulatory landscape	The regulatory landscape is actively changing as it relates to wetland protections. With the overturning of the Sackett decision, some wetlands will lose federal protection. In the State of Illinois, legislation exists that offers some level of protection to these wetlands, but is not broad, overarching coverage as was with the Sackett decision. Initially, wetlands that will be impacted by this in the coastal zone, as well as for the entire state, need to be identified. A new need for information will then be triggered depending on those results and how new legislation is passed at the state level in the next 5 years.

Table 38: Emerging issues and information needed is based on IDNR-CMP knowledge and reports listed in Relevant Sources.

In-Depth Management Characterization

Purpose: To determine the effectiveness of management efforts to address identified problems related to the wetlands enhancement objective.

1. For each additional wetland management category below that was not already discussed as part of the Phase I assessment, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

Significant Changes in Wetland Management

Management Category	Employed By State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Wetland assessment methodologies	N	N	N
Wetland mapping and GIS	N	N	N
Watershed or special area management plans addressing wetlands	Y	Y	Y
Wetland technical assistance, education, and outreach	Y	N	N
Other (please specify)	N	Y	Y

Table 39: Management Categories, management employment, CMP assistance, and significant changes are based on IDNR-CMP knowledge and reports listed in Relevant Sources.

2. For management categories with significant changes since the last assessment, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
    a. Describe significant changes since the last assessment;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

    While there have not been any changes around wetland assessment methodologies, mapping, or technical assistance, education, and outreach, in the coastal zone, or the state as a whole, they have been identified as needs within CMP and IDNR. This work is at its beginning stages and will help IDNR staff navigate the actively changing regulatory landscape.

    <u>Watershed or Special Area Management Plans Addressing Wetlands</u>

    a. The Lake County Lake Michigan Watershed Based Plan, released in 2022, outlines the current state of Lake County's portion of the Lake Michigan watershed (the northern section of the Illinois Coastal Zone). The plan proposes watershed goals, multiple of which relate to the three wetland stressors identified on this worksheet, as well as best management practices that can be employed to meet these goals. This plan can be used to help guide management and project funding priorities based on the identified goals. IDNR-CMP provided funding to support the creation of this plan. The Illinois International Port District (IIPD), located in the Calumet region, contains and is adjacent to existing and historical wetland habitat. IIPD published a Master Plan in 2022 which points out the expected growth of industry and development in the region juxtapose with the importance of the existing wetlands. Although this plan is specifically geared towards the IIPD property, many of the problems put forth such as invasive species issues and restoring wetlands degraded by historic industrial contamination are true for the entire region. In 2019, IDNR-CMP received NOAA funding for a Project of Special Merit. This project, led by the Illinois State Geological

Survey, consisted of a study at Illinois Beach State Park (IBSP) to assess the hydrology and water quality of wetlands. The final report acknowledges that the outcomes of this study fulfils a need identified during the previous 309 assessment to characterize and analyze the wetlands of the Illinois Coastal Zone. The results of this study are critical in understanding how the wetlands at IBSP function hydrologically including how they interact with groundwater, lake floodwaters, and surface water runoff from the upland watershed. This study is an example of information that is needed from all of the major wetland systems in the coastal zone to better understand, restore, and protect these resources.

b. The hydrologic and water quality study at IBSP was funded as a Section 309 Project of Special Merit from NOAA.
c. These plans can be used to help guide management and project funding priorities to comprehensively address the numerous stressors affecting coastal wetlands.

Habitat Creation via Floating River Wetlands

a. While the central portion of the Illinois Coastal Zone, the City of Chicago, does not have numerous existing wetlands, the Chicago Waterways Restoration Framework Plan, released in 2023, focuses predominately on the current state of the Chicago River and associated streams, as well as needed improvements. The tie to wetland management in this plan is unique; due to the lack of suitable riverbank for the creation of wetlands, the utilization of man-made floating wetland platforms is identified. These wetlands have been successfully implemented in the main stem, north branch, and south branch of the Chicago River. These projects have been used as a model for planning future floating wetlands in other sections of the Chicago River as well as in other states.
b. These were not CZM-driven changes. In 2024, IDNR-CMP provided pass-through grant funding to Urban Rivers in support of scaling up their floating wetlands iniatives.
c. These projects have been used as a model for planning future floating wetlands in other sections of the Chicago River as well as in other states, increasing wetland habitat in regions that may not have suitable streambanks.

3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's or territory's management efforts in protecting, restoring, and enhancing coastal wetlands since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's or territory's management efforts?

Since the previous assessment, studies that illustrate the effectiveness of Illinois' wetland management efforts have not been conducted. The information lacking in order to assess Illinois' management efforts circles back to the emerging issue of the changing regulatory landscape as it relates to wetlands. The state does not currently have data relating to the current state of wetlands and since no changes in management efforts have taken place, there is no resulting data. The first step here would be to conduct a study on the current state of wetlands and identify any gaps so that management decisions can be made and implemented. After that, studies can take place to measure the effectiveness of these management strategies.

Identification of Priorities

1. Considering changes in wetlands and wetland management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve its ability to more effectively respond to significant wetlands stressors. *(Approximately 1-3 sentences per management priority.)*

   Management Priority 1: Capacity building, technical assistance, education, and outreach

   IDNR-CMP can utilize its staff expertise, existing relationships with local organizations and municipalities, and access to federal funding to provide assistance by supporting municipalities and non-profits, who do much of the wetland work in the region. IDNR-CMP can play a key role in strengthening local wetland conservation by helping communities assess and refine their existing policies and management approaches. By working with agencies, partner organizations, and local governments, IDNR-CMP can promote wetland planning, protection, and restoration at the community level. Additionally, IDNR-CMP will foster collaboration and information sharing across jurisdictions and sectors, ensuring that communities, organizations, and agencies are better connected and equipped to use existing tools and resources effectively.

   Management Priority 2: Improved mapping, tools, and data

   Improved mapping tools and data will fill in the gap of a baseline understanding of the wetlands that exist in the coastal zone as well as allow for the assessment of wetland health and functionality. With an enhanced understanding of the current status of wetlands, work can more efficiently be prioritized and implemented to manage invasives, preserve wetlands at risk from development, and restore wetlands which have become degraded.

   Management Priority 3: Creation of region wide guidance and framework

   Information and recommendations guiding wetland management exists in a piecemeal fashion in reports, some of which are outdated, that focus on specific portions of the coastal zone. The creation of a coastal zone-wide guidance using the data and mapping identified in *Priority 2* will provide guidance on wetland management in the coastal zone. A guidance like this would inform management decisions around invasive species management, which wetlands are most in need of restoration or protection due to risks from development or existing degradation. Best management practices for wetland management would also bolster the effectiveness of a region wide framework.

2. Identify and briefly explain priority needs and information gaps the CMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	Y	Similar to the study conducted at IBSP as a project of special merit, studies on the hydrology of coastal zone wetlands, especially relating to changes in hydrology due to development or loss of function, will inform better planning and management.
Mapping/GIS	Y	Conversations have been had at IDNR around the creation of a tool that would potentially use artificial intelligence or other modeling to combine data from the National Wetlands Inventory as well as the Illinois Natural History Survey to better identify and map wetlands in the state, including the coastal zone. This information would fill some of the gaps described in the above sections of this worksheet.
Data and information management	Y	If the above needs are met, the data generated by research and new wetland mapping/assessments will need to be stored in a way that is not only useful to the coastal program but to partners and IDNR in general. This data can be used to inform decisions around improving mapping tools as well as in the creation of a region wide wetland guidance.
Training/capacity building	Y	Recent changes in regulations and permitting have created a growing need for training and capacity building. Professionals who are not wetland specialists would benefit from targeted education that highlights the functions, benefits, and ecosystem services of wetlands to support wetland management and conservation.
Decision-support tools	N	N/A
Communication and outreach	Y	During the stakeholder engagement portion of 309 planning, education and outreach targeted at changing the public's perception of wetlands was identified as a top priority. If communities better understand the services wetlands provide (flood protection, stormwater treatment…) they will be more likely to support activities to protect and preserve them.

