

# **Wisconsin Coastal Management Program**

## **Needs Assessment and Strategy**

**2021-2025**

For Enhancements to the  
Wisconsin Coastal Management Program

Authorized by Section 309 of the  
Coastal Zone Management Act of 1972

**Wisconsin Department of Administration  
Wisconsin Coastal Management Program  
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Section 309 Needs Assessment and Strategy  
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**Table of Contents**

<b>I. Introduction.....</b>	<b>4</b>
<b>II. Summary of Previous Strategy .....</b>	<b>5</b>
Wetlands .....	5
Coastal Hazards .....	7
<b>III. Assessment .....</b>	<b>10</b>
Wetlands .....	10
Coastal Hazards .....	20
Public Access .....	33
Marine Debris .....	37
Cumulative and Secondary Impacts .....	40
Special Area Management Planning .....	44
Ocean and Great Lakes Resources .....	46
Energy and Government Facility Siting .....	51
Aquaculture.....	54
<b>IV. Strategy 2021-2025 .....</b>	<b>57</b>
Wetlands Strategy .....	57
Coastal Hazards Strategy .....	64
<b>V. Summary of Stakeholder and Public Engagement .....</b>	<b>70</b>

# **I. Introduction**

The Coastal Zone Enhancement Program encourages state and territorial coastal management programs 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, ocean and Great Lakes resources, energy and government facility siting, and aquaculture. The enhancement program was established under Section 309 of the Coastal Zone Management Act (CZMA), as amended.

Every five years, states and territories are encouraged to analyze the relevance, priority, and opportunities for each of the nine enhancement areas, and to assess the effectiveness of existing management efforts to address identified problems. Each coastal management program identifies high priority management issues as well as important needs and information gaps the program must fill to address the issues.

This document follows the needs assessment and strategy template provided in the “Coastal Zone Management Act: Section 309 Program Guidance” published by the National Oceanic & Atmospheric Administration (NOAA), Office for Coastal Management. Further requirements of Section 309, including allowable uses of funding, are described in federal regulations (15 C.F.R. sec. 923, subpart K).

The needs assessment is intended to determine the extent to which problems and opportunities exist in each of the enhancement areas, determine the effectiveness of existing management efforts to address identified problems, and identify high priority needs for program enhancement. The needs assessment consists of two parts: a “Phase I (High Level) Assessment” for all nine enhancement areas, and a “Phase II Assessment” for those areas determined to be a “high priority” for the Wisconsin Coastal Management Program (WCMP). The Phase II Assessment is intended to explore potential problems, opportunities for improvement, and specific needs.

The strategy addresses high priority needs for program enhancement. WCMP identified wetlands and hazards as high priority areas and developed strategies for each. The strategies include goals and methods for meeting the goals over the five-year period. The strategies include proposed program changes, needs and gaps addressed, benefits to coastal management, likelihood of success, strategy work plans, fiscal and technical needs, and a 5-year budget summary for each area.

## II. Summary of Previous Strategy

In the last Assessment and Strategy, the Wisconsin Coastal Management Program (WCMP) proposed strategies to improve Wetlands and Coastal Hazards. Listed below are the major accomplishments under the previous Enhancement Strategy.

### Wetlands

The goal of the Wetlands section of the *Wisconsin Coastal Management Program Needs Assessment and Strategy 2016-2020* is “Develop or enhance local government wetland policies through outreach and targeted assistance.” Potential program changes identified included a model wetland ordinance, incorporation of wetland protection language into existing plans and policies, consideration of wetland functions in local hazard mitigation planning, and modification of the policies governing the Wisconsin Wetland Inventory that improve wetland data usability and accessibility. Working with partners, WCMP engaged in several efforts to implement the strategy. The following projects have been completed or are in progress to fulfill the 2016-2020 Wetland Strategy:

- Wisconsin Wetlands Association completed a project titled *Collaborating to Improve Local Wetland Policies and Practices*. The project built on a prior 309-funded task project that demonstrated the patterns between wetlands, flooding, and infrastructure response in watersheds in Bayfield, Ashland, and Iron Counties. The project developed and implemented an outreach plan to promote key findings to coastal audiences and to explore how findings from this and similar analyses can be leveraged to influence coastal land use and hazard mitigation policies and projects. A report was also developed, titled “Exploring the Relationship Between Wetlands and Flood Hazards in the Lake Superior Basin.” The project confirmed that there is a strong relationship between wetland disturbance/loss and storm-related infrastructure damages, and that there are opportunities to restore wetland hydrology to reduce downstream impacts. The project helped to clarify and focus how to explain connections between wetlands and flood risks at a local scale and what barriers and needs local communities have regarding wetland restoration and flood risk reduction. The project helped to set the stage for future efforts to help communities adopt wetland restoration policies.
- Southeastern Wisconsin Regional Planning Commission’s project, *Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin (“Natural Areas Plan”)* will update the Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin. The update will incorporate recent changes to the inventory and improve communication of that inventory to local municipalities, agencies of government, and conservation organizations. The SEWRPC natural areas plan seeks to identify and protect what remains of the landscape of the region as it existed pre-European settlement and to identify and protect other areas found to be vital to the maintenance of endangered, threatened, and rare plant and animal species. This project will ensure that Southeastern Wisconsin coastal communities and conservation organizations have access to accurate information regarding the Region’s highest quality and most imperiled natural resources. SEWRPC formally adopted the original plan in 1997 as part of the regional park and open space plan. The current effort will be formally adopted as an amendment.

- Wisconsin Wetlands Association ongoing project, *Accelerating Natural Flood Management in the Lake Superior Basin*, expands on their prior efforts in the region. Expected outcomes include extensive community engagement, including outreach to Ashland County leaders and collaborators, to facilitate community resiliency planning and risk-informed decision making. Outreach on Natural Flood Management Practices includes consulting with the Lake Superior Collaborative Steering Team and other partners to refine goals and develop and host a Rebuilding Natural Infrastructure Design Charrette. Facilitation of a technical working group to help develop new fluvial erosion hazard assessment methodologies with vulnerability assessment protocols used in other regions. It is expected that the facilitation will result in a local revised hazard mitigation plan (although the local emergency manager wishes to complete the procurement process of a separate FEMA grant before proceeding with mitigation plan work and FEMA efforts have been delayed by COVID-19). Additional, project partners are integrating the work supporting Ashland County's hazard mitigation planning process with the Ashland County Land and Water Conservation Department, which provides opportunities to support the department with development and implementation of watershed restoration and climate adaptation strategies. Other outreach efforts include an anticipated design charrette focusing on treatment options for repairing fluvial erosion hazards. Governor Evers signed Act 157 on March 3, 2020, which authorized \$150,000 for 2-3 wetland restoration demonstration projects to reduce flood risks and damages; the design charrette would be used to help select sites.

The projects that were funded through the 2016-2020 Wetlands Strategy had additional, cumulative outcomes, including:

- Ashland County collaborated with Wisconsin Wetlands Association, Northwest Regional Planning Commission, and USGS to secure a \$200,000 Advanced Assistance Hazard Mitigation Grant from FEMA to evaluate fluvial erosion hazards in the Marengo River Watershed and evaluate natural flood management strategies to protect vulnerable infrastructure.
- Wisconsin Wetlands Association and UW-Extension collaborated on a successful proposal to the Network for Landscape Conservation's Catalyst Fund to hire a 1-year coordinator for the Lake Superior Collaborative to help finalize and begin implementation of the LSC Action Plan. The grant was for \$24,538. UW Extension provided a 100% match. The position has been filled.
- Wisconsin Wetlands Association collaborated with the Northern Institute of Applied Climate Science (NIACS) to secure \$50,000 from the Brico Fund to integrate wetland/hydrologic restoration strategies into NIACS' climate adaptation menus and help Ashland County integrate climate informed wetland restoration strategies into their Land & Water Management Plan.

WCMP staff provided guidance and advice to Wisconsin Wetland Association staff and other partners as they developed projects to enhance wetland conservation in Wisconsin's coastal counties. Staff participated in planning for and coordinating annual Wetlands Conferences.

## Coastal Hazards

For the 2016-2020 Needs Assessment and Strategy, the Coastal Hazards Strategy focused on local policy development to address coastal hazards. The Strategy Goal is to “Develop or enhance government hazard policies through targeted outreach & technical assistance.” Management priorities include (1) Policy refinement/development, (2) Mapping/research, and (3) Targeted outreach. The following efforts were undertaken to achieve the strategy goal:

WCMP staff organized and chaired Coastal Natural Hazards Work Group meetings. Work group members come from diverse organizations – including Wisconsin Sea Grant Institute, Wisconsin Emergency Management, University of Wisconsin-Madison Departments of Engineering and Geology, Association of State Floodplain Managers, Ozaukee County, and Wisconsin Department of Natural Resources. The Work Group meets several times a year to discuss current and emerging issues, share information, and collaborate on projects.

- WCMP and Wisconsin Sea Grant Institute developed a J. Phillip Keillor Coastal Hazards Fellowship. The organizations have co-sponsored one-year fellowships focusing on tackling science and policy challenges related to increasing coastal community resilience across the Great Lakes region. The fellows have worked closely with WCMP and WSGI staff, developing close partnerships in both organizations. The fellows have been stationed in WCMP’s office. The partnership has allowed the fellows to have access to WSGI’s staff and resources as well. The fellows have also collaborated with members of the Wisconsin Coastal Hazards Work Group, local government representatives, and researchers from a variety of fields. WCMP and WSGI are currently hosting their third fellow, Adam Arend. Yi Liu and Adam Bechle also participated in the fellowship. Each of the fellows have worked on updating the Great Lakes Coastal Processes Manual. The document has been a very important tool throughout the Great Lakes Region in estimating risk to coastal property from changing lake levels, storms, and erosion. A revised and updated manual will allow planners, engineers, agencies, and other decision-makers to better understand hazards, determine risk, and develop and enforce policies. It is anticipated that the manual update will be completed and made available in the next year, although the timing may change due to complications with communication and outreach caused by the current pandemic. WCMP will assist communities in utilizing the manual to update or revise their local policies and plans. The fellowship has been a significant success, increasing collaboration between the host organizations as well as other partners, developing and updating essential tools for local communities, and providing outreach to local communities. The fellows’ efforts have led to many other opportunities and collaborations, including a successful application for a Coastal Resilience Grant.
- When he was the WCMP/WSGI J. Philip Keillor Coastal Management Fellow, Adam Bechle successfully applied for a Coastal Resilience Grant. He administered the program through his position as he completed the fellowship. Dr. Bechle has recently taken a position at WSGI, but he continues to lead the project. The project has increased coordination between WCMP and local communities, as well as WSGI, University of Wisconsin School of Engineering, and Southeastern Wisconsin Regional Planning Commission (SEWRPC). Several aspects of the project have led and will lead to changes in policy. Through one task, shoreline recession data was measured and made available on the shoreline viewer (see below) and was used by the Southeastern Wisconsin Regional Planning Commission in their update of the Ozaukee County Hazard Mitigation Plan. Local resilience opportunities have been identified through community self-assessments, and several communities

have followed up with staff on implementation. More information on the ongoing Coastal Resilience Project is available here: <https://sewicoastalresilience.org/>

- WCMP has received funding for a Project of Special Merit. The project is titled “Combining a mapping community of practice with an innovative digital collaborative environment to improve coastal hazard planning and policy development.” The ongoing project is addressing the data and mapping needs of Wisconsin’s Lake Superior communities. The State Geographic Information Officer, Jim Giglierano, and WCMP are partnering with the State Cartographer’s Office on the project. The project focuses on creating a community of practice to address flooding through the development of a critical data layer (culvert mapping), and to formalize communication between agencies and locals to promote better response to hazard events. Tasks include coordinating a Community of Practice to provide technical assistance to communities in development of guidelines and policies that incorporate hazard awareness and creation of a “Hazard Action Plan” to be enacted during a hazard event. The project and its deliverables were recently extended through March 2021. The website for the project is <https://www.wicdi.org/>.
- Enhancement funds have been used to analyze changes in shoreline, especially for bluffs and structures. The Association of State Floodplain Managers (ASFPM) and University of Wisconsin Professor Emeritus David Mickelson cooperated on projects to analyze shoreline changes from 2007 to 2018 along Lake Michigan. A similar analysis is being undertaken to examine the Lake Superior Shoreline. The projects have built on prior efforts that received enhancement funding. Photos from the 1970s, 2007, and 2012 have been analyzed for bluff condition, beach condition and identification of shoreline structures. The GIS layers and photos are available on the Wisconsin Shoreline Inventory and Oblique Viewer, [http://floodatlas.org/asfpm/oblique\\_viewer/](http://floodatlas.org/asfpm/oblique_viewer/). Communities have informed WCMP that the photos are very useful in assessing and communicating changes to the shoreline due to flooding, storms, and erosion. The site has been useful in sharing information for multiple projects that will likely lead to new or revised local plans and policies, including the Coastal Resilience Project.
- Through enhancements-funded projects with ASFPM and hazards-related work with Wisconsin Emergency Management, WCMP discovered that Wisconsin Civil Air Patrol can fly the coastlines and take photos for a relatively low cost. Enhancement funding was used to obtain shoreline photos which are available on the oblique viewer (link above).
- Enhancement funding was used for WCMP staff to provide outreach and coordination for coastal hazards-related issues. Higher lake levels, storms, and waves have led to severe erosion issues in Southeastern Wisconsin. WCMP coordinated with Wisconsin Emergency Management, Wisconsin Department of Natural Resources, and other state agencies and organizations to respond to the issues. WCMP helped to organize two public meetings in the region in 2016. Issues faced by communities in the Southeastern region and the public meetings that were held in response led Wisconsin Department of Natural Resources (DNR) to develop a streamlined erosion control permitting process which is intended to allow landowners to respond more quickly to rapidly receding shorelines: <https://dnr.wi.gov/topic/Waterways/shoreline/GreatLakesErosionControl.html>
- Staff responded to communities dealing with flooding issues. Flooding events in 2016 and 2018 significantly impacted communities along Lake Superior, as did 2019 flooding in Green Bay. Staff and



hazards work group members met with the mayor of Green Bay and his staff to discuss the issues faced by the city and potential responses. WCMP also helped to coordinate a public meeting held by US Rep. Gallagher on flooding issues in the Green Bay region.

