

## ILLINOIS COASTAL NONPOINT PROGRAM NOAA/EPA DECISION ON CONDITIONS OF APPROVAL

### **FOREWORD**

The Coastal Nonpoint Pollution Control Program, set forth in Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), 16 U.S.C. § 1455b, addresses nonpoint source pollution problems in coastal waters. Section 6217 directs states and territories with approved coastal zone management programs to develop and implement management measures for nonpoint pollution control to restore and protect coastal waters (coastal nonpoint programs).

This document provides the basis for the determination by the National Oceanic and Atmospheric Administration (NOAA) and the United States Environmental Protection Agency (EPA) (collectively, federal agencies) that Illinois has met the conditions that the federal agencies had identified in the earlier approval of Illinois' coastal nonpoint program on August 23, 2016, pursuant to CZARA (2016 findings). In this document, the federal agencies describe how the state program modifications satisfy each of the conditions identified in the 2016 findings.

### **DECISION**

The federal agencies issued findings on August 23, 2016, approving Illinois' coastal nonpoint program submission subject to conditions. Those findings are available at [coast.noaa.gov/data/czm/pollutioncontrol/media/6217il\\_fnl.pdf](https://coast.noaa.gov/data/czm/pollutioncontrol/media/6217il_fnl.pdf). Since that time, Illinois has undertaken actions to address each of the identified conditions. Based on those actions and the materials provided by the state that document how its program meets each condition, NOAA and EPA find that Illinois has satisfied all conditions on its coastal nonpoint program.

### **INTRODUCTION**

CZARA directed EPA to develop technical guidance to assist states and tribes in designing coastal nonpoint programs. On January 19, 1993, EPA issued that guidance in the document titled *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters*, 840-B92-002 (January 1993), which addresses five major source categories of nonpoint pollution: (1) urban runoff; (2) agriculture runoff; (3) forestry runoff; (4) marinas and recreational boating; and (5) hydromodification. The guidance also addresses nonpoint source pollution issues associated with the loss or damage to wetlands and riparian areas. The guidance is commonly referred to as the 6217(g) guidance because the statutory direction to EPA appears in CZARA Section 6217(g).

This document is organized following the same structure that was used for the federal agencies' 2016 findings to support approval of Illinois' program, with conditions, grouping together the conditions related to each major nonpoint source category or subcategory, as well as conditions related to Illinois' strategy for monitoring and additional management measures. The structure for each condition follows a standard format. Each original finding and condition identified in

2016 is repeated, followed by the federal agencies' rationale for how the state has met each condition. A list of acronyms is included at the end of this document.

For further understanding of the terms in this document, please refer to the following:<sup>1</sup>

- *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (EPA, January 1993)
- *Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance* (NOAA/EPA, January 1993)
- *Flexibility for State Coastal Nonpoint Programs* (NOAA/EPA, March 1995)
- *Final Administrative Changes to the Coastal Nonpoint Pollution Control Program Guidance for Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA)* (NOAA/EPA, October 1998) ("Final Administrative Changes")
- *Policy Clarification on Overlap of 6217 Coastal Nonpoint Programs with Phase I and II Storm Water Regulations* (NOAA/EPA, December 2002).

The federal agencies rely on, but do not repeat here, except as relevant to the findings, extensive information that the State included in various submittals to support its coastal nonpoint program. Further information and analysis are contained in the administrative record for this decision and are available upon request from the following locations:

U.S. EPA Headquarters, Office of Water  
Nonpoint Source Management Branch  
1200 Pennsylvania Ave., NW (4503-T)  
Washington, DC 20460  
Contact: Don Waye (202) 566-1170

NOAA, Office for Coastal Management  
SSMC-4, N/OCM6  
1305 East-West Highway  
Silver Spring, MD 20910  
Contact: Allison Castellan (240) 533-0799

U.S. EPA Region 5, Water Division  
77 W. Jackson Blvd.  
Chicago, IL 60604-3608  
Contact: Janette Marsh (312) 886-4856

### **III. URBAN**<sup>2</sup>

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<sup>1</sup> All of the guidance documents for the Coastal Nonpoint Program are available online at: <https://coast.noaa.gov/czm/pollutioncontrol/>.

<sup>2</sup> This section begins with Roman numeral three because it follows the organization that was used for the Federal agencies' 2016 findings to support the approval of Illinois' program with conditions available at [coast.noaa.gov/data/czm/pollutioncontrol/media/6217il\\_fnl.pdf](https://coast.noaa.gov/data/czm/pollutioncontrol/media/6217il_fnl.pdf). Gaps in numbering or lettering of subsequent sections and subsections exist for this similar reason.

## **D. NEW AND OPERATING ONSITE DISPOSAL SYSTEMS**

**2016 FINDING:** (1) Illinois has provided sufficient justification to support an exclusion of the new Onsite Disposal Systems (OSDS) management measure from its coastal nonpoint program. (2) Illinois has not yet provided sufficient justification to support an exclusion of the operating OSDS management measure from its coastal nonpoint program, although it may do so in the future.

**2016 CONDITION:** Within three years, Illinois shall either demonstrate that it has programs in place to meet the operating OSDS management measure, as described below, or provide sufficient justification to support an exclusion of the operating OSDS management measure from its coastal nonpoint program. An exclusion justification shall include more definitive information on the number of systems within the coastal nonpoint management area, as well as information on the status of these systems, so that NOAA and the EPA can determine whether the state would be eligible for an exclusion of the operating OSDS management measure. NOAA and the EPA would require information sufficient to determine whether the state or the counties have identified the extent to which these systems are being operated and maintained to prevent water quality problems or public health risks.

If Illinois does not pursue an exclusion request for the operating OSDS measure, or if NOAA and the EPA deny this request, Illinois shall then need to demonstrate that state or local programs, enforceable policies, and mechanisms are in place in order to 1) establish and implement policies and systems to ensure that existing OSDS are operated and maintained to prevent the discharge of pollutants; and 2) inspect OSDS at a frequency adequate to ascertain whether OSDS are failing.

**2022 DECISION:** Illinois has satisfied this condition.

**RATIONALE:** Illinois addresses its condition for the operating OSDS management measure through regulatory programs including the North Shore Water Reclamation District's Sewer and Sewer Systems Ordinance, Lake County's Onsite Wastewater Treatment System Ordinance, and Lake County's Public Nuisance Ordinance, as well as through widespread, voluntary point-of-sale inspections, and targeted education and outreach. The state has provided a legal opinion from its assistant attorney general to demonstrate that it has the necessary back-up authority to ensure implementation of the OSDS management measure throughout the coastal nonpoint program management area, where needed.<sup>3</sup>

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<sup>3</sup> Some systems are exempted through NPDES permits which "cover New and Replacement Surface Discharging Systems that discharge to Waters of the United States provided that: 1) the Surface Discharging System receives and processes only Domestic Sewage; 2) flows through the Surface Discharging System are less than 1,500 gallons per day; 3) connection to a sanitary sewer is greater than 300 feet away from the residential or non-residential property, and 4) all alternatives to a Surface Discharging System are technologically or economically infeasible as determined in accordance with paragraphs 2 through 4 below. Permit coverage is available to eligible Surface Discharging System Owners or Operators who submit an administratively complete Notice of Intent (NOI) to be covered by the general permit, including the technological and economic feasibility analyses." <https://www.epa.gov/sites/default/files/2017-01/documents/final-illinois-npdes-general-permit-20131231.pdf>. The state has the regulatory means to address both of the state's OSDS conditions for surface-discharging systems. As a result, the state does not need to cite the permit in their legal opinion.

The purpose of the operating OSDS management measure is to minimize pollutant loadings from operating OSDS. The management measure specifically requires states to:

1. Establish and implement policies and systems to ensure that existing OSDS are operated and maintained to prevent the discharge of pollutants to the surface of the ground and into ground waters that are closely hydrologically connected to surface waters and that require an OSDS to be repaired, replaced, or modified where the OSDS fails, or threatens or impairs surface waters;
2. Inspect OSDS at a frequency adequate to ascertain whether OSDS are failing; and
3. In applicable situations, consider replacing or upgrading OSDS to treat influent so that total nitrogen loadings in the effluent are reduced by 50 percent.

Under NOAA and EPA's 2016 approval conditions, Illinois does not need to meet the third element of the management measure because nitrogen loadings contributed by OSDS do not degrade water quality in Lake Michigan.<sup>4</sup> Furthermore, because Illinois is not seeking an exemption for this management measure, the state no longer needs to provide an exclusion justification, which would include information on the number and status of systems within the coastal nonpoint management area.

