

# **Wisconsin Coastal Management Program**

## **Needs Assessment and Strategy**

**2011-2016**

For Enhancements to the  
Wisconsin Coastal Management Program

Authorized by Section 309 of the  
Coastal Zone Management Act of 1972  
(as amended in 1990 and 1996)

**Wisconsin Department of Administration  
Wisconsin Coastal Management Program  
Final November 1, 2010**

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### **Revisions**

**Revision 2 November 1, 2010 for final submission includes responses to OCRM comments**

**Revision 1 July 14, 2010 includes updated Wetlands Strategy**

# Wisconsin Coastal Management Program

2011-2016

## Needs Assessment and Strategy

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## I. Introduction

The Coastal Zone Management Act (CZMA) Section 309, as amended in 1990 and again in 1996, established a voluntary coastal zone enhancement grants program for states to develop program changes in one or more of the nine coastal zone enhancement areas:

- Wetlands
- Public Access
- Coastal Hazards
- Cumulative and Secondary Impacts
- Energy and Government Facility Siting
- Marine Debris
- Ocean (Great Lakes) Resources
- Special Area Management Plans
- Aquaculture.

The Wisconsin Coastal Management Program (WCMP) uses section 309 funding from the U. S. Department of Commerce to fund grants for the above areas. The Needs Assessment and Strategy summarizes the WCMP and the proposed priority enhancement areas. The document follows the required National Oceanic & Atmospheric Administrations (NOAA) Office of Ocean and Coastal Resources Management (OCRM) formats.

The Needs Assessment includes

- 309 enhancement objectives
- resource characterization with qualitative and, when possible, quantitative analyses
- management characterization
- priority needs and information gaps
- enhancement area prioritization.

Strategy includes

- program change
- need(s) and gap(s) addressed
- benefit(s) to coastal management
- likelihood of success
- strategy work plan
- fiscal and technical needs
- 5-year budget summary by strategy.

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)

- Wisconsin Department of Transportation (DOT)
- Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP)
- Wisconsin Public Service Commission (PSC)
- University of Wisconsin (UW) System institutions.

This July 2010 document is a draft for OCRM input and public comment prior to finalizing the needs assessment and strategy for each enhancement area.

WCMP staff will review the process and draft with the Wisconsin Coastal Management Council. The draft will be posted on the WCMP website. An official notice of public comment will be published in the state's newspaper of record. Email notifications will be sent to current and past grant recipients and applicants and affiliate organizations inviting comment. WCMP staff will collect, edit and incorporate comments into the final submission document.

## **II. Summary**

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

### **A. Wetlands**

Since the last Needs Assessment and Strategy, the following Coastal Wetlands projects have used section 309 funds for

- Preparation of a Natural Heritage Inventory database for use by Southeastern Wisconsin Regional Planning Commission for the update of the Regional Natural Areas Plan
- Completion of an ecological integrity assessment for the West Shore of Green Bay
- An update to Southeastern Wisconsin Regional Planning' Commission's Regional Natural Area and Critical Species Habitat Plan
- Mapping and volunteer monitoring of ephemeral pond wetlands in Ozaukee, Racine, and Kenosha Counties
- Strengthening the Citizen Monitoring Network for Ephemeral Ponds in Southeastern Wisconsin
- An Inventory of Coastal County Wetland Protection Policies and Programs
- St. Louis River Estuary Monitoring and Assessment
- Lake Superior Coastal Watershed Assessment

### **B. Coastal Hazards**

For the 2006-2010 Needs Assessment and Strategy, the work plan for Natural Hazards included (1) Expansion of technical tools and technology transfer, (2) Education and outreach, and (3) Coordination with municipalities and agencies.

WCMP expanded technical tools through several projects.

- Section 309 was used to complete the final phase of an effort to characterize bluff conditions on the Lake Superior coastline to help communities create defensible setbacks.
- Partners used enhancement funds to take and geolocate oblique photographs of Wisconsin's coasts and develop a detailed GIS database to compare the new photographs to a set from the 1970s (which the partners also digitized and geolocated).
- The University of Wisconsin-Madison completed projects investigating the effect of lakebed down cutting on long-term bluff recession.

- A current project led by the University of Wisconsin “Education & Outreach of Bluff and Beach Profile in Response to Coastal Structures in Ozaukee County,” will result in new technology such as oblique digital imaging, laser range finders, and a combination of ground-penetrating radar, sub-bottom profiler, and sub-scan sonar.
- Bayfield County is currently receiving 309 funds to incorporate LIDAR data into its building setback requirements.

#### Education and outreach efforts included

- A project to develop a final report, “Managing Coastal Hazards Risks in Wisconsin’s Changing Climate”, that documents communities’ approaches to setbacks, recession/bluff stability models, and an annotated bibliography of coastal studies conducted in Wisconsin.
- Bay-Lake Regional Planning Commission completed “A Guide to Hazard Mitigation Planning for Coastal Communities in Wisconsin.” The guide assists communities with addressing coastal hazards issues with their hazards mitigation guides.
- Public education and outreach were large components of Bayfield County’s efforts to refine ordinance language to improve their setback requirements. The county conducted public forums, produced brochures, and updated its website.
- The University of Wisconsin-Madison’s project, “Education & Outreach of Bluff and Beach Profile in Response to Coastal Structures in Ozaukee County,” involves training students to evaluate the impacts of shore protection systems.

#### Coordination with municipalities and agencies has been important in nearly all of the 309-funded hazards projects.

- Efforts in Bayfield County, in particular, have involved multiple partners assisting a community. Partners met with community planners and regional planning commission staff in developing the Coastal Hazards Risks report described above.
- The University of Wisconsin-Madison has met with Ozaukee County staff and Concordia University staff in developing its projects, leading to an improved relationship between all three entities.

### III. Assessment

#### A. Wetlands

##### Section 309 Enhancement Objective

Protection, restoration, or enhancement of the existing coastal wetlands base, or creation of new coastal wetlands.

##### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Please indicate the extent, status, and trends of wetlands in the coastal zone using the following table:

Table 1: Wetland Status and Trends in the Coastal Zone Based on Wisconsin Wetlands Inventory (WWI) Data

	<b>Based on original WWI and most recent update</b>		
<b>Wetlands type</b>	<b>Estimated historic extent, based on 1979 aerial photos (acres)</b>	<b>Current extent, based on most recent WWI update (acres)</b>	<b>Trends in acres lost since 2006 (Net acres gained &amp; lost)</b>
Non-tidal/freshwater	1,191,443	1,216,626	+25,183 (gained) -407 (lost) <b>Net Gain = 24,776*</b>

Table 2: Wetland Status and Trends in the Coastal Zone Based on Wetland Activity Tracking Data

<b>Based on Wetland Activity Tracking Data (2006-2009)</b>				
<b>Wetlands type</b>	<b>Acres gained through voluntary mechanisms</b>	<b>Acres gained through mitigation (2006-2008)</b>	<b>Acres lost through permitted fill</b>	<b>Acres disturbed through permitted activities</b>

Non-tidal/ freshwater	<b>8,875 re- establishment (acre gain)</b>  2,935 enhancement of existing wetland (acre neutral)	+607 acres restored -209 the lost acres that were mitigated  <b>Net Gain = 397</b>	110.07	416.48
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2. If information is not available to fill in the above table, provide a qualitative description of information requested, including wetlands status and trends, based on the best available information.

**Table 1: Wetland Status and Trends in the Coastal Zone based on Wisconsin Wetlands Inventory Data**

Trends in wetland acreage in the northern and northeast region could not be analyzed due to the rate at which the maps are updated (24 year cycle). WCMP analyzed trends in five Lake Michigan southeast region coastal counties. Within the next two to three years WCMP will be able to perform an analysis of wetland trends in the remaining Lake Michigan northeast region coastal counties.

**Table 2: Wetland Status and Trends in the CZM Based on Wetland Activity Tracking Data**

With two U. S. Environmental Protection Agency (US EPA) Wetland Grants, the Wisconsin Department of Natural Resources (DNR) has developed a Wetland Activity Tracking Data Collection System. This system gathers data on the positive and negative activities in Wisconsin wetlands **that are tracked by the agencies involved** (*A Unified Tracking and Reporting System for Wetland Projects: Permitting, Compensatory Mitigation, and Voluntary Restoration, Final Report to US EPA, Region V, 2007*). Reports have been published for calendar years 2006 and 2007. Participating agencies include U. S. Fish & Wildlife Service, U. S. Department of Agriculture (USDA) Natural Resources Conservation Service, Wisconsin Department of Natural Resources, Wisconsin Department of Transportation and Ducks Unlimited.

Data for 2008 has been collected but the report is not yet published. Data from 2009 will be complete pending receipt of data from one agency. Table 2 includes data from 2006-2008.

On the positive side, the system tracks and maps re-establishment projects that result in a gain in acres, and enhancement projects aimed at improving function on existing wetland acres. For the purposes of this report, enhancement projects are “acre-neutral” since there is no increase in wetland acreage.

On the negative side, the system tracks projects that have received a permit to fill wetland or allow a temporary disturbance to wetlands. Permits for disturbance typically involve linear roads or distribution lines. The linear nature of these projects constrains the alternatives for avoiding wetlands. Use of Best Management Practices during construction and post-construction minimize impacts, but some impacts such as fragmentation of forested wetlands remain.

3. Provide a brief explanation for trends.

The gains in acres since 1979 based on the Wisconsin Wetland Inventory are largely the result of improvements in mapping technology, which has captured more accurately smaller wetlands, as further explained below.

The early spring during leaf off conditions aerial photography used in mapping wetlands in the five coastal counties in the southeast region was very high quality and large scale (1" = 400'). Because of the time of year and the scale of the interpreted photography used, wetlands less than ¼ acre in size were delineated and digitized. Previously point symbols on the maps represented these small wetlands that could not be digitized and included in the total acres of wetland for that county. Previous summer photography did not delineate farmed wetlands and thus not mapped. Early spring photography detected wetland signatures more precisely enabling mapping these farmed wetlands because they were not cropped and many of them had standing water and unvegetated soils.

4. Identify ongoing or planned efforts to develop monitoring programs or quantitative measures for this enhancement area.

Wisconsin Department of Natural Resources is currently updating wetland maps in coastal counties in the northeast region and will be able quantitatively analyze trends in wetland gains and losses. Wisconsin Department of Natural Resources is working with the Southeastern Wisconsin Regional Planning Commission to update the 2005 Wisconsin Wetland Inventory using high quality spring aerial photography flown in 2010.

Wisconsin Department of Natural Resources has also been preparing for the 2011 US EPA National Wetland Condition Assessment. Wisconsin Department of Natural Resources staff serves on the US EPA National Team to develop, review and test the proposed assessment protocol. Wisconsin Department of Natural Resources will conduct the field work for US EPA and has received an US EPA Wetland Grant to conduct an additional Intensification Study in many Lake Michigan coastal counties. As part of the intensification effort, Wisconsin Department of Natural Resources will partner with U.S. Fish and Wildlife Service (USFWS) and St. Mary's University to select and map sample

plots using the USFWS Status and Trends methods. The result will be a wetland quantity and type Status and Trends report and a study area wetland condition report.

Wisconsin Department of Natural Resources received a WCMP grant to develop cumulative impact tools for floristic quality and storm water attenuation in the City of Superior. The tools' purpose is to help the City, Wisconsin Department of Natural Resources, Corps and US EPA better assess the wetland losses occurring through the City's Special Area Management Plan. Wisconsin Department of Natural Resources also partners with the Corps to conduct a wetland changes study and utilize USFWS NWI+ to determine at a landscape level the functions wetlands are providing in the St. Croix Flowage watershed. The two studies' information will assist state and federal regulatory agencies better assess the impacts of proposed wetland fill and potential function loss.

5. Use the following table to characterize direct and indirect threats to coastal wetlands, both natural and man-made. If necessary, additional narrative can be provided below to describe threats.

<b>Type of threat</b>	<b>Severity of impacts (H,M,L)</b>	<b>Geographic scope of impacts (extensive or limited)</b>	<b>Irreversibility (H,M,L)</b>
Development/Fill	M	Extensive	H
Alteration of hydrology	M	Extensive	M
Erosion	L	Limited	H
Pollution	H	Extensive	H
Channelization	L	Limited	H
Nuisance or exotic species	H	Extensive	M
Freshwater input	Not applicable		
Sea level rise/Great Lake level change	L	Limited	M
Other (please specify)			

6. **(CM)** Indicate whether the Coastal Management Program (CMP) has a mapped inventory of the following habitat types in the coastal zone and the approximate time since it was developed or significantly updated

<b>Habitat type</b>	<b>CMP has mapped inventory (Y or N)</b>	<b>Date completed or substantially updated</b>
Tidal (Great Lakes) Wetlands	N	
Beach and Dune	N	
Nearshore	N	

Other –freshwater coastal zone		Y		1989 (see table below)	
COUNTY	Total Surface Area (acres)	Date of Photography	Acres of Wetland	% of County Mapped as Wetland	Wetlands as % of Coastal Zone Total
Ashland	668,045	1991	165,567	25%	2.46%
Bayfield	944,800	1991	80,217	8%	1.19%
Brown	338,355	1986	29,651	9%	0.44%
Door	308,941	1987	50,640	16%	0.75%
Douglas	837,843	1991	194,406	23%	2.89%
Iron	484,627	1991	151,589	31%	2.25%
Kenosha	174,611	2005	21,520	12%	0.32%
Kewaunee	219,290	1989	27,428	13%	0.41%
Manitowoc	378,579	1989	48,698	13%	0.72%
Marinette	897,126	1989	209,559	23%	3.11%
Milwaukee	154,598	2005	8,289	5%	0.12%
Oconto	638,701	1989	140,384	22%	2.08%
Ozaukee	148,448	2005	21,291	14%	0.32%
Racine	213,184	2005	22,094	10%	0.33%
Sheboygan	328,723	2008	45,293	14%	0.67%
<b>TOTAL</b>	<b>6,735,871</b>		<b>1,216,626</b>	<b>18%</b>	<b>18.06%</b>

7. **(CM)** Use the table below to report information related coastal habitat restoration and protection. The purpose of this contextual measure is to describe trends in the restoration and protection of coastal habitat conducted by the State using non-CZM funds or non Coastal and Estuarine Land Conservation Program (CELCP) funds. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

Contextual measure	Cumulative acres for 2004-2010
Number of acres of coastal habitat restored using non-CZM or non-Coastal and Estuarine Land Conservation Program (CELCP) funds	
Number of acres of coastal habitat protected through acquisition or easement using non-CZM or non-CELCP funds	<b>2,445.33</b> This is 2008-2010 acquisitions and does not include easements.

