



Illinois Coastal Clean Waters Program

Executive Summary

Prepared by the Illinois Department of Natural Resources
in partnership with Illinois Environmental Protection Agency

Draft for Public Review



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Overview

In 1990, Congress passed the Coastal Zone Act Reauthorization Amendments (CZARA) to the Coastal Zone Management Act (CZMA). Section 6217 of the CZARA addresses nonpoint source pollution problems in coastal waters. Nonpoint pollution stems from a wide range of dispersed sources that are challenging to manage, such as runoff from roads, construction sites, eroding banks and numerous other types of diffuse pollution. The amendments require state programs such as the Illinois Coastal Management Program (ICMP), which are funded through CZMA, to develop programs to implement measures that will control nonpoint source pollution, or ‘management measures’. The National Oceanic and Atmospheric Administration (NOAA) administers CZMA and CZARA.

The Illinois Coastal Management Program has completed a careful, extensive analysis considering how the State of Illinois can implement an effective Coastal Nonpoint Pollution Control Program (henceforth referred to as Coastal Clean Waters Program). The State’s program must meet the requirements of §6217 of the federal Coastal Zone Act Reauthorization Amendments and also respond to specific local needs and opportunities. The State of Illinois has already established the regulatory basis for managing nonpoint pollution, and both the State and local units of government have developed many programs to minimize such pollution. Chief among these is the Illinois Environmental Protection Agency’s (IEPA) Illinois Nonpoint Source Management Program (commonly referred to as Section 319, in relation to the relevant portion of the Clean Water Act) as well as various programs managed by Metropolitan Water Reclamation District (MWRD) and Lake County Stormwater Management Commission (LCSMC).

NOAA requires each state Coastal Management Program to address specific Management Measures under seven major sources of nonpoint pollution. Among these, the State of Illinois has requested exclusion from addressing agricultural sources and forestry sources because such land uses cover a very low proportion of the Illinois Coastal Zone. In addition, our Coastal Zone is unusual in that virtually the entire area is governed by Clean Water Act (CWA) regulations. US Environmental Protection Agency (USEPA) and NOAA have identified ten of the Management Measures related to “urban” and “hydromodification” sources as being covered under CWA regulations. Therefore, ICMP has requested exclusions for these Management Measures along with several others dealing with issues that are absent from our Coastal Zone, such as specific types of dams and with on-site sewage disposal systems.

Through the process of developing our Coastal Clean Waters Program, ICMP worked with a set of subject matter experts on our Advisory Panel to identify opportunities to increase the impact of existing nonpoint pollution control in the Coastal Zone. Most of our coastal waters suffer from some form of impairment as documented by IEPA, although many of these issues stem from sources beyond the purview of the Coastal Program such as atmospheric deposition of pollutants like mercury, or sediments contaminated with industrial pollutants. Nevertheless, the Advisory Panel identified a set of actions summarized by ten goals that ICMP can pursue to further reduce coastal nonpoint pollution, as described in [Section 2.6](#) of the full [nonpoint pollution program document](#). As part of this ongoing program, ICMP will continue implementing opportunities for broad public participation in the Coastal Clean Waters Program.

Illinois' Coastal Management Program consists of a network of state programs and authorities. These regulatory measures are integrated with the established programs of partnering state and local agencies. Support and implementation of the Coastal Clean Waters Program will come through extensive coordination among partners. We anticipate significant benefits to the coastal waters of Illinois as a result of this program.

Introduction

The Illinois coast extends 63 miles (101 km) from Wisconsin to Indiana, along the southern-most reach of the western shore of Lake Michigan (Figure 1). The glacial processes that shaped the Great Lakes Region created the three major landforms of the Illinois coast. These include the Zion beach-ridge plain extending from the Wisconsin border south to North Chicago; the bluff coast from North Chicago to Winnetka where Lake Michigan meets steep glacial moraines dissected by ravines; and the lower-lying Chicago Lakeplain that was once submerged under earlier stages of Lake Michigan. As the coast became populated and developed, coastal engineering has altered or influenced changes along nearly all 63 miles (101 km) of the Illinois coast. The only remaining shoreline segments free of any shore-protection structures are a three mile (5 km) reach in the South Unit of Illinois Beach State Park, and adjoining shore to the south, as well as a few isolated locations along the bluffs.

There are 18 municipalities along the coast. The northern portion of the Illinois' coast is located in Lake County while the southern part is in Cook County. Together these two counties contain about 46 percent of the Illinois population. Chicago is the largest municipality in both population and shoreline length, comprising about 35 percent of Illinois' coast. The coast is the major physical feature of the greater Chicago metropolitan area, which in the 2010 census had a population of nearly 9.5 million people. This is the third largest metropolitan area in the nation, and the most densely populated coastal area in the Great Lakes Region. No other coastal area in the Great Lakes has been urbanized and engineered to the same degree as the Illinois coast.