Illinois' coastal nonpoint management area, comprising portions of Cook and Lake Counties, has a relatively small number of parcels with operating OSDS. The entirety of the coastal nonpoint management area within Cook County is sewerage and served by the Metropolitan Water Reclamation District of Greater Chicago. Most of the Lake County portion of the coastal nonpoint management area is also sewerage and served by the North Shore Water Reclamation District, which provides collection and treatment for all communities except Winthrop Harbor, Zion, and Beach Park. These communities own and maintain their own sewage collection systems and deliver their sewage to North Shore Water Reclamation District for treatment. In Lake County, there are only a few small pockets within the coastal nonpoint management area, mostly within Beach Park, that are not connected to sewer. The county recently completed a catalog of OSDS and found that there are only 1,685 operating OSDS within these two areas. Finally, in accordance with Section 4.01(b) of the North Shore Water Reclamation District's Sewer and Sewer Systems Ordinance, the owner of any house, building, or property used for human occupancy, employment, recreation, or other purposes, situated within the district and within 300 feet of a public sewer, is required to connect directly with the public sewer within one year of receiving official notice to do so. Lake County's ordinance also prohibits approval of any site plan for an OSDS when the property is within 300 feet of a public sewer (Chapter 171.035(F)).<sup>5</sup> As a result, as the sanitary sewer system expands over time, the number of operating OSDS in the coastal nonpoint management area is expected to decrease.

Illinois addresses element one of the management measure through Lake County's Onsite Wastewater Treatment System Ordinance (Chapter 171) and Public Nuisance Ordinance (Article 2, Section 1(k)). There are 1,685 OSDS in the coastal nonpoint management area, 1,276

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<sup>4</sup> NOAA and EPA. 2016. *Findings for the Illinois Coastal Nonpoint Program*. Accessed: 04/08/2022. [https://coast.noaa.gov/data/czm/pollutioncontrol/media/6217il\\_fnl.pdf](https://coast.noaa.gov/data/czm/pollutioncontrol/media/6217il_fnl.pdf)

<sup>5</sup> North Shore Water Reclamation District. 2019. *An Ordinance Relating to Sewer and Sewer Systems*. Accessed: 04/08/2022. <http://www.northshorewrd.org/downloads/seword.pdf>

are permitted by Lake County and 409 were installed prior to the passage of the ordinance and have no associated permit. Nonetheless, all OSDS with a certified pre-treatment component as well as surface discharging OSDS with a certified pre-treatment component and/or an advanced secondary pre-treatment component are required to undergo management activities, regardless of permit status, pursuant to Chapter 171.220. These activities include repair, replacement, adjustment, or modification of any part of the certified pre-treatment component, and, where relevant, the advanced secondary pre-treatment component, “a minimum of two times per calendar year, no less than four months apart, and/or in accordance with the manufacturer’s requirements” (Chapter 171.221-171.222). Surface discharging OSDS must also have their effluent discharge sampled twice annually (Chapter 171.222(A)(3)). All management activities must be reported to the Lake County Health Officer within 30 days. These permit requirements ensure that systems that are especially vulnerable to failure are adequately maintained. Additionally, Chapter 171.223 requires that holding tanks be pumped as often as necessary to prevent overflow and repaired to assure proper operation, which provides another maintenance-related safeguard to protect against potential system failure. Furthermore, in accordance with Lake County’s Public Nuisance Ordinance (Chapter 94.05(J)), it is a public nuisance to operate or maintain an OSDS in a condition that is detrimental or potentially detrimental to the health and safety of county residents. This includes having “a cracked/damaged septic tank riser or cover, an exposed drop/distribution box, failure to properly supply, operate or maintain the disinfecting component of a surface discharge onsite wastewater disposal system, or failure to provide required reports of inspection and/or management activities of an onsite wastewater disposal system or system component.” When OSDS are operated in these conditions, the Lake County Health Department has the authority to initiate abatement or enforcement actions if responsible parties fail to heed ordinance violation warnings and notices (Chapter 94.82-.83, 94.99). These requirements reflect that the state has the authority to require property owners to repair, replace, or modify failing OSDS.

The state addresses element two of the management measure through widespread, voluntary point-of-sale inspections. Based on discussions with five local real estate agents, the state found that OSDS inspections are either required by mortgage companies or requested by potential buyers at the recommendation of the buyer’s agent for virtually all home sales. The state reviewed the Lake County property transfer rate and that of Beach Park, Illinois, and estimated that the average annual property transfer rate within the coastal nonpoint management area is five percent. As a result, the state estimates that 75 percent of homes with OSDS in the coastal nonpoint management area will be sold over the next 15 years, with an inspection occurring at the point-of-sale. Finally, based on 2010-2018 data on complaints concerning possible OSDS failures, the state estimates that an additional seven OSDS per year will be inspected as a result of the complaints process.

Illinois has a variety of educational and outreach materials that further address elements one and two of the management measure and the state has committed to sending targeted education and outreach materials on OSDS maintenance to property owners that were grandfathered into Lake County’s permitting system. For example, the University of Illinois Extension has developed a website dedicated to septic systems in Illinois.<sup>6</sup> This website contains a page entitled *Keeping*

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<sup>6</sup> University of Illinois Extension. N.d. *Septic Systems in Illinois*. Accessed: 03/17/2020.  
<https://web.extension.illinois.edu/septicystems/>

*Your Septic System Working*, which contains recommendations for operating and maintaining septic systems that align with element one of the management measure. For example, the website recommends replacing old plumbing fixtures with more efficient models, limiting garbage disposal use, and having the system pumped every one to three years. Another page on this website dedicated to buying and selling homes with operating OSDS, encourages the voluntary inspection of OSDS at the time of property transfer. Specifically, the website recommends that homeowners contact their local health department to request and review records related to the prospective home's septic system and request an inspection if a valid permit is not on file. Similarly, Lake County also has a National Environmental Services Center newsletter on septic system maintenance on its webpage dedicated to onsite wastewater treatment systems.<sup>7</sup> The newsletter provides estimates of pumping rates based on the size of the tank and household using the system. It also recommends that septic systems be inspected at least once a year, and more frequently if the system in question has moving parts. To track voluntary point-of-sale inspections rates, the state has committed to surveying a representative number of Lake County real estate agents every five years to determine whether point-of-sale inspections continue to be the norm for the property transfers. The state will verify the results of these surveys by identifying properties with OSDS that went through the title transfer process in the last five years, identifying properties for which a new (first-time or subsequent) OSDS permit was issued in the last five years, and analyzing and summarizing these data to provide an estimate of the inspection rate. The state also has committed to reviewing the number and locations of OSDS complaints and violations and assessing their outcomes in terms of additional inspections.

Illinois has provided a legal opinion from the State's Assistant Attorney General, asserting that the Illinois Environmental Protection Act (IEPA) (415 ILCS 5/12) provides adequate legal authority for the state to ensure the implementation of the 6217(g) operating OSDS management measure throughout the coastal nonpoint program management area, as needed. The state has described the mechanisms that link the implementing agency with the enforcing agencies, the IEPA's Bureau of Water and Division of Legal Counsel and has committed to using the state's Environmental Protection Act to implement the 6217(g) management measures, including operating OSDS, when needed.

## **E. POLLUTION PREVENTION**

**2016 FINDING:** (1) Illinois has demonstrated that it has programs in place across its coastal nonpoint management area to reduce pollutants generated from household hazardous chemicals. (2) Illinois has not yet demonstrated that it has programs in place across its coastal nonpoint management area to reduce pollutants generated from improper disposal of pet excrement; lawn and garden activities; and turf management on golf courses, parks, and recreational areas. (3) Illinois does not need to demonstrate that it has programs in place across its coastal nonpoint management area to reduce pollutants generated from the discharge of pollutants into storm drains or commercial activities such as parking lots and gas stations, as these discharges are

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<sup>7</sup> National Environmental Services Center. 2004. *Maintaining Your Septic System - A Guide for Homeowners*. Accessed: 04/08/2022. <https://www.nesc.wvu.edu/files/d/ba490d01-5c26-4d6b-bd60-5414f5530c1b/pipeline-fall-2004.pdf>

regulated under the National Pollutant Discharge Elimination System (NPDES) permits for municipal separate storm sewer systems (MS4s).

