



# Illinois North Shore Sand Management Strategy Project

## MEETING SUMMARY: ELECTED OFFICIALS UPDATE

July 26, 2016

Waukegan City Hall Council Chambers

### **Meeting Goals**

1. Report out on outcomes of the Illinois North Shore Sand Management Strategy Project
2. Share the partnerships and projects that Illinois Department of Natural Resources' Coastal Management Program are undertaking to support identified public shoreline management needs
3. Seek input on direction as we move forward with this effort

### **Part I: Project Outcomes and Next Steps**

#### ***Opening Remarks***

Noelle Kischer-Lepper, Director of Policy and Projects for the City of Waukegan, welcomed us to the City Hall Council Chambers on behalf of Mayor Wayne Motley.

Philippe Melin, District Director for U.S. Congressman Robert Dold and Sand Management Working Group member, spoke on behalf of the Congressman. Mr. Melin emphasized that Lake Michigan – and the Great Lakes more broadly – are the “jewel of our region,” and an essential economic, environmental, and cultural resource for North Shore communities. Melin stressed that the current approach by individual communities to solve their own unique problems is more expensive and less effective. Melin went on to explain that “this initiative [the Illinois North Shore Sand Management Strategy Project] has brought people together. If we speak together, we speak with a stronger voice and we can get more done.” Melin highlighted how this collaboration can facilitate “win-win” situations through the strategic use of shared resources. As we look forward to future work on shoreline management, Melin emphasized continuing to include missing voices in the discussion.

**Key themes** of Melin’s remarks were: 1) to think regionally; 2) partnerships are critical and we must continue to work together; 3) be inclusive; and 4) speak with one voice.

#### ***Project Background: Illinois North Shore Sand Management Strategy***

The Illinois Department of Natural Resources’ Coastal Management Program funded an 18-month project - The Illinois North Shore Sand Management Strategy Project – with Alliance for the Great Lakes. Angela Larsen, Community Resilience Manager for Alliance and a lead on this project, shared the overarching goals of the initiative: to facilitate improved collaboration among public landowners on shoreline management and to enhance long-term capacity. Elected officials, municipal staff, and corporate landowners were invited to participate on the Sand Management Working Group. Forty-two representatives volunteered and shared their expertise as a part of this group. Ms. Larsen described how the process enabled Working Group members to shape a regional vision for public shoreline management. The project was a first step toward collective thinking on this issue, and, as a result, identified immediate needs that will drive targeted next steps.



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The full project report summarizing the work of the Sand Management Working Group is available on IDNR's Coastal Management Program website [here](#).

### *Illinois' Lake Michigan Coast & Shoreline Management Challenges*

Dr. Ethan Theuerkauf, a coastal geologist and joint staff member of the Illinois State Geological Survey and the IDNR Coastal Management Program, discussed coastal change along Lake Michigan. Dr. Theuerkauf explained how, if we let the natural drift of sand go unimpeded, it would flow from Wisconsin, down our coast, and toward Indiana. However, communities have installed hardened structures to protect harbors and shorelines. Theuerkauf emphasized how we need to understand the cumulative impacts of these project-by-project decisions on the entire system, as well as how more frequent, intense storms and changing lake levels affect management decisions. He explained that a regional approach is so important for this reason, particularly one that could eventually link with efforts in Wisconsin and Indiana. Theuerkauf highlighted the importance of synthesizing data from individual research studies over the past 40 years and of addressing data gaps, saying, "Once we understand the system, we can better manage it and continue to develop management-driven research projects in the future." Dr. Theuerkauf shared three initiatives of IDNR's Coastal Management Program and of the University of Illinois' Prairie Research Institute (home to the Illinois State Geological Survey) that will address the needs identified by the Sand Management Working Group. These efforts include: 1) a National Oceanic and Atmospheric Administration (NOAA)-funded project that will map sand distribution and thickness using helicopter-based electromagnetic surveys; 2) a submitted proposal for Great Lakes Restoration Initiative (GLRI) funding to determine best practices to protect habitat at Illinois Beach State Park; and 3) a proposal in development to enhance the region's capacity to build and maintain resilience. He also announced intentions to organize site visits in the early fall to explore firsthand some of the region's shoreline changes and management challenges.