Land use/land cover in Illinois' Coastal Zone in the 21st century is largely developed for various urban uses: residential, commercial, industrial and transportation, with a fair proportion set-aside for recreation and preserves. A very small portion of the coastal zone is used for forestry and agriculture.

The rivers and streams in the Coastal Zone, particularly in Cook County, have been dramatically altered for flood control, wastewater management, and transportation purposes. The development of the Chicago Area Waterway System (CAWS) drastically altered the flow of water shifting the flow of most of the Chicago River watershed and parts of the Calumet River watershed into the Mississippi River Basin. The Chicago Area Waterway System includes the North Shore Channel (NSC), North Branch Chicago River (NBCR), Main Branch Chicago River, South Branch Chicago River (SBCR), Little Calumet River, and the Grand Calumet River. These Inland Waterway corridors intercept the lakeshore at three locations: 1) in Wilmette along Sheridan Road near Wilmette Harbor; 2) in the Chicago downtown area where Michigan Avenue crosses the Chicago River; and 3) in the Calumet area in far southeast Chicago and in Burnham.

Figure 1. Coastal Zone Map showing the Illinois Coastal Zone Boundary



Purpose of Program

The purpose of the Coastal Clean Waters Program is to reduce, control and, to the extent that it is feasible, eliminate nonpoint source (NPS) pollution that is causing, or could potentially cause, harm to the water quality of Lake Michigan and its connected waters. Nonpoint source pollution is defined under Section 319 of the Clean Water Act as: “Land management activity or land use activity that contributes or may contribute to ground and surface water pollution as a result of runoff, seepage or percolation, and that is not defined as a point source”

Even though the term “nonpoint source pollution” can be technically defined, the concept can be confusing. A wide variety of human activities and land use practices are potential nonpoint sources of pollution, even when many such activities and practices take place away from water. Nonpoint pollution can range from stormwater carrying pesticides, road salt and petroleum products to pet and wildlife waste that are carried into water bodies.

Current Approaches to Controlling Nonpoint Source Pollution

State level legal authority to control nonpoint source pollution in the Coastal Zone is primarily vested in three entities: the Illinois Department of Natural Resources (IDNR), the Illinois Environmental Protection Agency (IEPA), and the Illinois Pollution Control Board (IPCB). IDNR is the state agency responsible for implementation of the Coastal Clean Waters Program, through the Illinois Coastal Management Program (ICMP) in partnership with IEPA. There are four main statutes that either permit or mandate coordination among State and Federal agencies and units of local government in relation to the Coastal Clean Waters Program:

1. **The Clean Water Act**, (415 ILCS 5/4(m)), by which IEPA is authorized to “engage in planning processes and activities and to develop plans in cooperation with units of local government, state agencies and officers, and other appropriate persons in connection with the jurisdiction or duties of each such unit, agency, officer or person”.
2. **The Rivers and Streams Act** (615 ILCS 5/14a (2012)) has the “express intention” that close cooperation exists between IDNR, IEPA and IPCB. This collaborative effort extends to the City of Chicago and other municipalities whose actions affect Lake Michigan water quality. They and IEPA “shall work in close cooperation” to abate pollution from vessels and domestic and industrial sources.
3. **The Lake Michigan Shoreline Act** (615 ILCS 55 (2012)) enables the IDNR to cooperate with appropriate federal, state, and local agencies to devise effective means or methods of preventing erosion of the shore of Lake Michigan. IDNR’s Office of Water Resources (OWR) issues permits for work in and along the Lake Michigan shore, waterways, and within floodplains and floodways. OWR is responsible for evaluating joint permitting applications and is aware of permitting decisions and any permitting issues from IEPA or USACE. OWR staff take a lead role in carrying out ICMP’s program of reviewing projects for Federal Consistency in the Illinois Coastal Zone.
4. **The Interagency Wetland Policy Act** of 1989 (20 ILCS 830/) mandates coordination among several state agencies in relation to preservation and enhancement of wetlands and avoiding adverse impacts

to the state's remaining wetlands. This act creates an Interagency Wetlands Committee including IDNR, IEPA, Illinois Department of Agriculture, Illinois Department of Transportation, Illinois Historic Preservation Agency, Illinois Department of Commerce and Economic Opportunity, and the Capitol Development Board. The goal of the act is to ensure no net loss in wetlands due to state-supported activities, through the development of agency action plans and establishing a mitigation policy.