**2016 CONDITION:** Within three years, Illinois shall demonstrate that it has programs in place across the coastal nonpoint management area to reduce pollutants generated from improper disposal of pet excrement and turf management on golf courses, parks, and recreational areas. Within three years, Illinois shall demonstrate that it has programs in place across the coastal nonpoint management area, excluding the jurisdiction of Chicago, to reduce pollutants generated from lawn and garden activities.

**2022 DECISION:** Illinois has satisfied this condition.

**RATIONALE:** Illinois addresses its condition for the pollution prevention management measure through state and local regulations as well as a variety of voluntary programs. Regulatory measures include the Illinois Pesticide Act, Section 5a of the Lawn Care Products Application and Notice Act, and local pet waste management ordinances. The voluntary Audubon Cooperative Sanctuary Program for Golf and Illinois-Indiana Sea Grant Lawn to Lake Program further promote practices that are in conformity with the 6217(g) pollution prevention management measure.

The pollution prevention management measure requires states to demonstrate that they have programs in place across the coastal nonpoint management area to reduce pollutants generated from urban sources of nonpoint source pollution. The conditions placed on Illinois requires the state to address the pet excrement and turf management elements of the management measure. Illinois addresses the pet excrement element of the pollution prevention management measure through local ordinances. Illinois has demonstrated that every community in the coastal nonpoint management area, including the city of Chicago, has implemented a local ordinance making the improper management of pet waste unlawful.<sup>8</sup> For example, the ordinances of several<sup>9</sup> cities require removal of pet waste from public property and the property of another. Another example is Lake County's public nuisance ordinance (§ 94.08), which has declared that it is a nuisance to allow the buildup of pet/animal waste or manure on a property to the extent that it creates a condition that is detrimental or potentially detrimental to the health and/or safety of its inhabitants. Lake County further promotes proper dog waste management practices through its website.<sup>10</sup> Failure to comply with these local ordinances may result in a variety of penalties including fines and the impoundment of the animal in question. Compliance is also encouraged through signs about proper pet waste management that are placed primarily in parks and through IEPA's *Lake Notes* newsletter, which specifically encourages property owners to

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<sup>8</sup> Please contact NOAA and EPA for a complete list of pet waste management ordinance citations.

<sup>9</sup> Beach Park (§ 6.06.290), Burnham (§ Sec. 14-44), Calumet City (§ 10-6), Chicago (§ 7-12-420), Village of Dolton (§ Sec. 29), Evanston (§ 9-4-12), Glencoe (§ 6-18), Highland Park (§ 90.040(F)), Highwood (§ 6-4-4 B), Kenilworth (§ 91.024(c)), Lake Forest (§ 91.057), North Chicago (§ 8-15-9), Riverdale (§ 6.08.190), Waukegan (§ 4-48), Wilmette (§ 4-6.1), Winnetka (§ 6.08.020), and Zion (§ 6-38).

<sup>10</sup> Lake County Stormwater Management Commission. N.d. *Dog Waste Management*. Accessed: 04/08/2022.  
<https://www.lakecountyil.gov/2262/Dog-Waste-Management>

clean up pet wastes.<sup>11</sup> Taken together, these local ordinances, voluntary educational materials, and signs effectively encourage proper pet excrement disposal throughout the coastal nonpoint management area.

Illinois addresses the household lawn and garden activities and turf management elements of the pollution prevention management measure through two state regulations: (1) the Illinois Pesticide Act, (415 ILCS 60); and (2) the Lawn Care Products Application and Notice Act (415 ILCS 65/5a). The Illinois Pesticide Act requires commercial pesticide applicators and operators to obtain a license from the Illinois Department of Agriculture. (Per the State Department of Agriculture, applicators are the persons in an organization who are responsible for pesticide purchasing, storage, handling, and use; applicators may use pesticides or supervise the use of pesticides by licensed operators. Operators are those individuals that use pesticides at the job site and are supervised by applicators.) Applicator licensure is contingent on passing both a general and category-specific examination, including a category for turf pest management, covering proper pesticide use, storage, and disposal techniques to prevent pollution. Operator licensure is contingent on passing a general examination.<sup>12</sup> Training resources, including a study guide specific to turf pest management and online training modules, are maintained by the University of Illinois Extension. Requiring commercial pesticide applicators and operators to obtain a license helps to prevent pollution from lawn and garden activities as well as turf grass management by ensuring they have adequate knowledge and training.

The Lawn Care Products Application and Notice Act (Section 5a) bans professional applicators from applying phosphorus-based fertilizer to household lawns and gardens, parks, and recreational areas except where soil testing can demonstrate that there is a phosphorus deficiency (415 ILCS 65/5a). Although a few exceptions apply which are discussed below, this restriction effectively ensures that phosphorus-based fertilizer is applied only where needed, thereby preventing nutrient pollution. This is especially significant in Great Lakes states, such as Illinois, as excess phosphorus is the primary driver of eutrophication in freshwater systems.

One notable exception to the aforementioned application ban for phosphorus-based fertilizer pertains to golf courses. However, the statute generally prohibits fertilizer from being applied within a 15-foot buffer from any waterbody on a golf course. When applied with spray, drop or rotary spreader with deflector, a three-foot buffer must be maintained. Within the coastal nonpoint management area several localities have ordinances which limit or ban the use of fertilizer. The Chicago Park District has integrated sustainable fertilizer management across all parks, including those with public golf courses, and over 8,000 acres of greenspace in the city. In Highland Park the city has banned the use of phosphate fertilizers on private and public lands, including on golf courses. There are twelve golf courses in the Illinois coastal nonpoint management area. Ten of these (83%) have been certified through Audubon International's voluntary Audubon Cooperative Sanctuary Program for Golf,<sup>13</sup> which addresses fertilizer-

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<sup>11</sup> Illinois Environmental Protection Agency. *Lake Notes: Home and Yard*. 1995. Accessed: 04/08/2022. <https://www2.illinois.gov/epa/Documents/epa.state.il.us/water/conservation/lake-notes/home-yard.pdf>

<sup>12</sup> Illinois Department of Agriculture. N.d. *Certification and Licensing*. Accessed: 04/08/2022. <https://www2.illinois.gov/sites/agr/Pesticides/Pages/Certification-and-Licensing.aspx#h4>

<sup>13</sup> Audubon International. Not dated. *Audubon Cooperative Sanctuary Program for Golf*. Accessed: 04/08/2022. <https://auduboninternational.org/acsp-for-golf/>



driven nutrient pollution. This program promotes the implementation of Audubon International-developed environmental management practices for golf courses, including some which aim to prevent nutrient pollution. Example practices include: basing fertilizer application on the results of soil testing and “using slow-release fertilizers, spoon-feeding, and filtering drainage through vegetative or mechanical filters prior to entering water bodies.”<sup>14</sup> To be certified, golf course managers must demonstrate that they have met six certification standards (including chemical use reduction and safety, water quality management, and outreach and education) by conducting a site assessment, developing an environmental plan, and documenting plan implementation. The United States Golf Association provides experts who assist golf courses in adopting the program.

The second notable exception to the phosphorus-based fertilizer ban is for private citizens applying fertilizer to their lawns and gardens. Illinois addresses these sources through several outreach and technical assistance efforts to promote good fertilizer use practices that are targeted towards private citizens. For example, Illinois-Indiana Sea Grant’s Lawn to Lake program encourages homeowners to voluntarily implement natural lawn care practices. This program produced the *Lawn and Landscape Practices for Northwest Water Planning Alliance Communities (2013)*,<sup>15</sup> which encourages fertilizer-related pollution prevention practices like testing soil nutrient levels to determine if fertilizer is needed, using phosphorus-free fertilizers, using fertilizers with controlled-release nitrogen, best practices for timing fertilizer application, and creating a 25-foot fertilizer-free buffer near water bodies. A series of outreach materials were also created through the Lawn to Lake program, including pamphlets on fertilizer and pesticide use.<sup>16</sup> Recently, Illinois-Indiana Sea Grant’s efforts have been focused on revamping the Lawn to Lake program’s outreach materials.<sup>17</sup> University of Illinois Extension also maintains its Lawn Talk website, which includes guidance on choosing a lawn fertilizer, creating a lawn fertilization schedule, and calculating how much fertilizer to apply.<sup>18</sup> IEPA provides similar information through its Green Tips website, which features additional best practices for lawn and garden maintenance.<sup>19</sup> All of these resources and voluntary outreach efforts address the management measure by encouraging private homeowners to implement practices that reduce the amount of polluted runoff that reaches local waters.