A key theme of Theuerkauf's remarks was that targeted research will lead to the most cost-effective, regional results.

### *U.S. Army Corps of Engineers' Role in Shoreline Management*

The U.S. Army Corps of Engineers (USACE) has been involved in the development of the Illinois' shoreline over the past 150 years. Mr. David Bucaro, Chief of the Economic Formulation and Analysis Section of the Chicago District, outlined the six key aspects of USACE's mission: 1) protecting against storm damage; 2) facilitating commercial navigation; 3) restoring and protecting coastal ecosystems; 4) supporting recreation; 5) assisting in emergency management (e.g. Hurricane Sandy); and 6) regulating coastal activities. Mr. Bucaro noted that restoring and protecting coastal ecosystems is a relatively new area of work for USACE. Along the 32-mile stretch of shoreline encompassing the Illinois North Shore Sand Management Strategy project area, USACE has undertaken shoreline studies, construction of protection structures, and restoration projects. In particular, Bucaro highlighted the shoreline protection structure south of Waukegan Harbor, several restoration activities with Illinois Beach State Park, Fort Sheridan, and several projects in Highland Park. He also shared how in the mid-1980s, during the last period of high lake levels, USACE conducted erosion management studies.

Mr. Bucaro emphasized the important partnerships that USACE has with the state, municipalities, and the National Oceanographic and Atmospheric Administration to address shoreline management challenges. USACE requires cost-share from one or more non-federal partners for its projects. USACE can support the resiliency of the region through several initiatives: 1) a comprehensive North Shore sediment budget study (ongoing); 2) a study on the effectiveness of nearshore placement of dredged materials; 3) the



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Systems Approach to Geomorphic Engineering ([SAGE](#)) initiative, which focuses on innovative approaches to climate change; and 4) technical assistance.

### *Discussion*

#### **Question: Are there any tools or information that would be helpful to you?**

Ron Salski (Lake Bluff Park District) commented that a set of easily shareable YouTube videos that summarize the scientific information relevant to shoreline management would be a useful communication tool, particularly with the Parks and Beaches Committee. Angela Larsen (Alliance for the Great Lakes) remarked that better data collection and availability will be key to this effort, and that, in particular, the regional sediment budget study that USACE is developing will be an important resource. Ms. Larsen also emphasized that it is important for research like the upcoming National Oceanic and Atmospheric Administration (NOAA)-funded Helicopter Time domain Electromagnetic (HTEM) study and LIDAR (a surveying technology that measures distance with laser light) studies to be both ongoing and available. She raised the issue of having a process or portal available for sharing the data gathered through this research as well as determining how to repurpose this information into useful formats such as maps.

Rebecca Grill (Park District of Highland Park) asked if there was any thought given to modeling the data to determine the most appropriate ways to address extreme weather conditions, like the high lake level cycle that we are currently experiencing. Dave Bucaro (USACE) responded that USACE actions are restricted by economic justification and require a cautionary sponsor, which makes data modeling challenging because it is costly and data-intensive. However, USACE is working with the City of Waukegan currently to develop a model for the filler beach. Ethan Theuerkauf (Illinois State Geological Survey and IDNR Coastal Management Program) emphasized that many models already exist for shoreline mapping and we could partner with institutions to adapt existing models to our regional challenges. Brian Anderson (Prairie Research Institute) highlighted that a lot of computing power and capacity exists at the University of Illinois' [National Center for Supercomputing Applications](#) (NCSA) to develop these types of models and applications.

Stephanie Naglebach (Shabica & Associates, Inc.) raised the issue of the challenges with snapshots as a representation of averages. Dr. Theuerkauf responded that by framing the methodology of research studies appropriately, we can match the technique with the research question. Mr. Bucaro also emphasized that the region has been the focus of many studies, resulting in more long-term monitoring data that can mitigate this challenge.