- Staff coordinated with other agencies and partners on several large projects. WCMP staff are working on a National Fish and Wildlife Foundation-funded project that includes partners from the Natural Resources Foundation of Wisconsin, DNR, University of Wisconsin-Madison Engineering, WSGI, and others to address erosion issues and a failing off-shore structure in Pleasant Prairie. Staff participated in the WSGI-led, University of Michigan Graham Institute-funded Lake Michigan Coastal Bluffs Integrated Assessment. Staff presented at meetings and webinars on hazards efforts.
- Staff cooperated with Wisconsin Emergency Management (WEM) on multiple projects. WCMP staff attended Silver Jackets and hazard mitigation and recovery task force meetings coordinated by WEM. WCMP participated in the 2016 update to the State Hazard Mitigation Plan which state agencies, including the Department of Administration, formally signed onto. The plan is available here: <https://dma.wi.gov/DMA/wem/mitigation/2016-hazard-mitigation-plan> WCMP will participate in the upcoming update, as well.
- Wisconsin DNR asked WCMP and the Coastal Hazards Work Group to help coordinate a workshop on coastal processes for DNR (and other state agency) staff. Several work group members presented and led field work at the workshop, which was held in Port Washington October 8-9.

### III. 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. 174 of the CZMA Performance Measurement Guidance<sup>1</sup> 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 provided reports from NOAA’s Land Cover Atlas,<sup>2</sup> please indicate the extent, status, and trends of wetlands in the state’s coastal counties. You can provide additional or alternative information or use graphs or other visuals to help illustrate or replace the table entirely if better data are available. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period the data represents. Also note that Puerto Rico currently only has data for one time point so will not be able to report trend data. Instead, Puerto Rico should just report current land use cover for all wetlands and each wetlands type.

Current state of wetlands in 2016 (acres): 1,445,568.6

**Coastal Wetlands Status and Trends**

Change in Wetlands	from 1996-2016	from 2011-2016
Percent net change in total wetlands (% gained or lost)*	0.19%	0.11%
Percent net change in freshwater (palustrine) wetlands (% gained or lost)*	0.19%	0.11%
Percent net change in saltwater (estuarine) wetlands (% gained or lost)*	NA	NA

<sup>1</sup> <https://coast.noaa.gov/czm/media/czmapmsguide2018.pdf>

<sup>2</sup> <https://coast.noaa.gov/digitalcoast/tools/lca.html>. Note that the 2016 data will not be available for all states until later Summer 2019. NOAA OCM will be providing summary reports compiling each state’s coastal county data. The reports will be available after all of the 2016 data is available.

### How Wetlands Are Changing\*

Land Cover Type	Area of Wetlands Transformed to Another Type of Land Cover between 1996-2016 (Sq. Miles)	Area of Wetlands Transformed to Another Type of Land Cover between 2011-2016 (Sq. Miles)
Development	3.33	0.078
Agriculture	-1.85	-0.55
Barren Land	0.12	-0.053
Water	-5.94	-1.81

\* Note: Islands likely have data for another time period and may only have one time interval to report. If so, only report the change in wetlands for the time period for which data are available. Puerto Rico does not report.

Areas were calculated from data downloaded from <https://coast.noaa.gov/digitalcoast/tools/lca.html> (all downloaded rasters were clipped to include only Wisconsin's 15 coastal counties).

- If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of coastal wetlands since the last assessment to augment the national data sets.

None.

### Management Characterization:

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

### 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

- 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:
  - Describe the significance of the changes;
  - Specify if they were 309 or other CZM-driven changes; and
  - Characterize the outcomes or likely future outcomes of the changes.

### Statutes/Regulations:

- 2019 Wisconsin Act 59 changed wetland mitigation banking
  - Significance: Created a requirement that wetland mitigation bank credits be in the same watershed (Hydrologic Unit Code 8) as the wetland impacted.

- b) Section 309/CZM-Driven: No
  - c) Outcomes: The purpose of the bill is to prevent situations where wetlands are heavily impacted in one part of the state and mitigated in another part of the state. Expected outcomes are that affected wetlands will be mitigated within the same watershed.
- 2017 Wisconsin Act 183– expanded wetland exemptions; permitting exemptions created for artificial wetlands and nonfederal wetlands
  - a) Significance: Permitting exemptions created for artificial wetlands and nonfederal wetlands. Created permit exemptions for fill in certain types of nonfederal wetlands and some artificial wetlands. Created three exemptions from wetlands individual or general permitting requirements for deposit of fill or dredged material into nonfederal wetland (also known as isolated wetlands). Directs DNR to presume an exemption application is eligible. Created a procedure for an applicant to ask DNR to concur with a wetland confirmation made by a qualified third party. Modified the In-Lieu Fee mitigation program to allow grants to nonprofit organizations to create, restore, or enhance wetlands on DNR property and for property development activities related to wetlands created, restored or enhanced under a wetland mitigation grant. Created a nine-member Wetlands Study Council.
  - b) Section 309/CZM-Driven: No
  - c) Outcomes: Wisconsin DNR published guidance for Artificial Wetland Exemptions: <https://dnr.wi.gov/topic/wetlands/documents/3500-2018-01ArtificialWetland.pdf> and for Nonfederal Wetland Exemptions: <https://dnr.wi.gov/topic/wetlands/documents/3500-2018-02FinalNonfederalWetland.pdf> Wetlands Study Council has held monthly meetings since June 2019.
- 2017 Wisconsin Act 58
  - a) Significance: Created exemptions from permit requirements for discharges into a wetland located in an electronics and information technology manufacturing zone (which affects only FoxConn’s facilities in Racine County). Adverse impacts to functional values of wetlands in the area are compensated at a ratio of 2 acres per each acre impaired.
  - b) Section 309/CZM driven: No
  - c) Outcomes: Unclear. FoxConn site still under development.
- 2017 Wisconsin Act 115
  - a) Significance: Created an exemption from individual or general permit requirements for deposit of dredged or fill material in a wetland by a drainage district to maintain district drains in accordance with plans approved by the Department of Agriculture, Trade and Consumer Protection.
  - b) Section 309/CZM-driven: No
  - c) Outcomes: Unclear. DNR was required to update its rules related to the drainage district activity exemption.
- 2015 Wisconsin Act 387– various provisions affecting regulation of navigable waters.
  - a) Significance: Limited DNR review of practicable alternatives for wetland impacts involving less than two acres on lots created as part of a subdivision, land division, or other development initiated before July 1, 2012. DNR’s review of alternatives limited to the property owned by the applicant if the project involved construction or expansion of single-family home, barn, farm buildings, or small business project.

- b) Section 309/CZM-Driven: No
  - c) Outcomes: May lead to acquisition and development of isolated wetlands. May prevent DNR from requiring alternatives to wetland development.
- 2013 Wisconsin Act 80 – changed shoreland zoning regulations for shorelands that were annexed or incorporated as part of a city or village.
  - a) Significance: Before the legislation, newly annexed or incorporated areas continued under county zoning regulations for shorelands. The change allowed the city or village to pass its own shoreland zoning ordinance by July 1, 2014 for any shoreland are annexed after May 7, 1982.
  - b) Section 309/CZM-CZM-driven: No
  - c) Outcomes: There is concern that the change in regulation will result in loss or damage to sensitive shoreland areas, including wetlands and floodplains, through development.
- Wetland Mitigation:
  - a) Significance: Implementation of past legislation (2011 Wisconsin Act 118) has led to a system of mitigation that includes mitigation banking as well as an in-lieu fee system and permittee responsible mitigation.
  - b) Section 309/CZM-driven: No
  - c) Outcomes: Wisconsin DNR hosts a mitigation bank registry: <https://dnr.wi.gov/topic/Wetlands/mitigation/bankingRegistry.html>, an in-lieu fee program: <https://dnr.wi.gov/topic/Wetlands/WWCT/>, and permittee responsible mitigation information: <https://dnr.wi.gov/topic/Wetlands/mitigation/permitteeResponsibleMitigation.html>
- Wetland Inventory Database updates
  - a) Significance: DNR updated its Wetland Inventory Database on an ongoing basis. In 2019, DNR made access through ArcGIS free: [Wetland Inventory Database](#) The mapping function provides type, size, and location of wetlands from a high altitude imagery along with soil surveys, topographic maps, previous wetland inventories, and fieldwork.
  - b) Section 309/CZM: DNR received funding through section 306 funds.
  - c) Outcomes: Improved usability and access to wetland inventory

#### Enhancement Area Prioritization:

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

<b>High</b>	<u>  X  </u>
<b>Medium</b>	<u>      </u>
<b>Low</b>	<u>      </u>

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

Wetland protection, restoration, and enhancement (conservation) will benefit from a coordinated, inter-agency approach. In recent years, Wisconsin has seen new state regulations, an expansion of wetland mitigation banks, and changes (and shortages) in staffing at DNR. The situation has created a need for outreach and technical support from local governments and communities. Recent flooding events have

increased the demand for examining the role that wetlands could have in making communities more resilient. Wetland restoration is also an area that partners, and communities, are increasingly interested in, particularly in understanding how restoring higher-functioning wetlands may provide better protection to communities and increase species diversity. WCMP will continue to support protection, restoration, and enhancement of wetlands at a community level and state level, where appropriate.

## Needs Assessment: Phase 2:

### 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). When selecting significant stressors, also consider how climate change may exacerbate each stressor.

	Stressor/Threat	Geographic Scope (throughout coastal zone or specific areas most threatened)
Stressor 1	Hydrologic alterations	Lake Michigan – very high; Lake Superior – very high
Stressor 2	Invasive species	Lake Michigan – very high; Lake Superior – medium
Stressor 3	Development of wetlands	Lake Michigan – very high; Lake Superior – medium

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.

1. Hydrologic alterations – Historic and ongoing changes in how water moves across the landscape have significantly impacted watershed health, including degrading wetland quality and function. Contributing activities are widespread in the coastal zone including agricultural drainage, forestry practices, floodplain and stormwater management, and wetland and floodplain drainage.
2. Invasive species – Proliferation of invasive species pose a direct threat to the quality and function of existing wetlands, particularly coastal shoreland wetlands. In many cases they are also an indicator of underlying stressors such as hydrologic alterations and adjacent development.
3. Wetland development – Outright destruction, fragmentation, and conversion of wetland types have altered the character and capacities of wetlands in the coastal zone. Significant sources of stress include development, transportation projects, and pipelines.

From DNR's The Ecological Landscapes of Wisconsin, <https://dnr.wi.gov/topic/landscapes/Book.html>: "Many of Wisconsin's remaining wetlands are now in an altered or disturbed condition due to partial drainage, encroachment by invasive species, vegetation clearing, grazing, periodic plowing or other agricultural activities. Wetlands have also been degraded by hydrologic changes, erosion, sedimentation and eutrophication." And, "Protection of Lake Superior's coastal wetlands is of the utmost importance because of their size, condition, associated diversity, and unique ecological and

cultural attributes. Wetland threats include efforts to stabilize Lake Superior water levels, excessive sedimentation, inputs of nutrients and pollutants, shoreline development, and the spread of invasive species such as common reed, purple loosestrife (*Lythrum salicaria*), curly pondweed (*Potamogeton crispus*), and reed canary grass.”

2. 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
Climate change	Impacts to hydrologic processes; long-term forecasts; impacts of severe storms, flooding and associated damage (including fluvial erosion); impacts on carbon sequestration

#### **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	Y	Y	Y
Wetland mapping and GIS	Y	Y	Y
Watershed or special area management plans addressing wetlands	Y	Y	Y
Wetland technical assistance, education, and outreach	Y	Y	Y
Other (please specify)			

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.

#### **Wetland Assessment Methodologies**

- Wisconsin DNR’s “Provisional Wetland Floristic Quality Benchmarks for Wetland Monitoring and Assessment in Wisconsin”.



- Wisconsin DNR completed the tool to quantitatively rank wetland communities across the state. The effort was undertaken with funding from an EPA Wetland Program Development Grant. The final report was submitted to EPA in December.
- Section 309/CZM: This was not a CZM-driven change
- Outcome: The report will greatly increase the state's ability to quantitatively assess commonly occurring wetland communities by comparing floristic metrics against the same community type in the same ecological region. The tool will be rolled out in the upcoming year.