Table 40: Priority needs and gaps are based on knowledge from IDNR-CMP, internal and external stakeholders, and reports found in Relevant Sources

Enhancement Area Strategy Development

1. Will the CMP develop one or more strategies for this enhancement area?

Yes __X__
No _____

2. Briefly explain why a strategy will or will not be developed for this enhancement area.

The IDNR-CMP recognizes that invasive species, development, and degradation of functionality are significant issues for the Illinois Coastal Zone. Upstream development occurring outside of the coastal boundary may be impacting and degrading the functionality of coastal wetlands and the IDNR-CMP currently lack the means to address this issue. Strategies will be developed to determine how substantive are the impacts upstream development have on coastal wetlands and to increase resource delivery and management actions for coastal land managers to protect and enhance coastal wetlands.

Relevant Sources

Chicago Metropolitan Agency for Planning. (2022). *Illinois International Port District Master Plan*. IIPD-Master-Plan_2022_09_09_final_lowres.pdf

City of Chicago. (2019). *Wild Mile framework plan (Draft)*. Department of Planning and Development. https://www.chicago.gov/content/dam/city/depts/zlup/Planning_and_Policy/Publications/20190614_Wild%20Mile%20Framework_Draft_low_res.pdf

Lake County Stormwater Commission. *Stormwater Management Commission, Lake Michigan Watershed-Based Plan (2023).* https://www.lakecountyil.gov/2418/Lake-Michigan-Watershed.

Lake County Stormwater Commission. *Wetland Restoration and Preservation Plan.* (2020). WRAPP-Vol-1-Tech-Report-Final-PDF

Sullivan, G., Miller, N., Michel, N., Walter, M. (2017). *Calumet Conservation Action Plan*. Microsoft Word - 2019.04.30 Calumet_Wetland_CAP_Audubon Style.docx

United States Army Corps of Engineers. (2023). Chicago Waterways Restoration Framework Plan. Chicago Waterways Restoration Framework Plan.

Coastal Hazards

In-Depth Resource Characterization
Purpose: To determine key problems and opportunities to improve the CMP's ability to prevent or significantly reduce coastal hazard risks by eliminating development and redevelopment in high-hazard areas and managing the effects of potential sea level rise and Great Lakes level change.

1. Based on the characterization of coastal hazard risk, what are the three most significant coastal hazards [19] within your coastal zone? Also indicate the geographic scope of the hazard, i.e., is it prevalent throughout the coastal zone, or are there specific areas most at risk?

	Type of Hazard	Geographic Scope (throughout Coastal Zone or specific areas most threatened)
Hazard 1	Erosion	Throughout the coastal zone
Hazard 2	Flooding	Highly urbanized areas, mostly in the Chicago area and far north including Waukegan and surrounding area
Hazard 3	Great Lakes level change	Throughout the coastal zone

Table 41: Types of hazards and geographic scope are based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

2. Briefly explain why these are currently the most significant coastal hazards within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

As part of the stakeholder engagement survey for Phase I of the 309, respondents selected "Increase the understanding of risk and mitigation associated with coastal hazards (e.g., erosion, flooding, coastal storms) in Illinois" as one of the top three most pressing climate and coastal issues. Responders emphasized lack of education and information on the topic, the uncertainty and impacts of extreme weather events as it relates to flooding and shoreline erosion, and challenges connected to land use.

Hazard 1: Coastal Erosion

Portions of the Illinois shoreline are prone to erosion. Some of the factors that influence the rate and extent of erosion include sand availability in the littoral drift, geography of the coast, lake levels, and extreme weather events. Erosion impacts both the unique natural habitats found along the shoreline and important man-made infrastructure such as roads and water intake structures. Erosion impacts and mitigation measures are a frequent focus of the Shoreline Management Working Group. Other stakeholder focused initiatives, including the Coastal Resilience Guide for North Shore Communities, the South Shore Coastal Resilience Plan, and the Great Lakes Coastal Resilience Study, focus on erosion, associated impacts, and potential mitigation and adaptation strategies.

One factor influencing erosion is the availability of sand resources along the coast. A 2017 study by the Illinois State Geological Survey provided insight into the amount and location of sand along the Illinois Lake Michigan coastline. The study reveals that sand is abundant in the northern end of the coast, while

[19] See list of coastal hazards on pg. 27 of this assessment template.

the area south of Waukegan is relatively sand-starved. The study also determined that this dynamic existed even prior to manmade modifications to the shoreline.

The results of this sand study impact how communities should manage their shoreline for erosion. For example, most Illinois communities are in sand-starved areas and cannot rely on sand coming from the north through littoral drift to supply their beaches. Lack of sand in the system, plus the presence of sand capturing infrastructure such as groins and jetties, means that the majority of beaches must rely on beach nourishment for new sand and shoreline structures to retain it. Due to the high costs associated with beach nourishment and shoreline structures, many Illinois communities seek resources to assist in planning and implementing resilient solutions.

Hazard 2: Flooding

The Center for Neighborhood Technology's (CNT) 2019 Flood Equity Report found that from 2007 to 2016, over $400 million was paid to Chicago residents for flood damage. Flood claims were disproportionately from zip codes on the south and west sides of the city. Damage occurring in Chicago (and other coastal regions) is the result of both riverine and urban flooding.

Between 1979 and 2009, extreme precipitation events increased as much as 40 percent in the central U.S. compared to the previous 30 years. However, according to the Chicago Metropolitan Agency for Planning (CMAP), much of the region's infrastructure standards and floodplain maps rely on older precipitation data. CMAP recommends: "updating floodplain maps to reflect current development conditions as well as current and future precipitation; watershed and sewer modeling to identify and increase awareness of areas of riverine and urban flooding risk; collect flooding data and communicate risk."

In 2017, CMAP created the Urban Flood Susceptibility Index, which maps the areas most susceptible to flooding using a frequency ratio approach. The factors used in this analysis include Topographic Wetness Index, combined sewer service areas, property elevation compared to nearest Base Flood Elevation, impervious cover, age of first development, and precipitation variation. Data is sourced from FEMA, counties, and the City of Chicago and spans from 1978 to 2017, depending on the source. In the Urban Flood Susceptibility Index map, areas are given a susceptibility value of one (low) through ten (high). The vast majority of the city of Chicago has a value of at least seven, with many areas reaching a value of ten.

CNT's map of Chicago flood insurance claims, along with CMAP's Urban Flood Susceptibility index map, highlights the amount of flooding that occurs in areas adjacent to the Illinois coastal zone boundary, potentially impacting coastal habitats and Lake Michigan water quality.

Hazard 3: Great Lakes water level change

Lake levels in Lake Michigan reached a record low in 2013 and reached near-record high water levels in 2020. Change this rapid has not been seen before in the recorded history of lake levels from 1918 to present.

Many shoreline communities are now interested in how they can prepare for a range of future lake level changes going forward. Low water levels present impacts to navigation and increased dredging costs,

while high water levels increase vulnerability to coastal hazards. In 2020, during a period of near-record-high lake levels, a single winter storm resulted in an estimated $15 million in damages to Chicago Park District property along the lakeshore, with a Declaration of Disaster following the storm.

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Urban flooding	How stormwater from outside the Illinois Coastal Zone impacts the Illinois Coastal Zone.

Table 42: Emerging issue and information needed is based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

In-Depth Management Characterization

Purpose: To determine the effectiveness of management efforts to address identified problems related to the coastal hazards enhancement objective.

1. For each coastal hazard management category below, indicate if the approach is employed by the state or territory and if there has been a significant change since the last assessment.

