Newsday

Study: Third of Long Island Sound wetlands lost in 130 years

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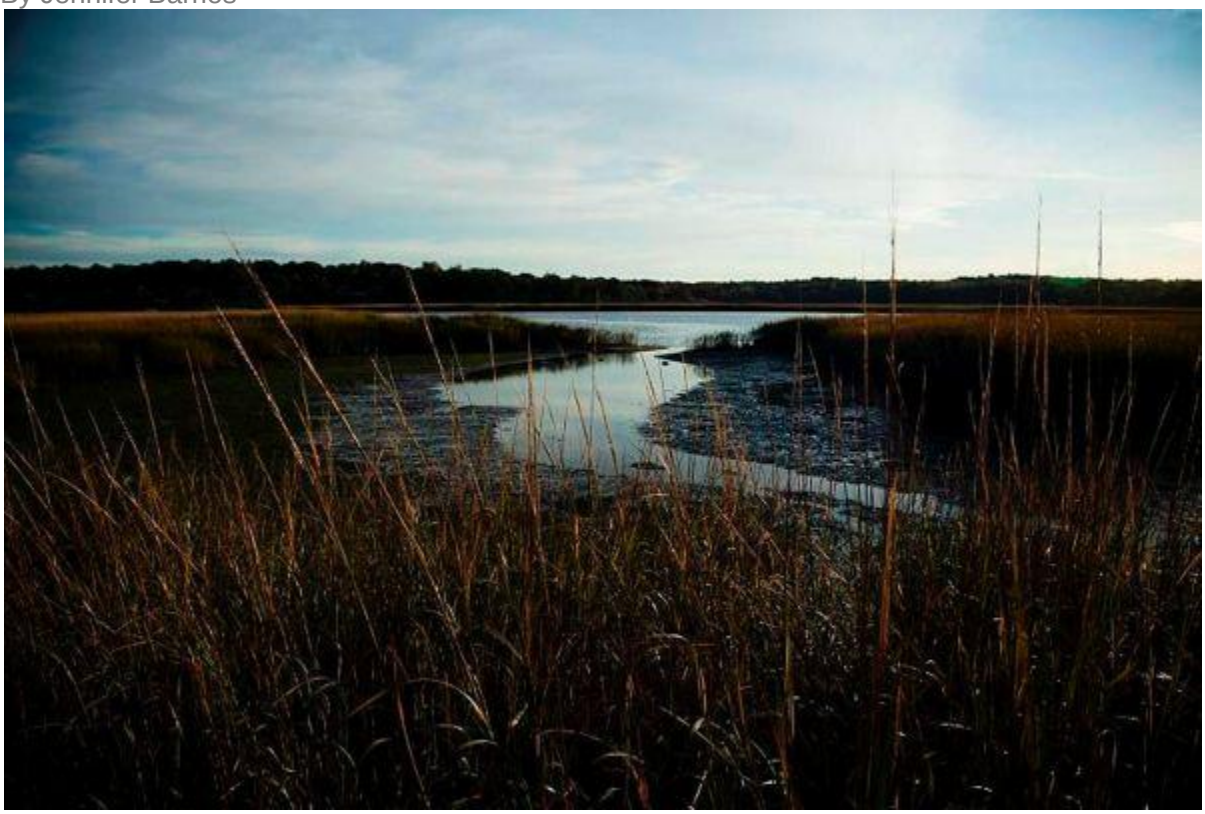
By Jennifer Barrios



The wetlands in Nissequogue, around the Nissequogue River, show dramatically on Oct. 20, 2014, during low tide. Photo Credit: Heather Walsh

Nearly half the wetlands along Long Island Sound in New York State have disappeared in the last 130 years — with a continued decline in recent decades despite legislation designed to protect them, a new federal study has found.

The U.S. Fish and Wildlife Service, working with environmental officials in New York and Connecticut, compared historical maps of the Long Island Sound from

the turn of the 19th century to wetland maps generated in the 1970s and the 2000s for its study, which was completed last year and widely released in March.

The agency found that nearly a third of all tidal wetlands along the Sound — or more than 7,800 acres — have been lost.

And while both states lost wetlands during the time period studied, New York saw the most severe decline at 48 percent, while Connecticut, which has more wetland acreage on the Sound, had a 27 percent loss during that time.