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<sup>14</sup> Audubon International. N.d. *Fact Sheet: Environmental Management Practices for Golf Courses*. Accessed: 04/08/2022. [https://auduboninternational.org/wp-content/uploads/2019/02/G\\_E-Environmental-Management-Guidelines-for-Golf.pdf](https://auduboninternational.org/wp-content/uploads/2019/02/G_E-Environmental-Management-Guidelines-for-Golf.pdf)

<sup>15</sup> Birchfield, J., Crisostomo, A., Csatari, C., Dorworth, L., Exl, J., Hentschel, R., Highlands, C., Rao, S., Schneemann, M., and Wallers, P. 2013. *Lawn and Landscape Practices for Northwest Water Planning Alliance Communities*. Accessed: 04/08/2022. <https://www.cmap.illinois.gov/documents/10180/107121/FY13-0092%20OUTDOOR%20WATER%20CONSERVATION%20MANUAL%20lowres.pdf/f9ef128d-c694-491f-8044-199d17f10cbc>

<sup>16</sup> Chicago Metropolitan Agency for Planning. N.d. *Lawn to Lake*. Accessed: 04/08/2022. <https://www.cmap.illinois.gov/programs/water/resources/lawn-to-lake>

<sup>17</sup> Illinois Extension, Illinois Environmental Protection Agency, and Illinois Department of Agriculture. 2019. *Illinois Nutrient Loss Reduction Strategy: Biennial Report 2019*. Accessed: 04/08/2022. <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/excess-nutrients/Documents/NLRS-Biennial-Report-2019-Final.pdf>

<sup>18</sup> University of Illinois Extension. N.d. *Lawn Talk: Planting and Maintenance*. Accessed: 04/08/2022. <https://web.extension.illinois.edu/lawntalk/planting/index.cfm>

<sup>19</sup> Illinois Environmental Protection Agency. N.d. *Green Tips*. Accessed: 04/08/2022. <https://www2.illinois.gov/epa/citizens/citizens-information/get-involved/Pages/Green-Tips.aspx>

**F. PLANNING, SITING, AND DEVELOPING ROADS AND HIGHWAYS; SITING, DESIGNING, AND MAINTAINING BRIDGES; ROAD, HIGHWAY, AND BRIDGE OPERATION AND MAINTENANCE; ROAD, HIGHWAY, AND BRIDGE RUNOFF SYSTEMS**

**2016 FINDING:** (1) Illinois has programs and enforceable policies and mechanisms in place to implement the management measure for planning, siting, and developing roads and highways with regard to local roads, but not for state roads. (2) Similarly, Illinois has programs and enforceable policies and mechanisms in place to implement the management measure for siting, designing, and maintaining bridges with regard to local bridges, but not for state-owned or operated bridges. (3) Illinois' program is exempt from the management measure for operation and maintenance of roads, highways, and bridges, as well as the management measure for road, highway, and bridge runoff systems, because nonpoint source pollution from these sources is regulated by NPDES permits for MS4s.

**2016 CONDITION:** Within three years, Illinois shall demonstrate that it has programs and enforceable policies and mechanisms in place across the coastal nonpoint management area to implement (1) the management measure for planning, siting, and developing roads and highways with regard to state roads; and (2) the management measure for siting, designing, and maintaining bridges with regard to state-owned or operated bridges.

**2022 DECISION:** Illinois has satisfied this condition.

**RATIONALE:** Illinois addresses its condition for the planning, siting, and developing roads and highways management measure as well as the management measure for bridges through the *Illinois Department of Transportation's Bureau of Design and Environment (BDE) Manual*. This manual establishes policies and procedures that are in conformity with EPA's 6217(g) guidance. As the manual states, it applies primarily to the State Highway System and "[a]ll projects on the State Highway System developed by the District Offices or other agencies shall be in compliance with this policy and the *BDE Manual*."

Per NOAA and EPA's 2016 approval conditions, Illinois must demonstrate that it has programs and enforceable policies and mechanisms in place to implement the management measure for planning, siting, and developing roads and highways as well as the management measure for bridges on state-owned and operated transportation infrastructure. The roads and highways management measures direct states to: (1) Protect areas that provide important water quality benefits and areas particularly susceptible to erosion or sediment loss; (2) limit land disturbance such as clearing and grading and cut and fill to reduce erosion and sediment loss; and (3) limit disturbance of natural drainage features and vegetation. The bridges management measures direct states to site, design, and maintain state-owned or operated bridge structures to protect sensitive and valuable aquatic ecosystems and areas providing important water quality benefits.

Just over 30 miles of roads and two bridges are owned and maintained by the state within the coastal nonpoint management area. There are limited opportunities for building new state roads and bridges or widening the existing network in the coastal nonpoint management area because

it consists of the heavily developed greater Chicago area. As a result, the management measure for planning, siting, and developing roads and highways, as well as the management measure for bridges, have very limited applicability to the state-owned and maintained road and bridge network.

Illinois addresses all elements of these management measures through its *BDE Manual*. The *BDE Manual* establishes uniform policies and procedures for locating, designing, and conducting environmental evaluations of construction and reconstruction projects within the state highway system. Chapter 26 of the *BDE Manual* describes special environmental requirements that must be addressed in the development of proposed state highway projects that impact surface waters, impaired waters, and/or wetlands; several of these requirements are in conformity with the 6217(g) guidance.<sup>20</sup> For example, Illinois' *BDE Manual* at 26-19.04 requires the identification and evaluation of potential project impacts to surface water resources and aquatic habitat, and the consideration of practical measures for avoiding, minimizing, and mitigating adverse project impacts to those resources. One of the parameters that must be considered in executing this policy is the presence of highly erodible soils, which when cleared of vegetation, can become a source of sedimentation into Lake Michigan. In addition, section 26-21.03 requires the identification of impaired waters in areas that state projects may affect, and implementation of mitigation measures where projects could potentially increase levels of a pollutant that is a cause of impairment. Furthermore, the Department of Transportation's wetlands policy, at section 26-8.03, is to "avoid impacts to wetlands unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to the wetlands" in the development of state highway projects. This wetlands policy directs the Illinois Department of Transportation to "preserve, enhance, and create wetlands where necessary in order to increase the quality and quantity of the State's wetland resource base." These policies illustrate how Illinois ensures that state-owned and maintained roads and bridges are planned, sited, and developed in ways that protect sensitive and valuable aquatic ecosystems, areas that provide important water quality benefits, and natural drainage features. These policies also limit disturbance to reduce erosion and sediment loss.

The *BDE Manual* also outlines general procedures which support the implementation of these management measures at all stages of the state road and bridge development process. Specifically, when planning a state route (a precursor to completing detailed studies) environmental impacts, including those to wetlands, must be considered in the route selection process.<sup>21</sup> Once a general route is selected, a corridor study is initiated. During corridor studies, all relevant environmental analyses, including the aforementioned special environmental requirements and environmental surveys, are considered. Environmental surveys are required when proposed projects would involve in-stream work or impact a wetland, among other

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<sup>20</sup> Illinois Department of Transportation. 2019. *Bureau of Design and Environment Manual, Chapter 26: Special Environmental Analyses*. Accessed: 04/08/2022. <http://idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Split/Design-And-Environment/BDE-Manual/Chapter%2026%20Special%20Environmental%20Analyses.pdf>

<sup>21</sup> Illinois Department of Transportation. 2019. *Bureau of Design and Environment Manual, Chapter 11: Phase I Studies*. Accessed: 04/08/2022. <http://idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Split/Design-And-Environment/BDE-Manual/Chapter%2011%20Phase%20I%20Studies.pdf>

activities,<sup>22</sup> and encompass the following: floodplains; wetlands; threatened or endangered species habitat, nature preserves, and natural areas; wild and scenic rivers; water quality of streams or lakes; wellhead protection areas; and groundwater recharge areas.<sup>23</sup> These requirements ensure that potential impacts to natural drainage features, areas that provide important water quality benefits or are susceptible to erosion and sediment loss, and valuable aquatic ecosystems, as well as mitigation options, are considered at the start and throughout the state road and bridge planning and siting process.