In 2008, Wisconsin Department of Natural Resources land acquisition programs began collecting land cover data on acquisitions. WCMP is not taking further action to collect this data, as it is not cost-effective to survey all of the federal, state, local, and tribal governments, and non-profit conservation organizations for restoration, acquisition, and

easement data. Nor would this data be quality-controlled for duplicated counting among programs for projects with multiple funding sources.

The above paragraph explains why it is not feasible to accurately report acres restored using state funds. Most restoration projects utilize a mix of funding sources, which cannot be assigned separate acreage values. This is a long-standing challenge to tracking restoration activities and is beyond the scope of the WCMP.

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the wetland management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Wetland regulatory program implementation, policies, and standards	Y	N
Wetland protection policies and standards	Y	N
Wetland assessment methodologies (health, function, extent)	Y	N
Wetland restoration or enhancement programs	Y	N
Wetland policies related public infrastructure funding	Y	N
Wetland mitigation programs and policies	Y	N
Wetland creation programs and policies	N	N
Wetland acquisition programs	Y	N
Wetland mapping, GIS, and tracking systems	Y	Y
Special Area Management Plans	Y	N
Wetland research and monitoring	Y	N
Wetland education and outreach	Y	N
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

- a) Characterize significant changes since the last assessment;  
 This information is already included in the section for “Wetland Mapping” and for “Tracking.”
- b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
- c) Characterize the outcomes and effectiveness of the changes.

### **Wetland Mapping**

The significant change related to wetland mapping is that the photo film, color infrared film, is no longer being produced and it is the aerial photography used as the basis to map wetlands. WDNR is investigating other sources of film or mapping techniques that will be used beginning in 2011. This change was not a CZM driven change. WDNR’s contractor’s initial research shows other possible film sources to which to switch and test in 2010.

The outcomes and effectiveness of this change are pending investigation and trial results..

### **Tracking**

In 2006, WDNR began reporting on trackable wetland gains, losses and acre-neutral impacts to wetlands. This change was not a CZM driven change. Reports are published at <http://dnr.wi.gov/wetlands/tracking.html>. This annual report series is compiled from existing databases that track regulatory permits, compensatory mitigation projects, Wisconsin Department of Transportation mitigation projects and restoration activities carried out by a partnership of federal and state agencies and conservation organizations. While the series focuses more on quantity than quality of wetlands, it does categorize tracked activities generally by positive or negative impacts.

Not all activities can be tracked. Some losses, such as illegal filling, are unknown. Others are not regulated, so there is no record to track. Other negative impacts are not trackable by acre and not included in the report. Some positive impacts are not yet tracked, such as control of invasive plants, maintenance of water control structures, and best management practices for improving plant and animal habitat on existing wetlands.

**(CM)** Indicate whether the CMP has a habitat restoration plan for the following coastal habitats and the approximate time since the plan was developed or significantly updated.

<b>Habitat type</b>	<b>CMP has a restoration plan (Y or N)</b>	<b>Date completed or substantially updated</b>
Tidal (Great Lake) Wetlands	N	
Beach and Dune	N	
Nearshore	N	

Other (please specify)		
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**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the Coastal Management Program and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Select type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> <b>(H, M, L)</b>
Improve tracking of activities occurring in WI's waterways and wetlands.	Regulatory, Policy	H
Increase wetland inventory mapping cycle.	Regulatory, Policy, Data, Communication & Outreach	H
Assess Unregulated Excavation & Agricultural Drainage Activities	Regulatory, Policy, Data	M
Develop tools to assess wetland functions at the landscape level to better assess wetland cumulative impacts and restoring wetlands in the watershed for specific functions.	Regulatory, Policy Data, Communication & Outreach	M

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**      \_\_\_\_\_  
**Medium**      X    
**Low**        \_\_\_\_\_

Briefly explain the level of priority given for this enhancement area.

Wetlands restoration and protection is historically an area of importance to the WCMP and state of Wisconsin in general. WCMP will continue to focus on this area with both Section 309 and Section 306 CZMA funding.

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

**Yes**          X    
**No**         \_\_\_\_\_

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

The WCMP will explore various options including

- working with the Wisconsin Department of Revenue to assess property tax policies and impact on wetland conservation,
- addressing wetland hydrology with new groundwater protection rules
- assessing the need for additional gap analysis

## **B. 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.

### **Resource Characterization**

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Characterize the level of risk in the coastal zone from the following coastal hazards:

(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*)

<b>Type of hazard</b>	<b>General level of risk (H,M,L)</b>	<b>Geographic Scope of Risk (Coast-wide, Sub-region)</b>
Flooding	H	Coast-Wide, especially Southern Kenosha County, from the City of Green Bay to the state line of Michigan, City of Superior, Bark Bay, Chequamegon Bay
Coastal storms, including associated storm surge	M/H	Coast-Wide/Green Bay and Superior area
Geological hazards (e.g., tsunamis, earthquakes)	L	Coast-Wide
Shoreline erosion (including bluff and dune erosion)	H	Coast-Wide, especially the Counties of Kenosha, Racine, Milwaukee, Ozaukee, Sheboygan, Manitowoc, Kewaunee, Door, Brown, and Douglas
Sea level rise and other climate change impacts	Not applicable	Not applicable
Great Lake level change and other climate change impacts	M	Coast-Wide

Land subsidence	M	Coast-Wide
Other (please specify) Great Lakes Structure Deterioration (corrosion, timber crib deterioration, etc.)	M	Lake Superior region

2. For hazards identified as a high level of risk, please explain why it is considered a high level risk. For example, has a risk assessment been conducted, either through the State or Territory Hazard Mitigation Plan or elsewhere?

### **Flooding**

Coastal flooding affects all of Wisconsin's coastal counties to some degree. Along Lake Michigan, coastal flooding is a serious issue in southern Kenosha County, and from the City of Green Bay to the state line of Upper Peninsula Michigan. Wind set-up, wave run-up, and lake levels affect the risk of coastal flooding. Wind set-up increases the level of a lake against which a steady wind is blowing, causing a corresponding decrease in lake level on the opposite side of the lake. Wave run-up is also caused by the wind. Waves form readily where there is a shallow beach profile. Strong winds can cause coastal flooding in such areas. The State of Wisconsin Hazard Mitigation Plan identifies flooding as one of thirteen hazards that have the highest probability of affecting the state and the greatest potential for mitigation. Flooding is listed as having a high probability and high potential for mitigation.

### **Coastal Storms/Storm Surge**

Areas in Wisconsin that are susceptible to flooding are also vulnerable to storm surge. Green Bay and Superior are vulnerable to a fetch effect, which puts them at a higher risk than other areas of the state.

### **Shoreline Erosion**

All fifteen of Wisconsin's coastal counties experience erosion. Wisconsin's Lake Michigan shoreline is generally vulnerable to shore erosion from the Illinois State line to the Sturgeon Bay Canal, a distance of 185 miles. From the Sturgeon Bay Canal around the northern tip of Door County to Green Bay, shore erosion is largely limited to bays and clay banks. Erosion rates are particularly high along sand plains and high bluffs composed of till. Short-term erosion rates of 3 to 15 feet per year have been recorded along sand plains and 2 to 6 feet per year along high bluff lines. Wisconsin's Lake Superior shoreline is vulnerable to shore erosion except for rocky portions of the Bayfield Peninsula, the low marshland in Chequamegon Bay, and at the mouth of the Bad River.

Portions of Wisconsin's coasts are at risk of episodic erosion. Unsound development in these hazardous areas can lead to catastrophic events. Coastal erosion is a naturally occurring process that can accelerate during strong storms with high winds or heavy wave actions. Such events can cause sudden failure of bluffs. Freezing and thawing of lake ice can also contribute to erosion.

The State of Wisconsin Hazard Mitigation Plan identifies coastal erosion as one of thirteen hazards that have the highest probability of affecting the state and the greatest potential for mitigation. Flooding is listed as having a high probability and high potential for mitigation.

Studies and reports relevant to Wisconsin's Coastal Hazards:

- Wisconsin Coastal Management Program (WCMP) Shore Erosion Study (1977)
- WCMP Mapping Erosion Hazard Areas (Lake Michigan, 1997)
- Springman, R. and S. M. Born, 1979. Wisconsin's Shore Erosion Plan: Options and Strategies
- State of Wisconsin Hazard Mitigation Plan (updated 2008)
- Bay Lake Regional Planning Commission (BLRPC) study (1996)
- South East Wisconsin Regional Planning Commission (SEWRPC) study (1997)
- Coastal Processes Manual (1998)
- Lake Michigan Potential Damages Study (1999)

3. If the level of risk or state of knowledge of risk for any of these hazards has changed since the last assessment, please explain.

Wisconsin Emergency Management (WEM), with assistance from cooperating state agencies including the Wisconsin Department of Administration, updated the State of Wisconsin Hazard Mitigation Plan in December 2008. Wisconsin Emergency Management re-examined and re-assessed the risks identified in the previous version of the plan.

4. Identify any ongoing or planned efforts to develop quantitative measures of risk for these hazards.
  - Wisconsin Emergency Management – State of Wisconsin Hazard Mitigation Plan (includes dollars lost estimates for counties)
  - FEMA wave run-up model
  - Wisconsin Initiative on Climate Change Impacts – water level changes (model)
  - Water Resources Institute – Ground Water Council (GWC)
5. **(CM)** Use the table below to identify the number of communities in the coastal zone that have a mapped inventory of areas affected by the following coastal hazards. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

6.

Type of hazard	Number of communities that have a mapped inventory	Date completed or substantially updated
Flooding	15 Six coastal counties have completed WI Flood Map Modernization: 1. Brown 2. Door 3. Milwaukee 4. Oconto 5. Ozaukee 6. Sheboygan All 72 Wisconsin counties have identified flood hazard areas	Lake Superior Counties (4) – 1980s Lake Michigan Counties (11)– 2005 – 2010
Storm surge	3 Counties (Brown, Ozaukee and Sheboygan) have wave run-up and/or wave height analysis	Ozaukee – 1990 Sheboygan – 2002 Brown – 2009
Geological hazards (including Earthquakes, tsunamis)	Not available	The WCMP is not taking actions to collect the data at this time.
Shoreline erosion (including bluff and dune erosion)	The 11 Lake Michigan Counties have maps depicting erosion rates.  From the north going south, Lake Michigan counties: 1. Marinette 2. Oconto 3. Brown 4. Door 5. Kewaunee 6. Manitowoc 7. Sheboygan 8. Ozaukee 9. Milwaukee 10. Racine 11. Kenosha	<b>Southeastern Wisconsin</b> Shoreline Recession and Bluff Stability - 1977 to 1995 – South East Wisconsin Regional Planning Commission (SEWRPC) 1997 reports changes in bluff recession and bluff stability on selected bluff slopes between two specific measurement dates, two decades apart, in Kenosha, Racine, Milwaukee and Ozaukee counties shoreline. <b>Northeastern Wisconsin</b> Recession and Slope Stability in: 1977 – 1995 Bay Lake Regional Planning Commission (BLRPC)

		(1996) reports changes in bluff recession and bluff stability on selected bluff slopes between four specific measurement dates 1977, 1980, 1988 and 1995 conducted by Bay Lakes Regional Planning Commission. The report covers nearly two decades of erosion studies in 23 shoreline reaches along 77 miles of the Lake Michigan coast in Sheboygan, Manitowoc, Kewaunee, and Door counties.
Sea level rise	Not applicable	Not applicable
Great lake level fluctuation	Not available	NOAA Great Lakes Environmental Resource Laboratory publishes daily lake levels, as well as annual averages. The WCMP has not found that communities have additional mapping needs, and does not intend to collect more data.
Land subsidence	Not available	The WCMP does not at this time intend to collect data.
Other (please specify)		

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Building setbacks/ restrictions	Y	N
Methodologies for determining setbacks	Y	Y

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Repair/rebuilding restrictions	Y	N
Restriction of hard shoreline protection structures	Y	N
Promotion of alternative shoreline stabilization methodologies	N	Y
Renovation of shoreline protection structures	N	N
Beach/dune protection (other than setbacks)	N	N
Permit compliance	Y	N
Sediment management plans	N	N
Repetitive flood loss policies, (e.g., relocation, buyouts)	Y	N
Local hazards mitigation planning	Y	Y
Local post-disaster redevelopment plans	N	N
Real estate sales disclosure requirements	Y	N
Restrictions on publicly funded infrastructure	Y	N
Climate change planning and adaptation strategies	N	Y
Special Area Management Plans	Y	N
Hazards research and monitoring	Y	Y
Hazards education and outreach	Y	Y
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment;
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

### **Methodologies for Determining Setbacks**

Since the last Needs Assessment, members of the Coastal Hazard Work Group have led developments in determining setbacks. In particular, work group members have coordinated with Bayfield County zoning staff to develop a new setback ordinance for the county. WCMP provided funding for the efforts, which included incorporating Light

Detection and Ranging (LIDAR) data into building setback requirements. The work also included on-the-ground site visits, public outreach, training, website development, and revisions to ordinance language. The outcome is currently a voluntary standard that will provide better protection of the county's shoreline.