Significant Changes in Coastal Hazards Statutes, Regulations, and Policies

Management Category	Employed by State/Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Change Since the Last Assessment (Y or N)
Shorefront setbacks/no build areas	N	N	N
Rolling easements	N	N	N
Repair/rebuilding restrictions	Y	N	Y
Hard shoreline protection structure restrictions	Y	N	Y
Promotion of alternative shoreline stabilization methodologies (i.e., living shorelines/green infrastructure)	Y	Y	Y
Repair/replacement of shore protection structure restrictions	Y	N	Y
Inlet management	N	N	N
Protection of important natural resources for hazard mitigation benefits (e.g., dunes, wetlands, barrier islands, coral reefs) (other than setbacks/no build areas)	N	Y	N
Repetitive flood loss policies (e.g., relocation, buyouts)	Y	N	N
Freeboard requirements	Y	N	N
Real estate sales disclosure requirements	Y	N	Y
Restrictions on publicly funded infrastructure	Y	N	Y

Management Category	Employed by State/Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Change Since the Last Assessment (Y or N)
Infrastructure protection (e.g., considering hazards in siting and design)	Y	Y	N

Table 43: Significant changes in coastal hazards management, state employment, IDNR-CMP assistance, and significant changes are based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

Significant Changes to Coastal Hazard Management Planning Programs or Initiatives

Management Category	Employed by State/Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Change Since the Last Assessment (Y or N)
Hazard mitigation plans	Y	N	Y
Sea level rise/Great Lake level change or adaptation plans	Y	Y	N
Statewide requirement for local post-disaster recovery planning	Y	N	N
Sediment management plans	N	Y	N
Beach nourishment plans	N	Y	Y
Special Area Management Plans (that address hazards issues)	N	Y	N
Managed retreat plans	N	N	N
Other (please specify)			

Table 44: Changes to coastal hazard management planning programs or initiatives, state employment, IDNR-CMP assistance, and significance are based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

Significant Changes to Coastal Hazard Research, Mapping, and Education Programs or Initiatives

Management Category	Employed by State/Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Change Since the Last Assessment (Y or N)
General hazards mapping or modeling	N	N	Y
Sea level rise mapping or modeling	N	N	N
Hazards monitoring (e.g., erosion rate, shoreline change, high-water marks)	Y	N	Y
Hazards education and outreach	Y	Y	Y
Other (please specify) Hazards pilot project	Y	N	Y

Table 45: Changes to coastal hazard research, mapping, education programs/initiatives, state employment, IDNR-CMP assistance, and significance are based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

2. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's management efforts in addressing coastal hazards since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's management efforts?

Currently there are no studies that have drawn conclusions on the effectiveness of the IDNR-CMP's management efforts in addressing coastal hazards since the last assessment. However, since the last assessment, IDNR-CMP has coordinated and facilitated the Illinois Sand Management Working Group, now the Shoreline Management Working Group, which has worked on several projects related to coastal hazards. There are plans to continue to utilize this group for coastal hazard management planning activities, such as through the Great Lakes Coastal Resiliency Study.

Identification of Priorities

1. Considering changes in coastal hazard risk and coastal hazard management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve its ability to more effectively address the most significant hazard risks. *(Approximately 1-3 sentences per management priority.)*

   Management Priority 1: Improving stormwater management and reducing urban flooding

   Description: Stormwater management is an escalating challenge in urban areas, requiring a range of solutions to effectively capture runoff, reduce flooding, and minimize associated damages. Coordinated efforts among agencies, supported by research and targeted studies, are essential to identify and implement effective strategies. Expanding the use of green infrastructure will play a central role, enhancing infiltration, improving water quality, and reducing flood risks while delivering additional ecological and community benefits.

   Management Priority 2: Explore mechanisms for regional and multijurisdictional approaches for effective shoreline management

   Description: There are significant needs to assist communities in working together on larger, more impactful shoreline management actions but there are significant structural and administrative challenges in doing this. Many communities do not have the capacity or expertise to take a lead role on a multijurisdictional coastal effort or project. IDNR-CMP plans to leverage its existing partner relationships across the local, state, and federal levels to improve regional and multijurisdictional coastal planning efforts.

2. Identify and briefly explain priority needs and information gaps the CMP has for addressing the management priorities identified above. The needs and gaps identified here should not be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	Y	There exists a need for Illinois-specific legal analysis providing policy options and recommendations for local shoreland management approaches (e.g. local setbacks, easements, planning/zoning provisions). Further research is needed to determine how flooding and stormwater outside the coastal zone affects the waters of the coastal zone. For example, combined sewer overflows affect water quality of the Chicago River and Lake Michigan, which are influenced by regional flooding events.
Mapping/GIS/modeling	N	Mapping efforts for vulnerabilities are currently being conducted through the Great Lakes Coastal Resiliency Study.
Data and information management	N	An online data hub called I-SHORE was recently launched to house Illinois coastal data and resources.
Training/Capacity building	Y	Empowering local shoreline managers to work with their neighbors to make decisions that benefit the larger system; training municipal staff and consultants on conceptualizing resilient shoreline management projects right from design to obtaining funding to navigating permitting requirements; enabling regulatory agency staff to streamline the permitting process for low impact projects that strive to improve regional shoreline resilience.
Decision-support tools	N	There are existing tools coastal managers can utilize, as well as a new one coming through the Great Lakes Coastal Resiliency Study
Communication and outreach	Y	Providing information on coastal hazards and resilient solutions to public land managers as well as private landowners.

Table 46: Priority needs and gaps are based on internal and external stakeholders, resources listed in Relevant Sources, and IDNR-CMP knowledge.

Enhancement Area Strategy Development

1. Will the CMP develop one or more strategies for this enhancement area?

Yes X
No ____

2. Briefly explain why a strategy will or will not be developed for this enhancement area.

The IDNR-CMP recognizes that urban flooding, lake level change, and erosion are significant issues for the Illinois Coastal Zone. Urban flooding and stormwater outside of the coastal boundary may be impacting coastal waters and habitats and IDNR-CMP currently lack the means to address this issue. Additionally, there continues to be capacity shortfalls at the local and state levels to address erosion and lake level change. Strategies will be developed to determine flooding impacts on coastal waters and to increase resource delivery to coastal land managers.

Relevant Sources

Center for Neighborhood Technology. (2018). *Flood equity report: Assessing disparities of urban flood risk for households of color in Chicago*. https://cnt.org/projects/flood-equity-report

Chicago Metropolitan Agency for Planning. (2018). *ON TO 2050: Comprehensive regional plan.* https://cmap.illinois.gov/wp-content/uploads/dlm_uploads/ON-TO-2050-Comprehensive-Regional-Plan-FINAL.pdf

Mwakanyamale, K.E., Brown, S.E., & Theuerkauf, E.J. (2020). *Delineating spatial distribution and thickness of unconsolidated sand along the southwest Lake Michigan shoreline using TEM and ERT geophysical methods,* Journal of Great Lakes Research, 46(6), 1544-1330. **https://doi.org/10.1016/j.jglr.2020.08.002**

National Weather Service. *January 10-11, 2020: First Snowfall of the Season*. National Weather Service. https://www.weather.gov/lot/1011Jan2020

P.Y. Groisman, R.W. Knight, and T.R. Karl, *Changes in intense precipitation over the central United States*, Journal of Hydrometeorology 13, no. 1, 2012. 47-66.

State of Illinois. (2020, February 6). *Gov. Pritzker Issues State Disaster Proclamation Following Significant Storm Damage in Cook, Lake Counties*. Illinois.gov. https://www.illinois.gov/news/release.html?releaseid=21135

SmithGroup. (2020, July 15). *Lake Michigan High Water Level Shoreline Assessment*. Chicago Park District & Chicago Department of Transportation. https://www.chicago.gov/content/dam/city/depts/cdot/general/RPT_2020-0715_Lake_Michigan_High_Water_Level_Shoreline_Assessment.pdf

U.S. Army Corps of Engineers Great Lakes and Ohio River Division, *Water level forecasts.* https://www.lrd.usace.army.mil/Water-Information/Water-Management/Great-Lakes-and-Harbors/Water-Level-Forecasts/

Strategy

Strategy: Coastal Hazards & Wetlands – Assessing Flooding and Development Impacts to Inform Coastal Zone Boundary Refinement

I. Issue Area(s)

A. The proposed strategy or implementation activities will *primarily* support the following high-priority enhancement area(s) *(check no more than two):*

- ☐ Aquaculture
- ☐ Energy and Government Facility Siting
- **X** Coastal Hazards
- ☐ Ocean/Great Lakes Resources
- ☐ Special Area Management Planning
- ☐ Cumulative and Secondary Impacts
- **X** Wetlands
- ☐ Marine Debris
- ☐ Public Access

B. The proposed strategy or implementation activities will also support the following enhancement areas *(check all that apply)*:

- ☐ Aquaculture
- ☐ Energy and Government Facility Siting
- ☐ Coastal Hazards
- ☐ Ocean/Great Lakes Resources
- ☐ Special Area Management Planning
- **X** Cumulative and Secondary Impacts
- ☐ Wetlands
- ☐ Marine Debris
- ☐ Public Access

II. Strategy Description

A. The proposed strategy will lead to, or implement, the following types of program changes *(check all that apply):*

X A change to coastal zone boundaries;

☐ New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;

☐ New or revised local coastal programs and implementing ordinances;

☐ New or revised coastal land acquisition, management, and restoration programs;

☐ New or revised special area management plans (SAMP) or plans for areas of particular concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,

☐ New or revised guidelines, procedures, and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government, and other agencies that will result in meaningful improvements in coastal resource management.