#### **IV. MARINAS AND RECREATIONAL BOATING**

##### **A. MARINA SITING AND DESIGN**

**2016 FINDING:** Illinois has the necessary authority to prevent nonpoint source pollution and require implementation of the following management measures: (1) marina flushing; (2) water quality assessment; (3) habitat assessment; (4) shoreline stabilization; and (5) stormwater runoff management. Illinois has provided a description of the regulatory programs the state will use to require implementation of these measures. Illinois has described programs that may be in conformity with the management measure for (6) fueling station design. However, Illinois has not yet described how it will require proper siting and design of fueling stations in the site planning phase. The state has not yet described programs in conformity with the management measure for (7) vessel sewage facility management

**2016 CONDITION:** Within three years, Illinois shall (1) demonstrate how its proposed programs will provide for siting and design of fueling stations in ways to effectively contain potential spills. The state shall also (2) identify how it will address ease of access and signage for vessel sewage facility management. The state shall (3) demonstrate how it promotes proper siting of vessel sewage facilities as part of a marina development plan to ensure facilities are designed to adequately handle expected use and to provide ease of access to minimize the risk of releasing vessel sewage to surface waters.

**2022 DECISION:** Illinois has satisfied this condition.

**RATIONALE:** Illinois addresses its condition for the marina management measures through various state regulations. These regulations include the Illinois Gasoline Storage Act; the Office of State Fire Marshal's Rules for Aboveground Dispensing Storage Tanks, Underground Storage Tanks, and Marinas; Subpart L of the Department of Public Health Recreational Area Code; and the Illinois Accessibility Code. The voluntary Illinois Clean Marina Program further promotes best management practices (BMPs) that are in conformity with the 6217(g) guidance marina management measures.

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<sup>22</sup> Illinois Department of Transportation. 2019. *Bureau of Design and Environment Manual, Chapter 27: Environmental Surveys*. Accessed: 04/08/2022. <http://idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Split/Design-And-Environment/BDE-Manual/Chapter%2027%20Environmental%20Surveys.pdf>

<sup>23</sup> Illinois Department of Transportation. 2018. *Bureau of Design and Environment Manual, Chapter 22: General Environmental Procedures*. Accessed: 04/08/2022. <http://idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Split/Design-And-Environment/BDE-Manual/Chapter%2022%20General%20Environmental%20Procedures.pdf>

Per NOAA and EPA's 2016 approval conditions, Illinois' marina condition pertains to the fueling station design and sewage facility management measures. The state addresses the fueling station design management measure, which requires fueling stations at marinas to be designed to allow for spills to be easily cleaned up, through a variety of state regulations enforced by the Office of the State Fire Marshal. For example, the rules for dispensing material from above ground storage tanks require tanks to be safeguarded against collision, spillage, or overfill (41 IAC 180.20(b)(3)). In deciding to approve or disapprove above-ground storage tanks at marinas, the Office of State Fire Marshal must consider a variety of factors including leaks and whether the dispensing location has seal-offs at all connections (41 IAC 180.20(b)(4)), and for marinas specifically, whether the dispensers are located in a diked/contained area.<sup>24</sup> The rules for the Design and Construction of Underground Storage Tanks require all newly installed or replaced underground storage tanks to be double walled to prevent spills and equipped with interstitial monitoring to detect potential leaks (41 IAC 175.400(a)). The rules for marinas (41 IAC 175.460) require spill containment equipment to be provided on docks adjacent to marine motor fuel dispensers to contain potential spills from portable containers (41 IAC 175.250(i)) and containment systems to be included under fuel dispensers (41 IAC 175.450(e); 41 IAC 175.460). Also, pursuant to the Illinois Gasoline Storage Act (430 ILCS 15), prior to the installation, upgrade, or repair of underground gasoline storage tanks located at marinas, a permit must be obtained from the Office of State Fire Marshal. Permit applicants must complete a checklist which requires the submission of designs, site plans, and descriptions of spill containment equipment to the Office of State Fire Marshal.<sup>25</sup> The Office of State Fire Marshal must also inspect and approve dispensing above ground storage tanks prior to their operation (41 IAC 180.20(b)(1)). These regulatory requirements ensure that fueling systems are designed to prevent spills from occurring and, if they do occur, to contain them and facilitate cleanup, which is in conformity with the fueling station design management measure.

Illinois addresses the two conditions related to the sewage facility management measure through two state regulations, Subpart L of the Illinois Department of Public Health Recreational Area Code (77 IAC 800) and the Illinois Accessibility Code (71 IAC 400). The sewage facility management measure requires the installation of pump-out, dump stations, and restroom facilities, where needed, at new and expanding marinas to reduce the release of sewage to surface waters. This management measure also requires these facilities to be designed to allow ease of access and the use of signage to promote their use by the boating public. Under Illinois' Public Health Recreational Area code, marinas are required to provide pump-out stations wherever boats equipped with toilets are permitted to dock in recreational areas (77 IAC 800.1300(a)). Marinas that provide docking facilities for overnight sleeping must also provide at least one shoreside restroom for men and women that is located within 500 feet of the boat docking area (77 IAC 800.1300(b)). The Illinois Accessibility Code further requires that restrooms and boat docks at public recreational facilities, including marinas, be accessible and

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<sup>24</sup> Illinois Office of State Fire Marshal. 2019. *Application for Dispensing Aboveground Storage Tank Installation*. Accessed: 04/08/2022.

[https://www2.illinois.gov/sites/sfm/SFMDocuments/Documents/AST\\_DispensingApplication.pdf#search=Marinas](https://www2.illinois.gov/sites/sfm/SFMDocuments/Documents/AST_DispensingApplication.pdf#search=Marinas)

<sup>25</sup> Illinois Office of State Fire Marshal. 2013. *Summary of Requirements for Marinas*. Accessed: 04/08/2022.

<https://www2.illinois.gov/sites/sfm/SFMDocuments/Documents/SummaryOfRequirementsForMarinas.pdf>

located on an accessible route (71 IAC 400.320). These regulations effectively demonstrate that the State has authorities in place to address the sewage facility management measure and to ensure that sewage facilities are properly sited and designed to handle expected use and to provide ease of access to minimize the risk of releasing vessel sewage to surface waters.

The voluntary, certification-based Illinois Clean Marina Program and Guidebook also supports the implementation of the 6217(g) guidance fueling station design and sewage facility management measures. The *Illinois Clean Marina Guidebook* (guidebook) includes several BMPs to encourage efficient and effective containment of spills from fueling stations.<sup>26</sup> For example, it calls for marinas to make spill response equipment, such as oil-absorbent materials and collection devices, available at fuel docks and other locations where spills are the most likely to occur. Furthermore, the guidebook recommends that fuel docks be in areas away from waves and wakes to prevent spills due to rocking. The guidebook also includes BMPs to promote the proper siting of vessel sewage facilities, ensure facilities are designed to adequately handle expected use, and ensure that vessel sewage facilities and restrooms are accessible. This includes the recommendation to install pump-out facilities that are adequate to meet the needs of the marina, include signage which describes how to properly use these facilities, provide shoreside restrooms that are available 24 hours a day, and provide facilities for liveaboard boats.

The Clean Marina Program encourages marinas to voluntarily adopt the BMPs contained within the guidebook, including those for fueling station design and sewage facility management, and complete a nine-step certification process to become a certified clean marina. Certified clean marinas are granted permission to use the Illinois Clean Marina Program logo on their advertising and to fly a Clean Marina Program flag on their property. The state also promotes certified marinas through websites, written materials, and at public events. As of May 2020, 19 of the 38 marinas in the Illinois coastal nonpoint program management area have been certified or have pledged to work towards Clean Marina certification.<sup>27,28</sup> To address one of the primary barriers to certification for older marinas, Illinois is incorporating green infrastructure and stormwater management recommendations into the certification process as guidance for older marinas that need updates.

## **V. HYDROMODIFICATION**

**2016 FINDING:** Illinois' program includes management measures and enforceable policies and mechanisms to meet the 6217(g) guidance, with two exceptions. It does not include management measures for: (1) improving surface water quality and instream and riparian habitat through the operation and maintenance of existing modified channels; and, (2) developing a process to identify where shoreline erosion is a nonpoint source pollution problem and stabilize the streambanks or shorelines.

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<sup>26</sup> Illinois Coastal Management Program. N.d. *Illinois Clean Marina Guidebook*. Accessed: 04/08/2022. <https://www2.illinois.gov/dnr/cmp/documents/guidebook.pdf>

<sup>27</sup> Illinois Coastal Management Program. 2016. *Chapter 5. Marinas and Recreational Boating*. Accessed: 04/08/2022. [https://www2.illinois.gov/dnr/cmp/documents/cmpcp\\_ch\\_5\\_marinas\\_and\\_recreational\\_boating.pdf](https://www2.illinois.gov/dnr/cmp/documents/cmpcp_ch_5_marinas_and_recreational_boating.pdf)

<sup>28</sup> Illinois Department of Natural Resources. N.d. *Certified and Pledged Marinas*. Accessed: 04/08/2022. <https://www2.illinois.gov/dnr/cmp/Pages/CertifiedandPledgedMarinas.aspx>

Where the state is relying on voluntary approaches to meet the hydromodification measures, it has identified a back-up enforceable policy to ensure their implementation throughout the coastal nonpoint management area. Illinois has not adequately described the monitoring and tracking methods it will use as part of its voluntary approach to meet the measure for improving surface water quality and instream and riparian habitat through the operation and maintenance of existing modified channels, and element one of the measures for eroding streambanks and shorelines.