The WCMP-funded report, "Managing Coastal Hazards in Wisconsin's Changing Climate," discussed below, documented setback approaches and recession/stability models. It included an annotated bibliography of coastal studies conducted in Wisconsin that are relevant to the setback issue.

### **Promotion of Alternative Shoreline Stabilization Methodologies**

WCMP funded a report titled "Managing Coastal Hazards in Wisconsin's Changing Climate." In addition to detailing coastal hazards and risk management on Wisconsin's shores, the report provides recommendations. One is to restrict shore protection structures and encourage non-structural options. The Coastal Hazards Work Group and WCMP will use the report and its recommendations in future efforts.

### **Local Hazards Mitigation Planning**

Wisconsin Emergency Management has coordinated with communities in developing and revising their Hazards Mitigation Plans and updated the State of Wisconsin Hazard Mitigation Plan. WCMP participated in some of the efforts. In addition, Bay-Lake Regional Planning Commission produced a report titled "A Guide to Hazard Mitigation Planning for Coastal Communities in Wisconsin," which was funded by WCMP. The guide assists communities with addressing coastal hazards issues within their hazard mitigation plans.

### **Hazards Research and Monitoring**

Research and monitoring efforts in the past few years have included final efforts to develop and provide public research for a bluff stability model for southeastern Lake Superior. WCMP funded the project. WCMP also funded the University of Wisconsin-Madison efforts to investigate lakebed down cutting in Lake Michigan. The work resulted in a much clearer understanding of erosion of the near shore lakebed and increased public awareness of bluff recession.

The WCMP also funded projects that resulted in oblique photographs of Wisconsin's coasts. The photographs were geolocated. Older oblique photos were digitized and geolocated, and a GIS database built to allow comparison between the sets. The work resulted in a database that allows users to analyze change to the state's shoreline.

## **Hazards Education and Outreach**

The University of Wisconsin-Madison coordinated with Concordia University in their research on Lake Michigan. The work resulted in significant information sharing and cooperation between the schools. Efforts in the Lake Superior region involved several public meetings as well as extensive outreach to county staff. Development of the “Managing Coastal Hazards in Wisconsin’s Changing Climate” report involved outreach to all of the coastal regional planning commissions as well as several county offices.

## **Climate Change Planning and Adaptation Strategies**

The Wisconsin Initiative on Climate Change Impacts (WICCI) was formed in 2007. It is a partnership between the Wisconsin Department of Natural Resources and the University of Wisconsin–Madison Nelson Institute for Environmental Studies. The goal of WICCI is to assess and anticipate climate change impacts on Wisconsin's natural resources, ecosystems, regions and industries (including agriculture, tourism and other human activities) and develop and recommend adaptation strategies that can be implemented by businesses, farmers, public health officials, municipalities, wildlife managers and other stakeholders. This is not a CZM-driven change, and is proving to be an effective mechanism for collecting and sharing information about climate change adaptation strategies.

In April 2007, Wisconsin Governor Doyle signed Executive Order 191 which brought together a prominent and diverse group of key Wisconsin business, industry, government, energy and environmental leaders to create a Task Force on Global Warming. The Task Force developed recommendations to reduce greenhouse gas emissions while growing our state economy. During their last meeting in July 2008, the Task Force voted overwhelmingly to approve the final report, Wisconsin's Strategy for Reducing Global Warming, and forward the document on to Governor Doyle for consideration. This is not a CZM-driven change, and has not yet resulted in formal program or policy changes. A bill to adopt some of the Task Force recommendations did not survive the legislative process in 2010.

3. **(CM)** Use the appropriate table below to report the number of communities in the coastal zone that use setbacks, buffers, or land use policies to direct development away from areas vulnerable to coastal hazards. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

For CMPs that use numerically based setback or buffers to direct development away from hazardous areas report the following:

<b>Contextual measure</b>	<b>Number of communities</b>
Number of communities in the coastal zone required by state law or policy to implement setbacks, buffers, or other land use policies to direct develop away from hazardous areas.	All 15 coastal counties - All buildings and structures in Wisconsin unincorporated areas, except piers, boat hoists, and boathouses, must be set back 75 feet from the ordinary high water mark (OHWM.)
Number of communities in the coastal zone that have setback, buffer, or other land use policies to direct develop away from hazardous areas that are more stringent than state mandated standards or that have policies where no state standards exist.	6 counties, 1 city – Sheboygan County, Manitowoc County, Ozaukee County, Racine County, Kewaunee County, Bayfield County and the City of Mequon.

For CMPs that do not use state-established numerical setbacks or buffers to direct development away from hazardous areas, report the following:

<b>Contextual measure</b>	<b>Number of communities</b>
Number of communities in the coastal zone that are required to develop and implement land use policies to direct development away from hazardous areas that are approved by the state through local comprehensive management plans.	Not applicable
Number of communities that have approved state comprehensive management plans that contain land use policies to direct development away from hazardous areas.	Not applicable

### **Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H,M,L)
Updated, long-term projections of potential lake levels based on	Data	H

downscaling of general circulation models for the Great Lakes Region		
Detailed near shore bathymetry for multiple time periods to study lakebed down cutting	Data	M
Current, high resolution LIDAR data to construct integrated topographic/bathymetric models to visualize the impacts of variable water levels	Data	M
Current and historical orthophotography to calculate rates of bluff and shore erosion	Data	M
Parcels, inventory of building footprints, tax assessment data, and panimetric mapping to assess buildings and infrastructure at risk to coastal hazards	Data	H
Current inventory of development and comparison to inventory conducted in 1980s (see preceding item)	Data	M
County snapshots (via Digital Coast) for all Wisconsin coastal counties (with verified data)	Data	L
Higher density and frequency of coastal observations (buoys and other sensors measuring wind, waves, water levels, etc.)	Data	L
Probing of lakebed to determine areas where lakebed down cutting is significant	Data	M
Detailed, on-the-ground inventory of shore protection structures	Data	M
Zoning or other local regulations to ensure appropriate setback from hazards (e.g. beach/dune protection regulations, restrictions on lakeward encroachment of development, mandatory setbacks from unstable/receding bluffs)	Regulatory	H
Testing of predicted climate change effects on bluff stability and shoreline recession	Data	M

Education of engineers and DNR staff for identifying hazardous areas, ensuring appropriate setbacks, and use of non-structural shoreline stabilization methodologies (where appropriate)	Training, Capacity, Communication & Outreach	H
Notifying public of potential hazards when they purchase shoreline property	Training, Capacity, Communication & Outreach	H
Technical tools to help communities address development and plan for hazards	Policy, Communication & Outreach	H
Development of near shore sediment management plans	Training, Communication & Outreach	H
	Data, Policy	M

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**       X    
**Medium**           
**Low**              

Briefly explain the level of priority given for this enhancement area.

Coastal hazards are a pervasive, serious threat to Wisconsin’s shoreline communities. Coastal erosion and flooding have caused millions of dollars in property damages. Without public outreach and changes in policy, future property damages due to coastal hazards are likely. Coastal hazards have historically been an area of high priority for Wisconsin and the priority ranking remains high.

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

**Yes**          X    
**No**               

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

The level of priority for coastal hazards is high. The risks to public safety and property are significant. Existing policies and practices are insufficient to direct development away from hazards. The information gaps demonstrate that there is need for more data

about hazards, more and better policies, and more outreach. WCMP will develop a strategy to address the data and policy gaps.

## C. 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

- I. Improve public access through regulatory, statutory and legal systems.
- II. Acquire, improve and maintain public access sites to meet current and future demand through the use of innovative funding and acquisition techniques.
- III. Develop or enhance a Coastal Public Access Management Plan which takes into account the provision of public access to all users of Coastal areas of recreational, historical, aesthetic, ecological and cultural value.
- IV. Minimize potential adverse impacts of public access on coastal resources and private property rights through appropriate protection measures.

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Characterize threats and conflicts to creating and maintaining public access in the coastal zone:

<b>Type of threat or conflict causing loss of access</b>	<b>Degree of threat (H,M,L)</b>	<b>Describe trends or provide other statistics to characterize the threat and impact on access</b>	<b>Type(s) of access affected</b>
Private residential development (including conversion of public facilities to private)	M	Private residential development is an issue primarily on the Lake Michigan and Green Bay coasts. Typically issues arise from new development of private lands that have provided unofficial access to coastal resources. Also neighboring properties encroach on poorly identified road ends and public rights of way.	Beach and non-motorized watercraft access.
Non-water dependent commercial/industrial uses	L	Generally Great Lakes waterfront uses in Wisconsin	Walking, waterfront trails,

of the waterfront (existing or conversion)		are fairly complimentary to public access. A strong public trust helps to ensure this.	
Erosion	M	Erosion impacts along Wisconsin's Great Lakes coasts are varied in severity and geology. The sandy bluffs of the mid Lake Michigan and red clay shores of Lake Superior are far more susceptible to continual and catastrophic slope failures than the gradual shoreline of southern Lake Michigan or the rocky shoreline of Door County.	Beach access and public infrastructure.
Sea level rise/ Great Lake level change	M	The Great Lakes have always been prone to sometimes severe water level changes. Climate change and its long term impact will likely mean lower water levels as we see less ice cover, increased evaporation through the winter and less recharge from snow melt. Lower water levels could seriously affect docks and landings making it difficult for boaters to access the lakes.	Beach and motorized watercraft access. Adaptive management and proactive planning for future access improvements are considerations.
Natural disasters	M	The most obvious threats from natural disasters to public access in Wisconsin's coastal area are flooding and high water, particularly at river mouths.	The impact at river mouths includes drowned boat launches and docks which affect boating access and fishing.
National security	L	Increased security at some locations that had provided access, but are no longer permitted is a reality that most users now seem to accept. Access near some cooling water outlets of power plants and to harbor facilities is no	Fishing and boating.

		longer viable.	
Encroachment on public land	M	Encroachment and loss of access at road ends and right of ways is the most common example.	Beach and non-motorized watercraft access.
Other			

2. Are there new issues emerging in your state that are starting to affect public access or seem to have the potential to do so in the future?

In the past few years while Lakes Michigan and Superior have been experiencing low water levels a number of older navigation structures have been compromised. The structures' timber crib foundations were exposed and became susceptible to decomposition. Additional accelerated corrosion of steel structures has been observed, particularly along the Lake Superior Shore. The Wisconsin Coastal Management Program (WCMP) has been a part of and funded projects that have studied possible corrosion causes and evaluated coating materials and methods.

Cladophora and elevated levels of e. coli continue to be issues at Great Lakes beaches. The WCMP intends to continue to support projects that enhance beach health monitoring and abatement measures. This includes nonpoint pollution control measures.

3. **(CM)** Use the table below to report the percent of the public that feels they have adequate access to the coast for recreation purposes, including the following. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

As the WCMP and state further develop initiatives such as the Lake Michigan Water Trail and the Coastal Atlas, much detailed information will be collected on public access along the Wisconsin Great lakes coasts. The WCMP, which is within the same team at the Department of Administration as the Wisconsin Land Information and Comprehensive Planning Programs, will leverage these connections for public access data collection.

The University of Wisconsin Sea Grant has developed the Great Lakes Circle Tour. This depicts various public access sites along Wisconsin's coastline. Analysis using GIS maps associated with the Wisconsin Coastal Web Atlas can be completed to determine acreage for these public access sites.

<b>Contextual measure</b>	<b>Survey data</b>
Number of people that responded to a survey on recreational access	
Number of people surveyed that responded that public access to the coast for recreation is adequate or better.	
What type of survey was conducted (i.e. phone, mail, personal interview, etc.)?	
What was the geographic coverage of the survey?	
In what year was the survey conducted?	

- Briefly characterize the demand for coastal public access within the coastal zone, and the process for periodically assessing public demand.

Forty percent of the state’s population lives within the 15 coastal counties (of 72 total counties). Due to population location and the attractiveness of Wisconsin’s varied coastal area, the demand for public access is great.

The formation of State Outdoor Recreational Plans (SCORP), which assess public access demand has begun. The development of these plans and the subsequent assessment of regional recreational demands are a work product. This process yields a methodology to strategically target public use and leverage all available fiscal resources

Additionally, on a more detailed level, the WCMP and the State Comprehensive Planning Grant programs fund the study of recreational demand and supply.

- Please use the table below to provide data on public access availability. If information is not available, provide a qualitative description based on the best available information. If data is not available to report on the contextual measures, please also describe actions the CMP is taking to develop a mechanism to collect the requested data.

As the WCMP and state further develop initiatives such as the Lake Michigan Water Trail and the Coastal Web Atlas, much detailed information will be collected on public access along the Wisconsin Great Lakes coasts.