#### Wetland Mapping and GIS

- Wisconsin DNR is updating its Wetland Inventory Database on an ongoing basis.
  - In 2019, DNR made access through ArcGIS free: [Wetland Inventory Database](#) The mapping function provides type, size, and location of wetlands from a high altitude imagery along with soil surveys, topographic maps, previous wetland inventories, and fieldwork.
  - Section 309/CZM: DNR received funding through section 306 funds.
  - Outcome: Improved maps and better access to maps for individuals and communities for planning purposes.
- Southeastern Wisconsin Regional Planning Commission (SEWRPC) is updating its "Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin."
  - The update will incorporate recent changes to the Regional natural areas inventory and improve communication of that inventory to municipalities, agencies of government, and conservation organizations.
  - Section 309/CZM: Project is receiving Section 309 funding.
  - Outcome: More accurate wetlands/habitat information and improved access to that information for communities and organizations in the Southeast region of Wisconsin.
- Wetlands and Watershed Explorer
  - Part of DNR/TNC's Wetland by Design project (see below). Online GIS mapping tool created by The Nature Conservancy and Wisconsin DNR with EPA funding.
  - Section 309/CZM: Project did not receive CZM funding.
  - Outcome: Allows users to explore watersheds and wetland services in order to help prioritize areas for protection.

#### Watershed or special area management plans addressing wetlands

- Wisconsin DNR and The Nature Conservancy in Wisconsin released "Wetlands by Design: A Watershed Approach for Wisconsin" in December, 2017. The intent of the document is to support a watershed approach for wetland mitigation and support voluntary wetland conservation efforts. It was not CZM-driven. The document is available here: [https://maps.freshwaternet.org/wisconsin/plugins/wetlands-watershed-explorer/assets/WetlandsByDesign\\_FinalReport.pdf](https://maps.freshwaternet.org/wisconsin/plugins/wetlands-watershed-explorer/assets/WetlandsByDesign_FinalReport.pdf)
- Wisconsin DNR published "The Ecological Landscapes of Wisconsin," which identifies the best areas of the state to manage for different natural communities, habitats, features, and species from an ecosystem management perspective. Wetlands are important features in the coastal areas. The document was not CZM-driven. It is available here: <https://dnr.wi.gov/topic/Landscapes/Book.html> To view chapters by area: <https://dnr.wi.gov/topic/landscapes/index.asp?mode=Choose>

#### Wetland Technical Assistance and Outreach

- Wisconsin Wetlands Association participated in several, extensive outreach efforts focusing in Wisconsin's Lake Superior Region. Please see Phase 1 Assessment, above, for details. The efforts received 309-funding. It is expected that the technical tools and assistance will result in more interest and exploration of wetlands as solutions for flooding and other storm damage.
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?

No recent studies have been done that directly assess the state's regulatory efforts.

The report [Exploring the Relationship between Wetlands and Flood Hazards in Wisconsin's Lake Superior Basin](#) identified "erosion-induced drainage" of upper watershed wetlands and floodplains as a major contributor to flood hazards and damages in Lake Superior coastal communities. It also noted that current maps and other available data sets do not paint an accurate picture of upper watershed wetland and floodplain storage because they indicate presence/absence of historic wetlands but do not reveal wetland condition. Beyond data gaps, the project identified unmet training and technical support needs that hinder coastal community's ability to evaluate and implement hydrologic restoration strategies to reduce flood risks and damages.

#### 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: Technical assistance, education, and outreach*

*Description: Many coastal wetlands decisions and efforts are made on a local and regional basis. Wisconsin Coastal Management Program has opportunities to assist communities in assessing their policies and approaches to wetland conservation, encourage collaboration between communities, organizations, and agencies, and provide outreach and assistance on existing tools and resources.*

*Management Priority 2: Improved mapping, data, tools*

*Description: Tools, data, and mapping have improved since the last assessment, but there are needs for more accessible tools, updated datasets, science on wetland functions, and facilitation in using those tools.*

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	Research on the functional values of wetlands, long-term effectiveness of mitigation banking, effect of lake level changes on wetlands, potential climate change impacts (including effect of potential for increased severe storm events); research on “new” invasive species; research to quantify the economic and ecological benefits of wetlands and wetland restoration practices
Mapping/GIS	Y	Continuing to improve Wisconsin Wetland Inventory to increase usability for local planning needs; need for updates in some applications; need for interpretation of existing data; need to make mapping and GIS data accessible
Data and information management	Y	Access to data and information is a continuing need. Long-term data management is a significant need. Making data sets consistent and to allow bringing one set into another has proven to be a significant need. There are data gaps on wetland conditions and opportunities to restore function to degraded wetlands.
Training/capacity building	Y	Non-wetland specialists need targeted training to understand the role and value of wetlands across other disciplines and in areas of importance to local communities. Where training efforts have been made, continued outreach is needed to maintain efforts.
Decision-support tools	Y	Decision support tools are needed to identify help communities make informed decisions when developing and implementing land use plans; need to evaluate, test, and improve existing tools
Communication and outreach	Y	Communities face ongoing needs on wetlands identification and education; need to make communities aware of available technical resources and how to use those resources. Communication between organizations, agencies, and communities is an ongoing need. Helping to coordinate communities of practice is a significant need, as is making those communities of practice self-sustaining.
Other (specify)		

#### 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.

Wisconsin’s coastal wetlands are facing a variety of stressors. The state regulatory program has undergone significant changes. Communities are increasingly concerned about the functional value of wetlands, especially with recent severe storm events. Agencies and communities need assistance in evaluating their approach to wetlands and utilizing the tools available. Better tools and data are needed to estimate the actual, functional value that wetland conservation can provide and to evaluate the condition and restorability of existing or historic wetlands. Wisconsin Coastal Management can provide an important role in coordinating efforts, encouraging collaboration, improving tools and mapping, and enhancing local wetland conservation activities.

## 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 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. 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 hazards. 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:
  - a. The state’s multi-hazard mitigation plan.
  - b. Coastal County Snapshots: Flood Exposure
  - c. Coastal Flood Exposure Mapper
  - d. Sea Level Rise Viewer/Great Lakes Lake Level Change Viewer
  - e. National Climate Assessment

**General Level of Hazard Risk in the Coastal Zone**

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

<sup>3</sup> 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*

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

"2016 State of Wisconsin Hazard Mitigation Plan" Describes vulnerabilities and outlines a strategy for state agencies. <https://dma.wi.gov/DMA/wem/mitigation/2016-hazard-mitigation-plan>

The Southeastern Wisconsin Resilience Project created a Coastal Resilience Self-Assessment Tool, which several communities in the region have used: [https://sewicoastalresilience.org/wp-content/uploads/2019/09/PUBLIC\\_Coastal\\_Resilience\\_Self\\_Assessment.pdf](https://sewicoastalresilience.org/wp-content/uploads/2019/09/PUBLIC_Coastal_Resilience_Self_Assessment.pdf) Other tools are available and are being developed through the project: <https://sewicoastalresilience.org/>

Wisconsin Department of Health Services developed a Wisconsin Flood Risk Mapping Application: <https://dhsgis.wi.gov/dhs/wfrma/>

Northwest Regional Planning Commission completed the Northwest Flood Impact Study, which includes the coastal counties of Ashland, Bayfield, Douglas, and Iron: <https://nwrpc.com/DocumentCenter/View/1494/Northwest-Wisconsin-Flood-Impact-Study?bidId=>

Updates to the Wisconsin Shoreline Inventory and Oblique Viewer include layers with short-term and long-term recession rates for the Southeastern Region. Oblique photos (with sets from 1976-2019) and data layers of bluff profiles can also help communities assess their risk: [http://floodatlas.org/asfpm/oblique\\_viewer/](http://floodatlas.org/asfpm/oblique_viewer/)

FEMA Risk MAP efforts are developing studies to identify flood risk and provide products to communities to help reduce risks. Milwaukee River Watershed is a current project: <https://dnr.wi.gov/topic/floodplains/riskmap.html> Other coastal counties will be included in future updates: <https://dnr.wi.gov/topic/FloodPlains/mapping.html>

FEMA is updating Flood Insurance Rate Maps for Great Lakes Coastal communities. The new maps may have significant effects on coastal communities: <http://www.greatlakescoast.org/>

Managing Coastal Hazard Risks on Wisconsin's Dynamic Great Lakes Shoreline includes information to assess coastal hazard risk and recommendations for risk reduction: [http://www.floods.org/ace-files/Projects/ManagingCoastalRisk\\_WI\\_2016.pdf](http://www.floods.org/ace-files/Projects/ManagingCoastalRisk_WI_2016.pdf)

"Adapting to a Changing Coast: Options and Resources for Local Officials in Southeastern Wisconsin" is a recent University of Wisconsin Sea Grant Publication that gives options to local communities for addressing shoreline erosion issues: <https://publications.aqua.wisc.edu/product/adapting-to-changing-coast-for-local-officials/>

Coastal Ordinance Provisions in Wisconsin Communities describes adopted regulations (through 2016) for Wisconsin's coastal counties: [http://www.floods.org/ace-files/Projects/Coastal\\_Regs\\_WI\\_Communities\\_2016.pdf](http://www.floods.org/ace-files/Projects/Coastal_Regs_WI_Communities_2016.pdf)

The Wisconsin Coastal Atlas has been regularly updated with tools and data layers for communities for assessing risk, including topics of coastal flooding and coastal erosion: <https://www.wicoastalatlasc.org/>

Wisconsin DNR has a website for placing erosion control structures on the Great Lakes which can help communities and individuals determine what requirements may be on their projects:

<https://dnr.wi.gov/topic/Waterways/shoreline/GreatLakesErosionControl.html>

The Great Lakes Dashboard is a useful tool for looking at current, historic, and predicted water levels for the Great Lakes: [https://www.glerl.noaa.gov/data/dashboard/GLD\\_HTML5.html](https://www.glerl.noaa.gov/data/dashboard/GLD_HTML5.html)

### 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)	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 <sup>4</sup>	Y	Y	Y
Management of development/redevelopment in other hazard areas	N	N	N
Climate change impacts, including sea level rise or Great Lakes level change	N	Y	Y

#### Significant Changes in Hazards Planning Programs or Initiatives

Topic Addressed	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)
Hazard mitigation	Y	Y	Y
Climate change impacts, including sea level rise or Great Lakes level change	Y	Y	Y

#### Significant Changes in Hazards Mapping or Modeling Programs or Initiatives

Topic Addressed	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)
Sea level rise or Great Lakes level change	Y	Y	Y
Other hazards	Y	Y	Y

2. Briefly state how "high-hazard areas" are defined in your coastal zone.

<sup>4</sup> Use state's definition of high-hazard areas.

For purposes of this document, high-hazard areas are areas within 75-feet of the ordinary high water mark or areas with actively eroding bluffs as well as areas likely to be affected by flooding within Wisconsin's Coastal Zone.

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.

*Statutes/Regulations/Case Law:*

- In response to significant erosion issues exacerbated by high lake levels in Southeastern Wisconsin, Wisconsin Department of Natural Resources (DNR) developed a temporary erosion control placement authorization process. With the changes, landowners may provide self-certification forms to place erosion control materials and may begin the placement before hearing back from DNR:  
<https://dnr.wi.gov/topic/Waterways/shoreline/GreatLakesErosionControl.html> The change was not CZM-driven. It is likely that more individuals will place shoreline protection materials on private property.
- Changes to shoreland zoning occurred prior to the beginning of the current 309 Needs Assessment. Legislation passed in 2015 changed shoreland zoning significantly by eliminating the provision that allows counties to create shoreland zoning ordinances that are more restrictive than the state standard of a 75-foot setback from the ordinary high-water mark. This was not a CZM-driven change. Although the long-term repercussions of the change are still unfolding, generally counties have been able to find other ways to prevent development that is too close to the edge of bluffs.
- FEMA is working on updated Flood Insurance Rate Maps for coastal counties, including those in Wisconsin. It is not a CZM-driven change. The new maps will include "VE zones," which are areas close to the shoreline and subject to high-velocity flow and wave action. VE zones will be new to Wisconsin: there are questions as to how the requirements of VE zones (such as elevated buildings) will be implemented in the state. It is likely that communities will have to address the changes in transects and implementation of the maps.
- In January 2019, the Wisconsin Supreme Court decided for a Madeline Island homeowner and against the DNR. DNR had permitted a pier on the property in 2001, but about ten years later, determined the pier was altering the shoreline and needed to be removed or modified. It was not CZM-driven effort. The case may affect how DNR issues and enforces permits for piers which have the potential to (or are determined to) have detrimental effects to adjacent shorelines and near-shore habitats.
- Concordia University, in Ozaukee County, completed a \$12 million bluff stabilization project in 2007. Neighbors filed a lawsuit against the school, claiming that the project was accelerating erosion to their shoreline properties. In 2014, a jury found that the structure was a nuisance that caused significant harm to neighboring properties, but that the University was not negligent, and the nuisance was not expected or intended. Nothing was awarded in damages. The lawsuit was not a CZM-driven change. The long-term effects of the case are unclear.
- In October 2019, Governor Evers signed an executive order to develop a strategy "to mitigate and adapt" to climate change. The EO created a task force on climate change to be led by the

Lieutenant Governor. It was not a CZM-driven change. Outcomes will likely include increased attention to climate change and its impacts. It is unclear if or how coastal hazards may be addressed.

- The National Sea Grant Law Center completed a report on the state and federal laws affecting Lake Michigan's shoreline. The report is titled "Lake Michigan Shoreline Management." It was not a CZM-driven effort from the Wisconsin side, although WCMP staff were involved through the Coastal Hazards Work Group. Illinois Coastal Management Program and Wisconsin Sea Grant Program requested the information from the National Sea Grant Law Center. The report focuses on all of the states adjacent to Lake Michigan, including Illinois, Indiana, Michigan, and Wisconsin. The report may lead to a better understanding of policies across the region, assisting communities in making informed decisions on regulating development and protecting shorelines.