B. ***Strategy Goal:***

The goal of this strategy is to assess the need and potential impacts of a coastal program boundary change to address coastal hazards, primarily flooding, and coastal wetland degradation in Illinois. During the five-year strategy period, IDNR-CMP will seek to understand how urban flooding in the Chicago River watershed in Cook County and upstream development in Lake County impact water

quality, coastal flooding and coastal wetland quality in Illinois' Lake Michigan coast. IDNR-CMP will engage qualified firms to conduct needs assessments, stakeholder engagement, hydrologic studies, and geospatial analyses to inform whether and where a coastal zone boundary change would allow IDNR-CMP to focus efforts and resources to better address coastal hazards and coastal wetland degradation in Illinois.

C. Description

The proposed strategy will include evaluation of two primary issues in Cook and Lake Counties, Illinois. In Cook County, IDNR-CMP will review flooding issues in the Chicago River watershed to better understand how and where urban flooding impacts water quality and coastal flooding within the Lake Michigan watershed. In Lake County, IDNR-CMP will conduct wetlands assessments to better understand impacts on coastal wetlands from upstream development. This will inform whether and where a change in Illinois' coastal zone boundary would help address the impacts of these issues for Illinois' Lake Michigan communities.

The Illinois Coastal Zone Boundary is currently based on the understanding that the reversal of the Chicago River and extensive sewer, deep tunnel and drainage modifications implemented through the course of urban development carries much of the surface water runoff, wastewater and pollutants in the Chicagoland region to the Mississippi watershed. In Cook County, the boundary follows corridors along the Chicago River and its branches, recognizing their historic and ongoing hydrologic connection to Lake Michigan through locks, combined sewer overflows, and floodwater diversions. In Lake County, the boundary generally follows Green Bay Road, which traces the Highland Park Moraine up to four miles inland and captures the watersheds of streams such as Kellog Creek, Bull Creek, the Waukegan River, and Pettibon Creek that flow directly to Lake Michigan. North Shore ravines that present ongoing erosion and stability challenges are included in the northern inland boundary as well. Since the Illinois coastal program and boundary was originally approved, new factors such as increased suburban development and increased extreme weather events have led to increased stormwater runoff and urban flooding, impacting how surface water and pollutants move in and out of the coastal zone. IDNR-CMP seeks to understand whether and where focus and investment beyond the current coastal zone boundary could help address these new factors.

Cook County, Illinois

Urban flooding resulting from increased storm intensity and extreme weather patterns is a persistent problem across the Chicago River watershed, leading to combined sewer overflows (CSOs) and repeated flooding of residential and commercial structures. The frequency and impacts of storm events has been increasing over the past decade, with periods of extended drought followed immediately by back-to-back severe storms that can produce as much as nine inches of precipitation over the course of a few hours, as was the case in July 2023, when rainfall caused at least $500 million in damages in Cook County, flooded over 70,000 basements, and forced officials to reverse the flow of the Chicago River into Lake Michigan. The result is increased volume and rapid flow to an aging local sewer system and a Deep Tunnel system that may already be or near capacity during storm events. Impervious surfaces increase the strain on the sewer system's ability to move water to treatment plants, due to the rapid intensity and quick fill of the system, which may lead to localized flooding, sewer backups, property damage, and degraded water quality from

combined sewer overflows in the Chicago River and potentially Lake Michigan, either through direct runoff, or by reversing river flows back toward the lake.

Lake County, Illinois

Coastal wetlands in Lake County are functionally important to Lake Michigan water quality, fish and bird habitat, and resilience to lake-level fluctuations. Upstream development has altered the hydrology of these coastal wetlands, as well as degraded critical habitat and reduced ecosystem services. Local protections, such as Lake County Stormwater Management Commission's 2015 Wetland Restoration Plan, are critical but cannot fully prevent the cumulative or cross-jurisdictional impacts of watershed-scale development. These upstream stressors highlight the need to evaluate whether the current coastal zone boundary adequately encompasses the watersheds most critical to sustaining wetland health and coastal resilience.

The proposed strategy will clarify how urban flooding and upstream development outside the current Illinois Coastal Zone influence Lake Michigan water quality and coastal wetlands. While Chicago River watershed runoff is often assumed to bypass Lake Michigan, pathways for inter-basin exchange, overland flow, combined sewer overflows, and localized drainage connections may still contribute pollutants and altered hydrology to the Lake Michigan system. The magnitude, frequency, and locations of these contributions are not well quantified. Similarly, development patterns in Lake County can modify watershed hydrology, changing timing, volume, and quality of inflows to coastal wetlands, yet the extent of these impacts remain insufficiently characterized. This strategy will focus on understanding these key issues in the context of Illinois' Coastal Zone boundary and identify whether and where the boundary could be expanded to help address the issues.

III. Needs and Gaps Addressed

Current assumptions about hydrologic pathways may underestimate the potential for stormwater, combined sewer overflows, and altered drainage to contribute pollutants and excess flows into Lake Michigan in Cook County. Concurrently, the influence of land use and development upstream of coastal wetlands in Lake County has not been fully characterized, leaving uncertainty around how these changes compromise wetland function, habitat integrity, and water quality protection.

The proposed strategy would allow the IDNR-CMP to identify a more accurate Coastal Zone boundary with a greater benefit for the Lake Michigan coast and coastal communities. Through research and input from coastal partners and communities, IDNR-CMP have identified increasing the use of green infrastructure for stormwater management as a high priority and IDNR-CMP has been working to promote green infrastructure use. This strategy will allow a better targeting of areas that should be prioritized to reduce the impacts of flooding near the Coastal Zone and bolster coastal wetland protections. Evaluating the Coastal Zone boundary will allow IDNR-CMP to focus efforts in areas where flooding and upstream development directly impact Lake Michigan and its coastal wetlands. IDNR-CMP will be able to align management strategies with the actual geographic extent of stressors and better coordinate with local and regional partners.

IV. Benefits to Coastal Management

This strategy will strengthen IDNR-CMP's ability to manage coastal resources by providing a clearer understanding of how surface water runoff, combined sewer overflows, repeated flooding and upstream development affect Lake Michigan water quality and coastal wetlands. By identifying the pathways through which urban flooding contributes to water quality degradation, IDNR-CMP will be able to target interventions in Cook County, such as green stormwater infrastructure, where they will have the greatest impact. Polluted runoff from extreme weather events can carry excess nutrients, sediment, bacteria, and other contaminants into connected waterways and potentially into Lake Michigan. With improved data and analysis, the IDNR-CMP will be able to better direct resources toward solutions that increase infiltration, reduce flood risk, and relieve pressure on already overburdened sewer systems.

Equally important, this strategy will address gaps in understanding how upstream development in Lake County affects coastal wetlands. These wetlands provide critical ecological and community benefits, including flood attenuation, water filtration, shoreline stabilization, fish and wildlife habitat, and recreational value. However, changes in land use upstream, such as increased impervious surfaces, can increase water flow, alter hydrologic regimes, reduce wetland resilience, and degrade habitat quality and wetland functionality. While Lake County's no-net-loss wetland policy and Wetland Restoration and Preservation Plan provide funding and strong frameworks, cumulative development pressures and increases in storm intensity and frequency continue to threaten wetland function. By assessing the magnitude and extent of these impacts, IDNR-CMP will be able to prioritize wetland conservation and restoration actions that protect the integrity of the Lake Michigan coast.

The benefits of this strategy extend beyond IDNR-CMP, as findings will be valuable to partner agencies and organizations engaged in stormwater management, habitat restoration, and regional planning. Better characterization of runoff, flooding, and wetland impacts will inform decision-making across multiple jurisdictions, leading to more effective and coordinated management of the Lake Michigan Basin. With an expanded boundary, IDNR-CMP will be able to leverage additional funding for management action and strategies to address flooding and wetland issues. Additional co-benefits include improving opportunities for groundwater recharge, enhancing ecological connectivity, and ensuring that the coastal zone boundary reflects the true extent of watershed influences on Lake Michigan. Ultimately, this strategy will position Illinois to better safeguard coastal communities, wetlands, and water quality under changing precipitation and development conditions.

