

Minnesota, US are losing valuable wetlands at an increasing rate

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Marshes were drained and replaced by shallow, lifeless ponds. Old floodplain forests were cut down with no plan for them to grow back. Swamps and bogs were permanently drowned by open water.

Minnesota and the Upper Midwest have been losing prime natural [wetlands](#) to development and logging that in many cases converts them to waters with few if any ecological benefits, according to a federal wetlands report released this spring. Despite decades of promises and policies aimed at stopping the loss of wetlands, the rate at which they are disappearing across the United States has gotten progressively worse since 2004, the report found.

The loss doesn't only threaten the billions of birds, reptiles, fish and other species that rely on them, it has degraded water quality and put human lives, homes and businesses at greater risk of flooding and wildfires, according to the U.S. Fish and Wildlife Service report.

A fundamental shift in strategy is needed to stop the loss, the report concluded.

In the decade between 2009 and 2019, about 670,000 acres of vegetated wetlands disappeared across the country, the report found.

State data shows that Minnesota, one of the nation's most wetland-rich states, lost 140,000 acres of forested wetlands between 2006 and 2020, despite a 3-decade-old law promising no net loss in the quantity or quality of the state's wetlands.

The way that the country has been losing its wetlands has changed in recent decades, said Megan Lang, a chief scientist at Fish and Wildlife and one of the report's lead authors.

"It's not as simple as it was in the past," she said.

Until the 1970s, the vast majority of that loss was agricultural, from farmers draining land for crops. The country is still losing wetlands to agriculture, but it's also seeing them flooded away, lost to [sea-level rise](#) and logging, converted to artificial lakes and ponds and drained for suburban development, the report found.

"Over time, our wetland policies at a national level have become less stringent," Lang said. "And now we're kind of burning the candle at both ends—we're still losing wetlands to people ditching and filling them, but we're also losing them to these more complicated factors."

The report shows that one of the major ways the Upper Midwest has been losing vegetated wetlands—swamps, bogs and marshes covered with shrubs, cattails or trees—is by converting them into open-water ponds. That can happen when a housing developer drains an intact marsh to build a subdivision and then digs a larger shallow pond that supports little or no wildlife in the middle of that subdivision. And it happens when loggers clear cut the trees out of a swamp, and saplings fail to regenerate.

Ponds and treeless swamps are still wetlands, but they don't come close to producing the same levels of wildlife, [water quality](#) or carbon storage as before. As vegetated wetlands have declined, the number of ponds and nonvegetated wetlands has risen in Minnesota and across the country, which can obscure the magnitude of the loss, the Fish and Wildlife Service warned.

Efforts are needed to protect the old wetlands and not simply replace them with less valuable ponds, the report said. The first step would be to create a data set that maps out the location, type and abundance of the nation's wetlands, and to model the functions and services the landscapes provide. That would help regulators better protect the most valuable wetlands and make sure that any that are lost to development are replaced by those of the same quality.

In Minnesota, the biggest losses have been to the state's forested wetlands—the swamps and floodplains with heavy tree cover. Of the 140,000 acres of forested wetlands in the state that were lost between 2006 and 2020, about 20% were expected to return, according to data from the Minnesota Department of Natural Resources. Much of the rest was degraded into [open water](#) or "emergent" wetlands with little tree cover.

"We can see that there are some of these wetland conversions here, and

now the next step is to the why," said Melissa Kuskie, deputy director of the DNR's ecological and water resources division. "That is where we all agree in state wetlands management that we need a lot more information to answer because there are multiple potential causes."

The state is partnering with the Wisconsin Department of Natural Resources to build tools to better understand the ecological functions of wetlands.

The report found that the rate of vegetated wetland loss has been increasing in recent years, but it's hard to say why that's happening, said Steve Herrington, associate director of water for the Nature Conservancy, a nonprofit that has been working to protect wetlands in the region.

Minnesota has some of the strongest state-level wetland protections in the country, Herrington said. And logging practices haven't changed much in decades.

But what has been worse, he said, is the weather. Temperatures have increased, and the state has been swinging between extremes of floods and droughts. All of that can make it harder for floodplain forests to regenerate after a clearcut, or for the moss and vegetation in swamps and bogs to survive the [drainage ditches](#) that were built decades ago.

"These are really sensitive systems, and we just don't know yet how all this change is affecting them," he said.

The U.S. Supreme Court's *Sackett v. EPA* decision in May 2023 removed massive amounts of wetlands from federal protection under the Clean Water Act. That includes most of the prairie pothole wetlands that make up much of western Minnesota, North Dakota and South Dakota.

Among the most productive landscapes for wildlife, the prairie potholes in the Upper Midwest and Canada support up to 80% of North America's duck population, according to a 2005 study.

Minnesota still has wetlands laws that will protect them from development. The Dakotas do not, he said.

"The prairie porthole area is really what gives us heartburn," Herrington said. "Just because of how things evolved since the glaciers 10,000 years ago, all the birds and critters and insects using them, those things are really sensitive."

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