In addition, the two counties which make up the Illinois Coastal Zone, Cook and Lake Counties, as well as the City of Chicago, have robust ordinances in place which establish uniform stormwater management requirements and provide significant technical assistance on best management practices which reduce nonpoint source pollution. These local requirements supplement the state programs and are managed by MWRD, LCSMC, and the City of Chicago, respectively, which are well-resourced and technically adept. These entities also have delegated authority to implement certain state level regulations at the local level.

For more information, see [Chapter 1](#) of the Coastal Clean Waters Program.

Program Components

Coastal Nonpoint Program Boundary

As defined in the Illinois Coastal Management Program Document (Program Document), available at <http://www.dnr.illinois.gov/cmp/Pages/documentation.aspx>, the Illinois Coastal Zone Boundary was developed to apply to the Illinois Coastal Clean Waters Program. As stated in the document:

“Federal guidelines recognize that urban coastal areas may have significantly altered shorelines and coastal landscapes, and within urban coastal settings the natural system relationships between land and water may be extremely difficult (or impossible) to define in terms of direct and significant impacts. In such cases, the federal guidance suggests the boundary be based on consideration of sewage discharge and urban runoff (15 CFR 923.32). For the Illinois coast, sewage discharge, and urban runoff, are important factors in defining the inland boundary along much of the Cook County lakeshore”.

The Program Document as approved by NOAA clearly states that the Coastal Clean Waters Program will be bounded by the Coastal Zone Boundary it defines. However, it states that the program will be limited to the lakeshore boundary, excluding the inland waterways. As stated on p. 185, “The ICMP will only include the Lake Michigan watershed portion (approximately 85 square miles) in the Coastal NPS Control Program.” However, because of periodic issues of discharge into Lake Michigan from these areas at times of heavy storm runoff, we have chosen to include the entire Coastal Zone Boundary to define the Coastal Clean Waters Program.

Non point Pollution Source Categories

According to NOAA and USEPA guidance documents, “states must provide for the implementation of management measures for each of the nonpoint source categories (e.g., agriculture) and subcategories identified in the guidance to protect coastal waters generally. The categories are:

1. Agriculture
2. Forestry
3. Urban Areas
4. Marinas and Recreational Boating
5. Hydromodification
6. Wetlands, Riparian Areas and Vegetated Treatment Areas

The following sections are brief summaries of the chapters that address these source categories. Please use links to review these categories as addressed in the full program document.

Agriculture ([Link to Chapter 3](#))

There is limited agriculture occurring in Illinois' Coastal Zone. Nonpoint pollution associated with agricultural operations is not significant. In addition, continued urbanization of the metropolitan Chicago area supports the conclusion that remaining agricultural areas will likely be developed or converted to forest preserves, public open space and parks in the future.

It would not be useful to develop priorities and strategies for a watershed activity that is not present nor expected to become a source of nonpoint pollution. Therefore Illinois requests a categorical exclusion for agriculture.

Forestry ([Link to Chapter 3](#))

There is no commercial forestry in Illinois' Coastal Zone and nonpoint pollution associated with commercial forestry operations are nonexistent. In addition, continued urbanization of the metropolitan Chicago area supports the conclusion that no commercial forestry will occur in the future. It would not be useful to develop priorities and strategies for a watershed activity that is not present nor expected to become a source of nonpoint pollution. Therefore, based on the following information, Illinois believes a categorical exclusion for forestry is justified.

Urban Areas ([Link to Chapter 4](#))

Illinois' shoreline is highly urbanized and has been subject to considerable stress from intense land use and competition to serve the economic and workforce needs and demands of this densely populated area. Sources of nonpoint pollution in urban areas include: runoff from developed and developing areas; runoff from construction sites; runoff from existing developments; general sources like household and landscaping; and pollutants from roads, highways and bridges.

There are 14 NOAA management measures for urban areas. ICMP is requesting exclusion from nine other urban areas management measures which are not discussed in this section (reasons for exclusion are provided in the full program document). The five management measures applicable to Illinois' Coastal Zone are presented below.

- **Watershed Protection Management Measure** - Provides general goals for local governments to use in developing comprehensive programs for guiding development and land use activities in a manner that will prevent and mitigate the effects of nonpoint source pollution.

- **Site Development Management Measure** - Reduction of nonpoint source pollution from all site development, including planning and construction of roads, highways, and bridges.
- **Pollution Prevention Management Measure** - Prevents or reduces nonpoint source loadings from activities like improper disposal of household hazardous wastes, lawn and garden wastes, operation and maintenance of motor vehicles, pet and urban wildlife wastes, and other wastes.
- **Planning, Siting and Developing Roads and Highways Management Measure** - Intended for planning transportation corridors around and away from sensitive ecosystems, including highly erodible areas.
- **Bridges Management Measure** - Requires that runoff from bridges be assessed and that appropriate stormwater quality measures and treatment are utilized to protect critical habitat, wetlands, fisheries, and water supplies.