<b>Types of public access</b>	<b>Current number(s)</b>	<b>Changes since last assessment (+/-)</b>	<b>Cite data source</b>

<b>Types of public access</b>	<b>Current number(s)</b>	<b>Changes since last assessment (+/-)</b>	<b>Cite data source</b>
<p><b>(CM)</b> Number of acres in the coastal zone that are available for public (report both the total number of acres in the coastal zone and acres available for public access)</p>	<p>6,736,576 total acres</p> <p>Number of public access acres not available. The University of Wisconsin Sea Grant has developed the Great Lakes Circle Tour. This depicts various public access sites along Wisconsin's coastline. Analysis using GIS maps associated with the Wisconsin Coastal Web Atlas can be completed to determine acreage for these public access sites.</p>	<p>0</p>	<p>Wisconsin Blue Book 1999-2000 p. 682          Wisconsin defines a coastal zone as the entire county bordering the coast.</p>

<b>Types of public access</b>	<b>Current number(s)</b>	<b>Changes since last assessment (+/-)</b>	<b>Cite data source</b>
<b>(CM)</b> Miles of shoreline available for public access (report both the total miles of shoreline and miles available for public access)	852.14 total shoreline miles  Number of public access miles not available. Analysis using GIS maps associated with the Wisconsin Coastal Web Atlas can be completed to determine the number of shoreline miles which are available for public access.	0	Public Access: A Policy Study/1976 by the Wisconsin Department of Natural Resource, Table D-3
Number of State/County/Local parks and number of acres	252.5 acres	+2.5 acres	*** Olde Stone Quarry Project Summary and Title Services of Door Co.
Number of public beach/shoreline access sites*	193	+1	*** 2008 BEACH Act Reporting Suamico Shore Land Acquisition Progress Report and Lot Appraisals
Number of recreational boat (power or non-power) access sites	144	+1	*** North Shore of Madeline Island Public Access Grant Agreement

<b>Types of public access</b>	<b>Current number(s)</b>	<b>Changes since last assessment (+/-)</b>	<b>Cite data source</b>
Number of designated scenic vistas or overlook points	103	+2	*** Sturgeon Bay Waterfront Walkway Extension Project Summary
Number of State or locally designated perpendicular rights-of-way (i.e. street ends, easements)	134 (does not include 3 counties)	0	***
Number of fishing access points (i.e. piers, jetties)	175	0	***
Number and miles of coastal trails/boardwalks	129.24	+ .6 miles (2 segments)  + .9 miles (4 segments)  +1.74 miles  ----- +3.24 Total	*** -Milwaukee 2008 River Access Trail Grant App -Ashland 2005 Waterfront Trail Grant App -Milwaukee 2004 River Access Trail Grant App
Number of dune walkovers	Not available	Not available	Not available
Percent of access sites that are ADA compliant access	Not available	Not available	Not available
Percent and total miles of public beaches with water quality monitoring and public closure notice programs	64.1%  Miles not available	+0.6%	Wisconsin Great Lakes Beach Monitoring & Notification Program 2008 Annual Report
Average number of beach mile days closed due to water quality concerns	578	+114.3	*** NRDC Testing the Waters 2009

<b>Types of public access</b>	<b>Current number(s)</b>	<b>Changes since last assessment (+/-)</b>	<b>Cite data source</b>
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*\*Joint agency and community survey conducted to determine used public beaches (2002-3). After agency walking survey of beaches, coastal communities surveyed to determine those beaches actively used.*

*\*\*Most access data compiled via Wisconsin's three Regional Planning Commissions located along the coast: Northwest RPC, Bay Lake RPC, and Southeast RPC.*

*\*\*\*Original data obtained from plat and gazetteer manual count, WCMP internal tracking grants databases and grantee biennial status reports. Numbers for "Changes since last assessment" were taken from internal tracking databases and grantee biennial reports.*

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Statutory, regulatory, or legal system changes that affect public access	Y	N
Acquisition programs or policies	Y	N
Comprehensive access management planning (including GIS data or database)	Y	N
Operation and maintenance programs	Y	N
Alternative funding sources or techniques		
Beach water quality monitoring and pollution source identification and remediation	Y	N

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Public access within waterfront redevelopment programs	Y	N
Public access education and outreach	Y	N
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment;
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and

c) Characterize the outcomes and effectiveness of the changes.

None

3. Indicate if your state or territory has a printed public access guide or website. How current is the publication and/or how frequently is the website updated? Please list any regional or statewide public access guides or websites.

The WCMP with the University of Wisconsin Sea Grant Institute worked on and funded the Wisconsin Coastal Guide (<http://www.wisconsincoastalguide.org>). From this site you can click on public access sites, then a particular beach to get a map and for many locations a 360 degree panorama. Updates include oblique photos along Wisconsin's Lake Michigan and Lake Superior coasts. Enhancements to the site are part of a current WCMP grant.

The WCMP assisted in the Wisconsin Harbor Towns Association's development of a Wisconsin Harbor Towns Guide. (Download the Guide from the home page <http://www.wisconsinharbortowns.org/>.) The organization has an active website.

WCMP participates in and provides funding support for the Wisconsin Marina Association (<http://www.wisconsinharbortowns.org/wma/index.htm>). This parallel association connects marina owners and operators. It provides an ideas exchange forum to enhance Wisconsin's marinas, promote boating and increase tourism to harbor towns.

It also provides the capacity for the continuation of the Wisconsin Clean Marina Association, another initiative the WCMP participates in and funds.

The WCMP worked with the Bay-Lake Regional Planning Commission developing a regional harbors plan and marina guide (<http://www.baylakerpc.org>). Additional WCMP funding for the Bay-Lake Regional Planning Commission has inventoried road ends within the region. This data is incorporated in local comprehensive and outdoor recreation planning.

In Lake Superior the WCMP partnered with the Northwest Regional Planning Commission (NWRPC) on the Lake Superior Public Access Study (<http://maps.nwrpc.com/coastal/lake-superior-south-shore-public-access-study>). This effort was designed to promote awareness of public access to Lake Superior and assist local units of government in making decisions about possible improvements to public access sites. Efforts were also directed at identifying new access locations and opportunities to expand or enhance awareness of public access. Also the NWRPC program was a part of the development of the Wisconsin Lake Superior Water Trail (<http://maps.nwrpc.com/coastal/lake-superior-water-trail>). This strong collaborative effort also involved the Inland Sea Society, Northland College, National Park Service and the Wisconsin Department of Natural Resources.

With financial assistance from the WCMP, the Wisconsin Department of Natural Resources developed the Lake Superior/Northwoods and the Lake Michigan Birding and Nature Trail guide. These are two of a series of five highway-based viewing guides, each highlighting unique regional ecosystems of Wisconsin. Each will link a set of waypoints, refuges and wild places that offer the best birding and wildlife watching opportunities. All are available at <http://dnr.wi.gov/org/land/er/birds/trail.htm>.

### **Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Public access has historically been a key component of the WCMP. Working as a networked program the WCMP has coordinated with its partner agencies to address all manner of public access needs. There are no major gaps that could be addressed.

In 2007, the WCMP and the Wisconsin Departments of Commerce, Natural Resources and Transportation along with the Board of Commissioners of Public Land and State Historical Society began the Wisconsin Waterfront Initiative as part of a greater statewide

economic development plan. Under the initiative, communities go to one location to identify resources from the entire state to develop or protect their waterfronts.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H,M,L)
Information related to the cumulative area (miles and acres) available for access.	This is a data gap and is primarily important as a contextual measure.	L

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**     \_\_\_\_\_  
**Medium**     X    
**Low**        \_\_\_\_\_

Briefly explain the level of priority given for this enhancement area.

The WCMP as part of its work related to the development of a Lake Michigan Water Trail intends to survey the public on perception and needs related to Great Lakes Public Access.

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

**Yes**        \_\_\_\_\_  
**No**           X  

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

Coordination among state agencies makes it possible to share and appropriately channel funds. The WCMP coordinates with Wisconsin Department of Natural Resources to maximize grant funds for developing recreational facilities. For example, WCMP concentrates on projects such as fishing piers and waterfront paths in Wisconsin's coastal zone. Some other grant programs fund more capital-intensive infrastructure development and redevelopment. This coordination and cooperation has proven successful in packaging available funds for worthy Great Lakes public access projects.

Regulatory programs ensure that public and private developments go through a permitting process to help guarantee that projects minimize negative effects on natural resources.

No Section 309 funding will be allocated for solely public access projects. Public access is a priority for the Section 306 funds.

## D. 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

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. In the table below, characterize the significance of marine/Great Lakes debris and its impact on the coastal zone.

<b>Source of marine debris</b>	<b>Extent of source (H,M,L)</b>	<b>Type of impact (aesthetic, resource damage, user conflicts, other)</b>	<b>Significant changes since last assessment (Y or N)</b>
Land Based – Beach/Shore Litter	L	Aesthetic.	N
Land Based – Dumping	L	Aesthetic.	N
Land Based – Storm Drains and Runoff	L	Aesthetic.	N
Land Based – Fishing Related (e.g. fishing line, gear)	L	Aesthetic and potential resource damage.	N
Ocean Based – Fishing (Derelict Fishing Gear)	Not applicable	Not applicable	Not applicable
Ocean Based – Derelict Vessels	Not applicable	Not applicable	Not applicable
Ocean Based – Vessel Based (cruise ship, cargo ship, general vessel)	Not applicable	Not applicable	Not applicable
Hurricane/Storm	L	Aesthetic.	N
Other (please specify)			
Other (please specify)			

2. If information is not available to fill in the above table, provide a qualitative description of information requested, based on the best available information.

Information for all sources of marine debris in Wisconsin provided in table above.

3. Provide a brief description of any significant changes in the above sources or emerging issues.

There were no significant changes in the marine debris sources noted above since the last Section 309 assessment. There are no emerging issues related to marine debris in Wisconsin.

4. Do you use beach clean-up data? If so, how do you use this information?

The Wisconsin Coastal Management Program (WCMP) provides financial assistance to Wisconsin Beach Sweep and the Alliance for the Great Lakes Adopt-a-Beach Program in conjunction with Ocean Conservancy's International Coastal Cleanup. The Wisconsin State Coordinator collects and submits beach cleanup data to Ocean Conservancy each year. WCMP recently used the data to determine if any trends exist in the amount of debris collected, changes in types of debris observed, geographic regions with more prevalent debris, and other emerging issues or trends.

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Employed by local governments (Y, N, Uncertain)</b>	<b>Significant changes since last assessment (Y or N)</b>
Recycling requirements	Y	Y	N
Littering reduction programs	Y	Y	N
Wasteful packaging reduction programs	Y	Y	N
Fishing gear management programs	N	N	N
Marine debris concerns in harbor, port, marina, & waste management plans	Y	Y	Y
Post-storm related debris programs or policies	N	N	N

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Employed by local governments (Y, N, Uncertain)</b>	<b>Significant changes since last assessment (Y or N)</b>
Derelict vessel removal programs or policies	N	N	N
Research and monitoring	N	N	N
Marine debris education & outreach	N	N	N
Other (please specify)			

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

a) Characterize significant changes since the last assessment;

**Marine Debris Concerns in Harbor, Port, Marina, & Waste Management Plans**

The WCMP provided financial and technical assistance to the University of Wisconsin Sea Grant Institute and the Wisconsin Marina Association to develop a Clean Marina Program for the state. A coalition of state and local government, university, and marina partners provided additional technical assistance. Marine debris concerns have been incorporated into the Wisconsin Clean Marina Program Best Management Practices manual and certification process. Practices include outreach and education to recreational boaters, marina planning and management, and proper management of waste.

b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and

Section 306 funding was used for the changes noted above.

c) Characterize the outcomes and effectiveness of the changes.

To date, the effectiveness of the changes noted above appears to be adequate.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H,M,L)
Develop research and monitoring protocol to assess marine debris in state.	Data.	L
Derelict fishing gear education to user groups.	Outreach.	L

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**      \_\_\_\_\_  
**Medium**    \_\_\_\_\_  
**Low**          X  

Briefly explain the level of priority given for this enhancement area.

The WCMP concluded that marine debris is not a major problem along Wisconsin’s Lake Michigan and Lake Superior coasts. The current impact of marine debris is primarily aesthetic therefore a higher priority is not warranted.

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

**Yes**        \_\_\_\_\_  
**No**           X  

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

Existing state and local policies and programs for reducing marine debris are adequate. Therefore, a strategy will not be developed. No Section 309 funding is proposed for marine debris. Limited funding under Section 306 will be used to address marine debris.

## ***E. 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.

### **Resource Characterization**

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Identify areas in the coastal zone where rapid growth or changes in land use require improved management of cumulative and secondary impacts (CSI) since the last assessment. Provide the following information for each area:

<b>Geographic area</b>	<b>Type of growth or change in land use</b>	<b>Rate of growth or change in land use (% change, average acres converted, H,M,L)</b>	<b>Types of CSI</b>
Kenosha County	Census percent change in population (2000-2009) and projected population growth (2000-2035).	8.5% and 42.0% respectively.	Increased urban and rural development, nonpoint pollution, habitat fragmentation.
Oconto County	Census percent change in population (2000-2009) and projected population growth (2000-2035).	10.7% and 43.0% respectively.	Increased urban and rural development, nonpoint pollution, habitat fragmentation.
Bayfield County	Census percent change in population (2000-2009).	9.3%	Increased urban and rural development, nonpoint pollution, habitat fragmentation.
Brown County	Census percent change in population (2000-2009).	8.3%	Increased urban and rural development, nonpoint pollution, habitat fragmentation.
Door County	Census percent change in population (2000-2009).	9.2%	Increased urban and rural development, nonpoint pollution, habitat fragmentation.

- Identify sensitive resources in the coastal zone (e.g., wetlands, waterbodies, fish and wildlife habitats, critical habitat for threatened and endangered species) that require a greater degree of protection from the cumulative or secondary impacts of growth and development. If necessary, additional narrative can be provided below to describe threats.

