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Illinois Department of Natural Resources: Jayette Bolinski, 217.785.3953, jayette.bolinski@illinois.gov
Waterfront Alliance: Valery Aguilar, 212.935.9831 x 109, vaguilar@waterfrontalliance.org

Illinois Beach State Park Shoreline Stabilization Project
First Freshwater Project to Achieve WEDG®
(Waterfront Edge Design Guidelines) Verification
First Project to Meet Version 3.0 of the Gold Standard in Waterfront Design

New York, NY — Today, the Waterfront Alliance announced that the Illinois Beach State Park Shoreline Stabilization Project is the first freshwater project to achieve WEDG® (Waterfront Edge Design Guidelines) Verification under WEDG’s Version 3.0. WEDG is a national rating system and set of guidelines that pushes the bar for creating resilient, ecological, and accessible waterfront design. The Illinois Beach State Park Shoreline Stabilization Project is the first freshwater project and fourteenth overall to meet WEDG’s gold standard.

Illinois Beach State Park in Lake County is home to the last remaining natural shoreline in the state. Faced with constant beach erosion from Lake Michigan’s waves, the Illinois Department
of Natural Resources and Capital Development Board wanted a solution that would renourish the eroded beach while also providing breakwaters that would slow down littoral processes and erosion to retain sand.

Design lead Moffatt & Nichol documented 22 stone breakwaters to protect approximately 2.2 miles of beachfront. The breakwater solution will protect the renourished beach by reducing wave energy and beach loss, while shielding both shoreline and upland habitat from severe ongoing erosion. Habitat design lead Living Habitats LLC created new below and above water habitat elements, enhancing the breakwaters’ resilient custom design and promoting native flora and fauna in the Lake Michigan ecosystem. Contracting lead Michels has construction underway, expecting placement totals of over 300,000 tons of stone, ranging from 10-pound bedding stone to 7-ton armor stone, and 430,000 cubic yards of sand.

Illinois Governor J.B. Pritzker is investing $73 million for constructing shoreline stabilization structures in three locations within Illinois Beach State Park. The funding is made possible through the Governor’s bipartisan Rebuild Illinois capital plan, the largest capital plan in state history.

“Illinois Beach State Park is the final remaining undeveloped lakefront in Illinois, providing unique recreational opportunities, geological significance, and critical habitat for endangered species,” said Governor of Illinois J.B. Pritzker. “Our historic Rebuild Illinois capital plan ensures we can protect the park from shoreline erosion and dune loss, maintaining this dynamic resource for Illinois residents.”

The Illinois Capital Development Board (CDB) is overseeing the design and construction for Illinois Beach State Park in accordance with the protocol for state-appropriated construction projects.

“The Capital Development Board is proud to manage the intervention and stabilization of the shoreline system at Illinois Beach State Park,” said the Illinois Capital Development Board executive director, Jim Underwood. “By defending against the natural shoreline transitory processes, we are protecting, preserving, and enhancing the existing infrastructure.”

Construction began in early spring 2023 with the delivery of the excavator and construction materials via barge. Substantial completion is expected in spring 2024.

The project team took an environmentally balanced approach to the project, choosing to stabilize, renourish, and protect the beach, while providing habitat for aquatic and avian species. The stone breakwaters, with rough surfaces, will provide aquatic habitats for mudpuppies and yellow perch, while nests for Caspian and common terns will be integrated
into a single breakwater structure, encouraging colonial nesting behavior. Closer to shore, the newly stabilized beach will increase connectivity between beach and wetland habitats and ecosystem performance, providing an important nesting habitat for federally endangered Great Lakes piping plovers.

For park users, the widened beach will also restore a trail connection along Burnett Avenue, improving pedestrian pathways. The breakwater arrangement will allow for unobstructed waterfront views between the structures, and the stone materials selected will provide a more natural appearance while viewing out across the lake’s surface.

The project team also developed a strategy for reuse of materials from the site to minimize construction debris disposal and enhance biodiversity. Salvaged concrete ecoblocks will be converted into vegetated blocks that will provide a growing surface for submerged native species and new refuge for juvenile fish. Driftwood and fallen trees that needed to be removed or relocated to allow for the shoreline stabilization work will be repurposed as natural windrows along the edge of the beach fill template to create a natural barrier between the beach activities and internationally recognized, rare terrestrial and wetland habitats. The renourishment and resiliency aspects of this project will also enable park users to maintain a direct connection to Lake Michigan for years to come.

“It is with great pleasure to announce that the Illinois Beach State Park Shoreline Stabilization Project marks the first breakwaters, freshwater, and rural project to achieve WEDG Verification,” said Waterfront Alliance president and CEO, Cortney Koenig Worrall. “The project team’s goal to protect the rapidly eroding beach with principles of resilience, ecology, and access throughout the site will ensure that the last remaining shoreline in the state is thriving in its environment and preserved for park users. Illinois State Beach Park demonstrates that WEDG is not only feasible but crucial on all varieties of waterfronts across the nation.”

“We are very excited that Illinois Beach State Park has been recognized as the Great Lakes’ first resilient waterfront design. This project transformed the park’s shoreline and improved public waterfront access, while enhancing the natural ecosystem. Thank you to WEDG for this recognition which highlights our dedication to resilient, enjoyable, and sustainable coasts on Lake Michigan and beyond,” said Moffatt & Nichol design lead, Maarten Kluijver.

WEDG Verification is only awarded to projects that successfully pass a technical review of the project’s design against WEDG standards. External specialists in engineering, architecture, and landscape architecture determined that the project exceeded the requirements for WEDG Verification, earning 146 out of 250 possible points in the standard (130 are needed to pass). In October 2023, the standard expanded to include inland rivers and lakes.
Waterfront Alliance commends the Illinois Beach State Park Shoreline Stabilization Project on its achievement of WEDG Verification and recognizes the comprehensive efforts of the project team, including:

- American Surveying/Engineering: surveying
- Carmona Strategic Solutions: stakeholder outreach
- Collins Engineering: construction quality and site civil design
- Illinois Capital Development Board: project client and contracting agency
- Living Habitats LLC: habitat design and landscape architecture
- Michels Construction, Inc.: contractor, design-build team lead
- Moffatt & Nichol: coastal design, design team lead
- SmithGroup: bridging document design, owner’s engineer
- Wang Engineering: geotechnical site investigation

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*The Waterfront Alliance builds, transforms, revitalizes, and protects accessible waterfronts for all communities, together.*