ICMP has determined that numerous programs and activities are being implemented to address these management measures. Regulatory programs which are applicable to the majority of the measures include: Joint Permitting process; 401 Water Quality Certifications; Cook County Watershed Management Ordinance; Lake County Watershed Development Ordinance; NPDES Phase II Stormwater Program; Watershed Improvement Act; Soil and Water Conservation Districts Act, Illinois Pesticide Act and local ordinances for the City of Chicago and other municipalities.

Education, outreach, and technical assistance programs include Illinois Urban Manual; Illinois' Green Infrastructure for Clean Water Act; and Technical Reference Manual.

Marinas and Recreational Boating ([Link to Chapter 5](#))

Lake Michigan provides Illinois residents with public and industrial water supply, shipping channels, and various aesthetic and recreation amenities, including a boating and fishing industry. Thirty-two marinas are in Illinois' Coastal Zone, with over 9,300 slips.

Nonpoint source pollution from marinas and small boat harbors can impair water quality in the Coastal Zone. Cleaning products and toxic chemicals used in boat maintenance can pollute waterways when they are washed into the water. Improper discharges of bilge water, wastewater, cleaning products, winterizing chemicals, fuels and lubricants from boats likewise impact water quality. The effect of runoff from a single parking lot or building on a water body may seem insignificant, but when multiplied, water quality can suffer. Mismanaged, old or poorly designed marinas or uninformed boat owners can negatively affect coastal water quality. Improved control of nonpoint pollution from marinas and boats will improve and maintain the quality of Illinois' coastal waters.

Operation and maintenance of marinas can also impact water quality and aquatic habitats. Principal sources of nonpoint pollution at marinas include stormwater; vessel maintenance and repair; petroleum; sewage handling; waste containment and disposal.

There are 15 management measures focused on marinas and recreational boating.

- **Marina Flushing Management Measure** - The purpose of this management measure is to site and design new or expanded marinas so that currents will aid in flushing of the site or renew its water regularly.
- **Water Quality Assessment Management Measure** - Specifies that water quality be assessed in the siting and design of both new and expanding marinas.
- **Habitat Assessment Management Measure** – Encourages marinas to be designed and located so as to eliminate or minimize adverse effects on wetlands, submerged aquatic vegetation, and other important habitat areas.
- **Shoreline and Stream Bank Stabilization Management Measure** – States that where shoreline erosion is a nonpoint source pollution problem, shorelines and/or stream banks should be stabilized.
- **Marinas: Stormwater Runoff Management Measure** - Specifies implementation of storm runoff controls from marina sites.
- **Fueling Station Design Management Measure** - Specifies that fueling stations at marinas be located and designed to allow for ease in cleanup of spills.
- **Sewage Facilities Management Measure** – Aims to prevent the release of sewage to surface waters from boats through design of marinas with proper sewage management facilities, including pumpout, dump station, and adequate restroom facilities.
- **Solid Waste Management Measure** - Specifies that solid wastes produced by the operation, cleaning, maintenance, and repair of boats should be properly disposed of so that these wastes do not enter marina waters.
- **Fish Wastes Management Measure** – Aims to promote sound fish waste management through a combination of fish cleaning restrictions, public education, and proper disposal.
- **Liquid Material Management Measure** - Ensures the availability of appropriate storage, transfer, containment, and disposal facilities for liquid materials commonly used in boat maintenance. It encourages the recycling of these materials whenever possible.
- **Petroleum Control Management Measure** - Aims to reduce the amount of fuel and oil from boat bilges and fuel tank air vents entering marina and surface waters. Fueling stations should have fuel containment and cleanup equipment and a spill contingency plan.
- **Boat Cleaning Management Measure** - Minimizes, to the extent practicable, the release to surface waters of (a) harmful cleaners and solvents and (b) paint from hull cleaning for boats that are in the water.
- **Public Education Management Measure** - Public education/outreach/training programs should be instituted for boaters, as well as marina operators, to prevent improper disposal of polluting materials.
- **Maintenance of Sewage Facilities Management Measure** - Specifies that pumpout facilities be maintained in operational condition and that their use be encouraged to reduce untreated sewage discharges to surface waters.

- **Boat Operation Management Measure** - Deals with ecological problems resulting from boating operations outside marinas. The management measure is designed to decrease turbidity and physical destruction of shallow-water habitat resulting from boating activities.

