Rising Waters

Toxic Risks to Lake Michigan's Shoreline Communities - At A Glance

12 hotspots around Lake Michigan

Climate change is fueling more extreme Lake Michigan Water levels, along with stronger winds and heavier storms. These conditions exacerbate erosion, beach loss, and damage along the shore. The region's 200+ shoreline communities have already spent $878 million in the past two years repairing damages from extreme weather events, and estimates could reach over $2 billion in the next five years. Now is the time to prepare for the risks ahead.

Using elevation data prepared by the National Oceanic and Atmospheric Administration (NOAA)'s Office for Coastal Management, the Environmental Law & Policy Center (ELPC) identified twelve areas where high lake levels and strong storms could impact industrial facilities, contaminated sites, and communities along Lake Michigan. These maps visualize four flood levels from 584 to 589 feet above sea level. This analysis cannot encompass the full scope of hazards along the shore, but the maps provide a useful starting point for risk assessment, spreading awareness, and prioritizing cleanup.

Illinois

Illinois' 63 miles of Lake Michigan shoreline is densely populated and interspersed with industrial areas, so extreme lake levels present serious challenges for the prairie state.

- **Zion's Nuclear Power Plant** shuttered in 2010, but highly radioactive spent nuclear waste remains stored in concrete canisters near the shore, surrounded by a fragile and eroding dune ecosystem.

- **Waukegan** has several industrial facilities clustered along the shore, including an old coal plant and coal ash ponds, an aerospace coating facility, and four Superfund sites.

- **Chicago's north and south side neighborhoods** have already seen significant flooding along with transportation infrastructure along the shore. Higher water could reach even further inland, affecting homes, businesses, medical facilities, and more. On the city's southeast side, three industrial sites along the Calumet River already pose pollution risks. Higher water levels could exacerbate these challenges and flood the low-lying community nearby.

Indiana

Much of Indiana's 45-mile Lake Michigan shoreline is heavily industrialized. Increased flooding could spread lingering pollutants, such as heavy metals, coal ash, and steel byproducts, to nearby residential communities.

- **Gary's lakefront** is dominated by industrial facilities, such as the U.S. Steel Gary Works, which has been a source of pollution for years. The facility's aging berms and contaminated lands sit next door to the Indiana Dunes National Park.

- In **Hammond**, the shuttered State Line Coal Plant was built on a square peninsula in the lake, where decades of coal ash waste were historically dumped on site. and remaining contaminants could leech into the surrounding water and soil.

For references and full report
see **elpc.org/RisingWatersReport**

ENVIRONMENTAL LAW & POLICY CENTER

Michigan

Michigan has the longest shoreline of any state along its namesake lake. Shoreline erosion and infrastructure damage have already impacted towns along its shore, eroding beaches, harming property, and costing millions in remediation.

• **South Haven's** wastewater treatment plant is in a low-lying area along the Black River, where flooding is common. Partially treated wastewater has spilled multiple times in the past few years.

Wisconsin

Wisconsin has over 1,000 miles of Great Lakes shoreline, and many of the state's largest cities hug the shores of Lake Michigan—from Milwaukee in the south to Green Bay in the north. Flooding and erosion have already affected several communities along the shoreline, but polluting facilities pose additional risks.

• **Two Rivers' and Manitowoc's** wastewater treatment plants have compromised water quality in the past. Flooding could increase the risk of sewage overflows and tank spills.

• **Sheboygan**'s Alliant Edgewater Coal Plant, three miles south of downtown, contains open-air coal-ash ponds and a coal ash landfill close to Lake Michigan. High water levels could erode shoreline berms, flood inland from the nearby Black River, and contaminate the lake.

Recommendations

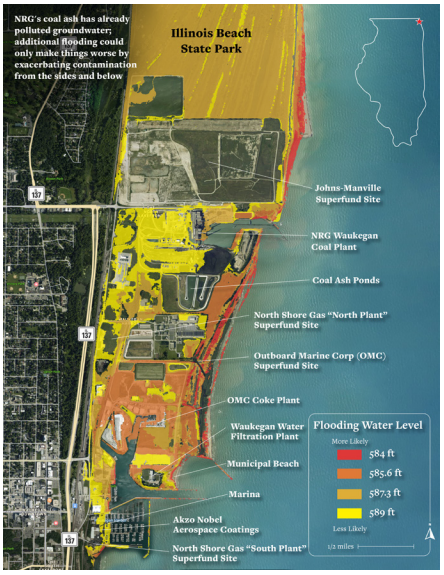
We need to rethink Lake Michigan's shoreline infrastructure in light of increasingly extreme water levels. Adapting to climate change and dealing with public health threats will require significant federal, state, and local financial investments and policy shifts. Policymakers must actively work with and include additional recommendations from affected communities.

• **Reassess vulnerable sites** – Clean up and reduce risks from toxic sites along the shoreline, including landfills, coal ash ponds, and industrial facilities. Assess the impacts of low water levels on marinas, water intake pipes, and wildlife.

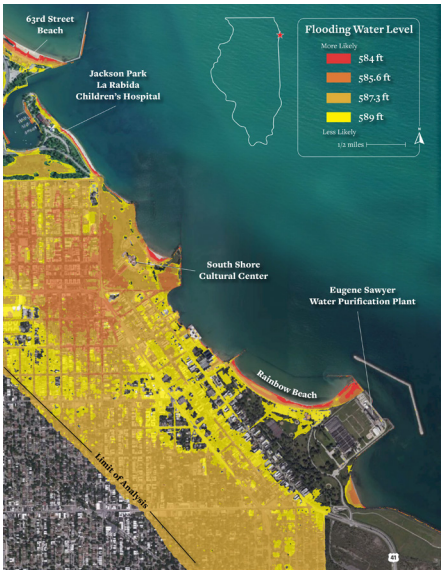
• **Evaluate risks of new projects** – Many planning, zoning, and building practices are based on historic Lake Michigan levels instead of the increasingly more extreme water levels.

• **Invest in green infrastructure** – Permeable pavers, rain gardens, and green roofs can absorb and filter stormwater where it falls, rather than overwhelming drainage systems, flooding streets, and flowing into the lake. Restoring wetlands can help absorb overflow from Lake Michigan while providing more wildlife habitat.

• **Effectively deploy federal funds and resources** – The Great Lakes Restoration Initiative and the bipartisan Infrastructure Investment and Jobs Act provide funding to address drinking water, wastewater, and stormwater threats. Likewise, we should ensure that federal agencies that protect our water have sufficient resources to do their jobs well.



Waukegan, IL – 6 industrial sites



South Shore Neighborhood – Chicago

South Haven, MI – Wastewater Treatment