<b>Sensitive resources</b>	<b>CSI threats description</b>	<b>Level of threat (H,M,L)</b>
Cold water tributaries to Lake Superior (Ashland, Bayfield and Douglas Counties).	Increased erosion and sedimentation due to land use and land cover changes.	H
Freshwater estuarine systems (coastwide).	Nutrient loading nonpoint sources, solids loading and pollution, and habitat fragmentation from development.	H
Lake Michigan fisheries spawning areas (Northeast Wisconsin and Green Bay).	Loss of structure or aquatic vegetation from navigation or environmental dredging.	M
Coastal tributary fish species (coastwide).	Loss of tributary connectivity due to culverts and habitat fragmentation.	M
Coastal beaches (coastwide).	Presence of bacterial contamination from agricultural and urban stormwater runoff.	H

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

- For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management Categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Regulations	Y	Y
Policies	Y	N
Guidance	Y	Y
Management Plans	Y	Y
Research, assessment, monitoring	Y	Y

Mapping	Y	Y
Education and Outreach	Y	Y
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

The coastal Nonpoint program addresses the areas of Agriculture, Forestry, Urban, Marina and Recreational Boating, Hydromodifications, and Monitoring.

- a) Characterize significant changes since the last assessment;

### **Regulations**

#### **Comprehensive Planning Legislation, s. 66.1001, Wis. Stats**

The Comprehensive Planning Law (“Smart Growth Law”) was enacted in October 1999. The law defines a comprehensive plan, requires public participation in the development of a plan, and requires consistency between a local government’s land use regulations and its comprehensive plan.

While a local government may choose to include additional elements, a comprehensive plan must include at least all of the below nine elements as defined by the Comprehensive Planning Law:

- 1) Issues and opportunities
- 2) Housing
- 3) Transportation
- 4) Utilities and community facilities
- 5) Agricultural, natural and cultural resources
- 6) Economic development
- 7) Intergovernmental cooperation
- 8) Land use
- 9) Implementation

An amendment to the Comprehensive Planning Law, signed into law May 2010, clarified the consistency requirement: Only those zoning, subdivision, and official map ordinances enacted or amended after December 31, 2009 must be consistent with the local government’s comprehensive plan.

To assist local governments in the development and adoption of comprehensive plans, the Department of Administration administers a comprehensive planning grant program. To date, the Comprehensive Planning Grant Program has awarded over \$21 million to 1,156

Wisconsin communities – more than half of the state’s counties and municipalities. The Comprehensive Planning Grant Program also provides information relating to comprehensive planning resources and manages a library of comprehensive plans.

### **State of Wisconsin Runoff Management Administrative Rules**

In response to 1997 Wisconsin Act 27 and 1999 Wisconsin Act 9 the State of Wisconsin created and modified a series of inter-related administrative rules associated with the State’s nonpoint source water pollution abatement program. These rules develop nonpoint source performance standards and prohibitions to meet water quality standards. Three existing administrative rules have been modified and six new rules have been created since the acts of 1997 and 1999. The final rules were adopted in 2002.

*The following Wisconsin Administrative Rules on runoff management have either been revised since the last Section 309 Needs Assessment or are currently undergoing rule revision. (NR is Natural Resources. ATCP is Agriculture, Trade and Consumer Protection.)*

#### *Chapter NR 151 Runoff Management*

This administrative rule establishes runoff pollution performance standards for both agricultural and non-agricultural practices as well as manure management prohibitions. These performance standards and prohibitions are intended to achieve water quality standards.

Proposed agricultural revisions include use of new performance standards (phosphorus index, tillage setback, and process wastewater handling), revision of existing performance standards (sheet, rill and wind erosion, manure storage facilities, and nutrient management); revisions to the implementation and enforcement procedures for cropland and livestock performance standards; and new and modified definitions to be consistent with definitions in revised Chapter 243.

Proposed non-agricultural revisions include revisions to the construction site performance standard, the post-construction performance standard (total suspended solids, peak flow control, infiltration, and protective area), the developed urban area performance standard, and the transportation performance standard.

Lastly, proposed revisions also include the requirement that best management practices be designed to meet the nonpoint source load allocations in approved Total Maximum Daily Loads.

Proposed revisions to Chapter 151 have been bundled together with proposed revisions in Chapters NR 153 and 155. These revisions have gone through public comment and will be going to the Natural Resources Board in June 2010 for approval. If approved, the proposed revisions will go to the Wisconsin Legislature.

#### Chapter NR 153 *Targeted Runoff Management Grant Program*

This administrative rule contains policies and procedures for administering the targeted runoff management grant program. The Wisconsin Department of Natural Resources may make grants under this program to governmental units and state agencies, including itself, for the purpose of reducing agricultural and urban nonpoint source pollution.

Proposed revisions include creating eligibility criteria and application, scoring, selection, and funding policies and procedures for Notice of Discharge projects authorized under Wisconsin Statute 281.65(4e). The proposed revisions also include revising the eligibility criteria and application, scoring, selection, and funding policies and procedures for targeted runoff management projects.

Proposed revisions to Chapter 153 have been bundled together with proposed revisions in Chapters NR 151 and 155. These revisions have gone through public comment and will be going to the Natural Resources Board in June 2010 for approval. If approved, the proposed revisions will go to the Wisconsin Legislature.

#### Chapter NR 155 *Urban Nonpoint Source Water Pollution Abatement and Storm Water Management Grant Program*

This administrative rule contains policies and procedures for administering the urban nonpoint source water pollution abatement and storm water management grant program. The Wisconsin Department of Natural Resources may make grants under this program to governmental units for practices to control both point and nonpoint sources of storm water runoff from existing urban areas, and for plans developing urban areas and areas of urban redevelopment.

Proposed revisions will provide uniform accountability of grant projects and increase the flexibility on how grants are used. This will include

- limiting the proportion of total funding any one grantee can receive during a grant period
- reimbursing local governments for work done by municipal staff
- requiring outstanding grants be completed on schedule before issuing a new grant award,
- requiring a final report, and allowing the Wisconsin DNR to deny grants if there is a conflict with other state or federal laws such as any potential impact on historic sites, cultural resources, endangered resources or interaction with hazardous sites.

Proposed revisions to Chapter 153 have been bundled together with proposed revisions in Chapters NR 151 and 155. These revisions have gone through public comment and will be going to the Natural Resources Board in June 2010 for approval. If approved, the proposed revisions will go to the Wisconsin Legislature.

#### Chapter NR 243 *Animal Feeding Operations*

This administrative rule is intended to implement design standards and accepted animal waste management practices for concentrated animal feeding operations that are

classified as point sources of pollution. It also establishes the criteria under which the Wisconsin DNR may issue a Notice of Discharge or a permit to other animal feeding operations that discharge pollutants to surface water. Proposed revisions to the rule became final and were promulgated in 2007. Revisions were necessary to comply with changes to federal regulations for Concentrated Animal Feeding Operations (CAFOs) and to improve consistency in implementing the associated Wisconsin Pollutant Discharge Elimination System.

The new rule takes important steps to address water quality impacts from livestock operations and more clearly specifies performance expectations for CAFOs. The revised rule now includes, for example, restrictions on applying solid and liquid manure on frozen or snow-covered ground, requirements for CAFOs to have six months worth of liquid manure storage, statewide phosphorus-based nutrient management requirements, manure and process wastewater application restrictions near waterbodies, and revised inspection, monitoring and reporting requirements.

*The following Wisconsin Administrative Rules on runoff management have not been revised since the last Section 309 Needs Assessment. Please note Chapter ATCP 50 below.*

Chapter NR 120 *Priority Watershed and Priority Lake Program*

Chapter NR 152 *Model Ordinances for Construction Site Erosion Control and Post-Construction Storm Water Management*

Chapter NR 154 *Best Management Practices and Cost Share Conditions*

Chapter NR 216 *Storm Water Discharge Permits*

Chapter ATCP 50 *Soil and Water Resource Management Program*

This administrative rule implements Wisconsin's soil and water resource management program under Wisconsin Statute Chapter 92.14. The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) administers the program in cooperation with county land conservation committees, the land and water conservation board, the Wisconsin DNR, and other state and federal agencies.

Wisconsin Department of Agriculture, Trade and Consumer Protection has filed a notice of intent and scope of proposed rulemaking with the State of Wisconsin. Wisconsin Department of Agriculture, Trade and Consumer Protection will revise ATCP 50 to respond to Wisconsin Department of Natural Resources NR 151 revisions. ATCP 50 revisions will address known issues following six years of implementing ATCP 50 to improve coordination of the state's nonpoint pollution program at the state and local levels, and to make routine updates and clarifications to the current rule.

**Chapter NR 102 *Water Quality Standards for Wisconsin Surface Waters***

This administrative rule establishes, in conjunction with Chapters NR 103 to 105, water quality standards for surface waters of the state pursuant to Wisconsin Statute Chapter

281.15. NR 102 defines the designated use categories for the state's waters and the water quality criteria necessary to support these uses.

In 2008 a technical review committee was established and coordinated by the Wisconsin Department of Natural Resources to review, develop, and propose statewide phosphorus water quality standards criteria, limitations, and effluent standards. Criteria were proposed in 2009 with public comments accepted in April 2010. The proposed rule revision will go to the Natural Resources Board in June 2010, and if approved, will go to the Wisconsin Legislature. The proposed rule revision will include a set of phosphorus water quality criteria for rivers, streams, various types of lakes, reservoirs, and the Great Lakes. The development of these criteria is in response to the significant impact phosphorus has on the state's water quality.

#### **Chapter NR 217 *Effluent Standards and Limitations***

This administrative rule intends to reduce the amount of pollutants discharged to surface waters by establishing effluent standards and limitations for point sources of pollution. Effluent standards and limitations are adopted pursuant to Wisconsin Statute 283. In 2008 a technical review committee was established and coordinated by the Wisconsin Department of Natural Resources to review, develop, and propose statewide phosphorus water quality standards criteria, limitations, and effluent standards. Criteria were proposed in 2009 with public comments accepted in April 2010. The proposed rule revision will go to the Natural Resources Board in June 2010, and if approved, will go to the Wisconsin Legislature.

The proposed rule revision will include procedures for determining and incorporating phosphorus water quality based effluent limitations into Wisconsin Pollutant Discharge Elimination System permits.

#### **Chapter ATCP 51 *Livestock Facility Siting***

This administrative rule implements the Livestock Facility Siting Law under Wisconsin Statute Chapter 93.90. Administered by Wisconsin Department of Agriculture, Trade and Consumer Protection, this rule establishes standards on how local governments regulate the siting of new and expanded livestock operations that will have 500 or more animal units. It also establishes that local governments are to use ordinances to regulate facility siting.

Rule changes that became effective May 2006 establish procedures local governments must follow if local permits are issued for livestock facilities. Local governments must apply the rule and use the worksheet for proposed facilities to meet specific standards like manure management, manure storage facilities, runoff management, odor management, management plans, and property lines and road setbacks.

Wisconsin Department of Agriculture, Trade and Consumer Protection is currently undergoing a four-year review of ATCP 51 including relevant implementation issues. A

technical committee has been established to review ATCP 51 and public comments have been accepted.

### **Working Lands Program**

The Wisconsin Working Lands Initiative was passed into law June 2009 as the Working Lands Program and can be found in Wisconsin Statute Chapters 91 (Farmland Preservation) and 93 (Department of Agriculture, Trade and Consumer Protection). The main components of the Working Lands Program are to expand and modernize the state's existing farmland preservation program, establish agricultural enterprise areas, and develop a purchase of agricultural conservation easement (PACE) matching grant program (Chapter ATCP 93.73). These efforts will assist in conserving important or unique agricultural resources, preserving and enhancing agricultural capacity, and protecting and enhancing state waters and other assets.

### **Chapter 299.83 Green Tier Program**

The authorizing Wisconsin Statute for the Green Tier Program under Chapter 299 General Environmental Provisions was set to expire July 2009 but was signed back into law July 2009. The Green Tier Program rewards regulated and un-regulated businesses, communities, and trade associations interested in developing greater environmental performances and associated economic gains. The law provides tools to assist clients in moving beyond minimum compliance. In addition to renewing the program July 2009, the new legislation repeals sunset dates, updates elements of the statute to make administering the law more efficient and clear, and improves and expands the laws ability to realize both environmental and business results.

### **Chapter ATCP 34 Clean Sweep Program**

This administrative rule establishes procedures for the agricultural chemical and container collection grant program under Chapter ATCP 93.55 and the household hazardous waste grant program under Chapter ATCP 93.57. In 2007 the Wisconsin Legislature authorized the Wisconsin Department of Agriculture, Trade and Consumer Protection to include the collection of unwanted prescription medication.

Wisconsin Clean Sweep offers grants and technical assistance to counties, regional planning commissions, and municipalities for the collection of hazardous and waste chemicals and unwanted prescription medications in rural and urban areas. There is a significant impact from chemicals and medications on Wisconsin's water quality. This program is intended to ensure that the significant amount of waste chemicals and unwanted medications that accumulate in homes, businesses, and farms are not inappropriately dumped or discarded.

### **Chapter 94.643 Restrictions on the Use and Sale of Fertilizer Containing Phosphorus**

This regulation is in effect through Wisconsin Statute 94 (Plant Industry) beginning April 2010. This new law restricts the use, sale, and display of turf fertilizer labeled as containing phosphorus or available phosphate. Any fertilizer that is labeled as containing

phosphorus or available phosphate cannot be applied to lawns or turf in Wisconsin unless the fertilizer application qualifies under certain exemptions. This law does not apply to agriculture, pastures, home gardens, trees and shrubs, and land used to grow grass for sod. The law is intended to provide protection to Wisconsin's water resources from phosphorus runoff.