### ***Sand Management Working Group: Outcomes & Next Steps***

Angela Larsen provided important background on the Sand Management Working Group. Ms. Larsen explained that public landowners were the core members of the group, and these participants provided critical expertise and served as liaisons with their individual communities. The group has evolved as the needs have evolved, but has ultimately sought to determine what current gaps exist that hinder improved regional shoreline management and how to address these identified needs. She described that this effort began after a meeting with federal, state, and local elected officials in March 2015, and that the first outcome of this working group was to adopt a common set of goals, referred to as Shoreline Principles in the final report, that would shape the group's shared vision for sustainable shoreline management.

Noelle Kischer-Lepper emphasized what an important ecologic and economic resource our sand is, highlighting her experience working for the City of Waukegan. The Sand Management Working Group



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took an asset-focused approach to this effort, and another one of the key outcomes of this work was the identification of shared public assets, which include Illinois Beach State Park, Waukegan Harbor, beaches, harbors and marinas, nature preserves, parks and Illinois Natural Area Inventory sites, industry sites, and infrastructure. The working group discussed the management challenges in protecting these shared public assets, which were numerous and varied based on both the type of asset and its location. However, Ms. Kischer-Lepper stressed that there are synergies, and when we work together to address them, we can reduce individual costs and enhance our effectiveness. Of all the management challenges discussed, there were two common challenges identified by working group members: the difficulty of navigating a complex regulatory and permitting landscape and limited resources. She highlighted how these challenges only further underscored the way that collaboration and coordinated efforts could improve the effectiveness of management actions.

Mr. Jim Anderson, Director of Natural Resources for Lake County Forest Preserves described one of the central outcomes of the working group: the identification of immediate needs and next steps. Mr. Anderson described these immediate needs as: 1) solution-driven data; 2) an understanding of management practices and their effectiveness; 3) an understanding of the policy and regulatory framework; and 4) a commitment to continue to work together toward sustainable approaches. By better understanding the system and addressing these informational gaps, the working group can develop targeted shoreline management strategies going forward. In order to address these needs, Mr. Anderson explained that the working group plans to: 1) gather and share data; 2) analyze legislative and regulatory opportunities; and 3) further refine its organizational structure and mission to carry this work forward into the future. He highlighted how the designation of the land from Illinois Beach State Park to Kenosha as a Ramsar area of importance demonstrates the impact that we can have on important ecological systems by working together, and he shared how the outcomes of the Sand Management Working Group will play an important part in the Forest Preserve's work.

**Key themes from the Sand Management Working Group members' presentations** were: 1) the need for coordination; 2) the need to better understand the system; 3) the value of a regional approach; 4) the need for sustainable strategies; and 5) the need to understand the policy landscape.

### *Facilitated Discussion*

**Question: How do you see your agency/office lending support to this effort or what role might you want to play?**

Illinois Representative Robyn Gabel stated that she saw her office as playing an important part in improving legislation at the state level, particularly in addressing policy roadblocks. John Sentell (Lake Forest Openlands) shared that local land trusts can be a key conduit to private landowners as the Sand Management Working Group considers outreach strategies.

Jon Shabica (Shabica & Associates, Inc.) commented that a synopsis of the regulatory and permitting hurdles would be a very helpful tool, particularly in addressing those instances when different agencies have conflicting regulations. Angela Larsen (Alliance for the Great Lakes) explained that she sees her organization as continuing to provide funding match and she is interested in better understanding the regulations and policies. Philippe Melin (U.S. Congressman Dold) emphasized that it is important to consider the reasons why sand cannot be moved, and that exploring this question could shape our understanding of the policy and permitting process.



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Marty Lyons (City of Evanston) stated that once we have the data we need, the next step is to translate that data into both regional and local speak. He stressed that it will be important to adjust information from a project-by-project local level to a regional level, as these are separate questions and both are critical. Mr. Lyons suggested that the Sand Management Working Group engage Northwestern University going forward, as they have both beach property and important expertise and capacity. Northwestern had not been a part of the conversation thus far, since they are a private landowner. Suellen Burns (IDNR) asked whether a technical assistance guide on what actions to take would be a useful translation of the information. Mr. Lyons responded that this step-by-step guidance of suggested actions would have to be contextual.