ICMP has determined that numerous programs and activities are being implemented to address these management measures, including permitting programs (such as gasoline storage, fuel dispensing, sewage collection and treatment, NPDES, etc.); IDNR Boating Education and Safety Program; and Cost Assistance for Marina Sewage Improvement Program.

In addition, IDNR administers the Clean Marinas Program which encourages marina operators and recreational boaters to protect coastal water quality by engaging in environmentally sound operating and maintenance procedures.

Illinois' Clean Marina Program was formalized in 2013 by the IDNR. A [guidebook](#) has been published that includes proper nonpoint source pollution controls. The program encompasses all management measures necessary to implement effective nonpoint source pollution controls in marinas in the Coastal Zone, and it is essentially equivalent to management measures described in USEPA.

Hydromodification ([Link to Chapter 6](#))

This chapter specifies management measures to protect coastal waters from sources of nonpoint pollution related to hydromodification activities. Illinois' Coastal Zone has undergone tremendous and permanent hydrologic and hydraulic modifications. Much of the coastal shorelines and riparian areas have been modified and hardened. The purposes of these monumental changes have been to protect urban infrastructure, to manage wastewater and floods, and to provide for navigation.

There are six NOAA management measures focused on hydromodification. Three of the measures are applicable to Illinois' Coastal Zone and are presented below. Three other hydromodification management measures are excluded and are not discussed in this section (reasons for exclusion are provided in the full program document).

- **Physical and Chemical Characteristics of Surface Water for Channelization and Channel Modification Management Measure** - This management measure is intended to be applied to public and private channelization and channel modification activities in order to prevent the degradation of physical and chemical characteristics of surface waters from such activities, evaluate potential changes in surface water characteristics, and target opportunities to improve conditions for fish and wildlife.
- **Instream and Riparian Habitat Restoration for Channelization and Channel Modification Management Measure** - The purpose of this management measure is to correct or prevent detrimental changes to instream and riparian habitat from the adverse effects of hydromodification.
- **Streambank and Shoreline Erosion Management Measure** - This management measure is intended to be applied by States to eroding coast lines and streambanks in coastal rivers and creeks. The measure does not imply that all shoreline and streambank erosion must be

controlled. Some amount of natural erosion is necessary to provide the sediment for beaches and channel deposits in rivers, and for substrate in wetlands.

ICMP has determined that numerous programs and activities are being implemented to address these management measures, including regulatory requirements (USACE Regional Permit 10- Bank Stabilization and USACE Section 404 permits); Section 401 of the Clean Water Act; Rivers and Harbors Act of 1899; and Rivers, Lakes, and Streams Act. Additional regulatory programs include Comprehensive Environmental Review Process (CERP), Cook County Watershed Management Ordinance, Lake County Watershed Development Ordinance, and the Chicago Zoning Ordinance.

Additional educational, technical and financial resources are available to minimize the impacts of nonpoint source pollution due to channelization in the Illinois Coastal Zone. Some of these include the Illinois Urban Manual originally developed by IEPA; Streambank Stabilization and Restoration Program, administered by the Illinois Department of Agriculture (IDOA) and USDA NRCS; Cook County Technical Guidance Manual, from MWRD; and Lake County Technical Reference Manual.

Wetlands, Riparian Areas, and Vegetated Treatment Systems [\(Link to Chapter 7\)](#)

Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Riparian areas are vegetated ecosystems along a waterbody through which energy, materials, and water pass. Riparian areas are characterized by a high water table, are they are subject to periodic flooding. Vegetated treatment systems (VTS) include vegetated filter strips and constructed wetlands. Vegetated filter strips (VFS) are vegetated areas designed and constructed to remove sediment and other pollutants from surface water runoff by filtration, deposition, infiltration, adsorption, absorption, decomposition, and volatilization.

Unlike the other categories, wetlands, riparian areas and vegetated treatment systems generally improve water quality and minimize effects of nonpoint source pollution. Therefore these management measures focus on protecting, restoring, or establishing wetland systems.

This section addresses three NOAA management measures to protect and restore Illinois' coastal wetlands and riparian areas.

- ***Protection of Wetlands and Riparian Areas Management Measure*** - The purpose of this management measure is to protect the water quality improvement functions of wetlands and riparian areas as a component of nonpoint source control programs.
- ***Restoration of Wetlands and Riparian Areas Management Measure*** - This management measure is applied to restore the full range of wetlands and riparian functions in areas where the systems have been degraded and destroyed and where they can serve a significant nonpoint source abatement function.
- ***Vegetated Treatment Systems Management Measure*** - The objective of this management measure is to promote the use of engineered vegetated treatment systems such as constructed

wetlands or vegetated filter strips where these systems will serve a significant nonpoint source pollution abatement function.