#### *Hazard Planning Programs/Initiatives*

- The Southeastern Wisconsin Coastal Resilience Project is a multi-year, multi-partner effort to address coastal hazards in communities in Ozaukee, Milwaukee, Racine, and Kenosha Counties. WCMP is partnering with the University of Wisconsin Sea Grant Institute, the University of Wisconsin-Madison Department of Civil and Environmental Engineering, and the Southeastern Wisconsin Regional Planning Commission to enhance community capacity to become more resilient to coastal hazards. It is a CZM-initiated project and receives NOAA Coastal Resilience Grants Program funding. Expected outcomes include improved awareness of coastal hazard risks, reduction in property damage, improvement of coastal assets including beaches and harbors, and multi-jurisdictional coordination to reduce risks.
- The Wisconsin Coastal Management Data Infrastructure (WICDI) project is focusing on reducing flood and storm damages by creating an inventory of culverts, developing a community of practice, providing additional data and training, and creating a collaborative online environment for communities in the Lake Superior region. It is a CZM-initiated project and receives section 309 Project of Special Merit funding. Expected outcomes include increased collaboration, a user-friendly GIS database, and other resources for addressing emergency response and damage assessments.
- Southeastern Wisconsin Integrated Assessment was an effort to deal with the intractable issues of bluff erosion and changing water levels in Southeastern Wisconsin. The project started in 2015 and ended in 2017. It was not a CZM-driven project, although WCMP staff partnered on the project and the project led to the development of the Southeastern Wisconsin Coastal Resilience Project. Two publications that resulted from the project, *Adapting to Changing Coast for Property Owners* and *Adapting to a Changing Coast for Local Officials* provide options and resources for property owners and local officials. The materials and outreach of the project will help promote better decision-making. <https://publications.aqua.wisc.edu/product/adapting-to-changing-coast-for-local-officials/> <https://publications.aqua.wisc.edu/product/adapting-to-a-changing-coast-for-property-owners/>
- *Tackling Barriers to Green Infrastructure: An Audit of Local Codes and Ordinances* is a publication that was developed by Wisconsin Sea Grant. It is a tool to help communities identify barriers within their regulations to implementing green infrastructure and flood reduction. It is not a CZM-driven project, although WCMP provided section 306 funding to a previous project that led to the publication's development. Wisconsin Sea Grant staff are assisting communities in updating their codes using the audit tool, which will lead to more and better green infrastructure development.



- The 2016 State Hazard Mitigation Plan was published in 2016. Wisconsin Emergency Management is the lead agency. The plan addresses multiple hazards in Wisconsin, including a section on Coastal Hazards. It is not a CZM-driven change, although Wisconsin Coastal Management Program is a partner on the plan. An updated state plan helps to influence local plans and gives access to FEMA funding. A 2021 plan is currently being developed.
- Multiple local hazard mitigation plans have been updated. The projects have not been directly funded by WCMP, although WCMP has provided funding to the regional planning commissions that have assisted in the development of the plans. Updated plans help communities prepare for the impacts of storms and other events. Mitigation plans also help make communities eligible for mitigation and other types of funding.
- *Coastal Ordinance Provisions in Wisconsin Communities* summarized the regulations of Wisconsin's coastal counties. Although state standards for setbacks have been altered and the publication has not been reviewed to make sure all of the ordinances are still valid, it is useful for reviewing how communities have addressed development near the coast. The project received CZM 309 funding. [https://www.floods.org/ace-files/Projects/Coastal\\_Regs\\_WI\\_Communities\\_2016.pdf](https://www.floods.org/ace-files/Projects/Coastal_Regs_WI_Communities_2016.pdf)
- *An Integrated Physical-Social-Community (PSC) Approach for Sustainable Shore Protection, Beach Integrity, and Bluff/Dune Stabilization Along Lake Michigan* is a project that recently began. It is receiving funding from Wisconsin Sea Grant Institute. The project has many partners, including representation from Michigan, Illinois, Indiana, and Wisconsin. The project focuses on improving coastal community resilience through a three-pronged approach: The physical aspect will focus on sediment budgets and shoreline structures, the Social approach will focus on landowner attitudes and relationships, and the Community approach will create a community of practice within the region. In Wisconsin, Dr. Chin Wu at University of Wisconsin-Madison is leading the project. (He is one of several Principle Investigators.) It is not a CZM-directed effort, but CZM staff are partners on the project. Results of the project may include an improved understanding of sediment budgets, erosion, and cumulative effects of structures; better relationships between communities; and an improved, regional approach to issues of erosion.

#### *Mapping/Modeling*

- The Wisconsin Shoreline Inventory and Oblique viewer has data layers for oblique photos from 2007-2008, 2012, 2016, 2017, 2018, and 2019 as well as historic photos. It also has inventories for shore structures and bluff and beach conditions. Coastal bluff, toe and shoreline recession for the southeastern portion of the state were recently added. The shoreline viewer is a CZM-driven application. Updates and maintenance of the viewer will help communities to assess changes to their shoreline and make better decisions. [http://floodatlas.org/asfpm/oblique\\_viewer/](http://floodatlas.org/asfpm/oblique_viewer/)
- Northwest Regional Planning Commission's (NWRPC) Northwest Wisconsin Flood Impact Study includes Ashland, Bayfield, Douglas, and Iron Counties (as well as Burnett, Sawyer, and Washburn). NWRPC used FEMA's HAZUS software to prepare flood inundation analysis for affected counties. The study was not CZM-driven, although NWRPC receives some funding from WCMP for outreach activities.

#### **Enhancement Area Prioritization:**

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

<b>High</b>	<u>  X  </u>
<b>Medium</b>	<u>      </u>
<b>Low</b>	<u>      </u>

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

Wisconsin's coastal communities have faced significant challenges with coastal hazards in recent years, with higher lake levels and severe storm events compounding damages caused by flooding and erosion. Damage from flooding, storms, erosion, and wave action are ongoing and there are growing concerns from those living on Wisconsin's coasts. WCMP reached out to partners on the Coastal Hazards Work Group and other organizations— including Wisconsin Sea Grant Institute, University of Wisconsin-Madison Departments of Civil and Environmental Engineering and Geology and Geoscience, Wisconsin Department of Natural Resources, Wisconsin Emergency Management, the Association of State Floodplain Managers, Southeastern Wisconsin Regional Planning Commission, Wisconsin Geological & Natural History Survey, the United States Geological Survey, local planners, the State Cartographer's Office, and the State Geographic Information Officer. Wisconsin's communities have very clear needs – financial, technical, and coordination – for addressing Coastal Hazards.

## Needs Assessment: Phase 2

### 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<sup>5</sup> 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 (shoreline/toe erosion, bluff erosion, slumping, etc.)	Coast-wide, especially Counties of Kenosha, Racine, Milwaukee, Ozaukee, Sheboygan, Manitowoc, Kewaunee, Door, Brown, Bayfield, Ashland, and Douglas
Hazard 2	Flooding	Coast-wide, especially southern Kenosha County, City of Milwaukee, Bay of Green Bay, City of Superior, Bark Bay, Chequamegon Bay
Hazard 3	Coastal storms	Coast-wide

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.

Coastal erosion, flooding, and coastal storms present significant risks to public safety and property. The Wisconsin Coastal Hazards Work Group has identified these areas (along with changing lake levels) as the most significant coastal hazards.

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.

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<sup>5</sup> See list of coastal hazards on pg. 24 of this assessment template.

Emerging Issue	Information Needed
Climate change/weather changes	Several flooding events in the last few years have raised the concern that there may be similar events in the near future; research and evaluation on impacts of climate change related to storms and flooding
Fluctuating lake levels	The lake levels have been high following a period of very low lake levels; research is needed on impacts to bluffs; outreach is needed to see what tools communities need to address fluctuating levels in their regulations
Effect of temporary shoreline protection	High lake levels led to allowing landowners to place rip rap and other materials to protect their properties through a temporary permitting process; unclear what the long-term resolution will be for these property owners and what the cumulative impacts may be
Coastal structures	Evaluation of existing in-water coastal structures (number, location, condition) and their effect on sediment transport systems; evaluation of alternatives to gray solutions; evaluation of innovative coastal structures and how to permit them
Flood elevation mapping	Impact of Federal Emergency Management Administration's new flood maps is unclear; VE zones will be new to Wisconsin; changes will also affect valuation of some properties; impact to communities is somewhat unclear.

#### 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	Y	Y	Y
Rolling easements	N	N	N
Repair/rebuilding restrictions	Y	Y	Y
Hard shoreline protection structure restrictions	Y	Y	Y
Promotion of alternative shoreline stabilization methodologies (i.e., living shorelines/green infrastructure)	N	Y	Y

<b>Management Category</b>	<b>Employed by State/Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Change Since the Last Assessment (Y or N)</b>
Repair/replacement of shore protection structure restrictions	Y	Y	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)	Y	Y	Y
Repetitive flood loss policies (e.g., relocation, buyouts)	Y	Y	N
Freeboard requirements	N	N	N
Real estate sales disclosure requirements	N	N	N
Restrictions on publicly funded infrastructure	N	N	N
Infrastructure protection (e.g., considering hazards in siting and design)	Y	Y	N
Other (please specify)			

#### Significant Changes to Coastal Hazard Management Planning Programs or Initiatives

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

#### 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	Y	Y	Y
Sea level rise mapping or modeling	Y	Y	Y
Hazards monitoring (e.g., erosion rate, shoreline change, high-water marks)	Y	Y	Y
Hazards education and outreach	Y	Y	Y
Other (please specify)			

- 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?

There have not been any studies directly evaluating the state's management efforts in addressing coastal hazards. Several projects, however, have focused on community engagement to identify needs and regulatory gaps. Wisconsin Sea Grant Institute's Integrated Assessment and their "Tackling Barriers to Green Infrastructure: An Audit of Local Codes and Ordinances," as well as the Association of State Floodplain Managers' recently-updated "Managing Coastal Hazard Risks on Wisconsin's Dynamic Great Lakes Shoreline" and the ongoing Coastal Resilience Project in Southeastern Wisconsin have provided evidence that communities are still looking for strategies to deal with erosion, flooding, and storms.

#### Identification of Priorities:

- 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: Community Outreach

*Description: Coastal communities have faced significant increases in flooding and erosion, with high lake levels increasing damages. The communities need technical and financial assistance to develop better policies and approaches to dealing with coastal hazards. WCMP is well-positioned to help provide that outreach, through its relationships with communities as well as the Communities of Practice developed through the Project of Special Merit and Coastal Resilience Project.*

Management Priority 2: Mapping and Tool Development

*Description: Improved maps and decision-support tools will help communities to identify areas at risk for flooding, erosion, and storm damage. WCMP can assist in developing and making available GIS layers and other tools. Enhancement funding has assisted in these areas significantly.*

**Management Priority 3: Inter- and Intra- Agency/Organization Coordination**

*Description: WCMP has played a significant role in coordinating planning for and responses to damage caused by coastal erosion and flooding. Through its role in coordinating the Coastal Hazards Work Group, WCMP has an opportunity to help agencies and organizations to communicate with one another in addressing coastal hazards.*

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 are research needs for changing lake levels and the effect on structures and shoreline; research is needed on recession rates; need for research on potential effects of climate change; research is needed on water transport within bluffs (and effect of higher lake levels); data is needed on cumulative effects of structures; research needed on nature-based shoreline solutions; research needed on functional value of wetlands related to areas at risk for coastal flooding in Wisconsin; research on ice jams and effects; research on freeze-thaw effects
Mapping/GIS/modeling	Y	Need for more modeling and mapping as new information becomes available; need to make existing layers consistent; need to make information available; mapping of nearshore habitat; digitization of shoreline
Data and information management	Y	Comprehensive inventory of structures; inventories of infrastructures at-risk; need to make data accessible to decision-makers and managers as well as landowners
Training/Capacity building	Y	Need to train planners, consultants, decision-makers on coastal erosion issues and need to understand issues they face in implementing better policies; training/education of consultants and local decision-makers for identifying hazardous areas, ensuring appropriate setbacks, and use of non-structural shoreline stabilization methodologies (where appropriate); training of permitting staff
Decision-support tools	Y	Technical tools to help communities address development and plan for hazards; new and improved visualization tools needed for planning efforts; need to integrate existing technology into useful tools; improvement needs for existing tools

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Communication and outreach	Y	Information sharing and capacity-building between agencies; information sharing and capacity building of new and existing communities of practice; communication to planners and decision-makers on how to use existing tools and applications
Other (specify)		

**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.

In recent years, the State of Wisconsin has faced high lake levels, historic storm events, and extensive flooding. Individuals have lost homes and infrastructure damage was severe. Communities need assistance in addressing coastal hazards. WCMP is in a good position to provide it.



## 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 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. 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 <sup>6</sup>	Changes or Trends Since Last Assessment <sup>7</sup> (↑, ↓, –, unkwn)	Cite data source
Beach access sites	180	↓ by 11	WI DNR 2019 Wisconsin Beach List
Shoreline (other than beach) access sites	204	unkwn	Lake Michigan Water Trail Inventory; Lake Superior Water Trail
Recreational boat (power or nonmotorized) access sites	311	↑	WI DNR Public boat landings
Number of designated scenic vistas or overlook points		unkwn	
Number of fishing access points (i.e. piers, jetties)	175	unkwn	Previous needs assessment. No further data available.

<sup>6</sup> Be as specific as possible. For example, if you have data on many access sites but know it is not an exhaustive list, note “more than” 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.