Georgia Basso, a biologist with the U.S. Fish and Wildlife Service and co-author of the study, said in reality the extent of the loss could be even greater, since the Sound already had lost wetlands by the time the 1880s-era maps were drawn.

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“We’re not saying we’ve only lost 30 percent,” Basso said. “We’ve probably lost more.”

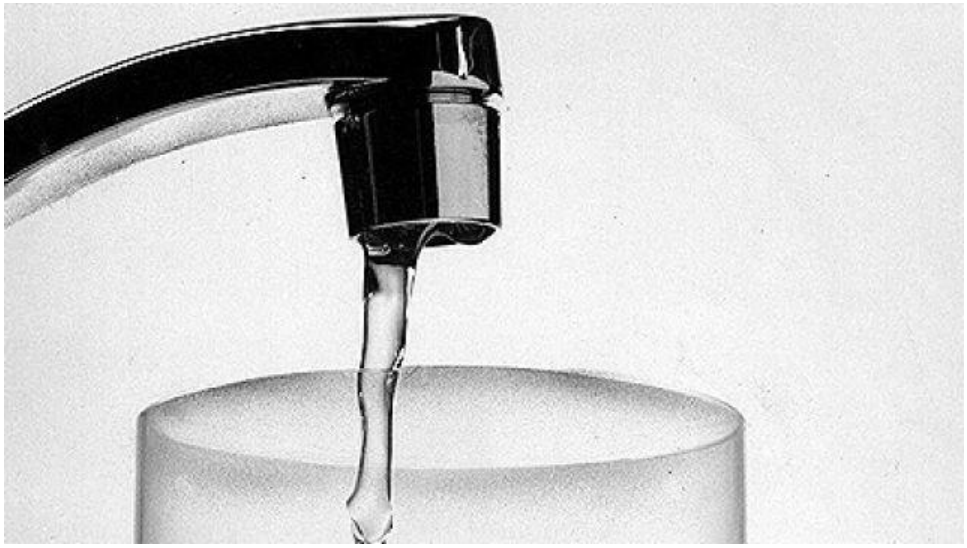
The study also examined wetland loss after the 1970s, when federal legislation was enacted to protect the areas from dredging and damage. While Connecticut’s wetlands have grown by 8 percent since that time, New York’s wetlands continued to decline, with a 19 percent loss after the protection began.

Part of the reason is the nature of New York's wetlands, which are at a lower elevation than those in Connecticut and thus more susceptible to being completely submerged as sea levels rise, Basso said.

There also aren't many rivers on Long Island that naturally carry sediment to the wetlands — a process critical to building them up, said Mark Tedesco, director of the U.S. Environmental Protection Agency's Long Island Sound office.

"That's really important, because as our sea level is rising, we need to keep those wetlands building," Basso said.

Data



The study also pointed to several stresses on wetlands caused by humans, including nutrient overload and the introduction of invasive species.

Wetlands serve several functions in Long Island Sound's ecosystem — including providing critical habitat for bird and marine life and serving as buffers against flooding during storms.

"Wetland loss in the end . . . affects a lot of ecosystem aspects, but it also very much so affects people," Basso said. "We're seeing more intense and more frequent storm events. We need wetlands to buffer our coasts against the effects of climate change."

They also capture nitrogen, serving a critical role in a waterway already choked by the contaminant.

“The loss of wetlands will diminish that function and exacerbate the water-quality impacts of existing nitrogen pollution sources and make it harder to reverse that trend,” Tedesco said.

Basso said she and the study’s other authors consulted with experts on the historical maps to ensure they could accurately compare them to later ones to estimate the amount of wetland loss.

One of those experts, R. Lawrence Swanson, associate dean of the School of Marine and Atmospheric Sciences at Stony Brook University, said he advised that the comparison would not be exact, but he felt the study’s authors accounted for the differences in how the maps were generated.

In a statement, EPA Regional Administrator Judith Enck called the reported loss “staggering.”

“It should sound the bell for strong action at every level of government and in the business community to reverse this troubling trend,” Enck said.

The study recommended a holistic approach to restoring wetlands in the Sound, instead of a focus on individual marshes, and increasing public awareness of the benefits of wetlands.

“It’s important this report came out, because it will refresh our concern about the value of wetlands and the important ecological functions they provide,” Swanson said. “Even though we have passed legislation to protect wetlands, in fact they’re still in jeopardy.”