ICMP has determined that numerous programs and activities are being implemented to address these management measures, including the Joint Permit Program; Illinois' Rivers, Lakes, and Streams Act; Rivers and Harbors Act of 1899; and the Interagency Wetland Policy Act of 1989. Lake County Stormwater Management Commission (LCSMC) has delegated authority from IDNR OWR to issue permits for development in regulatory floodplains and floodways. Projects are also regulated under the Cook County Watershed Management Ordinance and the Lake County Watershed Development Ordinance.

Other programs, focused on Education, Public Outreach and Technical and Financial Assistance, include Chicago Wilderness Green Infrastructure Vision; GO TO 2040 plan; Illinois Urban Manual; and Cook County Technical Guidance Manual. IDNR has several land acquisition programs which can be used for acquisition and protection of wetlands. Wetlands are also protected by Forest Preserve Districts and other public land owners.

Additional Management Measures ([Link to Chapter 8](#))

USEPA and NOAA's Program Development and Approval Guidance outlines the requirements for implementation of Additional Management Measures under §6217. Additional management measures provide a "second tier of pollution control efforts" after implementation of the §6217 management measures.

NOAA's guidance states that for program approval, states will need to complete the following steps

1. Identify coastal waters that are not attaining or maintaining applicable water quality standards or protecting designated uses, or that are threatened by reasonably foreseeable increases in pollution loadings from new or expanding sources;
2. Identify land uses that individually or cumulatively cause or threaten water quality impairments in those coastal waters;
3. Identify critical coastal areas;
4. Develop a process for determining whether additional measures are necessary to attain or maintain water quality standards in the waters identified above;
5. Describe the additional management measures the state will apply to the identified land uses and critical coastal areas;
6. Develop a program to ensure implementation of the additional management measures within the time frame described in section IV.D.

There are processes in place in Illinois to identify impaired waters; the most applicable is IEPA's implementation of the Clean Water Act. Overall, the vast majority of Illinois' Coastal Zone waters that have been sampled are considered impaired in at least one use. Water quality impairments in Illinois coastal waters are caused by a wide range of sources, many of which are unrelated to land use. Those

that are related to land use stem mainly from urban landcover, the predominant land use in the Coastal Zone.

Nearly all of the waters of the Coastal Zone are impaired in some manner and therefore it is difficult to identify particular areas that would stand out as critical over other areas. ICMP considers the entire 63 mile length of our Lake Michigan coast to be a 'critical coastal area'. We recommend a buffer length of 0.25 mile, which in many places will include the full width of the Coastal Zone.

Most of the land area in the Coastal Zone has already been converted to urban land cover, with most of the remaining consisting of recreational and conservation land. There is little reason to anticipate the need for additional management measures based on new types of land use; much of the impacts on coastal water quality appear to stem from the cumulative impacts of urban land cover.

Additional Goals for the Illinois Coastal Clean Waters Program

In addition to the existing Management Measures, ICMP worked with stakeholders and experts on our Advisory Panel to identify additional strategies to address coastal nonpoint source pollution. The Advisory Panel included professionals representing regulatory agencies, land management agencies, stormwater management agencies, municipal departments, municipal planning agencies and local nonprofit organizations working on these issues.

Through the Advisory Panel, ICMP sought to identify the following:

- Input into the unfilled niche(s) that the new Coastal Clean Waters Program could address
- How best the Coastal Clean Waters Program could provide technical assistance to local governments and the public to implement management measures
- A blueprint for a continued process for Coastal Clean Waters Program coordination with stakeholders into the future

While all of the gaps identified are very important, some of the issues already have agencies or organizations leading efforts to provide solutions, while others have no clear leaders yet identified and/or need additional support in the short term. Currently, the issues of greatest need for support from ICMP (in no particular order) were identified as:

- Coordination among the many agencies working in the Illinois Coastal Zone
 - Need for more streamlined or integrated permitting processes
 - Wetlands data, for example, is often inconsistent among various agencies or organizations; need a consistent method or dataset for the Coastal Zone
- Water quality monitoring
 - Monitoring is extremely important to track progress, but continually underfunded
 - Monitoring results, when available, could be more broadly communicated to the public
- Stormwater BMP maintenance
 - Many agencies and organizations are installing BMPs, but the long term maintenance and management is not consistently monitored nor enforced