V. Likelihood of Success

IDNR-CMP believes there is a medium to high likelihood of success that this strategy will lead to the program change. The extremely modified landscape and altered hydrology have led to uncertainty in Cook and Lake County. In Cook County, there is uncertainty around the precise pathways by which surface water runoff, repetitive flooding, and combined sewer overflows influence Lake Michigan water quality. In Lake County, there is uncertainty around the ways increased water flow from upstream development outside of the coastal zone change the hydrology and function of coastal wetlands that may be impacting Lake Michigan. The information

needed to resolve these gaps is knowable through targeted assessments, but challenges related to scale, data availability, and costs may affect the timeframe for completion. IDNR-CMP will also rely on engagement and input from coastal partners and communities to understand the pros and cons of a potential boundary change and will assess the political will for a proposed change once a better understanding of the issues is identified.

This strategy is supported by strong momentum and partnerships. IDNR-CMP has been well received by coastal stakeholders and enjoys broad support among local agencies, non-profits, and municipalities. Partners such as the Metropolitan Water Reclamation District of Greater Chicago, the City of Chicago, Lake County Stormwater Management Commission, and conservation organizations such as The Wetland Initiative and Lake County Forest Preserves District have a vested interest in understanding and addressing both flooding and wetland degradation. This collaborative environment increases the likelihood that research findings will be translated into management actions and that proposed refinements to the Coastal Zone boundary will be supported.

Robust community and stakeholder engagement will be critical to ensuring success of the proposed program boundary change. Engaging community members throughout the process through workshops, surveys, and public meetings will help ensure that the strategy reflects local priorities and builds long-term support. Illinois-Indiana SeaGrant is developing a Southern Lake Michigan Coastal Resilience Community of Practice (CoP) which can serve as a framework for connecting managers, planners, and researchers across Northeastern Illinois and Northwestern Indiana to develop a community for sharing and collaborating on efforts to prevent and mitigate coastal hazards. IDNR-CMP can utilize this CoP to ensure the success of the proposed program boundary change and build long-term support. In Cook County, incorporating the perspectives of agencies that address stormwater as well as the communities that are impacted by urban flooding will be particularly important. In Lake County, incorporating the perspectives of communities that rely on wetlands for flood protection, recreation, and ecological value will be particularly important.

To maintain and build future support, IDNR-CMP will continue regular outreach and education with coastal legislators, elected officials, community groups, and partner agencies. Communication efforts will highlight how improved understanding of flooding and wetland stressors translates into tangible benefits such as reduced flood risk, improved water quality, stronger wetland protections, and enhanced resilience of the Lake Michigan coast. By aligning scientific research with community needs and policy priorities, the IDNR-CMP will maximize the likelihood of achieving meaningful, widely supported program changes within or following the five-year assessment cycle.

VI. Strategy Work Plan

Strategy Goal: The goal of this strategy is to assess the need and potential impacts of a coastal program boundary change to address coastal hazards, primarily flooding, and coastal wetland degradation in Illinois.

IDNR-CMP will engage qualified teams to deliver: 1) a Chicago River watershed urban flooding assessment, and 2) a Lake County coastal wetland impact assessment. Strategy development and review will be done in partnership with key agencies, state and federal partners, and NGOs, potentially including agencies and organizations such as the Metropolitan Water Reclamation District, Chicago Department of Water Management, Metropolitan Planning Council, Illinois Environmental Protection Agency, Lake County Stormwater Commission, Lake Forest Openlands Association, The Wetlands Institute, Audubon Great Lakes, and others. IDNR-CMP will hold quarterly check-ins to review interim results, assess progress, and refine methods to ensure actionable findings for management and potential boundary updates.

Total Years: 5
Total Budget: $937,500

Year: 1
Description of activities:

- Preliminary meetings with NOAA OCM to guide program change evaluation
- Develop workplan
- Finalize scope of work
- Create RFPs, review proposals, and select contractors
- Execute contracts with experienced firms
- Literature review and assessment of currently available data
- Coordination with key partners
- Quarterly assessments of work

Major Milestone(s): Develop workplan and strategies, select contractor(s), execute contract(s)
Budget: $187,500

Year: 2
Description of activities:

- Begin flooding assessment in Chicago River watershed including hydrologic study and geospatial analysis
- Begin wetland assessment in Lake County including hydrologic study and geospatial analysis
- Data gathering
- Quarterly assessments of work
- Biannual interim findings workshop with stakeholders and communities
- Incorporate stakeholder input on flooding and wetland priorities

Major Milestone(s): Consultants begin flooding and wetland assessments, two community and stakeholder workshops
Budget: $187,500

Year: 3
Description of activities:

- Project management
- Quarterly assessments of work

- Continued flooding assessment in Cook County, including hydrologic study and geospatial analysis, refine with stakeholder input
- Continued wetland assessment in Lake County, including hydrologic study and geospatial analysis, refine with stakeholder input
- Continued data gathering, address data gaps
- Biannual stakeholder and community engagement sessions
- Incorporate stakeholder input on flooding and wetland priorities

Major Milestone(s): Continued urban flooding and wetland assessments, two stakeholder and community engagement sessions
Budget: $187,500

Year: 4
Description of activities:

- Project management
- Quarterly assessments of work
- Continued flooding assessment in Cook County, including hydrologic study and geospatial analysis, refine with stakeholder input
- Continued wetland assessment in Lake County, including hydrologic study and geospatial analysis, refine with stakeholder input
- Address data gaps
- Biannual stakeholder and community engagement sessions

Major Milestone(s): Continued urban flooding and wetland assessments, two stakeholder and community engagement sessions
Budget: $187,500

Year: 5
Description of activities:

- Assessment of results, including evaluation of coastal zone boundary
- Dissemination of results to stakeholders and NOAA OCM
- Biannual stakeholder and community engagement workshop sessions
- Coordinate with NOAA OCM for preliminary review and guidance of the program change
- Prepare documentation for program change (if warranted)

Major Milestone(s): Completion of flooding assessment and wetland assessment, compilation and analysis of results, two stakeholder and community engagement sessions, preliminary meetings with NOAA OCM for review and guidance on program change, preparation of draft documentation necessary for program change (if warranted), submission of documentation necessary for program change (if warranted) to NOAA
Budget: $187,500

VII. Fiscal and Technical Needs

A. Fiscal Needs:

Section 309 funding should be sufficient to accomplish this strategy.

B. Technical Needs:

IDNR-CMP does not have the capacity to fulfill all of the needs of this strategy and plans to have most of the technical work done contractually. IDNR-CMP staff will manage the contract work and will support the community engagement through staff time funded by NOAA's annual allocation (Section 306 funds). IDNR-CMP will also facilitate intra- and inter-agency review, input and approval.

VIII. Projects of Special Merit (Optional)

No Projects of Special Merit are planned at this time. Projects of Special Merit may be submitted as additional data needs are identified.

Five-Year Budget Summary by Strategy

Strategy Title	Anticipated Funding Source (309 or Other)	Year 1 Funding	Year 2 Funding	Year 3 Funding	Year 4 Funding	Year 5 Funding	Total Funding
Coastal Hazards & Wetlands – Assessing Flooding and Development Impacts to Inform Coastal Zone Boundary Refinement	309	$187,500	$187,500	$187,500	$187,500	$187,500	$937,500
Total Funding		$187,500	$187,500	$187,500	$187,500	$187,500	$937,500

Summary of Stakeholder and Public Comment

IDNR-CMP staff consulted internal and external stakeholders in the preparation of this document. Internal stakeholders consisted of staff from IDNR-CMP, IDNR Office of Water Resources, and other divisions within the IDNR. External coastal stakeholders consisted of IDNR-CMP partners with a working knowledge of the program, core understanding of IDNR-CMP's mission and objectives, and having

worked with the IDNR-CMP on recent project efforts. Groups facilitated by IDNR-CMP such as the Beach Managers Working Group, Shoreline Management Working Group, and the Coastal Clean Waters Advisory Group provided input during meetings, online surveys, and meetings.