NOAA and the EPA do not require Illinois' program to meet management measures for erosion and sediment control for dams and chemical and pollutant control for dams since NPDES permits for discharges associated with construction activity apply to these sources of pollution. Illinois has provided sufficient justification to support a categorical exclusion of the management measure for protection of surface water quality and instream and riparian habitat for dams.

**2016 CONDITION:** Within three years, Illinois (1) shall develop a process to improve surface water quality and instream and riparian habitat through the operation and maintenance of existing modified channels; and (2) shall develop a process to fully address the streambank and shoreline erosion management measure. The state shall show that it has an operation and maintenance program with specific timetables for existing modified channels that includes identification of opportunities to restore instream and riparian habitat in those channels and shall demonstrate that it has programs or processes in place to stabilize eroding streambanks and shorelines.

**2022 DECISION:** Illinois has satisfied this condition.

**RATIONALE:** Illinois addresses its hydromodification condition through its voluntary watershed planning process and through its commitment with the U.S. Army Corps of Engineers (USACE) to complete the *Chicago Rivers Restoration Framework Plan*. The state has provided a legal opinion from its assistant attorney general to demonstrate that it has the necessary authority to ensure implementation of the hydromodification management measures throughout the coastal nonpoint program management area.

The State's hydromodification condition pertains to two management measure categories: channelization and channel modification, and streambank and shoreline erosion. These management measures require states to:

1. Evaluate the potential effects of proposed channelization and channel modification on surface water quality and instream and riparian habitat;
2. Plan and design channelization and channel modification to reduce undesirable impacts; and
3. Develop an operation and maintenance program with specific timetables for existing modified channels that includes identification and implementation of opportunities to improve surface water quality and restore instream and riparian habitat.

The streambank and shoreline erosion management measure requires states to:

1. Where streambank or shoreline erosion is a nonpoint source pollution problem, streambanks and shorelines should be stabilized;

2. Protect streambank and shoreline features with potential to reduce nonpoint source pollution; and
3. Protect streambanks and shorelines from erosion due to uses of either the shorelands or adjacent surface waters.

Per NOAA and EPA's 2016 approval conditions, Illinois previously addressed all but the third element of the channelization and channel modification management measures and the first element management measure for streambank and shoreline erosion.<sup>29</sup> To fully address the 2016 approval condition, the state is providing financial and technical assistance, including participating in the plan development process, to support the update and development of watershed-based plans to ensure that they address the elements of the hydromodification management measures. These watershed plans will cover the entirety of the coastal nonpoint management area, except the approximately 11.5 square mile area that falls within the Chicago urban core, which is covered by other planning mechanisms discussed below.

In accordance with the hydromodification management measures, newly developed and updated watershed plans will identify where shoreline and or streambank erosion is a nonpoint pollution problem, set priorities, and establish timelines for project implementation. Plans will also include specific priority projects to restore instream and riparian habitat and to address streambank and shoreline erosion, with timetables for implementation. In addition, the state has included hydromodification-specific guidance in its *Guidance for Developing Watershed Action Plans in Illinois* (guidance).<sup>30</sup> This guidance encourages users to include information on the physical characteristics of riparian corridors (e.g., streambank erosion, existing vegetation type and quality, presence of streamside BMPs); the presence and effects of hydromodification; and biological indicators of water quality (e.g., species, fish size, fish kills, habitat) in water resources inventories developed through the watershed planning process. The guidance also highlights hydromodification as a potential cause or source of impairments to be considered in the watershed assessment process.

The state will first focus its efforts on the Lake Michigan Watershed in Lake County, which includes the Bluff/Ravine, Dead River, Kellogg Creek, Waukegan River, and Pettibone Creek subwatersheds. Illinois has awarded the Lake County Stormwater Management Commission \$130,000 in grants to develop a watershed-based plan for the Lake Michigan Watershed. Existing watershed plans for the Dead River, Kellogg Creek, and Waukegan River will also be updated through this effort.<sup>31</sup> The state anticipates that all watersheds in the coastal nonpoint management area, except the Chicago urban core, will be covered by an updated or new

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<sup>29</sup> NOAA and EPA. 2016. *Findings for the Illinois Coastal Nonpoint Program*. Accessed: 04/08/2022. [https://coast.noaa.gov/data/czm/pollutioncontrol/media/6217il\\_fnl.pdf](https://coast.noaa.gov/data/czm/pollutioncontrol/media/6217il_fnl.pdf)

<sup>30</sup> Chicago Metropolitan Agency for Planning and IEPA. 2007. *Guidance for Developing Watershed Action Plans in Illinois*. Accessed: 04/08/2022. <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/Documents/Watershed-Action-Plan-Guidance.pdf>

<sup>31</sup> Lake County IL Stormwater Management Commission. N.d. *Lake Michigan Watershed*. Accessed: 04/08/2022. <https://www.lakecountyil.gov/2418/Lake-Michigan-Watershed>.

Lake County IL Stormwater Management Commission. 2018. Watershed-Based Plan Status. Accessed: 12/02/2019. <https://www.lakecountyil.gov/DocumentCenter/View/27778/Lake-County-Watershed-Based-Plan-Status-Map>



watershed-based plan by 2030. Going forward, watershed-based plans will be updated every 10 years, as feasible.

Because the Chicago River flows away from Lake Michigan, the vast majority of the Chicago urban core does not drain into the lake and as such is largely excluded from the coastal nonpoint management area. The exception is approximately 11.5 square miles of land along segments of the Chicago River, North Shore Channel, and Little Calumet and Grand Calumet Rivers. Within this small portion of the Chicago urban core, Illinois addresses its condition for the hydromodification management measures through the *Chicago Rivers Restoration Framework Plan*. The plan is being developed through the USACE's Planning Assistance to States program. Under the program states, tribes, territories, and non-federal interests enter into a cost sharing agreement with USACE and assume responsibility for plan implementation.<sup>32</sup> The *Chicago Rivers Restoration Framework Plan* is a comprehensive planning framework that addresses a range of topics from public health and flood risk management to ecological restoration. The ultimate goal of the plan is to develop a list of funding-ready projects, a funding plan, and an implementation timeline to stabilize streambanks, restore natural processes, and address streambank and shoreline erosion opportunities along the Chicago River system. The City of Chicago committed to developing this framework plan in 2020 when it entered into a partnership agreement with the USACE. Parties to this plan include the City of Chicago's Department of Planning and Development (DPD), Chicago Park District, the Forest Preserve District of Cook County, and the Metropolitan Water Reclamation District of Greater Chicago, who are also members of the Chicago River Ecology and Governance Task Force.<sup>33</sup> Although the USACE initially intended to complete the *Chicago Rivers Restoration Framework Plan* by the end of 2020, the timeline was delayed. The USACE now anticipates completion in 2022. The focus of this plan is the portion of the following rivers that fall within the limits of the City of Chicago: Chicago River, North Shore Channel, Sanitary and Ship Canal, Little Calumet River, Grand Calumet River and Calumet River, their riparian areas (30-foot setback), and adjacent public lands. Through the partnership, the planning effort has consisted of an inventory of existing conditions, problem identification, assessment of restoration options and improvement opportunities. There is a focus on developing measures for restoration or improvements as well as identifying flood risk management strategies for restoration such as green infrastructure. As part of the funding and coordination approach, the plan will look for funding opportunities to prioritize projects at the river's edge, as well as develop a long-term plan for funding river edge and ecological improvements.<sup>34</sup> The City of Chicago DPD has committed to supporting or leading various tasks in plan development including; task force collaboration, identifying opportunities to leverage funding and most importantly developing the framework plan and implementation strategy document. An implementation strategy including detailed cost and timeline estimates for each of the activities has also been outlined in the draft plan. The Coastal Management Program will monitor implementation through relevant websites, reports, databases, discussions, and other tracking products resulting from the

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<sup>32</sup> USACE. *Corps Planning: Planning Assistance to States Fact Sheet*. Accessed: 04/06/2022.  
<https://www.nae.usace.army.mil/Portals/74/docs/PublicServices/PAS-FactSheet-Aug2019.pdf>

<sup>33</sup> USACE. *Draft Scope of Work: Chicago Rivers Restoration Framework Plan, Section 22, Planning Assistance to States Program*. July 2019. Copy available upon request.