<sup>7</sup> If you know specific numbers, please provide. However, if specific numbers are unknown but you know that the general trend was increasing or decreasing or relatively stable or unchanged since the last assessment, note that with a ↑ (increased), ↓ (decreased), – (unchanged). If the trend is completely unknown, simply put “unkwn.”

Type of Access	Current number <sup>6</sup>	Changes or Trends Since Last Assessment <sup>7</sup> (↑, ↓, -, unkwn)	Cite data source
Coastal trails/ boardwalks (Please indicate number of trails/boardwalks and mileage)		unkwn	
Number of acres parkland/open space	1,996,479	unkwn	Statewide Comprehensive Outdoor Recreation Plan 2019-2023: <a href="https://dnr.wi.gov/topic/lands/scorp/">https://dnr.wi.gov/topic/lands/scorp/</a>
Access sites that are Americans with Disabilities Act (ADA) compliant <sup>8</sup>		unkwn	
Other (please specify)		unkwn	

- 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,<sup>9</sup> the National Survey on Fishing, Hunting, and Wildlife Associated Recreation,<sup>10</sup> and your state's tourism office.

Statewide Comprehensive Outdoor Recreation Plan 2019 - 2023 was recently completed:  
<https://dnr.wi.gov/topic/lands/scorp/>. Surveyed participants identified the need for more hiking trails in their home county as the most frequently selected recreation need.

Wisconsin Department of Administration estimates from 2019 indicate that the population in coastal counties has increased by about 24,000 people, compared to data from 2010:  
[https://doa.wi.gov/DIR/Final\\_Ests\\_Co\\_2019.pdf](https://doa.wi.gov/DIR/Final_Ests_Co_2019.pdf)

Wisconsin Harbor Towns Association updated and published its Wisconsin Harbor Towns Guide, as it does about every three years. The organization has an active website:  
<https://wisconsinharbortowns.net/>

<sup>8</sup> For more information on ADA see [www.ada.gov](http://www.ada.gov).

<sup>9</sup> Most states routinely develop "Statewide Comprehensive Outdoor Recreation Plans", or SCORPs, 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 SCORPs at [www.recpro.org/scorp-library](http://www.recpro.org/scorp-library).

<sup>10</sup> 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. See [www.wsfrprograms.fws.gov/subpages/nationalsurvey/national\\_survey.htm](http://www.wsfrprograms.fws.gov/subpages/nationalsurvey/national_survey.htm)

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 Wisconsin Coastal Guide includes multiple resources that informally inventory public access features. A Public Access story map focuses on Wisconsin's coast. The Guide is currently being updated. <https://maps.aqua.wisc.edu/storymaps/wcg/>

### 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)	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	Y	N
Operation/maintenance of existing facilities	Y	Y	N
Acquisition/enhancement programs	Y	Y	N

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.
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?<sup>11</sup>

#### 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)	Multiple	Multiple	Multiple
Date of last update	Varies	Varies	Varies
Frequency of update	Varies	Varies	Varies

<sup>11</sup> 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.

The State of Wisconsin does not maintain a single public access guide. There are, however, multiple resources addressing different aspects of public access to coastal resources. Please see “Resource Characterization,” above. In addition, please see Wisconsin DNR’s Lake Michigan State Water Trail interactive web map: <https://dnr.wi.gov/topic/parks/name/lakemichigan/> and the Northwest Regional Planning Commission’s Lake Superior Water Trail page: <https://www.nwrpc.com/868/Lake-Superior-Water-Trail>.

**Enhancement Area Prioritization:**

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

<b>High</b>	_____
<b>Medium</b>	<u>  X  </u>
<b>Low</b>	_____

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

Public access is a priority for the Wisconsin Coastal Management Program and is regularly funded through section 306.

## 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 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. 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, unknwn)	Type of Impact <sup>12</sup> (aesthetic, resource damage, user conflicts, other)	Change Since Last Assessment (↑, ↓, -, unknwn)
Beach/shore litter	L	Aesthetic	-
Land-based dumping	L	Aesthetic	-
Storm drains and runoff	L	Aesthetic	-
Land-based fishing (e.g., fishing line, gear)	L	Aesthetic/resource damage	-
Ocean/Great Lakes- based fishing (e.g., derelict fishing gear)	L	Resource damage	-
Derelict vessels	N/A	-	-
Vessel-based (e.g., cruise ship, cargo ship, general vessel)	N/A	-	-
Hurricane/Storm	L	Aesthetic/resource damage	-
Tsunami	N/A	-	-
Other (please specify)			

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.

The Alliance for the Great Lakes reported that from 2015-2019, 60% of the litter items collected at Wisconsin beaches as part of their Adopt-a-Beach program was plastic, and 28% of collected items were smoking related. Glass, metal, paper, and other items comprised a much smaller percentage of litter.

<sup>12</sup> You can select more than one, if applicable.

The NOAA Marine Debris Program funded a study that quantified microplastics on national park beaches. This study found that the Apostle Islands National Lakeshore in Wisconsin had, on average 221.3 pieces of microplastic per kilogram of sand, which is more than any other national park location included in the study.

#### 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)	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	N	N	N
Marine debris removal programs	N	N	N

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.

#### 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.

The Great Lakes Marine Debris Action Plan contains goals related to research, science-based policy and management decisions, education and community outreach, and marine debris removal. Of the 53 actions laid out in the 2014-2019 plan, 34 are complete, 17 are in progress, one is not yet started, and one was removed from the plan. The 2020-2025 plan builds on the progress that has been made with a new set of actions for the next five years. The Wisconsin Coastal Management Program is a member of the action plan working group.

The concentration and type of microplastics in the Great Lakes and tributaries, as well as the impacts to biota, are active areas of research with the University of Wisconsin Sea Grant engaged in

this work. A NOAA Marine Debris Program funded project focused on the Milwaukee Estuary is assessing the feasibility of using mussels to monitor for microplastics in the Great Lakes.

There also exist programs to reduce and clean-up marine debris. The University of Wisconsin Sea Grant, Apostle Islands Sport Fishermen's Association, and Great Lakes Indian Fish and Wildlife Commission Law Enforcement team hosted two workshops, developed outreach materials, and created a web portal for information sharing with the goal of changing behavior to prevent gill net loss. Building on this, a project funded by the NOAA Marine Debris Program Community-based Marine Debris Removal Grant aims to remove derelict fishing gear by using anglers to crowd-source the location of ghost nets. Additionally, the Lake Superior National Estuarine Research Reserve hosts 2-5 coastal clean-ups annually along the Pokegama River in the St. Louis River Estuary, on Barkers Island, or on Wisconsin Point. The Lake Superior Reserve also has a traveling marine debris exhibit that collects pledges from people to reduce plastic consumption. To date, the exhibit has collected just over 1000 pledges. In addition to the Adopt-a-Beach clean-ups, the Alliance for the Great Lakes also runs campaigns targeting plastics and smoking related litter, including the "Hold On To Your Butt MKE" program at urban beaches in Milwaukee and the Plastic Pollution toolkit that highlights strategies to reduce plastic pollution in the Great Lakes.

## 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 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 National Ocean Economics Program Data on population and housing,<sup>13</sup> please indicate the change in population and housing units in the state's coastal counties between 2012 and 2017. 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 (2012-2017) to approximate current assessment period.

**Trends in Coastal Population and Housing Units**

	2012	2017	Percent Change (2012-2017)
Number of people	2,059,051	2,065,025	0.29%
Number of housing units	939,988	949,347	1.00%

2. Using provided reports from NOAA's Land Cover Atlas,<sup>14</sup> please indicate the status and trends for various land uses in the state's coastal counties between 1996 and 2016. You may use other information and include graphs and figures, as appropriate, to help illustrate the information. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period that the data represent. Also note that Puerto Rico currently only has data for one time point so will not be able to report trend data. Instead, Puerto Rico should just report current land use cover for developed areas and impervious surfaces.

\* Please note that NOAA's Land Cover Atlas data for 2016 is unavailable for Wisconsin. And the 1996-2016 Land Cover Change data is unavailable from the C-CAP FTP Tool. Due to this, Wisconsin has added 2011 land coverage data and gain/loss changes since 2006 in the Tables 2 and 3 below, as provided in the 2016-2020 Section 309 Needs Assessment.

<sup>13</sup>[www.oceaneconomics.org/Demographics/PHresults.aspx](http://www.oceaneconomics.org/Demographics/PHresults.aspx). Enter "Population and Housing" section and select "Data Search" (near the top of the left sidebar). From the drop-down boxes, select your state, and "all counties." Select the year (2012) and the year to compare it to (2017). Then select "coastal zone counties."

<sup>14</sup>[www.coast.noaa.gov/digitalcoast/tools/lca.html](http://www.coast.noaa.gov/digitalcoast/tools/lca.html). Note that the 2016 data will not be available for all states until later Summer 2019. NOAA OCM will be providing summary reports compiling each state's coastal county data. The reports will be available after all of the 2016 data is available.



### Distribution of Land Cover Types in Coastal Counties \*

Land Cover Type	Land Area Coverage in 2011 (Acres)	Gain/Loss Since 2006 (Acres)
Developed, High Intensity	163286.8	5197.8
Developed, Low Intensity	272200.0	5533.0
Developed, Open Space	75582.9	7375.9
Grassland	126867.2	21719.5
Scrub/Shrub	336915.8	-8063.6
Barren Land	18637.6	181.5
Open Water	1263120.0	642.7
Agriculture	1694620.8	-6971.2
Forested	2591488.4	-24906.2
Woody Wetland	1447250.1 (woody/emergent)	-718.6 (woody/emergent)
Emergent Wetland	NA	NA

3. Using provided reports from NOAA's Land Cover Atlas,<sup>15</sup> please indicate the status and trends for developed areas in the state's coastal counties between 1996 and 2016 in the two tables below. You may use other information and include graphs and figures, as appropriate, to help illustrate the information. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period the data represents. Also note that Puerto Rico currently only has data for one time point so will not be able to report trend data. Unless Puerto Rico has similar trend data to report on changes in land use type, it should just report current land use cover for developed areas and impervious surfaces.

### Development Status and Trends for Coastal Counties

	2006	2011	Percent Net Change
Percent land area developed	492963.0 (6.2%)	511069.7 (6.4%)	18106.7 (3.7%)
Percent impervious surface area	188433.8 (2.4%)	194212.0 (2.4%)	5778.2 (3.1%)

\* Note: Islands likely have data for another time period and may only have one time interval to report. If so, only report the change in development and impervious surface area for the time period for which data are available. Puerto Rico does not need to report trend data.

<sup>15</sup>[www.coast.noaa.gov/digitalcoast/tools/lca.html](http://www.coast.noaa.gov/digitalcoast/tools/lca.html). Note that the 2016 data will not be available for all states until later Summer 2019. NOAA OCM will be providing summary reports compiling each state's coastal county data. The reports will be available after all of the 2016 data is available.

### How Land Use Is Changing in Coastal Counties

Land Cover Type	Areas Lost to Development Between 2006-2011 (Acres)
Barren Land	1372.4
Emergent Wetland	1139.6 (emergent and woody wetland combined)
Woody Wetland	See above
Open Water	103.9
Agriculture	12017.8
Scrub/Shrub	495.7
Grassland	1867.9
Forested	1627.7

*\* Note: Islands likely have data for another time period and may only have one time interval to report. If so, only report the change in land use for the time period for which high-resolution C-CAP data are available. Puerto Rico and the Northern Mariana Islands do not report.*

- 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.

There have been coastal shoreline changes in the past five years, mostly due to higher water levels and nearshore and bluff erosion rather than development. Installation of shoreline stabilization structures have been more common to address and mitigate higher water levels and coastal and nearshore processes. There has not been a recent, comprehensive coastwide shoreline assessment conducted, but some publicly available information is available in the Wisconsin Shoreline Inventory and Oblique Viewer [http://floodatlas.org/asfpm/oblique\\_viewer/](http://floodatlas.org/asfpm/oblique_viewer/).

- 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.

There are no additional data or reports.

### Management Characterization:

- 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)	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	Y	N
Guidance documents	Y	Y	N
Management plans (including SAMPs)	Y	Y	N

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.

There have been no significant changes since the last assessment.

#### 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 level of priority given is due to the significant and diverse problems associated with cumulative and secondary impacts in Wisconsin and the driving forces of development and population growth. These impacts, even if insignificant by themselves, when combined can cause significant impacts to water quality, habitat, navigation, public access, and coastal and nearshore health in both the built and non-built environment. These impacts can severely threaten the state's coastal resources.

WCMP concludes that existing rules, policies, and programs are adequate to address the issues and challenges currently faced in Wisconsin's coastal zone due to cumulative and secondary impacts. There is not a need for new policies to be supported by Section 309 funding.

There has been significant investment from federal, state, tribal and local governments, and many stakeholders in Wisconsin, to address cumulative and secondary impacts. WCMP, as a networked program in the Department of Administration, has been able to successfully work collaboratively with these stakeholders and efficiently leverage financial and technical assistance when involved. No Section 309 funding is proposed. Section 306 funding will continue to be utilized to provide both financial and technical assistance.

## 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 I (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
City of Superior	Updated SAMP in 2008 with a new comprehensive plan

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.

Special area management plans (SAMP) are designed under the Coastal Zone Management program, specifically under 16 USC §1452(3). Wisconsin currently has one SAMP developed for the City of Superior. The SAMP has been in place since 1992 and was reauthorized under a new comprehensive plan in 2008. The SAMP identified about 1,000 acres where Army Corps of Engineers (COE) and State SAMP general permits may be used. The City handles the initial eligibility and standard review working with the applicant. The SAMP streamlines the COE and DNR review of permits since the City works with the applicant to develop a project that is eligible and compliant with the general permit.

