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Michigan Environment Watch

On Mackinac Island, Lake Huron's waves are destroying an iconic highway



SLIDESHOW: Large pieces of state highway M-185 on Mackinac Island have been destroyed or heavily damaged. (Bridge photo by John Russell)

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 Michigan Environment Watch

On a typical sunny summer day, Mackinac Island's car-free highway would be teeming with walkers, bicyclists and horseback riders taking in virtually unbroken views of Lake Huron's crystalline waters along the iconic 8.2-mile loop.

But at the height of the island's summer tourism season, much of M-185 is deserted. Large barricades block off half of the road's length, with signs warning of dangerous conditions ahead.

Beyond the barricades, record high Lake Huron water levels have flooded the island's pebble beaches and swallowed large swaths of pavement, leaving craters where the road once stood.

In place of the tourists, heavy machinery rumbles down the highway, depositing 11-ton boulders into the water to absorb waves that have been gnawing away the asphalt. But with only \$1.4 million to address an estimated \$7.4 million in damage to M-185, only so much can be salvaged.

"Right now, the main focus is just getting enough rock down to keep it from falling in more," said Myron Johnson, manager of Mackinac Island State Park, which spearheads day-to-day maintenance of the Michigan Department of Transportation-owned highway.

M-185 is just one of many casualties of high Great Lakes water levels that [have wreaked havoc](#) on public and private infrastructure statewide. But in tourism-dependent, car-free Mackinac, the damaged highway is perhaps just the most visible symbol of a summer beset by obstacles.

The island's economy is already hobbled by COVID-19 business closures, capacity restrictions and sanitation requirements, not to mention flooding that has forced many downtown business-owners to run electric pumps 24/7 in their basements. With miles of outdoor space now inaccessible, visitors have a little less room to roam, making social distancing that much more of a challenge

“The world is edgy right now. We like to think of Mack as a place to get away from all of that, so we’re trying to be stewards of a place that can make that available for people.” — Phil Porter, Mackinac State Historic Parks director

“It’s the perfect storm,” said Ira Green, who rents bicycles to tourists through his Mackinac Island Bike Shop. Now, in addition to sanitizing the bikes to ward off the virus, his daily routine includes breaking the news about the temporary closure of M-185 to visitors who hoped to circumnavigate the island.

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“It impacts us quite a bit,” Green said, “But people are making the best of it, and they are finding new routes.”

State park and MDOT officials say they’re aiming to reopen M-185 as soon as possible. But unless water levels recede soon, more damage is likely once fall storms arrive.

Water, water everywhere

All around Michigan, flooding and erosion are wreaking havoc on the state’s coastal roads and bike paths, along with private property and other public infrastructure.

Take, for instance, [Lakeshore Boulevard](#) in Marquette. Or the [Little Traverse Wheelway](#) between Petoskey and Charlevoix. Or [U.S. 31](#) outside Pentwater. Or the [M-22 bridge](#) over Betsie Lake.

Water levels across all the Great Lakes remain well above average, after cold winters in recent years produced widespread ice cover that curbed evaporation, while successive rainy springs [filled the lakes ever-higher](#).

Inland aquifers are also full, rendering them unable to absorb water when heavy rains hit. That results in severe floods like the one that [caused the Edenville and Sanford dams to fail](#) in May outside Midland.

Lakes Michigan, Huron, St. Clair and Erie all set monthly average water level records in May. Huron and Michigan (which have identical water levels because of their connection at the Straits of Mackinac) are on track to continue rising through July, possibly breaking a 1986 record for their highest water levels ever recorded.

Across the state, 40 state-owned highways and bridges are seeing high-water-related damage, said Brad Wieferich, director of MDOT's Bureau of Development.

The department will spend about \$5 million this year to "keep things passable," Wieferich said. Longer-term fixes such as raising bridges to prevent repeat flooding or moving roadways further inland would cost as much as \$100 million, making high-water damage "one more priority to put on the stack of things that we have to determine how we're going to fund."

The speed with which Lake Huron destroyed large portions of M-185 on Mackinac Island speaks to the Great Lakes' destructive power when high water levels collide with intense storm surges.

Johnson, the park manager, noticed the first signs of asphalt damage last August. While state officials worked to negotiate a maintenance contract for what was then a minor problem, Lake Huron continued to batter the island.

"The lake level just kept going up and up and up," Johnson said. "Now it's to a point where it doesn't take a lot of east wind to get water up onto the road."

By November, [a huge chunk](#) of asphalt had collapsed into the lake. In the months that followed, it only got worse.

A winter without ice

Winter usually offers a respite from the annual pummeling, as ice cover on the lake limits wave action. But last winter was mild, and [Lake Huron remained largely ice-free](#). Water crashed ashore for months on end, scouring the earth out from underneath M-185 and causing the asphalt to buckle.

When winds picked up, seven-foot waves slammed ashore with such force, they piled beach pebbles feet-deep on the highway.

Mackinac State Historic Parks Director Phil Porter is all too familiar with the Great Lakes' cycles of high and low water levels — he spent childhood summers on the island and has worked for the parks system since the 1970s.

“But this is the biggest threat I’ve ever seen,” he said.

For now, work crews are fixing only the most heavily-damaged sections of road, and hoping the new boulder revetments will help prevent further damage. MDOT officials hope to make more repairs next year, said Dan Weingarten, a spokesman for the department’s Superior region, but given the [massive state revenue shortfall](#) tied to the COVID-19 pandemic, it’s unclear how much money will be available for the job.

Work crews are conserving boulders where they can, hoping to stretch materials far enough to armor an extra stretch or two of shoreline.

“We’re putting a Band-Aid on something that isn’t going to go away,” said Jeremy Burr, foreman for the Team Elmer’s construction crew in charge of the repair job.

Efforts to mitigate damage to the road are further complicated by the rocky topography that produces Mackinac’s stunning views. Along much of the island, limestone bluffs jut out nearly to the shoreline, making it impossible to move the road away from the water.

“There’s nowhere you can go,” Porter said. “It’s either build it higher or abandon it, which we’re not going to do.”

Porter estimated as many as 400,000 people bike along the road every year. It’s an enormous tourism asset, not to mention a crucial transportation artery for island visitors, residents and emergency responders.

And in the time of COVID-19, when indoor recreation opportunities are scarce and many are [hopping on their bicycles](#) as a means of socially-distanced recreation, Porter said M-185 may be more important to the island than ever.

“The world is edgy right now,” he said. “We like to think of Mack as a place to get away from all of that, so we’re trying to be stewards of a place that can make that available for people.”

MDOT officials hope to reopen the partially-repaired M-185 in the coming weeks, in time for late-summer tourists to enjoy it before the fall storms arrive to test the highway's new rock armor.

The boulders won't be the only noticeable difference: Repaired sections of road will be gravel-topped. After purchasing more than 9,000 tons of stone to reinforce the shoreline, there is no money left to lay new asphalt.

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July 17, 2020 | [Kelly House](#)

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