Philippe Melin (U.S. Congressman Dold) suggested that the USACE regulatory department be included in working group discussions to bring everyone on the same page with regional and local needs and gaps in understanding.

Angela Larsen (Alliance for the Great Lakes) raised the question of who should be the convener of the working group going forward. She emphasized that the convener should be someone who adds additional political pull to that of the working group.

Sarah Shadnia (Illinois Senator Melinda Bush) stated that, on the legislative side, she echoes Representative Gabel. Senator Bush's constituents include North Point Marina, and she emphasized the importance of having more local voices involved, such as local marinas and yacht clubs. Angela Larsen explained that, for this project, outreach to private landowners and citizens, including user groups, was out of the scope, but these are definitely important stakeholders that we should engage going forward. This was recommended by several members of the working group. Illinois Senator Daniel Biss stressed that it is helpful for participants today to identify key constituents to engage.

### **Question: What actions do you think could best support the long-term sustainability of the working group?**

Illinois Senator Daniel Biss highlighted that it is important to have public-level engagement, particularly to gauge public expectations and create appropriate outreach tools. Suellen Burns (IDNR) stressed the need to be accountable and develop results that support public needs.

Marty Lyons (City of Evanston) raised the idea of an intergovernmental agreement (IGA). Since the working group members are all public landowners, this could be an important step in solidifying this relationship, as long as the terms provide enough freedom.

Ed Wilmes (City of North Chicago) stressed the disconnect between regulatory agencies in regards to contaminated sediments. He advocated for improved communication between regulatory agencies involved for efficiency and effectiveness, and emphasized that this communication must occur before sand movement happens.

## **Part II: Wheels in Motion**

### ***Illinois Coastal Science Initiative***

Dr. Brian Anderson, Senior Deputy Executive Director of the Prairie Research Institute at the University of Illinois, Urbana-Champaign, shared the mission and expertise of the Prairie Research Institute (PRI). PRI and the Illinois Department of Natural Resources' Coastal Management Program have established an



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intergovernmental agreement that enables the two organizations to collaborate on coastal issues. As a part of this partnership, four staff members with expertise in geology, ecology, and human dimensions are embedded within the Coastal Management Program office.

Prairie Research Institute is comprised of five state surveys: the natural history survey, geological survey, water survey, archeological survey, and the sustainable technology center. Taken together, the institution has about 800 scientists on staff, including state scientists, and about an 80 million-dollar budget of leveraged funds. PRI focuses on applied science, and provides enhanced expertise and capacity to the Coastal Management Program.

### *Discussion*

Ron Salski (Lake Bluff Park District) asked what opportunities for collaboration exist. Dr. Anderson emphasized strong relationships with other institutions on campus, particularly the capacity for super-computing, which could support our mapping analysis, the SeaGrant extension program based out of University of Illinois, Urbana-Champaign, and the University's Institute for Government and Public Affairs. Mr. Rick Winkel from the Institute for Government and Public Affairs unfortunately was unable to attend and speak at this meeting, but he worked as a state elected official for many years and provides important policy expertise to Coastal Management Program efforts. Anderson raised the importance of an established convener for this effort, and explained how the *Illinois State Partnership Act* provides broad authorities for government entities to work together, such as the intergovernmental agreement established between PRI and the Coastal Management Program. Intergovernmental agreements can give a partnership more long-lasting impact. Dr. Anderson also highlighted the importance of public engagement to this process to determine the values that communities care about most and the best approaches to meet these identified needs. Angela Larsen (Alliance for the Great Lakes) emphasized that what form the Sand Management Working Group will take going forward and what role it seeks to fill are questions that the group still needs to answer.

### *Updates from the IDNR Coastal Management Program*

Catherine Buchalski, Coastal Ecologist for the Illinois Natural History Survey at IDNR's Coastal Management Program, spoke on behalf of Diane Tecic, Director of the IDNR Coastal Management Program. Ms. Buchalski explained that the Coastal Management Program is applying for funding to meet many of the immediate needs identified by the Sand Management Working Group, as heard earlier today in the discussion of the National Oceanic and Atmospheric Administration-funded helicopter survey research and in the program's application for Great Lakes Restoration Initiative funding to understand changing shorelines at Illinois Beach State Park and appropriate management measures. She noted that the Sand Management Working Group could create a foundation for collaboration on coastal resilience. Ms. Buchalski emphasized that the Coastal Management Program wants to be supportive of the working group's needs.