Initial stakeholder input was sought during the Phase I assessment through a web-based survey. The survey was sent out to the 665 subscribers of the IDNR-CMP monthly newsletter as well as through the newsletters of partners including, Chicago Wilderness Alliance, Friends of the Chicago River, and Openlands. The survey was also shared on LinkedIn. The survey was open for three weeks and received responses from 38 individuals. Local government and non-profit made up 58% of the responses. Respondents were fairly familiar with IDNR-CMP as 47% of respondents interacted with IDNR-CMP staff at an event, and 45% applied for or received an IDNR-CMP grant. Responses covered a range of aspects but tended to identify wetlands, coastal hazards, and public access as priorities. Respondents indicated that development, public perception and education, and habitat fragmentation and degradation are the most pressing challenges. Public engagement and education, interagency collaboration, and funding were the top opportunities for IDNR-CMP to address coastal issues according to respondents. The results of this survey are attached as Appendix A at the end of this document.

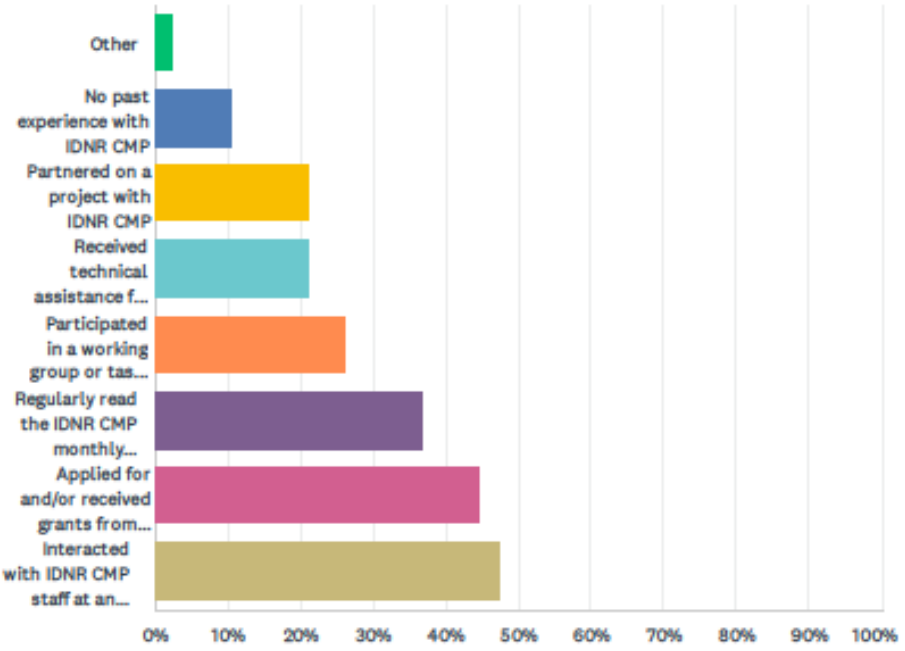
Further focused stakeholder input includes a web-based survey, facilitated exercises during meetings with the Beach Managers Working Group and Coastal Clean Waters Advisory Group, and through one-on-one calls with partners. The survey was sent out to representatives of the Shoreline Management Working Group, internal IDNR staff, the Coastal Clean Waters Advisory Group, and partners with a core understanding of coastal hazards and wetland issues. The Beach Managers Working Group was developed in 2017 and is an informal network of local beach managers collaborating to address public access and coastal resilience issues in the Illinois Coastal Zone. The Shoreline Management Working Group was developed in 2015 following the previous 309 assessment and strategy and is a network of local, state, and federal leaders and land managers – from the public, academic and private sectors – collaborating to address shoreline change on Illinois' Lake Michigan shoreline. The Coastal Clean Waters Advisory Group was developed in 2024 following the approval of IDNR-CMP's nonpoint source pollution prevention program and is an network of local and state public, academia and nonprofit leaders collaborating to address water quality issues in Illinois' Coastal Zone. One-on-one calls were held with representatives from the Lake County Stormwater Management Commission, Lake County Forest Preserves District, The Wetlands Initiative, IDNR Office of Water Resources, IDNR Wildlife Biologists, and the Metropolitan Planning Council. Responses from the survey and interviews covered a range of aspects and identified upstream and urban stressors, such as urbanization, hydrologic modifications, and invasive species, as undermining coastal wetland health and water quality. Results from the online survey are shown as Appendix B at the end of this document.

The Draft Enhancement Assessment and Strategy for 2026-2030 was made available on the IDNR-CMP website for 33 days from October 30, 2025, to December 2, 2025, for public input. An online form was published to receive public comment. IDNR-CMP responses to the public comment period will be updated as Appendix C following the public comment period.

Appendix A: Illinois Department of Natural Resource Coastal Management Program 2026-2030 Enhancement Survey

Q2 Which of the following best describes your past or current working experience, if any, with the IDNR Coastal Management Program (select all that apply)?

Answered: 38 Skipped: 0

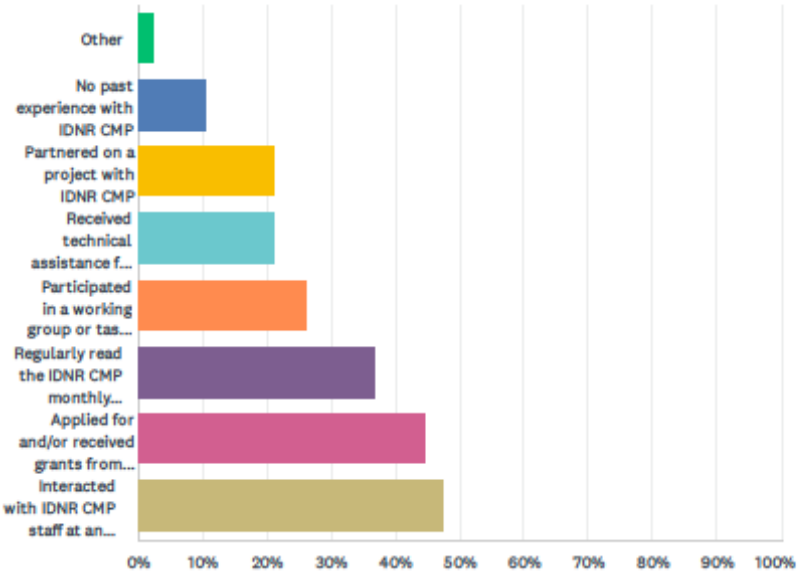


ANSWER CHOICES	RESPONSES	
Other	2.63%	1
No past experience with IDNR CMP	10.53%	4
Partnered on a project with IDNR CMP	21.05%	8
Received technical assistance from IDNR CMP	21.05%	8
Participated in a working group or task force that IDNR CMP facilitates	26.32%	10
Regularly read the IDNR CMP monthly newsletter	36.84%	14
Applied for and/or received grants from IDNR CMP	44.74%	17
Interacted with IDNR CMP staff at an event	47.37%	18
Total Respondents: 38		

2025 IDNR Coastal Management Program Enhancement Survey SurveyMonkey

Q2 Which of the following best describes your past or current working experience, if any, with the IDNR Coastal Management Program (select all that apply)?

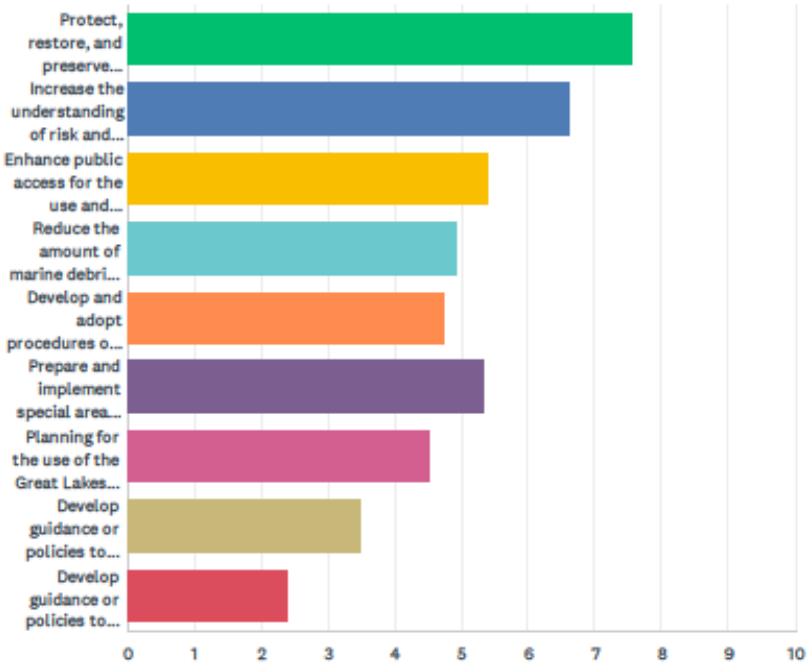
Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES	
Other	2.63%	1
No past experience with IDNR CMP	10.53%	4
Partnered on a project with IDNR CMP	21.05%	8
Received technical assistance from IDNR CMP	21.05%	8
Participated in a working group or task force that IDNR CMP facilitates	26.32%	10
Regularly read the IDNR CMP monthly newsletter	36.84%	14
Applied for and/or received grants from IDNR CMP	44.74%	17
Interacted with IDNR CMP staff at an event	47.37%	18
Total Respondents: 38		

Q3 Considering what you know to be the most pressing climate and coastal issues facing Illinois, please identify which of the following enhancement areas that you think are the most important for IDNR CMP to consider. Please rank the following enhancement areas below. Please arrange the following topics in order of 1 = Highest Priority to 9 = Lowest Priority.

