

# The Suffolk Times.

## DEC: Fish kills may ‘continue to be the norm’

by [Chris Lisinski](#) |  
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An official study of [last summer’s fish kills in the Peconic River](#), which were attributed to a variety of factors, confirmed that the biggest culprit was nitrogen-fed algal blooms, [according to the state Department of Environmental Conservation](#).

And as local leaders scramble to integrate new, cleaner systems to handle nitrogen runoff and minimize seepage into local waters, the study warned that the events of last summer could repeat themselves.

“What can be certain is that given the current state of eutrophication [pollutant runoff] in the river, algal blooms and diminished oxygen levels will continue to be the norm,” the report stated. “If the waters are warm enough for anoxia to develop and a body of fish are present, another fish kill is likely to occur.”

The river has “a long history of degraded water quality,” officials wrote in the report. On average, it has substantially less dissolved oxygen than other Long Island waterways, and since so much nitrogen runs into the estuary from fertilizers and sewage, there is plenty of food to fuel swaths of algae such as the “brown tide” that, among others, suffocated hundreds of thousands of bunker fish last May and June.

The river has also seen several fish kills in the past, according to the report. Between one and three million bunker died in the Peconic in 1999, and similar kills in 2000, 2008 and 2009 yielded hundreds of thousands of dead fish.

Jim Gilmore, director of the DEC's marine bureau since 2007, noted that last summer's events were largely the result of three factors: high nitrogen levels in the waterways, a large set of bunker and a "very large scale of bluefish" coming into the river.

Those combined conditions caused a specific chain of events. The nitrogen helped feed an unusually strong bloom of several types of algae, including one sometimes referred to as "brown tide." At night, those algae consume oxygen in the water around them, and rising temperatures — common in spring and summer — also deplete oxygen levels, causing the water to be suffocating.

Normally, bunker fish would be able to detect that the river was low on oxygen and avoid it, but they became trapped in the area, unable to escape because of "aggressively feeding bluefish," the report stated. With more fish competing for a limited supply of oxygen — made even more scarce by nitrogen-fed algae's impact on the water — the result was predictable: Many of those fish died.

So, the lack of escape for the bunker was the final piece in what was a sort of perfect storm.

"Conditions that are conducive to fish and other kills have existed in the river for some time," the report stated. "As temperatures increased in the spring, all that was needed was a large body of panic-driven menhaden [bunker] trapped by predators [bluefish] to finish off whatever oxygen was left."

Last summer saw three separate bunker die-offs. The first occurred May 16 near the Long Island Aquarium, though that was "minor" compared to the May 27 kill that left hundreds of thousands of bunker corpses piling up on beaches and in marinas. Then, on June 14, tens of thousands more bunker died in another fish kill.

The report, a collaboration between the DEC and county and academic resources, found the primary cause of death to be asphyxiation due to depleted or even nonexistent amounts of oxygen in the water. That conclusion confirms what researchers had said at the time.

According to Mr. Gilmore, while New York fishermen typically take nearly the entire year to fill the quota of bluefish allowed under an interstate agreement, since the fish had circulated north so early in the year, "we were already looking to exceed our quota in the early spring."

Other possible factors in the fish kills, such as bacteria and pesticides, were found to be at normal levels in the water, so researchers concluded they were not involved.

At the time, local leaders scrambled to clean up the rotting bunker. Riverhead Town even enlisted local fishermen to harvest live bunker to prevent future fish kills; at times, the town also allowed the high tide to carry away carcasses before cleaning up the rest.

The incidents have added vigor to ongoing discussions about more efficient ways to protect water quality. Suffolk County [formed a panel in June](#) to discuss addressing nitrogen runoff and, days later, both [town and county officials called on the federal government](#) to allocate more resources toward protecting the Peconic Estuary.

In November, local, county and state municipalities [formed the Peconic Estuary Protection Committee](#) to pool resources toward that goal. And just last week, the DEC held a meeting in Riverhead to discuss a new Long Island Nitrogen Action Plan.

Mr. Gilmore said the DEC's study could be used to help implement measures to meet goals related to nitrogen reduction in waters.

***WITH JOSEPH PINCIARO***

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