- Consistency in maintaining and monitoring installed BMPs is also lacking; not all owners using the same methods or guidelines
- Illinois Urban Manual is valuable, however its contents could be made available to a less technical audience
- Green Infrastructure (GI) implementation
 - Good planning and siting of GI opportunities exists, but funding and political will to implement is limited
- Addressing the actual pollutants causing nonpoint source pollution
 - Cleaning up/capping brownfields – especially in the Calumet region – where pollutants are exposed and directly polluting the waterways. This may be a point source, but is nevertheless important to local stakeholders.
 - Reducing the impacts of chemicals used in asphalt sealants (i.e., parking lots at marinas, etc.)
 - Reducing the amount of road salt used in the Coastal Zone

The Advisory Panel identified the above issues as having the most pressing needs over the next three to five years. The Coastal Clean Waters Program will continue beyond the short term view of three to five years in which these needs were identified. The Advisory Panel recommends that regular stakeholder engagement to track progress and needs should be built into the Program. This ensures real time evaluation and program revisions as may be needed. To accomplish this, the Advisory Panel devised a strategy for future Coastal Clean Waters Program engagement which includes annual stakeholder survey, Advisory Panel annual meetings, workshops, and a five year needs assessment.

Implementation

ICMP will be developing a formal Implementation plan for the Coastal Clean Waters Program following official Program approval by NOAA and USEPA. However, we have developed a preliminary implementation strategy to begin addressing the needs above. Many of these needs also correspond very well with priorities identified in the [Illinois Lake Michigan Implementation Plan](#). The expert panel identified over forty opportunities (existing gaps) related to the four nonpoint source categories applicable in the Illinois Coastal Zone (urban areas, marinas, hydromodification, wetlands) for augmenting current aspects of the existing nonpoint source framework.

The urban areas gaps were generally bigger and more pressing issues in our region, such as implementing green infrastructure practices, retrofits and protecting sensitive ecological areas. In comparison, typical gaps identified for marinas included a need for outreach and education on topics such as the Clean Marinas program, bilge disposal laws, etc.

The results of the advisory panel process have been summarized into the following priorities. These focus areas are organized approximately in order from the highest to lowest priority, based upon the needs of our Coastal Zone, stakeholder input, and ICMP priorities. There are no focus areas identified for Agriculture or Forestry because we are requesting exemption from these nonpoint source categories.

Focus Areas:

- 1) Clean Marinas Program (Marinas and Recreational Boating)
- 2) Implement, maintain, and monitor green infrastructure and other sustainability and best management practices (Urban Areas)
- 3) Wetland protection and restoration (Wetlands)
- 4) Ravine, riparian, and stream protection and restoration (Wetlands)
- 5) Sand management (Hydromodification)
- 6) Snow management and road salt control (Urban Areas)
- 7) Seawall repair, removal and replacement (Hydromodification)
- 8) Develop, adopt, implement, and monitor watershed plans (Urban Areas)
- 9) Water quality monitoring (Urban Areas, Marinas, Hydromodification, and Wetlands)
- 10) Other issues including commercial marinas, asphalt sealants, gull/wildlife control (primarily Urban Areas, Marinas)

Under each focus area, we have identified goals along with potential activities that the Coastal Clean Waters Program may implement. Our main strategies for program implementation include education and outreach, training, promotion of existing tools and resources, coordination, and funding.

Our draft workplan (Table 1) includes activities that we expect will be undertaken by ICMP staff, activities which can potentially be funded through IDNR or IEPA in partnership with local and regional entities. In compliance with the federal guidelines, our timeline following program approval is five years for program implementation and evidence of progress. We recognize that implementation of the Coastal Clean Waters Program is a long-term commitment and have worked with the advisory panel to identify realistic roles for our program in the next five years. For more information, please see [Chapter 2](#) of the Coastal Clean Waters Program.

Table 1. Five Year Implementation Goals for the Coastal Clean Waters Program

Goals	Potential Role of CNPCP	Source Category
1) Clean Marinas Program		
Increase number of certified Clean Marinas	Outreach to marina operators on the Clean Marinas program	Marinas
Decrease gull problems caused by fish waste and solid waste	Enforce fish waste regulations; Outreach and education to all marinas on best practices; Certify more Clean Marinas	Marinas, Urban Areas
Increase awareness of regulations and best practices among out-of-state and resident boaters who don't have dock slips at Clean Marinas	Support work of Clean Boats Program to reach boat-ramp users; Coordinate with Great Lakes Clean Marina program to provide information to visiting out-of-state boaters	Marinas
Increase compliance with boat sewage discharge laws	Outreach on laws to boaters; Workshops for Marina management	Marinas
Reduce nonpoint source pollution from boat maintenance facilities	Increase number of certified Clean Marinas; Outreach to independent facilities on best practices	Marinas

