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**Contact:** Tina Haisman, ASBPA media relations -- (239) 292-2882  
Michael Chrzastowski, Ph.D., Illinois State Geological Survey -- (217) 244-2194

**Managing shorelines in the Great Lakes takes multiple approaches**

FORT MYERS, FL – Coastal experts have been attempting to manage the 63-mile Illinois coast of Lake Michigan for more than 170 years, and they say if these treasured shorelines are to be preserved, everyone must understand the ever-changing coastal environment and the methods available to sustain them.

“The trend on the Illinois coast has been to rely on engineering solutions to stabilize our shorelines,” says Michael Chrzastowski, Ph.D., senior coastal geologist for Illinois State Geological Society. “On an urbanized coast like that of Illinois, it is necessary that we be proactive in shoreline management.”

The shorelines of the Great Lakes differ from ocean coastal areas for two primary reasons – the rapid and large change in water level and the existence of ice in the winter.

Ice is a problem in the Great Lakes because it causes damage to coastal structures and it carries valuable sand away from the shoreline out into deeper waters. Wave-driven ice can act like a battering ram against coastal structures. Waves can also wash sand onto ice near the shore; as this ice drifts, it can carry that sand offshore. Since sand drops as the ice melts, if it’s carried far offshore that sand is permanently lost into deep water.

“The water level in Lake Michigan is a design and engineering challenge, because there has been a historical range of lake level of slightly over six feet due to weather and climate,” says Chrzastowski. “That is a drastic change – something the coastlines of the oceans do not experience.”

As a result, coastal experts around the Great Lakes must plan for both the high and the low water levels when they build structures or perform beach nourishment projects to preserve the shoreline. To do this, they utilize a variety of structures combined with beach nourishment.

“The Chicago lakefront is an excellent example of using structures to stabilize a shoreline and keep sand on the beach,” says Chrzastowski. “We utilize revetments, groins and breakwaters, and construct overfilled artificial beaches to prevent erosion.”

In the southern portions of Lake Michigan, coastal engineers dredge harbor entrances and relocate the sand on one side of the harbor or the other to help keep the neighboring beaches well nourished.

Lessons learned from these successes and failures of the past are helping coastal planners to develop improved methods for managing the beautiful coast of America’s treasured Great Lakes.

For more information about the stabilization of the shorelines in the Great Lakes, visit [www.asbpa.org](http://www.asbpa.org).

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**ABOUT ASBPA**

Founded in 1926, the American Shore and Beach Preservation Association (ASBPA) represents the scientific, technical and political interests along the coast in an effort to shape national research and policy concerning shore and beach management and restoration. ASBPA strives to engage in a factual debate on coastal issues and economics that will foster sound, far-sighted and economical development and preservation of our beaches; thereby aiding in placing their beliefs within the reach of the largest possible number of people in accordance with the ideals of a democratic nation. For additional information about ASBPA, please visit [www.asbpa.org](http://www.asbpa.org).