#### ***Chapter 100.28 Sale of Cleaning Agents and Water Conditioners Containing Phosphorus Restricted***

This regulation is in effect through Wisconsin Statute 100 (Marketing and Trade Practices) beginning July 2010. This new law creates a general restriction for prohibiting the retail sale, and sale to retailer, of any household cleaning agent which contains more than 0.5% phosphorus by weight. Cleaning agents include laundry detergent, dishwashing soap, household cleaners, etc. This law also creates a restriction for prohibiting the retail sale, and sale to retailer, of any non-household machine dishwashing cleaning agent, or those used for cleaning medical and surgical equipment, which contains more than 8.7% phosphorus by weight. Cleaning agents used for industrial processes or for cleaning dairy equipment are exempt. This law is intended to reduce the amount of phosphorus from these cleaning products from entering Wisconsin's water systems.

#### **Guidance**

##### **Wisconsin Great Lakes Strategy: Restoring and Protecting Our Great Lakes**

This guidance document, developed by the Wisconsin Department of Natural Resources Office of the Great Lakes, was updated in 2009 and reflects changes in priorities and actions since last updated in 2006. The Wisconsin Great Lakes Strategy addresses eight of the nine priorities identified by the Council of Great Lakes Governors for the restoration and protection of the Great Lakes. The goals of the Strategy are to

- 1) translate the recommendations from the Great Lakes Regional Collaboration into Wisconsin specific actions,
- 2) be a vehicle for coordinating efforts and developing shared priorities,
- 3) serve as a menu for securing and allocating resources, and
- 4) promote developing projects for implementation and position Wisconsin to compete for federal restoration and protection funding.

The Strategy focuses on resources and ecosystems impacted by the Great Lakes. This includes tributary and groundwater connections, species dependent on the Great Lakes and their tributaries, and land use influences on water quality and quantity. A new element has been added to the Strategy, namely climate change.

##### **Wisconsin Clean Marina Program**

The University of Wisconsin Sea Grant Institute developed the Wisconsin Clean Marina Program in 2010 with financial and technical assistance from the Wisconsin Coastal Management Program (WCMP) and additional technical assistance from other federal,

state, and university partners. A Wisconsin Clean Marina Program manual was developed that guides marinas in how to become certified as clean marinas.

### **Management Plans**

**See Lake Michigan Integrated Fisheries Management Plan 2003-2013 in Section G (Ocean) Great Lakes Resources.**

### **Research, Assessment, and Monitoring**

#### **Wisconsin's Great Lakes Beach Monitoring and Notification Program**

This program is coordinated through the Wisconsin Department of Natural Resources Bureau of Watershed Management and the summer of 2010 marks its eighth year. With funding from the US EPA under the authority of the BEACH Act, the Wisconsin Department of Natural Resources implements the program with assistance from other federal, state, and local government partners. The program goal is to monitor Great Lakes beaches to improve public notification of advisories and reduce beach visitors' risk of exposure to disease-causing microorganisms. As of 2008, 123 of Wisconsin's 192 Great Lakes beaches are now being monitored. Since the introduction of the sanitary survey by the US EPA, the state has increasingly utilized sanitary surveys, local, and nonprofit partners since 2007. Sanitary surveys may provide valuable information about potential pollution sources and assist stakeholders with implementing remediation measures.

#### **Manure Measurement Advisory System: Runoff Risk Assessment and Advisory Model**

This new tool in development will help farmers protect water resources when spreading manure by deploying and maintaining a model and website that assists producers in assessing the likelihood of runoff events occurring on a given day. The risk assessment model will be based on weather, landscape, and local soil and field conditions. This tool is the product of a collaborative effort by Wisconsin Department of Agriculture, Trade and Consumer Protection, U. S. Department of Agriculture Natural Resources Conservation Service, U. S. Geological Survey, NOAA National Weather Service, and the University of Wisconsin-Madison.

### **Mapping**

#### **Manure Measurement Advisory System: Nutrient and Manure Application Restriction Mapping**

This new tool, recently developed, will help farmers protect water resources when spreading manure by providing online free, consistent, accessible statewide restriction maps for use by planners, producers, and manure applicators. Restriction maps will show where, when and how much manure can be applied within Wisconsin state rules (2005

Wisconsin National Resource Conservation Service (NRCS) 590 Nutrient Management Practice Standard). This tool is also the product of a collaborative effort noted above under the project Manure Measurement Advisory System: Runoff Risk Assessment and Advisory Model.

### **Education and Outreach**

#### **Wisconsin Clean Marina Program**

As noted above, the Wisconsin Clean Marina Program, through the Wisconsin Marina Association and its members, provides technical assistance, education, and professional training to marina operators, owners, and staff on marina best management practices. In addition, education and outreach is provided to recreational boaters, community groups, tourism officials, and the general public regarding clean marinas, clean boating, and the environmental and economic benefits of these can provide. The Wisconsin Marina Association was created in 2009 with financial and technical assistance from WCMP.

- b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and

Non-CZM funding was used for most of the changes noted above since the last Section 309 Needs Assessment. For those changes that used financial assistance from WCMP, Section 306 funding was used and has been noted.

- c) Characterize the outcomes and effectiveness of the changes.

To date, the effectiveness of the changes noted above appears to be adequate.

### **Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H,M,L)
Development of a nitrogen water quality criteria standard.	Regulatory and policy.	L
Local land use decision-making education.	Communication and outreach.	H
Low impact development education	Communication and	M

(coastwide).	outreach.	
Consistent compliance monitoring of farmers nutrient management plans, etc.	Capacity.	M
Encourage communities to conduct source identification of beach contaminants and implement remediation activities.	Capacity, training, communication and outreach.	M
Enhance County capacity to implement conservation practices on private lands.	Capacity.	L

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**     \_\_\_X\_\_\_  
**Medium**   \_\_\_  
**Low**       \_\_\_

Briefly explain the level of priority given for this enhancement area.

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, etc. and severely threaten the state’s coastal resources.

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

**Yes**       \_\_\_  
**No**        \_\_\_X\_\_\_

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

It is the conclusion of the WCMP that existing rules, policies, programs, and research are adequate to address the issues and challenges currently faced in Wisconsin’s coastal zone.

There has been significant investment from federal and state agencies, 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 work collaboratively with these stakeholders and efficiently leverage financial and technical assistance when involved. Section 306 and 310 funds have proven adequate, when combined with other agency and partner resources, to address cumulative and

secondary impacts. No Section 309 funding is proposed. Funding will continue to be provided through Section 306 and Section 310.

## **F. Special Area Management Planning**

### **Section 309 Enhancement Objective**

Preparing and implementing special area management plans for important coastal areas

The Coastal Zone Management Act (CZMA) 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.”

### **Resource Characterization**

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Identify geographic areas in the coastal zone subject to use conflicts that can be addressed through special area management plans (SAMP). Also, include areas where SAMPs have already been developed, but new issues or conflicts have developed that are not addressed through the current plan. If necessary, additional narrative can be provided below.

<b>Geographic Area</b>	<b>Major conflicts</b>	<b>Is this an emerging or a long-standing conflict?</b>
City of Superior	Development siting within a unique complex of coastal wetlands on Lake Superior.	Long-standing; SAMP is adopted
Village of Pleasant Prairie	Planned development within the Chiwaukee Prairie dune and wetland complex on Lake Michigan.	Long-standing; SAMP expired

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. Identify below any special management areas in the coastal zone for which a SAMP is under development or a SAMP has been completed or revised since the last Assessment:

<b>SAMP title</b>	<b>Status (new, revised, or in progress)</b>	<b>Date approved or revised</b>
City of Superior SAMP II	Revised	2008

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment (area covered, issues addressed and major partners);
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

The City of Superior SAMP was revised to reflect more targeted and realistic development plans, and to protect priority wetlands within the city. This was a non-CZM effort by the City of Superior, Wisconsin Department of Natural Resources, and U.S. Army Corps of Engineers. The revised SAMP provides more clarity on where development is allowable and more certain protection of priority wetlands.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy).

<b>Gap or need description</b>	<b>Type of gap or need (regulatory, policy, data, training, capacity, communication &amp; outreach)</b>	<b>Level of priority (H,M,L)</b>
Planning in coastal communities	Policy	M

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**        \_\_\_\_\_  
**Medium**    \_\_\_\_\_  
**Low**          X  

Briefly explain the level of priority given for this enhancement area.

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. Coastal communities have other policy and regulatory tools which better address the objectives of this enhancement area.

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

**Yes**        \_\_\_\_\_  
**No**          X  

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

Coastal communities have other policy and regulatory tools which better address the objectives of this enhancement area. All municipalities that make land-use decisions are required to adopt a comprehensive plan that includes and integrates the protection of coastal resources while improving governmental decision making. The WCMP provides section 306 funding for plan development and implementation, and is closely linked with the state's Comprehensive Planning Grant Program, which provides community grants for plan development..

## G. Great Lakes Resources

### Section 309 Enhancement Objective

Planning for the use of Great Lakes resources

#### **Lake Michigan Integrated Fisheries Management Plan 2003-2013**

This management plan was developed by the Wisconsin Department of Natural Resources Lake Michigan Fisheries Team in 2004 to guide the management of sport and commercial fisheries in the Wisconsin waters of Lake Michigan. The intention of the plan was to develop a fisheries management program that complements and utilizes other Wisconsin Department of Natural Resources programs and recognize the roles of other federal, state, tribal and private agencies and organizations. The goals of the management plan include

- 1) a diverse, balanced and healthy ecosystem,
- 2) a multi-species sport fishery within the productive capacity of the lake,
- 3) a stable commercial fishery, and
- 4) science-based management.

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. In the table below characterize Great Lakes resources and uses of state concern, and specify existing and future threats or use conflicts.

<b>Resource or use</b>	<b>Threat or use conflict</b>	<b>Degree of threat (H,M,L)</b>	<b>Anticipated threat or use conflict</b>
Habitats and Species	Aquatic invasive species (AIS); nonpoint pollution/runoff; human development and land use changes	H	Loss of habitat for fish and wildlife species affects commercial and sport fishing, tourism, recreation industries.
Water Quality	Nonpoint source pollution/runoff; contaminated sediments; nuisance algae	M	Threat to human and wildlife/fish health; affects economic health

Water Quantity	Water diversions/ consumptive uses	M	Threat to ecosystem services, habitats, economic health, human health.
Waterborne transportation	Sedimentation/ dredging; AIS; conversion of waterfront land to non-water dependent uses	M	Threat to water quality, habitats, wildlife/fish health, economic health

2. Describe any changes in the resources or relative threat to the resources since the last assessment.

Aquatic invasive species continue to be a major threat to Great Lakes Resources. This threat is exemplified by the anticipated invasion of Lake Michigan by Asian carp species through the Chicago Sanitary and Ship Canal system, despite the efforts to implement an electric barrier. Other species continue to be introduced through ballast water on oceanic ships. Federal efforts to address these threats have been delayed and/or incomplete.

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Comprehensive Great Lakes management plan or system of Marine Protected Areas	N	N
Regional comprehensive Great Lakes management program	N	N
Regional sediment or dredge material management plan	N	N
Intra-governmental coordination mechanisms for Great Lakes management	Y	N
Single-purpose statutes related to Great Lakes resources	Y	Y
Comprehensive Great Lakes management statute	N	N

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Great Lakes resource mapping or information system	Y	N
Great Lakes habitat research, assessment, or monitoring programs	Y	Y
Public education and outreach efforts	Y	N
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment;
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

### **Single-Purpose Statutes Related to Great Lakes Resources**

- a) Wisconsin approved the Great Lakes Compact, an interstate agreement to manage the waters of the Great Lakes and generally ban diversions of water out of the Great Lakes basin. The Compact was approved by Congress in 2008. Wisconsin enacted legislation to implement the Compact requirements in 2008 (Wis. Stats. 281), and is currently drafting Administrative Rules to regulate water use, conservation, and diversion.
- b) The Governor’s Office, Wisconsin Legislature, and Wisconsin Department of Natural Resources using non-CZM funding drove the adoption of the Great Lakes Compact. CZM funds (s. 306) have supported outreach and education related to the Compact and Great Lakes water management issues.
- c) The outcomes and effectiveness of the change in management are:
  - New state laws (Wis. Stats. 281)
  - A process for conserving and managing surface and groundwater in the Great Lakes basin, and for making decisions about diverting surface water out of the basin.
  - Effectiveness is not yet known, as the regulations are not yet adopted.

### **Great Lakes Habitat Research, Assessment, or Monitoring programs**

- a) Wisconsin nominated the St. Louis River for designation as the Lake Superior National Estuarine Research Reserve (NWERR). The nomination was approved by NOAA in 2008, and a draft Environmental Impact Statement and Management

Plan was published in May 2010. The University of Wisconsin-Extension is the lead state agency for the Lake Superior NERR.

- b) The Lake Superior NERR site selection and management planning process was driven by CZM section 306 and section 315 funding from WCMP to the University of Wisconsin-Extension.
- c) The outcomes and effectiveness of the change in management are:
  - Creation of a coordinated research, education, and stewardship program centered on 16,000 acres on the St. Louis River in Superior, Wisconsin.
  - Creation of an advisory board with representatives of several local, state and tribal government agencies to provide input on priorities for the NERR programs.
  - Effectiveness is not yet known, as designation of the Lake Superior NERR will occur in October 2010.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need Description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H, M, L)
Great Lakes resource mapping	Communication & outreach	M
Habitat research, assessment and monitoring	Data; capacity	M

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**     \_\_\_\_\_  
**Medium**      X    
**Low**        \_\_\_\_\_

Briefly explain the level of priority given for this enhancement area.