#### **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)	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	Y	N	N
SAMP plans	Y	N	N

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.

#### 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.

In Wisconsin, SAMP permits are granted by the U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources. SAMPs are not a high priority issue in Wisconsin. The local community must take the initiative to begin the planning process, or fully support a regional, state, or federal agency's coordination of the SAMP. Prior experience with the SAMP process and outcome has been uneven and demonstrates a limited applicability of the process for Wisconsin communities. Also, current policies of the U.S. Army Corps of Engineers make it difficult to follow a predictable SAMP process. Coastal communities have other policy and regulatory tools which better address the objectives of this enhancement area.

## Ocean and Great Lakes Resources

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

**PHASE I (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),<sup>16</sup> indicate the status of the ocean and Great Lakes economy as of 2015 (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 Ocean and Great Lakes Economy for Coastal Counties (2015)**

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	44,959	630	188	3,166	6,535	161	34,277
Establishments (# of Establishments)	2,064	34	26	26	137	20	1,821
Wages (Millions of Dollars)	\$957.0	\$8.2	\$10.8	\$157.7	\$251.1	\$6.1	\$523.0
GDP (Millions of Dollars)	\$2,100	\$33.0	\$20.9	\$465.8	\$408.1	\$51.7	\$1,100

<sup>16</sup> [www.coast.noaa.gov/digitalcoast/tools/enow.html](http://www.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 "2015" 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 Ocean and Great Lakes Economy for Coastal Counties (2005-2015)<sup>17</sup>

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	5,986	42	-101	-840	2,729	-101	4,258
Establishments (# of Establishments)	161	-2	-13	-5	5	-12	188
Wages (Millions of Dollars)	\$270.22	\$2.755	-\$2.073	\$12.144	\$91.347	-\$3.178	\$169.229
GDP (Millions of Dollars)	\$511.02	\$13.039	-\$3.756	\$162.893	-\$25.442	\$26.263	\$338.032

- 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<sup>18</sup>, indicate the number of uses within ocean or Great Lakes waters off of your state. For energy uses (including pipelines and cables, see the “Energy and Government Facility Siting” template following). Add additional lines, as needed, to include additional uses that are important to highlight for 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 Ocean or Great Lakes Waters

Type of Use	Number of Sites
Federal sand and gravel leases ( <i>Completed</i> )	
Federal sand and gravel leases ( <i>Active</i> )	
Federal sand and gravel leases ( <i>Expired</i> )	
Federal sand and gravel leases ( <i>Proposed</i> )	
Beach Nourishment Projects	
Ocean Disposal Sites	
Principle Ports ( <i>Number and Total Tonnage</i> )	5 commercial freight ports and 30 million tons of cargo
Coastal Maintained Channels	13 commercial port channels
Designated Anchorage Areas	
Danger Zones and Restricted Areas	
Other (please specify)	

- 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.

<sup>17</sup> The trend data is available at the bottom of the page for each sector and type of economic data. Mouse over the data points for 2005 and 2015 to obtain the actual values and determine the change by subtracting 2005 data from 2015.

<sup>18</sup> [www.coast.noaa.gov/digitalcoast/tools/ort.html](http://www.coast.noaa.gov/digitalcoast/tools/ort.html). Go to “Quick Reports” and select the “state waters” option for your state or territory. Some larger states may have the “Quick Reports” for their state waters broken into several different 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. Then scroll through each category to find the data to complete the table.

### Significant Changes to Ocean and Great Lakes Resources and Uses

Resource/Use	Change in the Threat to the Resource or Use Conflict Since Last Assessment (↑, ↓, -, unkwn)
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 <sup>19</sup>	-
Energy production	-
Fishing (commercial and recreational)	-
Recreation/tourism	-
Sand/gravel extraction	-
Dredge disposal	-
Aquaculture	-
Other (please specify)	

4. For the 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.

### 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 (Comm and Rec)	Aquaculture	Recreation	Marine Transportation	Dredging	Sand/Mineral Extraction	Ocean Acidification	Other (Specify)
<i>Example: Living marine resources</i>		X	X	X	X	X		X	X			
Dredge disposal			X						X			

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.

None.

### Management Characterization:

<sup>19</sup> Offshore development includes underwater cables and pipelines, although any infrastructure specifically associated with the energy industry should be captured under the "energy production" category.



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**

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

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.

The Lake Superior and Lake Michigan Lakewide Action and Management Plans (LaMPs) are both complete. The Lake Michigan LaMP was last updated in 2008, but the Lake Superior LaMP (2015-2019) was updated since the last assessment and published in 2016. The Lake Superior LaMP documented and updated the following:

- Current environmental conditions
- Threats to the ecosystem
- Lakewide objectives
- Priorities for future scientific investigations
- Actions and projects to address threats and to achieve lakewide objectives

The LaMPs are not funded by, or driven by, Section 309 or other CZM funding. LaMPs are coordinated by the U.S. Environmental Protection Agency in cooperation with the Wisconsin Department of Natural Resources.

The LaMPs continue to serve as guidance for federal and state agencies in addressing and coordinating resource management issues and needs, as well as informing the Great Lakes Restoration Initiative Strategy.

The State of Wisconsin and NOAA's Office of National Marine Sanctuaries continue to cooperate on designating a National Marine Sanctuary (NMS) along Wisconsin's Lake Michigan coast. As part of

the nomination and designation process, state and NOAA staff continue to update the management plan and environmental impact statement for the NMS. The nomination and designation process have been driven by Section 306 funding and WCMP staff coordination and technical assistance. The outcome will be the eventual designation of the Wisconsin NMS and implementation of the NMS management plan.

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

<b>Comprehensive Ocean/Great Lakes Management Plan</b>	<b>State Plan</b>	<b>Regional Plan</b>
Completed plan (Y/N) (If yes, specify year completed)	N	N
Under development (Y/N)	N	N
Web address (if available)		
Area covered by plan		

#### **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.

Great Lakes resources will continue to be a priority for the Wisconsin Coastal Management Program (WCMP). WCMP and the state continue to support regional and local restoration strategies and efforts to address current and emerging threats. This includes implementation of projects along Lake Superior and Lake Michigan's coasts to improve Great Lakes resources.

There continues to be a need for additional research, assessment and monitoring of Great Lakes resources, including of habitat and fisheries, to better understand the impact of emerging threats from new invasive species, climate change, etc. as well as existing threats from within the watersheds and nearshore.

WCMP will continue to target Section 306 funding to Great Lakes resource projects. WCMP staff (via Section 306) will also continue to provide coordination and technical assistance on Great Lakes resource projects and initiatives by collaboratively working with federal, tribal, state and local partners.

## 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)20

**PHASE I (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<sup>21</sup> includes existing data for many of these energy facilities and activities.

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<sup>20</sup> 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 describe what states need to do regarding national interest and consideration of interests that are greater than local interests.

<sup>21</sup> [www.coast.noaa.gov/digitalcoast/tools/ort.html](http://www.coast.noaa.gov/digitalcoast/tools/ort.html). Select "Quick Reports" and then enter your state. Select the Quick Reports for "coastal waters" off of your state. Depending on the size of the state, there may be more than one "coastal waters". If so, you will need to add the data from all reports to complete the table. Click on the wind turbine icon on the left ("Energy and Minerals") for information on energy facilities. 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 (↑, ↓, -, unkwn)	Proposed in Coastal Zone (# or Y/N)	Change in Proposed Facilities/Activities Since Last Assessment (↑, ↓, -, unkwn)
Pipelines	Y	-	Y	-
Electrical grid (transmission cables)	Y	↑	Y	↑
Ports	13	-	N	-
Liquid natural gas (LNG)	N	-	N	-
Other (refuse derived fuel/biogas/landfill gas)	Y	↑	Y	↑
Oil and gas	Y	-	N	-
Coal	Y	-	N	↓
Nuclear	N	↓	N	-
Wind	Y	-	N	-
Wave	N	-	N	-
Tidal	N	-	N	-
Current (ocean, lake, river)	N	-	N	-
Hydropower	Y	-	N	-
Ocean thermal energy conversion	N	-	N	-
Solar	Y	↑	Y	↑
Biomass	Y	-	N	-
Other (please specify)				

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.

The Wisconsin Public Service Commission (PSC) is responsible for siting approval of most power plants, pipelines, and electric transmission and distribution lines. (Outside of dams: The Federal Energy Regulatory Commission has jurisdiction over most large hydropower projects and DNR regulates the remaining dams.) PSC conducts a biennial Strategic Energy Assessment which evaluates the adequacy and reliability of the state's current and future electrical supply. The most recent assessment is available here: <https://www.fairwisconsinrates.com/public-service-commission-strategic-energy-assessment-2024/>

3. Briefly characterize the existing status and trends for federal government facilities and activities of greater than local significance<sup>22</sup> in the state's coastal zone since the last assessment.

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

<sup>22</sup> 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).

### 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.

#### Significant Changes in Energy and Government Facility 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)
Statutes, regulations, policies, or case law interpreting these	Y	N	N
State comprehensive siting plans or procedures	N	N	N

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.

### 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.

Measures are already in place to facilitate siting while maintaining current levels of coastal resource protection.

## 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 I (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.<sup>23</sup>

**Status and Trends of Aquaculture Facilities and Activities**

Type of Facility/Activity	Number of Facilities <sup>24</sup>	Approximate Economic Value	Change Since Last Assessment (↑, ↓, -, unkwn)
Data not available (please see below)	Data not available (please see below)	Data not available (please see below)	unkwn

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.

Data on aquaculture facilities is inadequate to characterize for this assessment, as it is not possible to accurately count facilities. Much of the data is sensitive due to the small number of facilities and the need to protect proprietary sales data. There are no in-water facilities within either of the Great Lakes. Most Wisconsin facilities are located inland. Going forward, there is no expectation that things will change in the next five years.

**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.

<sup>23</sup> While focused on statewide aquaculture data rather than just within the coastal zone, the *Census of Aquaculture* ([www.agcensus.usda.gov/Publications/Census\\_of\\_Aquaculture/](http://www.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 2013. The report provides a variety of state-specific aquaculture data to understand current status and recent trends. .

<sup>24</sup> 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.

### Significant Changes in Aquaculture 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)
Aquaculture comprehensive siting plans or procedures	N	N	N
Other aquaculture statutes, regulations, policies, or case law interpreting these	Y	N	N

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.

### 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.

The current status and condition of aquaculture in Wisconsin and its coastal zone is relatively static. Two state regulatory agencies, the Wisconsin Department of Natural Resources and Wisconsin Department of Agriculture, Trade and Consumer Protection, are already working collaboratively with the aquaculture industry, tribal governments, the University of Wisconsin, University of Wisconsin Sea Grant Institute, and the Wisconsin Aquaculture Association on best management practices, monitoring and assessment, and outreach and education. University of Wisconsin Sea Grant Advisory Services has provided aquaculture technical assistance since 1985.

In addition, Wisconsin Department of Agriculture, Trade and Consumer Protection is advised by the Wisconsin Aquaculture Industry Advisory Council, which is comprised of industry, state agency and university representatives. The Council works to identify and address critical issues facing Wisconsin's aquaculture industry. And the Wisconsin Department of Natural Resources established the Aquaculture Industry Working Group, which focuses more specifically on resource protection issues. Both groups have contributed to maintaining communication between Wisconsin's aquaculture stakeholders in pursuing common objectives and identifying challenges.





## IV. Strategy 2021-2025

### Wetlands Strategy

#### I. Issue Area(s)

The proposed strategy or implementation activities will support the following high-priority enhancement areas (*check all that apply*):

- |  |   |
|--|---|
| <input type="checkbox"/> Aquaculture                           | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy and Government Facility Siting | <input checked="" type="checkbox"/> Wetlands              |
| <input type="checkbox"/> Coastal Hazards                       | <input type="checkbox"/> Marine Debris                    |
| <input type="checkbox"/> Ocean/Great Lakes Resources           | <input type="checkbox"/> Public Access                    |
| <input type="checkbox"/> Special Area Management Planning      |   |

#### II. Strategy Description

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

- ☐ 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** *State the goal of the strategy for the five-year assessment period. The goal should be the specific program change to be achieved or be a statement describing the results of the project, with the expectation that achieving the goal would eventually lead to a program change. For strategies that implement an existing program change, the goal should be a specific implementation milestone. For example, work with three communities to develop revised draft comprehensive plans that consider future sea level rise or, based on research and policy analysis, present proposed legislation on wetland buffers to state legislature for consideration. Rather than a lofty statement, the goal should be achievable within the time frame of the strategy.*

Enhance local and watershed wetland policies through targeted outreach and collaboration

Program changes that may result from the strategy:

- Updated comprehensive plans that include wetland conservation language
- Local hazard mitigation plans and land and water management plans that include wetlands as a way to address flooding
- Revisions of local ordinances to incorporate functional values of wetlands

- Adoption of consistent methodology to assess fluvial erosion hazards and natural flood management opportunities
- Development of long-term, sustainable plans for addressing invasive species

*C. Describe the proposed strategy and how the strategy will lead to and/or implement the program changes selected above. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)*

Wisconsin Coastal Management Program (WCMP) will work with other agencies, organizations, and local communities to address wetland conservation at local and watershed levels. WCMP will build on past Section 309 successes to encourage continued collaboration between local governments and organizations in the coastal regions. This will include leveraging the relationships built through efforts in the Lake Superior region (exploring flood risk and wetlands and collaboration on culverts), promoting and expanding GIS tools and resources, and implementing designs and methods through locally-adopted plans and policies. WCMP will collaborate with decision-makers and partners to encourage communities to evaluate existing local regulations and develop plan updates and new policies to better conserve wetlands in the coastal zone. With upcoming demonstration projects and FEMA funding, communities have indicated that they are receptive to exploring wetlands as a way to address flooding: WCMP and its partners will assist communities in updating their local plans to include wetland restoration language and to make themselves more better-situated for any potential future funding that may be made available. WCMP will work with partners to encourage and foster new and ongoing communities of practice in coastal regions to better identify shared concerns and develop consistent, effective approaches to wetland conservation. Working with communities and partners, WCMP will help to develop and expand technical tools, such as mapping tools, to improve access to information and support better local policy decisions.