<sup>34</sup> Great Rivers Chicago. *Our Great Rivers: Achievements & Priorities 2016-2020*. Accessed: 03/22/2022.  
[https://www.metroplanning.org/uploads/cms/documents/2021\\_our\\_great\\_rivers\\_update\\_final.pdf](https://www.metroplanning.org/uploads/cms/documents/2021_our_great_rivers_update_final.pdf)

framework plan as well as through communications with the USACE, the City of Chicago, and the Friends of the Chicago River. This includes permits issued for any work done in or over the water where the IDNR Resources has joint permit jurisdiction.

The state has identified over 40 completed streambank stabilization projects that have improved surface water quality, and/or enhanced instream and riparian habitat in Lake County's ravines. These projects have been undertaken and funded by a variety of partners, including local governments, the county stormwater management board, private funders, non-profit organizations, the Illinois Clean Water Act (CWA) Section 319 program, the Great Lakes Restoration Initiative, and USACE.<sup>35</sup> For example, the Bull Creek Stabilization Project restored and stabilized 1,475 feet of stream corridor through the installation of rock toe, riffles, and planting native plants.<sup>36</sup> In addition, the Ravine 7 Fish Habitat Restoration Project at Millard Park opened and naturalized the outfall of the ravine stream at Lake Michigan for fish passage, stabilized 1,400 linear feet of streambank using a mix of rock and native plants, installed pool and riffle structures in the stream channel, and provided spawning habitat to improve physical and biological processes and ecosystem functions for native fish and macroinvertebrates.<sup>37</sup>

The state has described several funding programs that could be used to support the implementation of the hydromodification-related projects outlined in watershed-based plans. Specifically, the state's CWA Section 319 grant program can be leveraged to implement hydromodification best management practices for water quality and instream restoration projects. The Streambank Stabilization and Restoration Program provides cost-share for projects that demonstrate effective, inexpensive vegetative and bioengineering techniques to address streambank erosion.<sup>38</sup> Finally, the Chi-Cal Rivers Fund supports projects that enhance instream habitat for aquatic life.<sup>39</sup> Projects may include riverbank naturalization, bank stabilization, riparian buffer planting, in-stream structure installation, and restoration of wetlands, prairies, and forests adjacent to watercourses. The *Chicago Rivers Restoration Framework Plan* will also describe potential opportunities to leverage funding to complete the activities described in the plan as part of its implementation strategy.

Illinois has provided a legal opinion from the State's Assistant Attorney General, asserting that the Illinois Environmental Protection Act (415 ILCS 5) and the Illinois Rivers, Lakes, and Streams Act (615 ILCS 5/5 and 615 ILCS 5/7) provide adequate legal authority for the state to ensure the implementation of the 6217(g) guidance hydromodification management measures

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<sup>35</sup> Ravine Efforts. N.d. *Lake County Illinois*. Accessed: 04/08/2022.

<https://pdhp.maps.arcgis.com/apps/MapSeries/index.html?appid=b5b773c7fcb247e182e829702829739f>

<sup>36</sup> Lake County, Illinois. N.d. *Bull Creek Streambank Stabilization Project*. Accessed: 04/08/2022.

<https://www.lakecountyil.gov/DocumentCenter/View/27025/Bull-Creek-Streambank-Stabilization-Project-Factsheet>

<sup>37</sup> Alliance for the Great Lakes, Chicago Botanic Garden, The Field Museum, and Openlands. 2016. *Revitalizing our Ravines: Restoring Native Diversity to Aquatic Ravine Ecosystems*. Accessed: 04/08/2022.

[https://greatlakes.org/wp-content/uploads/2016/08/Raving\\_Project\\_Case\\_Study\\_Highland\\_Park.pdf](https://greatlakes.org/wp-content/uploads/2016/08/Raving_Project_Case_Study_Highland_Park.pdf)

<sup>38</sup> Will/South Cook County Soil and Water Conservation District. N.d. *Agricultural Conservation Programs/Streambank Stabilization and Restoration Program* (website). Accessed: 04/08/2022. <http://www.will-scookswcd.org/program.php?id=7#:~:text=SSRP,techniques%20for%20limiting%20streambank%20erosion>

<sup>39</sup> National Fish and Wildlife Foundation. N.d. *Chi-Cal Rivers Fund* (website). Accessed: 04/08/2022.

<https://www.nfwf.org/programs/chi-cal-rivers-fund>

throughout the coastal nonpoint program management area, as needed. The state has described the mechanisms that link the implementing agency with the enforcing agencies (the IEPA's Bureau of Water and Division of Legal Counsel and the Illinois Department of Natural Resources' (IDNR) Office of Water) and has committed to using the state's Environmental Protection Act and Rivers, Lakes and Streams Act to implement the 6217(g) guidance management measures, including hydromodification, when needed.

Illinois tracks the voluntary implementation of these management measures through: (1) its CWA Section 319 Biannual Report; (2) Lake County's internal database and GIS-based information management system for stream restoration and stabilization projects; and (3) specific tracking and monitoring protocols established through each watershed-based plan. Illinois will track the implementation of the *Chicago Rivers Restoration Framework Plan* through relevant websites, reports, databases, discussions, and other tracking products resulting from the framework plan, as well as through communications with the USACE, the City of Chicago, and the Friends of the Chicago River. This includes permits issued for any work done in or over the water where IDNR has joint permit jurisdiction.

## **X. ADDITIONAL MANAGEMENT MEASURES**

**2016 FINDING:** Illinois has not yet described how it will use monitoring and assessment information to determine which additional management measures will be considered and, if required, developed and implemented.

**2016 CONDITION:** Within three years, Illinois shall demonstrate that it has a monitoring framework in place to measure effectiveness of the state's Coastal Nonpoint Pollution Control Program's management measures, as well as to document and assess sources of impairment that are currently unidentified. At that time, the state shall also identify any additional management measures which would be needed to attain and maintain water quality standards and, if required, develop a strategy to meet these additional measures.

**2022 DECISION:** Illinois has satisfied this condition.

**RATIONALE:** As described below in the Monitoring section of this document, Illinois has demonstrated that it has a monitoring framework in place to measure the effectiveness of the state's Coastal Nonpoint Pollution Control Program's management measures. The state will use its watershed planning process to identify the causes of impairments where those are currently unknown. Illinois has also committed to partnering with the Illinois Coastal Management Program's Technical Advisory Committee, the Coastal Nonpoint Program Advisory Panel, the sponsors of watershed-based plans and others to identify potential additional management measures and strategies to implement those additional management measures, when needed.

According to the state's *2018 Integrated Water Quality Report*, the vast majority of sampled waters in Illinois' coastal nonpoint program management area are considered impaired for at least one designated use.<sup>40</sup> In many cases, the complete causes of impairment are not fully

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<sup>40</sup> Illinois Environmental Protection Agency. 2018. *Illinois Integrated Water Quality Report and Section 303(d) List*, 2018. Accessed: 04/08/2022. <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Documents/Draft-2018-Integrated-Report-11-14-2018.pdf>

known. The state expects to use its watershed planning process to help identify unknown causes of impairment as the planning process provides an opportunity to examine and investigate potential pollution sources more closely.

Illinois has also outlined a process for determining whether additional management measures are necessary to attain water quality standards if the management measures described in the 6217(g) guidance prove to be insufficient. Specifically, the state will consult with watershed-based plan sponsors, representatives of the Advisory Panel for the Coastal Nonpoint Program, and the Illinois Coastal Management Program's Technical Advisory Committee to identify potential management measure needs. If additional management measures are proposed through this consultation process, the state has committed to identifying, prioritizing, and selecting additional management actions to be funded and implemented. The Illinois Coastal Management Program will also review and revise its funding priorities to meet the state's changing nonpoint source-related water quality needs.

## **XII. MONITORING**

**2016 FINDING:** Illinois' monitoring approach does not demonstrate the ability to assess over time the success of the management measures in reducing pollution loads and improving water quality.