Great Lakes resources will continue to be a priority for the Wisconsin Coastal Management Program (WCMP), as evidenced by the recent adoption of the Great Lakes Compact and the state's support for regional restoration strategies.

Gaps remain in the coordination and dissemination of mapping data for Great Lakes resources, although efforts to address these gaps are ongoing. Finally, there is a moderate need for research, assessment and monitoring of Great Lakes resources, especially habitat and fisheries.

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

**Yes**            \_\_\_\_\_  
**No**                 X    

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

The priority for the WCMP will continue to be to support implementation of existing management strategies through section 306 funding of pass-through grant projects and inter-agency coordination by staff and the Wisconsin Coastal Management Council.

Initiatives to address the needs identified in this area do not require formal changes to the WCMP.

## H. Energy & Government Facility Siting

### Section 309 Enhancement Objectives

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

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. In the table below, characterize the types of energy facilities in your coastal zone (e.g., oil and gas, Liquefied Natural Gas (LNG), wind, wave, Ocean Thermal Energy Conversion (OTEC), etc.) based on best available data. If available, identify the approximate number of facilities by type.

Type of Energy Facility	Exists in CZ (# or Y/N)	Proposed in CZ (# or Y/N)	Interest in CZ (# or Y/N)	Significant changes since last assessment (Y or N)
Oil and gas facilities	Y (onshore)	N	N	N
Pipelines	Y (onshore)	N	N	N
Electric transmission cables	Y (onshore)	Y (onshore)	Y (onshore)	N
LNG	N	N	N	N
Wind	Y (onshore)	Y (onshore)	Y	N
Wave	N	N	N	N
Tidal	N	N	N	N
Current (ocean, lake, river)	N	N	N	N
OTEC	N	N	N	N
Solar	Y	N	Y	N
Other (please specify)	Y	N	N	N
Nuclear	1,660 MW			
Coal	5,191 MW			
Natural Gas/Oil	2,486 MW			
Renewable Solid Fuel	30 MW			
Refuse Derived Fuel	6 MW			

2. Please describe any significant changes in the types or number of energy facilities sited, or proposed to be sited, in the coastal zone since the previous assessment.

Since the last assessment, three large fossil-fuel power plants were constructed in the coastal zone counties. No new coal or natural gas power plants, however, are expected to be proposed in the coastal counties in the near future.

The natural gas-fired combined-cycle Port Washington Generating Station was brought on-line in Ozaukee County. This utility-owned plant consists of two units, each with a generating capacity of 575 megawatts. The new units replaced older, coal-fired generating units.

The Elm Road Generating Station, consisting of two 615 megawatts coal-fired generating units, is nearing completion. The new utility-owned units are located adjacent to older coal-fired units of the existing Oak Creek Generating Station. The new Elm Road plant straddles the border of Milwaukee and Racine Counties.

The Sheboygan Energy Facility, a non-utility 530 megawatts natural gas-fired combustion turbine power plant, was constructed in Sheboygan County.

The Wisconsin Public Service Commission (PSC) authorized a utility to install facilities to produce synthetic gas (syngas) from biomass for the production of electricity at the Bay Front generating facility in Ashland County. The project would include both new facilities and modifications to an existing coal-fired boiler. The project is being reconsidered pending further review of increased cost estimates.

No new wind turbines were constructed in Wisconsin's coastal counties since the last assessment. The ongoing interest in installing new turbines in the coastal counties is on hold pending completion of PSC wind turbine siting guidelines. New wind turbine projects near Lake Michigan are anticipated once the guidelines are established.

There is also interest in the future development of offshore wind turbines in Lakes Michigan and Superior. A number of significant technical, economic, environmental, and legal issues to be resolved before any projects would proceed. An offshore wind project proposal would involve substantial state agency review, evaluating many issues for the first time. Lake Michigan appears to present fewer barriers to offshore wind projects than does Lake Superior.

There are ongoing activities involving the electric transmission system. The 345,000 volt (345 kV) transmission line, identified as under review in the last assessment, has been constructed between the Arrowhead Substation near Duluth, Minnesota and the Weston Substation near Wausau Wisconsin. A portion of this line passes through Douglas County.

New sections of 345 and 138 kV transmission lines were also constructed in western Oconto County as part of a larger transmission system upgrade extending back into central Wisconsin. Transmission facilities were expanded to accommodate the output of the new Port Washington and Elm Road power plants.

The Wisconsin Public Service Commission has approved construction of about 8 miles of new 138 kV transmission line near Sturgeon Bay in Door County.

A small number of new and rebuilt 115 kV and 138 kV lines are expected to be proposed in the coastal counties in the upcoming years. No expansion of the 345 kV network is expected.

Since the last assessment, Enbridge Energy added additional lines increasing the capacity of its petroleum pipeline system that passes through Douglas County. No significant expansions or additions to the natural gas or petroleum pipeline systems in the coastal counties are expected in the near future.

State offices are receiving frequent inquiries regarding development of off-shore wind turbines in Lake Michigan. The PSC, in collaboration with multiple state agencies (including WCMP), published a study titled *Wind on the Waters*. The document explores the legal, planning, financial, and engineering challenges a developer would need to address to complete such a project.

3. Does the state have estimates of existing in-state capacity and demand for natural gas and electric generation? Does the state have projections of future capacity? Please discuss.

The Wisconsin Public Service Commission conducts a biennial Strategic Energy Assessment which evaluates the adequacy and reliability of the state's current and future electrical supply.

The Wisconsin Public Service Commission asks Wisconsin's electric utilities to look seven years into the future and project: 1) anticipated growth in energy demand; 2) planned new construction of generation and major transmission lines; 3) need to purchase power from outside sources; and 4) types of fuels they plan to use. Based on this information and other research, the Wisconsin Public Service Commission writes a draft report assessing the adequacy and reliability of the state's electrical supply. The draft report is distributed for comments to the utilities, advocacy and interest groups, and the general public. The Wisconsin Public Service Commission prepares a final report reflecting these comments and submits it to the Legislature and the public.

The Wisconsin Public Service Commission also conducts a yearly review of the natural gas needs of the state's gas utilities. The gas supply plans forecasts the gas needs of the utility's customers for a three year period. The plans then evaluate the capacity contracts

the utility has with the interstate gas pipeline companies, along with the contracted sources of the gas commodity. The available capacity and commodity levels are compared with the forecasted gas needs to demonstrate that the gas utilities have the ability to provide reliable gas service to their customers at a reasonable cost.

4. Does the state have any specific programs for alternative energy development? If yes, please describe including any numerical objectives for the development of alternative energy sources. Please also specify any offshore or coastal components of these programs.

As a whole, the state has programs for alternative energy development. The state's renewable portfolio standards require all electric providers to meet a gradually increasing percentage of their sales with qualified renewable resource, with 10% of sales by 2015. Executive Orders also provide for alternative fuels purchasing requirements by state fleets, energy conservation goals, and renewable energy goals for state facilities. There are no programs that are limited to Wisconsin's Coastal Zone.

5. If there have been any significant changes in the types or number of government facilities sited in the coastal zone since the previous assessment, please describe.

See above.

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. Does the state have enforceable policies specifically related to energy facilities? If yes, please provide a brief summary, including a summary of any energy policies that are applicable to only a certain type of energy facility.

The WCMP has policies related to energy facilities. There are several policies related to the construction, maintenance, and operation of dams. One enforceable policy requires a certificate of public convenience and necessity from the Wisconsin Public Service Commission for construction of a new energy facility and another policy describes the requirements for a certificate. Another policy states that the Wisconsin Public Service Commission may not certify any nuclear power plant unless several requirements are met, including public welfare and adequate waste disposal.

2. Please indicate if the following management categories are employed by the State or Territory and if there have been significant changes since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Statutes or regulations	Y	N
Policies	Y	N
Program guidance	Y	N
Comprehensive siting plan (including SAMPs)	N	N
Mapping or GIS	Y	N
Research, assessment or monitoring	Y	N
Education and outreach	Y	N
Other (please specify)		

3. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
- Characterize significant changes since the last assessment;
  - Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - Characterize the outcomes and effectiveness of the changes.

Not applicable

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can further describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need (regulatory, policy, data, training, capacity, communication &amp; outreach)</b>	<b>Level of priority (H,M,L)</b>
Off-shore wind energy facility siting	Policy; data	M

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**        \_\_\_\_\_  
**Medium**    \_\_\_\_\_  
**Low**        \_\_\_x\_\_\_

Briefly explain the level of priority given for this enhancement area.

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

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

**Yes**        \_\_\_\_\_  
**No**        \_\_\_x\_\_\_

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

No data or regulatory gaps were identified. The enhancement area has a low level of priority. Although energy facility siting issues in the coastal zone – especially offshore wind energy facilities – may become more contentious in the future and require a strategy, WCMP does not expect any proposals in the next several years. Also, as mentioned above, adequate measures are already in place to facilitate siting while maintaining current levels of coastal resource protection.

## ***I. Aquaculture***

### **1. 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

#### **Resource Characterization**

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Generally characterize the private and public aquaculture facilities currently operating in your state or territory.

<b>Type of existing aquaculture facility</b>	<b>Describe recent trends</b>	<b>Describe associated impacts or use conflicts</b>
National Fish Hatchery	None.	None.
State Fish Hatchery	None.	None.
Tribal Fish Hatchery	Increase in hatchery capacity and rearing pond expansion.	Ample sources of ground and surface water for expansion. Associated impacts minimal.
University Aquaculture Facility	None.	None.
Private Fish Farm	Statewide increase in number of fish farms. Approximately 2100 fish farms as of 2009.	Regulations, monitoring, and use of best management practices result in minimal impact to natural water bodies, water quality, and fish health.

#### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Aquaculture regulations	Y	Y
Aquaculture policies	Y	N
Aquaculture program guidance	Y	N
Research, assessment, monitoring	Y	Y
Mapping	Y	N
Aquaculture education & outreach	Y	Y
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment;

(ATCP indicates Wisconsin Department of Agriculture, Trade and Consumer Protection statutes, administrative rules, codes, etc. NR is Wisconsin Department of Natural Resources.)

### **Aquaculture Regulations**

#### **ATCP Chapter 10**

This rule (s. ATCP 10.60, subch. VIII Wis. Adm. Code, *Fish*) details the requirements for registering fish farms, fish imports, introduction of fish into state waters, fish movement within the state, use of bait fish, fish health certification, reintroduction of fish into original source populations, fish disease and reporting, and requirements for fish health inspectors and laboratories.

Since the last assessment, changes to the rule were made that became effective January 2009. These changes include modifications to fish farm registration based on allowable activities and clarifications to fish farm registrations. And more important, the changes reflect the presence of Viral Hemorrhagic Septicemia (VHS) in the Lake Michigan and Lake Winnebago systems and the threat posed to other systems statewide. Fish health certificates and expanded VHS testing are required for fish and fish eggs of all known VHS-susceptible species. The sale of bait fish known to be infected with VHS or another reportable disease is prohibited. Fish reintroduced to the same public water bodies from which they are collected are exempt from VHS testing provided certain criteria are met. Fish and fish eggs moved between an operator's own fish farms are exempt from VHS testing requirements provided certain criteria are met. Lastly, all VHS test results must be reported to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP).

A proposed rule change is again being considered for ATCP Chapter 10.60, subch. VIII of the Wis. Adm. Code. The proposed rule revision includes

- adding exemptions from requiring fish farm registration under specific circumstances, clarifying exempting recreational anglers transporting baitfish for fishing across state lines from import permit requirements,
- simplifying specific record keeping requirements, allowing the use of other state fish health certificate forms if equivalent to Wisconsin, and
- allowing for other forms of testing such as egg disinfection practices.

These proposed rules will be available in 2010 for public comment.

### **Research, Assessment, and Monitoring**

Due to the presence of VHS in the Lake Michigan and Lake Winnebago systems and the threat posed to other systems statewide, the state requires additional testing and monitoring of fish and fish eggs of all known VHS-susceptible species. Between 2004-2009, there has been an 8-10% increase in VHS testing to assist in assessing the status and threat of VHS.

Current propagation studies in Wisconsin are focusing on several Great Lakes regional fish species with yellow perch, lake sturgeon, whitefish, lake trout, sunfish and striped bass primarily targeted. These studies often involve investigating potential improvements in rearing system technology to reduce water usage at aquaculture facilities.

In 2006 the Northern Aquaculture Demonstration Facility and the University of Wisconsin conducted research to demonstrate best management practices with fish hatchery effluents.

In 2006 the Northern Aquaculture Demonstration Facility, the University of Wisconsin, and the Wisconsin Department of Agriculture, Trade and Consumer Protection investigated the symptoms, occurrence, cause, and possible treatments for “whitetail” syndrome in yellow perch.

### **Aquaculture Education and Outreach**

In January 2007, the University of Wisconsin-Extension hired three new aquaculture specialists. These new university specialists work statewide and provide outreach and education, marketing, and technical assistance to aquaculture farms, facilities, and stakeholders. These positions will assist in building the capacity for a sustainable future for Wisconsin aquaculture.

In 2006 the Northern Aquaculture Demonstration Facility, the University of Wisconsin, and tribal fisheries programs conducted a walleye rearing program to demonstrate cool water species incubation and pond rearing techniques.

- b) Specify if it was a 309 or other CZM driven change (specify funding source) or if it was driven by non-CZM efforts; and

Section 309 or other CZM funding sources were not used for the changes noted above. Activities were entirely driven by non-CZM efforts and funding sources.

- c) Characterize the outcomes and effectiveness of the changes.