2) Implement, maintain, and monitor green infrastructure and other sustainability and best management practices		
Increase implementation of green infrastructure practices and sustainable design	Support green infrastructure planning and/or implementation; Work with partners to provide training opportunities and materials	Urban Areas, Wetlands
Improve monitoring and maintenance of green infrastructure and BMPs	Promote operations/maintenance resources such as the Illinois Urban Manual; Coordinate with partners including MWRD and LCSMC to provide training	Urban Areas
Increase daylighting of storm sewers	Partner with local project leads to set priorities and assess next steps; Help identify and pursue funding opportunities	Hydromodification
3) Wetland protection and restoration		
Implement wetland restoration projects in a regionally-collaborative manner	Coordinate with local and regional public landowners and planning entities on prioritizing wetlands for restoration, using latest mapping tools where needed; Support restoration planning and implementation	Wetlands
Prioritize restoration and acquisition opportunities	Support mapping and data collection; Create inventory of restoration opportunities; Use existing 319 watershed plans as a resource	Wetlands
Increase restoration of privately-owned wetlands	Create data inventory on wetland ownership; Provide outreach on conservation easements and funding opportunities; Outreach and education on restoration aimed at private owners	Wetlands
Improve and connect hydrology in wetland areas	Help prioritize restoration projects with technical tools; Support inventories and prioritization of sensitive areas and restoration planning	Hydromodification
4) Ravine, riparian, and stream protection and restoration		
Increase implementation of BMPs on both public and private properties with ravines	Provide outreach on conservation easements and funding opportunities; Connect landowners with existing information and resources; Build partnerships to prioritize restoration projects with technical tools	Hydromodification
Improve riparian land management through coordination between riparian landowners	Create and/or promote coordination mechanisms such as working groups, forums, symposia, etc.	Wetlands
Improve the quality of ravine restoration projects	Outreach and education about existing programs and resources to communities and municipalities	Hydromodification

4) Ravine, riparian, and stream protection and restoration continued		
Protection and management of riparian lands	Support restoration and land acquisition projects; Outreach and education to riparian landowners on conservation easements and funding opportunities	Wetlands
Regulation of stormwater discharges into ravine systems	Outreach and education to municipalities; Support sustainable coastal planning	Urban Areas
5) Sand Management and shoreline protection and restoration		
Balance sand management and erosion control	Coordinate local, federal and state interests; Work with local communities to provide more info about state and federal programs; Outreach to local communities	Hydromodification
Reduce the impacts of new structural shoreline projects	Outreach and education about existing programs and resources to communities and municipalities	Hydromodification
6) Snow management and road salt control		
Improve the management of snow	Outreach and education to municipalities and private commercial enterprises on existing regulations	Urban Areas
Decrease impacts of salt (roads, sidewalks, parking lots)	Investigate the creation of a salt applicator licensing program (EX: Minnesota)	Urban Areas
7) Seawall repair, removal, and replacement		
Naturalize channelized streams and reduce risks related to failing sea walls	Work with partners to prioritize seawalls for repair, removal, or replacement, with a focus on reducing risks to people and the environment such as persistent toxins; Work with municipalities and land owners to identify next steps	Hydromodification
Repair and maintenance of new or existing structures (seawalls, piers)	Promote operation and maintenance technical resources; Provide information on available funding	Hydromodification
8) Develop, adopt, implement, and monitor watershed plans		
Monitoring/follow up on implementation of watershed plans	319 program staff	Urban Areas
Increase comprehensive planning at watershed scale through the development, adoption, and implementation of 319 plans	Funding is available for 319 plans; Outreach and education to local government and stakeholders; Support partnerships to complete 319 plans for additional watersheds	Urban Areas
Protect sensitive ecological areas	Ensure that sensitive ecological areas are included in 319 plans; Participate in regional planning initiatives such as the Chicago Wilderness Green Infrastructure Task Force; Provide information on available funding	Urban Areas

9) Water quality monitoring		
Improve water quality monitoring	Organize a consortium to bring together agencies conducting monitoring; Advocate for the implementation of additional water quality monitoring with strategic placement of monitors	Urban Areas
10) Other issues including commercial marinas, asphalt sealants, gull/wildlife control.		
Reduce nonpoint source pollution originating from commercial marinas	Outreach to commercial marinas on best practices and existing legislation	Marinas
Asphalt sealants	Support outreach projects such as point of purchase education on sealants	Urban Areas, Marinas
Urban wildlife and nuisance control (gulls, pets)	Education and outreach to park districts and other land owners about management tactics	Urban Areas