### **III. Needs and Gaps Addressed**

*Identify what priority needs and gaps the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority needs and gaps. This discussion should reference the key findings of the assessment and explain how the strategy addresses those findings.*

The following priority needs and gaps will be addressed:

Communication and Outreach – As noted in the needs assessment, changes in regulations and state agency staffing have led to a need for increased outreach and technical support to local governments and communities. Communities face ongoing needs with wetlands identification and education. Outreach is also needed to make communities aware of available technical resources and how to use those resources. Communication between organizations, agencies, and communities is an ongoing need. Helping to coordinate communities of practice is a significant need, as is making those communities of practice self-sustaining. WCMP will work with partners and communities to support local wetland planning and policies. WCMP will support new and existing communities of practice to better facilitate information sharing and collaboration.

Training/Capacity-Building – Changes in permitting and other regulations have created a need for training. Non-wetland specialists need targeted training to understand the role and value of

wetlands across other disciplines and in areas of importance to local communities. Where training efforts have been made, continued outreach is needed to maintain efforts. WCMP will engage agencies and other partners to provide information on the role and value of wetlands and wetland stewardship. With its partners, WCMP will explore opportunities to adapt methodologies used in other regions to Wisconsin.

Decision support tools— Decision support tools are needed to assist communities in making informed decisions when developing and implementing land use plans. A related need is to evaluate, test, and improve existing tools WCMP will assist communities in utilizing existing decision support tools and look for ways to enhance existing tools and develop new ones.

Mapping/GIS – There are multiple needs for mapping and GIS related to wetlands, including a need to improve the Wisconsin Wetland Inventory to increase usability for local planning, needs for interpretation of existing data, and needs to make mapping and GIS data accessible and available. WCMP will work with agencies and other partners to improve consistency between datasets, update existing maps to make them more accurate, and increase accessibility.

The strategy addresses the following management priorities:

Management Priority 1: Technical assistance, education, and outreach: *Many coastal wetlands decisions and efforts are made on a local and regional basis. Wisconsin Coastal Management Program has opportunities to assist communities in assessing their policies and approaches to wetland conservation, encourage collaboration between communities, organizations, and agencies, and provide outreach and assistance on existing tools and resources.* WCMP will assist local communities in examining their wetlands policies. WCMP will work with agencies, partner organizations, and local communities to promote local wetland planning and conservation. WCMP will encourage collaborative approaches and information sharing between communities and other partners.

Management Priority 2: Improved mapping, data, tools: *Tools, data, and mapping have improved since the last assessment, but there are needs for more accessible tools, updated datasets, science on wetland functions, and facilitation in using those tools.* WCMP will work with agencies, partner organizations, and local communities to develop better tools, data, and mapping products. WCMP will support refining and improving existing tools and maps and making them more accessible (user-friendly and available) to communities.

The needs assessment has identified invasive species, development, and hydrologic alterations as the three biggest stressors to wetlands. Most land-use decisions in Wisconsin are made on a local level. Focusing on local policies and plans to address wetlands conservation is a sensible approach.

The current 309 strategy has helped to build networks for sharing information and building capacity for wetlands protection. This strategy will build on past successes and further engage partners, agencies, and communities to protect and improve wetlands in Wisconsin's coastal zone.

#### **IV. Benefits to Coastal Management**

*Discuss the anticipated effect of the strategy, including the scope and value of the strategy, in advancing improvements in the CMP and coastal management, in general.*

The strategy will advance WCMP and coastal management by engaging communities and partners to protect wetlands in the coastal zone. Strengthening local governmental capabilities and improving coordination of existing policies and activities of governmental units and planning agencies are two key objectives of WCMP. By facilitating information sharing between communities, agencies, and organizations, the strategy will increase awareness of the benefits (functional, habitat, aesthetic, cultural) of wetlands, encourage thoughtful planning, and lead to new conservation efforts.

## **V. Likelihood of Success**

*Discuss the likelihood of attaining the strategy goal and program change (if not part of the strategy goal) during the five-year assessment cycle or at a later date. Address the nature and degree of support for pursuing the strategy and the proposed program change, as well as the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.*

The strategy will build on current section 309 efforts. Recent 309 tasks have created a network of individuals and communities interested in pursuing actions to protect coastal wetlands in the Lake Superior region. The current section 309 strategy has also strengthened relationships between agencies and other partners. Wisconsin Wetlands Association, Wisconsin Emergency Management, Wisconsin Department of Natural Resources, Wisconsin Sea Grant Institute, and University of Wisconsin-Extension are partners who can be anticipated to continue involvement in any 309 wetlands efforts. There is significant momentum that is continuing to build.

Recent storm events throughout Wisconsin's coastal zone and higher lake levels have raised interest in the functional value of wetlands. Partners from all the regional planning commissions coastal zone and local communities are very interested in pursuing wetlands conservation for flooding protection as well as water quality and habitat. There is a distinct urgency among communities. Based on community interest, past successes, and enthusiastic partners, the likelihood of success is high.

## **VI. Strategy Work Plan**

*Using the template below, provide a general work plan that includes the major steps that will lead toward or achieve a program change or implement a previously achieved program change. For example, even if the final adoption of the program change is outside of the CMP's control, what steps will be included in the work plan so the CMP ensures the program change is considered, reviewed, and hopefully adopted by the outside entity? Who are the other stakeholders or elected officials that need to be engaged, and how and when during the strategy development process? What is the decision-making or voting process that is involved in the adoption of the program change, and how will the CMP interact with this process to ensure that the proposed program change is considered? If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. The plan should identify a schedule for completing the strategy and include major projected milestones (key products, deliverables, activities, and decisions) and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual milestones are a useful guide to ensure the strategy remains on track, OCM recognizes that they may change somewhat over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. Further detailing and adjustment of annual activities, milestones, and budgets will be determined through the annual cooperative agreement negotiation process.*

**Strategy Goal:** Enhance local wetland policies through targeted outreach and collaboration

**Total Years:** 1-5

**Total Budget:** \$375,000

**Year(s):** 1-5

**Description of activities:** Direct technical assistance: Funding will be used for WCMP staff to provide technical assistance to communities, coordinate with agencies and partners, participate in relevant work groups, develop and manage projects with partners. Funding will be used to support 50% of a Full Time Employee position throughout the strategy period.

**Major Milestone(s):** Identify and hire FTE (year 1). WCMP staff will provide improved coordination between agencies and partners (years 1-5). Identification of areas for improvement of state and local communities' policies and guidance (years 2-3). Developed and executed projects to improve state and local protections (years 1-5).

**Budget:** \$225,000 (based on \$45,000 per year)

**Year(s):** 1-5

**Description of activities:** Targeted assistance and outreach: pass-through funding to communities and other partners for projects to assist local communities in identifying opportunities to protect and restore vulnerable wetlands; promotion of wetlands for habitat and functional values

**Major Milestone(s):** Revised, updated, or new local plans and policies to protect wetlands (years 1-5). At least two completed projects directly leading to new or revised local policies (years 1-5).

**Budget:** \$125,000

**Year(s):** 1-5

**Description of activities:** Improvements to data, GIS, mapping as necessary to complete direct and targeted assistance and outreach tasks listed above. Activities may include mapping or GIS development for local communities that will be incorporated into adopted local plans or updates to state or regional databases that used for wetland identification, characterization, or regulation and are formally adopted.

**Major Milestone(s):** Updated and/or improved maps and databases that are formally adopted or incorporated into a formally-adopted plan or used for regulation (years 1-5). Development of tools and data that communities and partners use for identifying and prioritizing sites for wetland conservation, leading protection and/or restoration of the areas.

**Budget:** \$25,000

## **VII. Fiscal and Technical Needs**

**A. Fiscal Needs:** *If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the CMP has made, if any, to secure additional state funds from the legislature and/or from other sources to support this strategy.*

Partner agencies and local communities will be involved and their time and efforts will likely make up additional funding needs. It is highly unlikely that state funds could be secured to support the effort, although state funds may support partner agencies who are involved with the effort. Additionally, partner agencies may be funded through other federal sources (such as the Federal Emergency Management Administration, building on work that is expected to be done through the *Rebuilding Natural Infrastructure in Ashland County* project). The state recently passed legislation

that will provide funding for demonstration projects in the Lake Superior region, which will likely help in implementation of strategy (in addition to the efforts of past strategies). WCMP recently participated in a Great Lakes Coastal and Nearshore Habitat Assessment Project workshop: staff will continue to be engaged in identifying funding that can be used for sites and activities identified through that process as well as Great Lakes Restoration Initiative funds.

**B. Technical Needs:** *If the state does not possess the technical knowledge, skills, or equipment to carry out all or part of the proposed strategy, identify these needs. Provide a brief description of what efforts the CMP has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).*

WCMP will work with other state agencies and partners such as the Wisconsin Sea Grant Institute, Wisconsin Department of Natural Resources, Wisconsin Wetlands Association, and Wisconsin Emergency Management to address technical needs. As a networked agency, WCMP has ongoing, strong relationships with its partners.

**VIII. Projects of Special Merit (Optional)**

*If desired, briefly state what projects of special merit the CMP may wish to pursue to augment this strategy. (Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above.) The information in this section will not be used to evaluate or rank projects of special merit and is simply meant to give CMPs the option to provide additional information if they choose. Project descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not provide detailed project descriptions that would be needed for the funding competition.*

WCMP may pursue PSM funding to support adoption of wetland conservation strategies to increase community resiliency.

## ***5-Year Budget Summary by Strategy***

At the end of the strategy section, please include the following budget table summarizing your anticipated Section 309 expenses by strategy for each year. Generally, CMPs should only develop strategies for activities that the state intends to fund and work on given their anticipated level of Section 309 funding. However, in some circumstances, CMPs may wish to use the assessment and strategy development process as a broader strategic planning effort for the CMP. In that case, the CMP may elect to include additional strategies that exceed the state's anticipated Section 309 funding over the five-year period. If the CMP chooses this approach, it should still clearly indicate which strategies it anticipates supporting with Section 309 funding and which strategies it anticipates supporting through other funding sources.

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
Enhance local and watershed wetland policies through targeted outreach and collaboration	309	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$375,000
<b>Total Funding</b>		\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$375,000

## Coastal Hazards Strategy

### IX. Issue Area(s)

The proposed strategy or implementation activities will support the following high-priority enhancement areas (*check all that apply*):

- |  |   |
|--|---|
| <input type="checkbox"/> Aquaculture                           | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy and Government Facility Siting | <input type="checkbox"/> Wetlands                         |
| <input checked="" type="checkbox"/> Coastal Hazards            | <input type="checkbox"/> Marine Debris                    |
| <input type="checkbox"/> Ocean/Great Lakes Resources           | <input type="checkbox"/> Public Access                    |
| <input type="checkbox"/> Special Area Management Planning      |   |

### X. Strategy Description

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

- ☐ 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:** *State the goal of the strategy for the five-year assessment period. The goal should be the specific program change to be achieved or be a statement describing the results of the project, with the expectation that achieving the goal would eventually lead to a program change. For strategies that implement an existing program change, the goal should be a specific implementation milestone. For example, work with three communities to develop revised draft comprehensive plans that consider future sea level rise or, based on research and policy analysis, present proposed legislation on wetland buffers to state legislature for consideration. Rather than a lofty statement, the goal should be achievable within the time frame of the strategy.*

Assist agencies and communities in developing and revising coastal hazards policies through outreach and data development and management.

Program changes that may result from the strategy include:

- Revisions of locally-adopted plans, maps, and ordinances
- Inclusion of coastal hazards in local comprehensive plan updates
- Inclusion of coastal hazards in local hazard mitigation plans
- Revisions to State of Wisconsin All Hazards Plan



- Revisions to local ordinances to address barriers to flood protection

*C. Describe the proposed strategy and how the strategy will lead to and/or implement the program changes selected above. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)*

Wisconsin Coastal Management Program (WCMP) will work with partner agencies, organizations, and local governments to identify opportunities to improve plans and regulations related to coastal erosion, flooding, and storms. WCMP will coordinate efforts through the Coastal Hazards Work Group. WCMP will lead efforts for information sharing between Coastal Hazards Work Group members as well as outside partners and communities, including promoting ordinance refinement and local policy development to address coastal hazards. Working with partner state agencies through the Coastal Hazards Work Group, WCMP will look for opportunities for guidance development and interpretation of state regulations. WCMP will collaborate with Wisconsin Emergency Management in updating the State of Wisconsin All Hazards Plan and its adoption. WCMP staff will encourage coastal communities to apply for annual section 306-funded local grant funding to incorporate coastal hazards into their locally-adopted comprehensive plan updates and local hazard mitigation plans. WCMP will also expand on coordination efforts made through the Project of Special Merit and the Coastal Resilience Project. With partner agencies, WMCP will continue to promote the efforts and products of those projects through their Communities of Practice and will look for opportunities to expand lessons learned from the projects to other regions and hazards. Sharing the lessons learned and promoting the products developed through those projects, WCMP will encourage local decision-makers to include changing lake levels, erosion, storm damage and other coastal-hazards in their locally-adopted plans and policies. WCMP will provide outreach and resources to communities impacted by coastal hazards.

