

Hempstead Bay improving

Levels of nitrogen, ammonia lower; challenges remain

BY OLIVIA WINSLOW

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Water quality monitoring of Hempstead Bay shows reduced concentrations of nitrogen and ammonia, reflecting a decades-long trend, but oxygen-depleting “excessive nutrient loads” still pose a threat to fish and plant life, according to a new report released Thursday.

The latest monitoring draws on nearly 50 years of waterway data collected by Hempstead Town’s Department of Conservation & Waterways, said Steve Raciti, an associate professor of biology at Hofstra University and lead author of the report. The report also involved the Town of Hempstead, Hofstra’s National Center for Suburban Studies and the Long Island Regional Planning Council, which provided funding through the state Department of Environmental Conservation.

“We’ve seen improvements in water quality since the early 1980s to the present and very large improvements in nitrogen [pollution] in the western side of Hempstead Bay near wastewater treatment plants,” Raciti said in an interview.

With various efforts underway to improve conditions of Hempstead Bay, (known informally as the Western Bays) such as the South Shore Reclamation Facility in Bay Park, Raciti said, it was important to assess the bay’s current water quality and document changes over time.

“If we’re going to spend hundreds of millions of dollars to try to improve the water quality in Hempstead Bay,” Raciti said. “don’t we want to understand what the water quality was before we implement these improvements?”

Monitoring will enable lawmakers and others involved to see whether “we actually reached our goal of greatly improving water quality and to understand the impact of these changes on the quality.”

Collaborative effort

John Cameron, chair of the Long Island Regional Planning Council, cited efforts to divert harmful effluent out of the bay,



Cassidy Freudenberg, a conservation biologist with the Town of Hempstead, tests bay water quality.

such as wastewater and stormwater, as well as other improvements.

The current \$1.5 million monitoring project began five years ago but also drew on nearly 50 years of data produced from previous Hempstead town water quality studies. The Department of Conservation & Waterways undertook its first monitoring effort in 1968, then continued doing it from 1974 until 2017, when the program ended, prodding Raciti and his colleagues to continue the effort.

The collaboration that led to the report was on view at a news conference Thursday at Hempstead Town’s Department of Conservation & Waterways marine lab in Point Lookout, with Hempstead Town officials, Hofstra officials, including president Susan Poser, a representative of the state Department of Environmental Conservation and the planning council.

Raciti said there was a “huge environmental and economic cost” to nitrogen pollution, citing an estimate of “\$200 billion per year in damage to the [U.S.] economy, human health and the environment.” He said the environmental costs include algae blooms, “which can lead to low oxygen conditions in the water,” and are deleterious to marine and plant life, and the

overall wetland areas.

The new report, “Water Quality Trends in Hempstead Bay, NY from 1968-2023,” noted: “The recent data from 2019 to 2023 suggest that the improvements (decreases) in nitrate and ammonia concentrations have continued since 2017. Recent nitrate concentrations were significantly lower than during the prior 10 years for which we have monitoring data (2007-2017). . . . There is also evidence of an overall decline in ammonia concentration since 1975 that is most pronounced from 2000 to the present.”

The report noted, however, that “water quality challenges remain,” citing “excess nutrient loads” that contribute to depleted oxygen in the waterway. Also, fecal coliform contamination, though declining, still poses a challenge.

Town’s focus

Hempstead Town Supervisor Donald X. Clavin Jr. said in an interview with Newsday that when he came into office in 2020, he and other town officials began working on having the “dilapidated” marine lab rehabilitated.

“We understand the importance of this,” Clavin said of the water quality monitoring.

Clavin said the town is also

engaged in other efforts to help rid the waterway of nitrogen pollution that starves organisms of oxygen, causing them to die off, depleting food sources for fish. These include deploying kelp in the water and seeding the bay with oysters that, as they grow, help lower nitrogen levels.

“We’re seeing it’s a labor that’s having a benefit to the waterways,” Clavin said. “That’s why this team up [with Hofstra and the planning council] is so important. With our testing facility, we’re seeing these changes and others are seeing the positive results.”

Cassidy Freudenberg, a conservation biologist with the Town of Hempstead, led a tour on a sunny Thursday morning of the middle part of Hempstead Bay, illustrating how water samples are taken. She put a cylindrical tool connected to a cord that is marked with notches at a half meter and at a meter off the side of the boat. “The deeper it goes, the less algae and sediment is in the water.”

“It went down about a meter and a half. For the summer time that’s pretty normal,” Freudenberg said. “We’ll get clearer in the winter time when there’s less algae.” But, she added, at “one and half [meters], the water’s pretty clear.”

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CORRECTIONS

A “New to the Market” item about a Blue Point home in the Aug. 9 Real Estate section included two incorrect photos. The correct photos are on Page C2.

THIS DATE IN HISTORY

1777 American forces won the Battle of Bennington in what was considered a turning point of the Revolutionary War.

1812 Detroit fell to British and Native American forces in the War of 1812.

1861 President Abraham Lincoln issued Proclamation 86, which prohibited the states of the Union from engaging in commercial trade with states in rebellion — i.e., the Confederacy.

1896 Gold was discovered in Canada’s Yukon Territory, sparking the “Klondike Fever” that would draw tens of thousands to the region in search of fortune.

1954 The first issue of “Sports Illustrated” was released.

1962 The Beatles fired their original drummer, Pete Best, and replaced him with Ringo Starr.

1978 James Earl Ray, convicted assassin of Martin Luther King Jr., told a Capitol Hill hearing he did not commit the crime, saying he’d been set up by a mysterious man called “Raoul.”