**2016 CONDITION:** Within three years, Illinois shall develop an approach that enables the state to assess, over time, the extent to which implementation of management measures is reducing pollution loads and improving water quality. Illinois shall have a framework in place that will track the implementation of required management measures in relation to the scheduled monitoring activities.

**2022 DECISION:** Illinois has satisfied this condition.

**RATIONALE:** Illinois's Coastal Nonpoint Program includes various monitoring programs that, in combination, enable the state to assess over time the extent to which the implementation of management measures is reducing pollution loads and improving water quality. The state has also outlined a framework to track the implementation of required management measures in relation to scheduled monitoring activities through its watershed-based plans.

### *Water Quality Monitoring Programs*

Illinois monitors water quality through a variety of programs including but not limited to the Lake Michigan Monitoring Program, the Ambient Lake Monitoring Program, Intensive Basin Surveys, and the Fish Contaminant Monitoring Program. These four programs are described below. More detailed descriptions of these programs can be found in the State's *2018 Integrated Water Quality Report* and *2013 Nonpoint Source Management Program* document.<sup>41,42</sup>

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<sup>41</sup> Illinois Environmental Protection Agency. 2018. *Illinois Integrated Water Quality Report and Section 303(d) List, 2018*. Accessed: 04/08/2022. <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/tmdls/Documents/Draft-2018-Integrated-Report-11-14-2018.pdf>

<sup>42</sup> Illinois Environmental Protection Agency. 2013. *Illinois' Nonpoint Source Management Program*. Accessed: 04/08/2022. <http://www.epa.state.il.us/water/watershed/publications/nps-management-program/index.pdf>

The Lake Michigan Monitoring Program consists of 80 water quality monitoring stations and has three focal areas—nearshore, harbors, and public water supplies. With respect to nearshore areas, 25 monitoring sites are probabilistically selected and sampled three times a year. Data are collected on a variety of parameters including surface temperature, dissolved oxygen, pH, conductivity, secchi depth, chloride, fluoride, metals (total), nutrients (total), solids (total, dissolved, and volatile), and sulfate. Data are also collected and analyzed on an expanded suite of parameters at five nearshore sites per year. Harbor and public water supply sites are sampled at similar frequencies and on similar parameters. Harbors are monitored on a five-year rotational basis with two to three harbors being monitored per year. Public water supply intakes are also monitored on a five-year rotational basis with three to four intakes being monitored per year.

In addition to the state monitoring program, county and municipal governments monitor nearshore bacteria at a number of Lake Michigan swimming beaches. County and municipal governments sample the beaches at least every two weeks and report the results to the state. IEPA aggregates this data as part of its oversight of the Lake Michigan Beaches TMDL and analyzes the data for daily health risks and long-term trends.

The state monitors the water quality of inland lakes through Illinois' Ambient Lake Monitoring Program. The Ambient Lake Monitoring Program collects data at approximately 50 inland lakes, including lakes in the Illinois coastal nonpoint management area.<sup>43</sup> This monitoring program involves the collection of water quality and sediment samples as well as field observation data including water color, weather, amount of sediment, algae and macrophytes, and other important aspects of the lake.

Information on Illinois streams is collected through the state's Intensive Basin Surveys. Each year, more than 100 monitoring stations in select basins collect data on biological, chemical, and physical indicators of aquatic resource condition. Different basins are monitored each year so that statewide coverage is achieved once every five years. Intensive Basin Surveys are a major source of information for assessing attainment of aquatic life use in Illinois streams. At each Intensive Basin Survey station, fish and macroinvertebrate assemblages, physical habitat (including stream discharge), and water chemistry are measured or otherwise characterized to determine resource conditions. Sampling for fish-tissue contaminants and sediment chemistry also is conducted to screen for the accumulation of toxic substances.

Through Illinois' Fish Contaminant Monitoring Program, fish samples are collected from 40 to 50 stream, river, and inland lakes, including waters within the coastal nonpoint management area, and four Lake Michigan open water stations each year. Samples from four additional Lake Michigan harbor stations are collected every three to four years. The Fish Contaminant Monitoring Program aims to provide around 400 samples to the IEPA laboratory for analysis of 13 banned pesticides, the industrial chemical polychlorinated biphenyls and the heavy metal mercury.

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<sup>43</sup> Illinois Environmental Protection Agency. N.d. *Ambient Lake*. Accessed: 04/08/2022.  
<https://www2.illinois.gov/epa/topics/water-quality/monitoring/Pages/ambient-lake.aspx>

The state has committed to reviewing water quality monitoring strategies, identifying gaps in monitoring needs, and ensuring that all data available are digitized and available for analysis. The state will also identify and evaluate potential new data sources and approaches to data collection and analysis that can be used to update its monitoring efforts.

#### *Best Management Practice Implementation Monitoring*

Illinois has also identified several resources that allow the state to track management measure implementation over time. The first is IEPA's Resources Management Mapping System (RMMS).<sup>44</sup> The RMMS database is used by IEPA to track the application of specific BMPs and includes important data points such as BMP location, type, and date installed. The second source is the state's *Section 319 Biannual Reports*. These reports are required to include status reports on Section 319 grant projects, which include BMPs implemented to address nonpoint sources of pollution. BMP implementation tracking and plan-specific effectiveness monitoring also occurs at the local level through watershed-based plans. Finally, Illinois will track the implementation of the Chicago Rivers Restoration Framework Plan through relevant websites, reports, databases, discussions, and other tracking products resulting from the framework plan, as well as through communications with the USACE, the City of Chicago, and the Friends of the Chicago River. This includes permits issued for any work done in or over the water where IDNR has joint permit jurisdiction.

#### *Assessment of Water Quality Changes Over Time and Best Management Practice Effectiveness*

The Illinois Coastal Management Program takes a multi-pronged approach to use existing monitoring data to better understand water quality status, trends, and BMP effectiveness. Through this approach, the state aims to better understand coastal waters and stream water quality, identify appropriate BMPs for each recognized issue or impairment to be addressed, and identify when additional management measures may be needed to achieve water quality standards.

To assess the extent of changes to pollution loads and water quality over time, the state will use data from its ambient monitoring programs to conduct a trends analysis to summarize long-term changes in water quality. This analysis will establish baseline water quality trends associated with selected parameters, assist in determining the effectiveness of recent management measure implementation activities, and help to identify when new management measures are needed to improve coastal water quality.

The *State's Integrated Water Quality Reports*, which are developed every two years pursuant to CWA Sections 305(b), 303(d), and 314 also help to assess how water quality is changing over time. *Integrated Water Quality Reports* contain an assessment of Illinois' surface waters including streams, inland lakes, and Lake Michigan, and identify whether waterbodies are fully supporting, partially supporting, or not attaining designated uses such as swimming or serving as habitat for fish and other aquatic life. A water that does not support one or more of its designated uses is said to be "impaired." These reports allow users to track whether designated use impairments are being resolved or continue or increase over time. Taken together, the trends

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<sup>44</sup> IEPA. N.d. *Resources Management Mapping System* (website). Accessed: 04/08/2022.  
<https://www.rmms.illinois.edu/>

analysis and *Integrated Water Quality Report* provide a holistic picture of surface water quality in Illinois and allow users to track changes over time.

The state will review the trends analysis data, the *Integrated Water Quality Report*, IEPA RMMS system information, and other water quality reports to evaluate the status and efficacy of implemented management measures and determine whether additional management measures are warranted. The trends analysis and *Integrated Water Quality Report* will also be integrated into new and updated watershed-based plans in the coastal nonpoint management area. By assessing the results of the trends analysis, the *Integrated Water Quality Report*, and watershed-based plan-specific monitoring and BMP implementation data, watershed-based plan sponsors will be able to assess the effectiveness of implemented BMPs. As described in detail in the Hydromodification section of this findings document, the state has committed to supporting the development and update of watershed-based plans for all watersheds in the coastal nonpoint management area over the next 15 years and update these plans every 10 years, as feasible. In doing this, the state ensures that this analysis will occur throughout the coastal nonpoint management area for the foreseeable future.

#### **LIST OF ACRONYMS**

6217(g)	Section 6217(g) of the Coastal Zone Act Reauthorization Amendments
BDE	Bureau of Design and Environment
BMP	Best Management Practice
CWA	Clean Water Act
CZARA	Coastal Zone Act Reauthorization Amendments
EPA	U.S. Environmental Protection Agency
GIS	Geographic Information System
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
MS4	municipal separate storm sewer system
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OSDS	onsite disposal systems
RMMS	Resources Management Mapping System
USACE	U.S. Army Corps of Engineers