Answered: 38 Skipped: 0



2025 IDNR Coastal Management Program Enhancement Survey SurveyMonkey

	1	2	3	4	5	6	7	8	9	TOTAL	SCORE
Protect, restore, and preserve coastal wetlands in Illinois.	36.84% 14	23.68% 9	21.05% 8	2.63% 1	10.53% 4	2.63% 1	2.63% 1	0.00% 0	0.00% 0	38	7.55
Increase the understanding of risk and mitigation associated with coastal hazards (e.g. erosion, flooding, coastal storms) in Illinois.	26.32% 10	15.79% 6	18.42% 7	10.53% 4	5.26% 2	15.79% 6	5.26% 2	0.00% 0	2.63% 1	38	6.63
Enhance public access for the use and enjoyment of the Illinois Lake Michigan coastline.	18.42% 7	13.16% 5	5.26% 2	10.53% 4	15.79% 6	10.53% 4	5.26% 2	10.53% 4	10.53% 4	38	5.39
Reduce the amount of marine debris (e.g., plastic pollution, derelict fishing gear, other trash) entering the Great Lakes	2.63% 1	13.16% 5	18.42% 7	5.26% 2	10.53% 4	18.42% 7	18.42% 7	7.89% 3	5.26% 2	38	4.92
Develop and adopt procedures or guidance to assess, consider, and control the cumulative and secondary impacts of coastal growth and development in Illinois. Cumulative and secondary impacts include such issues as changes in housing availability, changes in land cover, development	5.26% 2	7.89% 3	15.79% 6	7.89% 3	15.79% 6	15.79% 6	10.53% 4	10.53% 4	10.53% 4	38	4.74

trends, and how land is used.											
Prepare and implement special area management plans (including comprehensive plans for natural resources and economic growth) for important coastal areas in Illinois.	7.89% 3	18.42% 7	7.89% 3	13.16% 5	13.16% 5	10.53% 4	15.79% 6	10.53% 4	2.63% 1	38	5.32
Planning for the use of the Great Lakes resources (e.g., employment, benthic habitat, cultural/historic resources, tourism, wages, GDP) in Illinois.	2.63% 1	5.26% 2	2.63% 1	28.95% 11	13.16% 5	13.16% 5	15.79% 6	10.53% 4	7.89% 3	38	4.53
Develop guidance or policies to help facilitate the siting of energy and government facilities (e.g., ports, pipelines, electric power facilities) within the coastal zone in Illinois.	0.00% 0	2.63% 1	5.26% 2	15.79% 6	15.79% 6	5.26% 2	10.53% 4	21.05% 8	23.68% 9	38	3.50
Develop guidance or policies to evaluate and facilitate the siting of public and private aquaculture facilities (facilities that raise aquatic organisms, such as fish) in the coastal zone in Illinois.	0.00% 0	0.00% 0	5.26% 2	5.26% 2	0.00% 0	7.89% 3	15.79% 6	28.95% 11	36.84% 14	38	2.42

Q4 Considering the two HIGHEST PRIORITY areas you ranked in Q3, what do you see as the most pressing challenges for each?

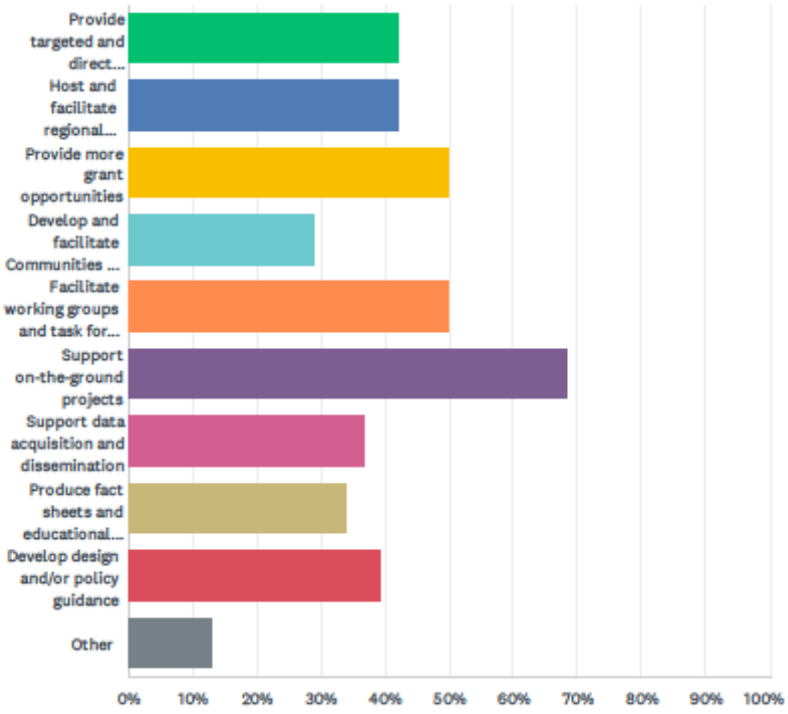
Answered: 38 Skipped: 0

Q5 Considering the top two HIGHEST PRIORITY areas you ranked in Q3, what do you see as the opportunities for the IDNR Coastal Management Program to more effectively address the challenges?

Answered: 38 Skipped: 0

Q6 Considering the two HIGHEST PRIORITY you ranked in Q3, and their challenges and opportunities, in your opinion, how can the IDNR Coastal Management Program best work to address those issues? (Select all the apply)

Answered: 38 Skipped: 0



2025 IDNR Coastal Management Program Enhancement Survey SurveyMonkey

ANSWER CHOICES	RESPONSES	
Provide targeted and direct technical assistance	42.11%	16
Host and facilitate regional workshops	42.11%	16
Provide more grant opportunities	50.00%	19
Develop and facilitate Communities of Practice for specific issues	28.95%	11
Facilitate working groups and task forces to drive change	50.00%	19
Support on-the-ground projects	68.42%	26
Support data acquisition and dissemination	36.84%	14
Produce fact sheets and educational materials	34.21%	13
Develop design and/or policy guidance	39.47%	15
Other	13.16%	5
Total Respondents: 38		

Q7 The IDNR Coastal Management Program recognizes community resiliency as “the sustained ability of a coastal community to understand and use available resources to respond to, withstand and recover from adverse situations.” In your opinion, what are the biggest challenges facing Illinois’ coastal communities seeking to build and maintain resilience to adverse situations?

Answered: 38 Skipped: 0

Q8 How do you think the IDNR Coastal Management Program could best support coastal communities' efforts in Illinois to build coastal resiliency, adapt to climate change, or address other coastal issues facing communities?

Answered: 38 Skipped: 0

Q9 Please provide any additional comments, insights or feedback for the IDNR Coastal Management Program to consider.

Answered: 11 Skipped: 27

Appendix B: Coastal Hazards and Wetlands Stakeholder Input

1. Which county is the community where you work or represent located? If you work in or represent communities in both counties, please submit one survey response for each county. There will be an option to “Submit another response” once you complete this survey if needed. Thank you!