## **XI. Needs and Gaps Addressed**

*Identify what priority needs and gaps the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority needs and gaps. This discussion should reference the key findings of the assessment and explain how the strategy addresses those findings.*

The following Priority Needs will be addressed:

- Data and information management – Needs include a comprehensive inventory of structures, inventories of infrastructures at-risk, need to make data accessible to decision-makers and managers as well as landowners. WCMP will support development of GIS and other data systems and inventories. WCMP will work with partner agencies to manage and update existing inventories and to make datasets compatible with one another.
- Training/Capacity Building – There is a need to train planners, consultants, decision-makers on coastal erosion issues for understanding issues and implementing policies. Other needs include training and education of consultants and local decision-makers for identifying hazardous areas, ensuring appropriate setbacks, and use of non-structural shoreline stabilization methodologies (where appropriate) and training of permitting staff WCMP will work with its networked agencies and local communities to provide training for decision-

makers at the state and local level. WCMP will coordinate with local communities and encourage new and ongoing Communities of Practice.

- Decision-support tools – Technical tools are needed to help communities address development and plan for hazards. New and improved visualization tools are needed for planning efforts. Tool development may include updating existing tools or developing new assessment tools to help communities make well-informed choices in addressing coastal hazards.
- Communication and outreach – Needs include information sharing and capacity-building between agencies, information sharing and capacity building of new and existing communities of practice, and communication to planners and decision-makers on how to use existing tools and applications. WCMP will promote existing tools, coordinate Coastal Hazards Work Group efforts, and work with partners to provide information to communities, help build capacity for existing communities of practice, and provide support for accessing and using data and tools.

The following Management Priorities will be addressed:

- Community Outreach – *Coastal communities have faced significant increases in flooding and erosion, with high lake levels increasing damages. The communities need technical and financial assistance to develop better policies and approaches to dealing with coastal hazards. WCMP is well-positioned to help provide that outreach, through its relationships with communities as well as the Communities of Practice developed through the Project of Special Merit and Coastal Resilience Project.* WCMP will work with the Coastal Hazards Work Group, partner agencies and organizations, existing communities of practice, and local governments to provide community outreach.
- Mapping and Tool Development—*Improved maps and decision-support tools will help communities to identify areas at risk for flooding, erosion, and storm damage. WCMP can assist in developing and making available GIS layers and other tools.* New and updated maps and tools will assist communities in identifying areas at risk. These tools may be created through local planning efforts or in conjunction with partner agencies and organizations.
- Inter- and Intra-Agency/Organization Coordination – *WCMP has played a significant role in coordinating planning for and responses to damage caused by coastal erosion and flooding. Through its role in coordinating the Coastal Hazards Work Group, WCMP has an opportunity to help agencies and organizations to communicate with one another in addressing coastal hazards.* WCMP will help to coordinate agencies, organizations, and local governments in addressing and responding to coastal hazards. Efforts will include inter-agency meetings, trainings, and direct outreach.

## **XII. Benefits to Coastal Management**

*Discuss the anticipated effect of the strategy, including the scope and value of the strategy, in advancing improvements in the CMP and coastal management, in general.*

The strategy will advance WCMP and coastal management by protecting economic investments and resources in Wisconsin's Coastal Zone. The effort will build on past CZM-funded efforts, including the Project of Special Merit and Coastal Resilience Project. The strategy will provide local communities with tools and support to develop local protections for coastal hazards.

Strengthening local governmental capabilities and improving coordination of existing policies and activities of governmental units and planning agencies are two key objectives of WCMP. The strategy will support resiliency and public safety.

### **XIII. Likelihood of Success**

*Discuss the likelihood of attaining the strategy goal and program change (if not part of the strategy goal) during the five-year assessment cycle or at a later date. Address the nature and degree of support for pursuing the strategy and the proposed program change, as well as the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.*

There is a high likelihood of success. As a networked agency, WCMP works closely with other state agencies. Member agencies of the Wisconsin Coastal Hazards Work Group, including Wisconsin Emergency Management, Wisconsin Department of Natural Resources, University of Wisconsin-Madison Dept. of Engineering, and UW Sea Grant Institute have informed development of the strategy and have had an opportunity to review it. WCMP will continue to coordinate regular meetings of the group. WCMP and work group members have worked with communities throughout the coastal zone and have found that some are very interested in improving their responses to coastal hazards. The WCMP and work group members are committed to assisting local communities and helping to improve understanding of and responses to coastal hazards. Higher lake levels and increased frequency of storm events have caused significant damages in the region: communities are very eager for resources to address coastal hazards.

### **XIV. Strategy Work Plan**

*Using the template below, provide a general work plan that includes the major steps that will lead toward or achieve a program change or implement a previously achieved program change. For example, even if the final adoption of the program change is outside of the CMP's control, what steps will be included in the work plan so the CMP ensures the program change is considered, reviewed, and hopefully adopted by the outside entity? Who are the other stakeholders or elected officials that need to be engaged, and how and when during the strategy development process? What is the decision-making or voting process that is involved in the adoption of the program change, and how will the CMP interact with this process to ensure that the proposed program change is considered? If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. The plan should identify a schedule for completing the strategy and include major projected milestones (key products, deliverables, activities, and decisions) and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual milestones are a useful guide to ensure the strategy remains on track, OCM recognizes that they may change somewhat over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. Further detailing and adjustment of annual activities, milestones, and budgets will be determined through the annual cooperative agreement negotiation process.*

**Strategy Goal:** Assist agencies and communities in developing and revising coastal hazards policies through outreach and data development and management

**Total Years:** 1-5

**Total Budget:** \$375,000

**Year(s):** 1-5

**Description of activities:** Direct technical assistance: Funding will be used for WCMP staff to provide technical assistance to communities, coordinate with agencies and partners, participate in the Coastal Hazards Work group and other relevant work groups, communities of practice, and teams, and develop and manage projects with partners. Funding will be used to support 50% of a Full Time Employee position throughout the strategy period.

**Major Milestone(s):** Improved coordination between agencies and partners (years 1-5). Outreach to communities promoting policies and practices that can be adopted in local plans and ordinances (years 1-5). Developed and executed projects to improve local protections (years 1-5).

**Budget:** \$225,000 (based on \$45,000 per year)

**Year(s):** 1-5

**Description of activities:** Targeted financial assistance and outreach: WCMP will provide pass-through funding to projects that assist local communities in identifying opportunities to address coastal hazards; ordinance revisions, plan development; development and revision of outreach materials

**Major Milestone(s):** Revised, updated, or new local plans and ordinances addressing flooding and/or coastal erosion (2-3 projects, years 1-5).

**Budget:** \$75,000

**Year(s):** 1-5

**Description of activities:** Improvements to data, GIS, mapping to assist agencies and communities in assessing and responding to damages caused by coastal hazards. Efforts may include updating and improving existing databases and tools (such as the shoreline viewer), development of maps and databases for inventorying infrastructure, and mapping that the state and local communities can incorporate into adopted plans and regulations.

**Major Milestone(s):** Updated and/or improved maps and databases; improved infrastructure for collecting, managing, and sharing data and analyses; improved hazard mapping collaborations, including training (years 1-5).

**Budget:** \$75,000

## **XV. Fiscal and Technical Needs**

**A. Fiscal Needs:** *If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the CMP has made, if any, to secure additional state funds from the legislature and/or from other sources to support this strategy.*

Partner agencies and local communities will be involved, and their time and efforts will likely make up additional funding needs. It is highly unlikely that state funds could be secured to support the effort, although state funds may support partner agencies who are involved with the effort. Additionally, partner agencies may be funded through other federal sources (such as the Federal Emergency Management Administration).

**B. Technical Needs:** *If the state does not possess the technical knowledge, skills, or equipment to carry out all or part of the proposed strategy, identify these needs. Provide a brief description of what efforts the CMP has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).*

WCMP will work with other state agencies and partners to address technical needs. As a networked agency, WCMP has ongoing, strong relationships with its partners.

#### **XVI. Projects of Special Merit (Optional)**

*If desired, briefly state what projects of special merit the CMP may wish to pursue to augment this strategy. (Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above.) The information in this section will not be used to evaluate or rank projects of special merit and is simply meant to give CMPs the option to provide additional information if they choose. Project descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not provide detailed project descriptions that would be needed for the funding competition.*

WCMP is currently pursuing PSM funding for a collaborative hazard mapping effort in the Lake Superior region. WCMP may pursue PSM funding in the future to expand and/or transfer that work to other coastal regions of the state.

### **5-Year Budget Summary by Strategy**

*At the end of the strategy section, please include the following budget table summarizing your anticipated Section 309 expenses by strategy for each year. Generally, CMPs should only develop strategies for activities that the state intends to fund and work on given their anticipated level of Section 309 funding. However, in some circumstances, CMPs may wish to use the assessment and strategy development process as a broader strategic planning effort for the CMP. In that case, the CMP may elect to include additional strategies that exceed the state's anticipated Section 309 funding over the five-year period. If the CMP chooses this approach, it should still clearly indicate which strategies it anticipates supporting with Section 309 funding and which strategies it anticipates supporting through other funding sources.*

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
Assist agencies and communities in developing and revising coastal hazards policies through outreach and data development and management	309	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$375,000
<b>Total Funding</b>		\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$375,000

## V. Summary of Stakeholder and Public Engagement

WCMP engaged many stakeholders in the development of the 2021-2025 Needs Assessment and Strategy. Staff shared a draft document directly with partners who contributed to its development. The draft was made available for public comment on WCMP's website, <https://coastal.wisconsin.gov>. WCMP shared the plan with the Wisconsin Coastal Management Council at a February 13, 2020 meeting. WCMP updated the draft document with comments received from stakeholders and will note and consider any other comments received.

In the development process to collect data and perform assessment, the WCMP (within the Wisconsin Department of Administration) collaborated with its fellow agencies:

- Wisconsin Department of Natural Resources (DNR) *DNR staff provided information on wetlands policies and science, gave detailed comments on the wetlands assessment and strategy, and provided information used throughout the assessment sections.*
- Wisconsin Department of Transportation (DOT) *DOT staff coordinate the State's Harbor Assistance fund and are represented on the Wisconsin Coastal Management Council*
- Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) *DATCP staff provided information on the state of aquaculture in the coastal zone.*
- Wisconsin Public Service Commission (PSC) *Information from PSC staff informed the energy siting section.*

WCMP engaged other stakeholders in developing the document, including:

- The Wisconsin Coastal Hazards Work Group *Work group members include staff from DNR, Wisconsin Emergency Management, Wisconsin Sea Grant, University of Wisconsin-Madison Department of Civil and Environmental Engineering, University of Wisconsin-Madison Department of Geology and Geoscience, Association of State Floodplain Managers, USGS, Wisconsin State Cartographer's Office, Wisconsin State Geographic Information Officer, and local governments. Coastal Hazards Work Group members offered extensive feedback in developing the Assessment Phase I, Assessment Phase 2, and Strategy for the Hazards sections of the document. Work group members identified relevant documents, projects, and information for developing the assessment and strategy sections. They provided significant insight to needs, information gaps, and strategy development.*
- Wisconsin Wetlands Association *WWA staff comments throughout development of the 2021-2025 Needs Assessment and Strategy, particularly for the wetlands sections. WWA met with WCMP staff several times, provided information on wetlands policies, existing tools and data, and information gaps, and gave feedback on early drafts of the document.*
- Regional Planning Commissions *WCMP staff work closely with Bay-Lake Regional Planning Commission, Northwest Regional Planning Commission, and Southeastern Regional Planning Commission. SEWRPC staff provided comments that helped WCMP develop the needs assessment and strategy for the wetlands section.*
- University of Wisconsin Extension *WCMP staff met with UW Extension staff on the needs assessment and strategy, focusing on the wetlands section of the document. UW Extension staff made recommendations that helped to guide strategy development for wetlands.*
- WCMP's Public Access Technical Advisory Committee *WCMP staff discussed the 309 Needs Assessment and Strategy with the group, which is made up of state, regional, and other partners*

*with expertise in engineering, coastal processes, planning, and other disciplines relevant to public access.*

- *WCMP's Nonpoint Pollution Technical Advisory Committee WCMP staff shared information on the 309 Needs Assessment and Strategy and solicited feedback from the group. Group members consist of state and local experts in water quality and nonpoint source pollution.*
- *Todd Brennan, Senior Policy Manager at the Alliance for the Great Lakes, provided information about and data from the Adopt-a-Beach program and other beach clean-ups for the Marine Debris section.*
- *Titus Seilheimer from Wisconsin Sea Grant provided information about microplastics and microfibers for the Marine Debris section.*
- *Sarah Lowe, Great Lakes Regional Coordinator for the NOAA Marine Debris Program/Freestone Environmental Services, helped identify relevant resources for the Marine Debris section.*
- *Deanna Erickson, Education Coordinator at the Lake Superior National Estuarine Research Reserve, provided information about relevant programs at the Lake Superior Reserve for the Marine Debris section.*