To date, the effectiveness of the changes noted above appears to be adequate.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need (regulatory, policy, data, training, capacity, communication &amp; outreach)</b>	<b>Level of priority (H,M,L)</b>
Difficult regulatory landscape for sustainable growth of aquaculture in state.	Regulatory and policy.	L
Determine mercury contamination in aquaculture fish and feeds. Research can provide foundation for best management practices.	Data and policy.	M

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**     \_\_\_\_\_  
**Medium**    \_\_\_\_\_  
**Low**          X  

Briefly explain the level of priority given for this enhancement area.

According to data sources, outside of the more recent threats posed by Viral Hemorrhagic Septicemia and the increase in private fish farms, the current status and condition of aquaculture in Wisconsin and its coastal zone is relatively static. The 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 rules, best management practices, monitoring and assessment, and outreach and education. And, University of Wisconsin Sea Grant Advisory Services has provided aquaculture technical assistance since 1985.

In addition, Wisconsin Department of Agriculture, Trade and Consumer Protection established 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.

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

Yes        \_\_\_\_\_  
No           X  

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

It is the conclusion of the WCMP that existing aquaculture rules, policies and programs are adequate to address the issues and challenges currently faced in Wisconsin's coastal zone. No Section 309 funding is proposed for aquaculture.

## IV. Strategy 2011-2016

### A. Wetlands

#### I. Issue Area(s)

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

- |  |   |
|--|---|
| <input type="checkbox"/> Aquaculture                         | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy & 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. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) 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. Describe the proposed program change(s) or activities to implement a previously achieved program change.

Generally, the WCMP does not directly control its incorporated enforceable policies because ours is a networked program. While our program can support and encourage policy changes through section 309 projects, it is not realistic to provide extensive detail beyond year one of the strategy (granted, we are still negotiating scopes of work for year one activities).

1. Develop property tax policy alternatives that provide incentives to landowners to conserve wetlands.

This would be a “new or revised authority” if a new tax policy is adopted, similar to existing WCMP coastal policy 2.4, which pertains to differential taxation of agricultural lands.

2. Update local government land use regulation/zoning policies to enhance protection of wetlands.

This would be a revision of local coastal policy implementation, specifically WCMP policy 2.13 “shoreland zoning”.

3. Incorporate wetland hydrology protection into new groundwater protection policies.

This would be a range of changes from new/revised guidelines/policies to new or revised authorities, depending on the actual mechanism used. The most relevant current WCMP policy is 1.3.1. “groundwater protection policies”.

### **III. Need(s) and Gap(s) Addressed**

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

Priority Need addressed:

“Assess Unregulated Excavation & Agricultural Drainage Activities”

Developing property tax policy alternatives that provide incentives to landowners to conserve wetlands is one option for addressing unregulated landowner activities that degrade wetlands in the coastal zone. Landowners currently have an incentive to convert wetlands that have been previously used for agriculture back to agricultural or other non-wetland uses. Property tax rates for wetlands are higher than for land that is actively farmed. This activity would assess the impact of this tax policy on farmed wetlands and develop alternatives that would reduce or eliminate the incentive to fill or drain wetlands.

“Improve tracking of activities occurring in Wisconsin’s waterways and wetlands.”

Updated local government land use regulation/zoning policies to enhance protection of wetlands will include better coordination with state wetland regulatory program staff. Updated local regulations will provide a more comprehensive level of regulation of wetland activities and enable Wisconsin Department of Natural Resources to more accurately track

permitted activities and compliance levels.

“Develop tools to assess wetland functions at the landscape level to better assess wetland cumulative impacts and restoring wetlands in the watershed for specific functions. “

Incorporating wetland hydrology protection into new groundwater protection policies will be one tool for assessing wetland functions at the landscape level. Integrating groundwater and wetland hydrology protection policies will result in more effective decision-making and management of these natural resources in the coastal zone.

#### **IV. Benefit(s) to Coastal Management**

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

Program changes that result in a reduction in agricultural wetlands filled or drained, improve the effectiveness of local and state wetland regulations, and integrate groundwater and wetland hydrology. Protection policies improve the protection of coastal zone wetlands and water quality for coastal rivers, groundwater, and the Great Lakes.

#### **V. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) 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 support for pursuing these strategies from nonprofit conservation organizations, landowner associations, the Wisconsin Department of Revenue, and Wisconsin Department of Natural Resources.

Activity 1 has the support of the Department of Revenue nonprofit conservation organizations, and landowner associations. The Department of Revenue has cooperated with the Wisconsin Wetlands Association in initiating discussion about analyzing the link between state tax policies and wetland management.

Activity 2 will build on previous work by the WCMP, Wisconsin Wetlands Association, and University of Wisconsin-Madison to assess the current level of local wetland regulation. The Wisconsin Department of Natural Resources has cooperated. It will support further efforts to gather information and develop recommendations for improving local wetland regulations.

Activity 3 will enhance current efforts led by the Wisconsin Department of Natural

Resources with the collaboration of University of Wisconsin and other stakeholders to develop new state groundwater protection policies.

WCMP is a networked agency and closely collaborates with other state agencies, municipalities, regional planning commissions and University of Wisconsin System institutions.

## VI. Strategy Work Plan

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, 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 outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

**Total Years: 5**

**Total Budget: \$490,000**

**Final Outcome(s) and Products:**

**Years: 1-2**

**Description of activities:**

- Facilitate discussions with stakeholders and state agencies to define the scope of the policy issues and alternatives analysis.
- Implement consensus recommendations of stakeholders and agencies.
- Develop draft policies/legislation/rules, as appropriate

**Outcomes:** Develop property tax policy alternatives that provide incentives to landowners to conserve wetlands.

**Budget:** \$60,000

**Years: 1-2**

**Description of activities:**

- Inventory existing local wetland regulations in 15 coastal counties; assess regulatory gaps and analyze opportunities.
- Identify options for local wetland protection.
- Develop outreach materials and workshops for communicating options to 15 coastal counties.

**Outcomes:** Update local government land use regulation/zoning policies to enhance

protection of wetlands in the majority of 15 coastal counties.

**Budget:** \$30,000

**Years:** 1-2

**Description of activities:**

- Inventory/map wetland groundwater hydrology in the coastal zone.
- Develop policy alternatives to integrate wetland hydrology and groundwater protection.

**Outcomes:** Incorporate wetland hydrology protection into new groundwater protection policies.

**Budget:** \$100,000

**Years:** 3-5

**Description of activities:**

- Assess future wetland strategy needs.
- Follow-up on results of first two years of wetland strategy implementation.

**Outcomes:** To be determined

**Budget:** \$300,000

The three to five year activity plan lacks detail because it is not possible to predict the outcomes of a process to change policies/programs, nor is it possible to predict the level of funding that will be available to the state through CZM funding.

## **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 applying agency has made, if any, to secure additional state funds from the legislature and/or other sources to support this strategy.

No additional state funds are available beyond what has already been appropriated for base agency operations, which are also subject to future reductions.

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

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

If desired, briefly indicate what PSMs 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 PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

***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.

<b>Strategy Title</b>	<b>Year 1 Funding</b>	<b>Year 2 Funding</b>	<b>Year 3 Funding</b>	<b>Year 4 Funding</b>	<b>Year 5 Funding</b>	<b>Total Funding</b>
Wetlands 1	\$30,000	\$30,000				\$60,000
Wetlands 2	\$15,000	\$15,000				\$30,000
Wetlands 3	\$50,000	\$50,000				\$100,000
Wetlands 4			\$100,000	\$100,000	\$100,000	\$300,000
<b>Total Funding</b>	\$95,000	\$95,000	\$100,000	\$100,000	\$100,000	<b>\$490,000</b>

## **B. Coastal Hazards**

### **I. Issue Area(s)**

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

- |  |   |
|--|---|
| <input type="checkbox"/> Aquaculture                         | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy & 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    |   |

### **II. Program Change Description**

**A.** The proposed strategy will result in, or implement, the following type(s) 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.** Describe the proposed program change(s) or activities to implement a previously achieved program change. 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.)

### **Policy Development**

Wisconsin Coastal Management Program (WCMP) will coordinate with its partner agencies through the Coastal Natural Hazards Work Group and with local governments in all 15 coastal counties to create and/or revise local setback ordinances and zoning ordinances relevant to coastal hazards. Zoning generally occurs locally in the state and

counties are allowed to develop more stringent standards than the state has adopted as a whole. WCMP will work with other state agencies, regional planning commissions, and county staff to create and improve policies regulating coastal hazards. Public education and outreach will be a large component of WCMP's efforts.

This would be a revision of local coastal policy implementation, specifically WCMP policy 2.13 "shoreland zoning".

WCMP's efforts will include:

- 1) Public Outreach and Training – WCMP will cooperate with its partners to provide meetings and workshops with the goal of educating landowners and other stakeholders of the threats posed by coastal hazards. WCMP will also support efforts to train state and county staff – along with coastal engineers and real estate interests – on identifying and addressing hazards.
- 2) Development of policy language – WCMP will work with county staff to develop defensible policies relevant to coastal hazards. At the county level, efforts will likely include revising or creating setback ordinances as well as zoning ordinances. WCMP will coordinate review of existing ordinances and other regulations for communities and will help to develop stronger policy language.
- 3) Development of new tools to address coastal hazards – In recent years, WCMP has funded that allow for a better understanding of coastal processes and the current state of the shoreline. The tools aid in educating the public and in developing better policies, such as the LIDAR data collected in Bayfield County that informs the county's zoning efforts. WCMP will continue to identify and support development of technical tools that promote effective regulations.

### **III. Need(s) and Gap(s) Addressed**

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

The strategy addresses the following gaps which are identified as high priority needs in the Assessment:

- Zoning or other local regulations to ensure appropriate setback from hazards (e.g. beach/dune protection regulations, restrictions on lakeward encroachment of development, mandatory setbacks from unstable/receding bluffs) – *Development of policy language is a key part of the Coastal Hazards strategy. WCMP will work with communities to create new and improve existing regulations. Past experience in working with communities and state agencies has made it clear that, at this time, it*

*would be exceedingly difficult to change setback regulations at the state level. Most zoning is done at the local level in Wisconsin, which makes working with local communities the most effective way to address the need for better regulations.*

- Education of engineers and Wisconsin Department of Natural Resources staff for identifying hazardous areas, ensuring appropriate setbacks, and use of non-structural shoreline stabilization methodologies (where appropriate) – *The Coastal Hazards strategy includes education and outreach efforts for DNR staff, landowners, and professionals who work on the shoreline. Members of the Coastal Hazards Work Group have found that there is a significant need to educate engineers and Wisconsin Department of Natural Resources staff on how to identify and address hazardous areas. Also, the use of non-structural shoreline stabilization methodologies (where they are appropriate) is a recommendation of a past report funded by the WCMP. The WCMP chairs the Coastal Hazards Work Group. The members possess significant expertise and experience. Coordination with the work group members to provide public outreach and training will be an effective way to address the identified gap.*
- Technical tools to help communities address development and plan for hazards – *Past efforts have demonstrated that technical tools can help a community in creating and implementing its regulations. The WCMP will work with communities and members of the Coastal Hazards Work Group to identify technical needs. The WCMP and the Coastal Hazards Work Group have developed working relationships with the communities and agencies that will benefit from the tools.*

#### **IV. Benefit(s) to Coastal Management**

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

The program changes will result in improved regulations and implementation of new and existing regulations related to coastal hazards. The result of improved regulations and practices will be protection of property and welfare of property owners and reduction of erosion and bluff failures on Wisconsin's coasts. Educational and training efforts will provide more clear and consistent decisions from regulators and better approaches to managing coastal hazards (both in a regulatory and engineering sense).

#### **V. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) 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 likelihood of success is high. WCMP is a networked agency and closely collaborates with other state agencies. Wisconsin Emergency Management and Wisconsin Department of Natural Resources are very supportive, as are the University of Wisconsin-Madison and University of Wisconsin Sea Grant. WCMP coordinates with state agencies and other organizations through chairing the Coastal Hazards Work Group. WCMP will continue to coordinate regular meetings of the group. In addition, WCMP has worked directly with Regional Planning Commissions and local communities that will benefit from the strategy. WCMP will continue to cooperate with the Regional Planning Commissions and communities in its implementation efforts. WCMP will provide informal technical assistance to the communities and organizations and will help develop public meetings and workshops to promote the strategy.

## VI. Strategy Work Plan

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, 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 outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

An estimated 15 coastal counties will be included in this work plan.

**Total Years:** 5

**Total Budget:** \$250,000

**Final Outcome(s) and Products:** New and revised coastal hazards regulations

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

**Description of activities:** Training of coastal managers and engineers including state staff and education of public landowners and stakeholders

**Outcome(s):** Education and outreach

**Budget:** \$85,000

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

**Description of activities:** Review of existing policies and development of new policy language

**Outcome(s):** Policy development

**Budget:** \$85,000

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

**Description of activities:** Development of technical tools to assist communities in addressing coastal hazards

**Outcome(s):** Technical tools

**Budget:** \$80,000

**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 applying agency has made, if any, to secure additional state funds from the legislature and/or other sources to support this strategy.

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

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

If desired, briefly indicate what PSMs 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 PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

*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.

<b>Strategy Title</b>	<b>Year 1 Funding</b>	<b>Year 2 Funding</b>	<b>Year 3 Funding</b>	<b>Year 4 Funding</b>	<b>Year 5 Funding</b>	<b>Total Funding</b>
Policy development	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
<b>Total Funding</b>						

The five year funding table is not specific because it is not possible to predict the outcomes of a process to change policies/programs, the priorities of changing public officials, and the level of funding that will be available to the state through CZM funding.