ID	Responses
1	Lake County, IL
2	Cook County, IL
3	Lake County, IL
4	Lake County, IL
5	Cook County, IL
6	Cook County, IL
7	Cook County, IL
8	Cook County, IL

2. Do you manage any wetlands within or directly adjacent to the Illinois Coastal Zone that are impacted by upstream stressors, such as hydrologic modifications, development, invasive species, etc.? If so, which wetland(s) and what are the upstream stressors for each? If known, please include generally where or how far upstream these stressors begin.

ID	Responses
1	no
2	No
3	I do not manage wetlands, but I do map adjacent beaches. However, beach erosion and removal of material do result in the shoreline encroaching upon wetlands and potentially cause habitat destruction.
4	We do not actively manage wetlands. Our program just reviews projects funded or performed by a state agency for compliance with IWPA.
5	Not directly managing wetlands, but at IEPA we will sample streams for water quality and biology in those areas.
6	Yes - or at least co-manage wetlands, river riparian areas within the City of Chicago - Parks owned and leased/managed. I'm noticing issues in particular along the riverbanks related to dramatic swings in water level/height and velocity, particularly in spring with large ice sheets flowing an slamming into banks and big fluctuations associated with large storms. Lakefront issues also remain a concern, though less so in the last few years with lower lake levels.
7	The entirety of the Chicago River watershed receives excess nutrients, but this becomes especially acute after the O'brien wastewater treatment plant on the North Shore Channel, and persists throughout the urban core of Chicago. The Urban core is also heavily polluted with sediments with legacy pollutants such as heavy metals, which are not always present in the water column, but are available enough to be accumulating in plant tissues at a minimum. The excess nutrients and presence of undigested organic sediments with high concentrations of heavy metals then meets other urban stream stressors that come from storm runoff and etc. This pollution is diluted by water coming from the lake along the main branch of the Chicago River, but pollutants are quickly concentrated again with degraded seawall and side channels on the South Branch and Ship and Sanitary Canal which compound the industrial activities along land.
8	None of our sites we currently manage are wetlands.

3. Based on your knowledge and experience, are issues or stressors outside the Illinois Coastal Zone boundary contributing in a significant way to increase urban and/or coastal flooding within the coastal zone? If so, please provide a specific example(s) of the issues or stressors.

ID	Responses
1	No
2	No
3	I am not sure.
4	Besides climate change, I am not aware of any.
5	Urban development with increased impervious surfaces could contribute, especially in areas relying on ravine systems to move water during storm events.
6	Yes - land use and stormwater management upstream of City boundaries significantly impact river flow volume and velocity as they ultimately combine and enter the north branch and continue to flow downstream.
7	The locks at Joliet are ultimately in control of flooding along the Illinois coastal zone- the system in the urban area is highly channelized, and designed to move water away quickly. But at the chokepoint of Joliet, it is sometimes impossible to let enough water through to avoid coastal flooding, and this causes combined sewer overflows, disturbs polluted sediments, and washes urban pollution in. Large rain and flooding events cause large fish kills and oxygen deprivation in the water for weeks afterwards.
8	Yes, looking at the coastal boundary there are areas excluded from the zone that are a part of the Chicago-Calumet River watershed therefore they contribute to stormwater runoff and the combined sewer system that impacts water quality in the river system which is a part of the coastal zone.

4. Based on your knowledge and experience, is urban flooding significantly impacting the water quality in Lake Michigan? If so, please provide a specific example(s) of how urban flooding is impacting Lake Michigan water quality.

ID	Responses
1	No
2	
3	I am not sure.
4	Not applicable to my program.
5	There hasn't been an increase in water quality standards violations in the Lake Michigan Nearshore open waters in a monitoring capacity, but runoff from significant storm events that make their way into the lake can have short-term effects, and can be additive over time. Deliberate diversions from the North Shore Channel could become more frequent with increased response to flooding.
6	yes - CSOs and the stability and vegetation along the riverbanks can contribute significant amounts of trash via flooding and water quality in terms of erosion/sediment addition.
7	Urban flooding will during severe rain events cause the temporary reversal of the Chicago River in to Lake Michigan, making water intakes vulnerable to untreated city sewage and urban runoff.
8	Friends of the Chicago River is not an expert on Lake Michigan water quality issues, but we know that urban flooding contributes to water quality issues in the Chicago-Calumet River system, such as chlorides from de-icing salt and E. coli / fecal coliform from combined sewer overflows. Water quality problems in the river system ultimately impact the lake when storm events, combined sewer overflows (CSOs), and lock operations allow pollutants from the river system to move toward the lake.

5. Based on your knowledge and experience, is coastal flooding significantly impacting the water quality in Lake Michigan? If so, please provide a specific example(s) of how coastal flooding is impacting Lake Michigan water quality.

ID	Responses
1	No
2	
3	I am not sure.
4	Not applicable to my program.
5	Not to my knowledge for anything current.
6	Coastal flooding in Illinois' case would be very similar to urban flooding.
7	
8	Friends of the Chicago River is not an expert on Lake Michigan water quality issues, but we know that coastal flooding on the river system creates turbulence from wave action that stirs up polluted riverbed sediments and legacy industrial contaminants. This also causes shoreline and bank erosion, damaging natural areas, bulkheads, and river-edge infrastructure.

6. In your opinion, what broader-scale actions or solutions would be helpful to address upstream impacts to Lake Michigan water quality and wetlands in Illinois?

ID	Responses
1	Meetings with various stakeholders to discuss the questions above would be a good start.
2	
3	Beach nourishment in impacted areas, especially those impacted by recent infrastructure developments.
4	Buffers on all drainage, particularly in agricultural and industrial adjacent lands would be beneficial.
5	Current protections for coastal land, or acquiring/ restoring new areas.
6	Additional riverbank restoration that includes a combination of armor (stone/riprap) and grading/upland stabilization via planting. Adding green infrastructure upstream where possible ie converting lawn to natural areas, etc.
7	Create more opportunities to store and passively treat storm water. The TARP tunnel project has had enormous success with reducing combined sewer overflows, more opportunities to store and connect storm water systems should be a top priority.
8	Floodplain reconnection

7. Similarly, in your opinion, what broader-scale actions or solutions would be helpful to address urban and coastal flooding issues in Illinois?

ID	Responses
1	Stakeholder communication.
2	
3	Nature-based solutions.
4	More wetland creation. Less development in flood prone areas.
5	expanded stormwater drainage or handling for larger/ more intense weather events.
6	Potentially greater coordination with MWRD to combine resources and strategies to address issues related to immediate storm mitigation, ideally though more sustainable approaches like ecological restoration and study/quantified evaluation (I can't stress this need for quantified impacts enough) on the actual impacts of these landscape changes and green infrastructure like permeable pavers or porous pathways and their associated maintenance.
7	The same as the previous answer
8	Funding for maintenance and expanded installations of distributed green stormwater infrastructure, specifically in priority sewersheds where CSOs still occur.

8. In your view, would it be useful for the IDNR Coastal Management Program to explore modifying the Illinois Coastal Zone boundary to address stressors such as upstream development or urban flooding?

ID	Responses
1	I don't know enough to answer this question.
2	
3	Upstream development, yes. Urban flooding, I am not sure.
4	Unsure, I suspect it would all depend on what hydraulic models indicate. I don't know if there is value in moving dirty water to other watersheds, but moving flood storage to wetlands outside of the Lake Michigan Watershed may be beneficial.
5	What currently sets the boundary? Watershed or catchment? HUC area? There can always be something like an influence zone surrounding, or expanded during times of potential flooding?
6	Yes - including the north branch, at least within city limits, but potentially beyond (though I recognize that this is tough to find where to stop) would make a lot of sense and have potentially significant contributions to urban flooding and coastal health. In particular, the area just upstream from the confluence has had a lot of significant erosion resulting, and where the bottom of the river is concrete or brick lined at the bottom with a combination of aging steel and concrete revetment contributing to higher velocity of water, sediment, and trash/foreign objects entering the waterway.
7	Yes, the coastal zone should encompass the watershed areas of the Chicago, Calumet, and Des Plaines river systems
8	Absolutely. Using an expanded watershed approach than encompasses the entire drainage area for streams and tributaries that are hydrologically connected to the Lake Michigan basin (i.e. including the entire land area of the Chicago-Calumet River watershed) will ensure upstream stressors can be addressed comprehensively to protect both river and lake water quality.

Appendix C: Public Comment Responses