### *Facilitated Discussion*

Jeannette Windon (U.S. Senator Kirk) mentioned that it is helpful for elected officials and their offices to know when the Coastal Management Program is applying for Great Lakes Restoration Initiative grants so that they can support these efforts and share the outcomes.

**Question: How can the Sand Management Working Group, the Illinois Department of Natural Resources, and other partners support you in addressing the needs of your constituents?**



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Angela Smith (Foss Park District) shared her organization's need for wayfinding, which lets communities know how to get to important local ecological and cultural resources. She noted that support on this effort is very useful. Ms. Smith also highlighted the need for sand nourishment and beach rebuilding, as well as a better understanding of the permitting process.

Sarah Shadnia (Illinois Senator Bush) discussed the contaminated sites including coal plants and a nuclear facility in her constituent area, and the importance of finding solutions to address these issues.

Beth Koch (Illinois Representative Jesiel) emphasized the importance of protecting critical infrastructure, in particular the drinking water infrastructure at risk in the region. She asked whether there is a prioritized list of issues or projects guiding the working group's efforts. Angela Larsen (Alliance for the Great Lakes) noted that the Sand Management Working Group discussed objective criteria that would guide priorities; however, everything discussed by the group thus far has been project-specific. She explained that analysis of policy and regulations has risen to the top of the Sand Management Working Group's priorities for this reason. Brian Anderson (Prairie Research Institute) noted that identifying key infrastructure at risk is also a current priority at Prairie Research Institute. Noelle Kischer-Lepper (City of Waukegan) stressed the number of water intake structures in the county along and suggested we consider the science around how infrastructure is impacted, as it is both an important economic issue and a homeland security issue. Ed Wilmes (City of North Chicago) suggested we reach out to the Great Lakes Naval Station. Catherine Buchalski (Illinois Natural History Survey and IDNR) explained that we have been trying to engage the naval station on the working group and would welcome any contacts that the group might have. David Bucaro (USACE) suggested including representatives from these infrastructure areas on the working group.

### **Question: Reality check – are we missing anything?**

George Russell (Lake Bluff Community Development Department) mentioned a focus on permit streamlining and the basic maintenance of infrastructure and beaches.

Beth Koch (Illinois Representative Jesiel) emphasized raising public awareness regarding the challenges in shoreline management and the efforts of the Sand Management Working Group, particularly if private landowners and other stakeholders will be engaged in the future. Sarah Shadnia (Illinois Senator Bush) suggested including the voice of additional non-profits in the area as well as the voices of more private companies.

Joe Seidemann (Waukegan Port District) asked if there was anything happening in Wisconsin that is similar to this effort. He emphasized the need to collaborate across state boundaries, particularly with Wisconsin to the north. Ethan Theuerkauf (Illinois State Geological Survey and IDNR) mentioned that Wisconsin does have a coastal hazards group and we are working with them on these issues. Dave Bucaro (USACE) noted that this is more than just a sand management issue, and it is important to think more broadly about this as a resilience and coastal hazards issue to find the necessary synergies. Philippe Melin (U.S. Congressman Dold) stressed the need to identify and prioritize solutions that will affect multiple issues that stakeholders care about and to leverage "win-win" solutions.

### ***Closing***

Suellen Burns (IDNR) summarized the key overarching messages of the discussion: 1) to think regionally; 2) to continue to work together; and 3) to address data and policy needs in order to develop



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sustainable solutions. She shared that IDNR plans to reach out to participants about a two-hour site visit to explore shoreline management challenges and solutions on the North Shore, led by Dr. Ethan Theuerkauf. Ms. Burns also let participants know that the Sand Management Working Group will meet in the fall, and that, while continuity and ongoing participation will be important for the working group, all are welcome and encouraged to participate in this next meeting. IDNR will share more information about the meeting once it is scheduled.