

The Waters Of The Harbor

by Peter B. Fleischer

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The quality of the harbor's waters is fundamental to the ongoing resurgence of a recreationally focused harbor. Fishing, swimming, boating, and shoreline recreating along the city's six-hundred mile coast in all five boroughs requires that high standards be set, maintained and enforced. Environmental improvements including marshland restoration, bird colonies and fish populations also require high standards set, maintained and enforced.

That is why it is worth paying attention to a recently released report by the city's Department of Environmental Protection, assessing the condition of the waters surrounding New York. In the survey's 91st year, the department reports "improved water quality for the harbor" acknowledging that "some areas and parameters may not share the general trend."

The annual summary of the state of harbor water quality (not drinking water) is based on a sampling program from 53 stations off the coasts of all five boroughs. The summary is the most comprehensive water quality survey for the region and it provides benchmarks for commercial fishing interests, recreational users, industrial concerns and municipal government. Data is broken up into four regions.

These are:

1. Upper East River and the Western Long Island Sound
2. The Inner Harbor (waters bounded by the Verrazzano, George Washington and Triborough Bridges)
3. Jamaica Bay
4. Lower New York Bay (waters bounded by the Verrazzano Narrows Bridge, Rockaway Peninsula and New Jersey's Sandy Hook Peninsula).

While the Department of Environmental Protection has many indicators, the four most important ones are fecal coliform concentrations; bottom dissolved oxygen; chlorophyll a; and surface water transparency. These indicators track the health of the harbor's waters, particularly as they affect swimming water safety and the ability of the aquatic environment to support marine life. High fecal coliform levels result in beach closures. Low levels of dissolved oxygen reduce the survivability of plants and fish. Other indicators track high levels of algae, which thrive on the high levels of nitrogen released by wastewater treatment plants.

Since the expansion of wastewater treatment, mandated and funded by the Clean Water Act,

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measures of harbor water quality have shown steady improvement. In addition to the federal standards, the New York State Department of Environmental Conservation also sets standards for harbor water quality and municipal performance.

Upper East River and the Western Long Island Sound

Dissolved Oxygen levels have remained high despite decreases in nitrogen loadings from the water pollution control plants. Hypoxia, i.e., oxygen deprivation, remains an issue in Western Long Island Sound, as does a high rate of lobster mortality.

The Inner Harbor

The department has claimed credit for recent improvements in water quality in the waters of the Inner Harbor. In 2000, most of the 21 stations had summer fecal coliform means nearly two orders of magnitude better than the State standard. All summer means for dissolved oxygen exceeded the standard.

Jamaica Bay

The report notes that dissolved oxygen concentrations were higher in Jamaica Bay than anywhere else in the harbor and high in terms of the levels of recent years. They cite recent efforts at the wastewater treatment plants to reduce nitrogen loadings. The report also noted a long-term and recurring dissolved oxygen problem in the Bay. Poor circulation, point source loadings and plankton growth were cited.

Lower New York Bay

This area includes many popular regional beaches such as Coney Island, Rockaway Beach and Staten Island's South Shore. The report states that this area "has consistently met State standards" adding "there have been almost no beach closures in recent years".

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General Conditions

Many interrelated forces including weather, geography, manmade pollution, natural conditions, and biological cycles determine harbor water quality. The summer of 2000, which was when the survey was taken, was colder and rainier than average. Rain induced run-off increases the levels of suspended sediments which may have reduced summer-averaged, surface water transparency between 2000 and 1999. The survey attributes many of the cited improvements to implementation of water conservation steps and operational changes at wastewater plants that increased treatment capacity.

Maintaining harbor water quality is no easy task, The Hudson-Raritan River System receives an astonishing 20 percent of its volume from municipal and industrial sources including the combined storm/sewer outfalls. The city claims it now treats as much as 56 percent of the combined storm sewer outfall run-off. The impressive eleven-percent decrease in daily water use in the 1990s has benefited the entire system.

The city agency deserves credit for its ongoing initiatives aimed at harbor water quality. Its pace and intensity however could be accelerated. The agency is still run more like a water and sewer utility than a protector of the marine and recreational environment. The survey's artfully presented statistics omit key environmental failures that are as telling as the explicit story. The public would be better served by a full account of recent declines in performance that are cloaked in the survey report by the repeated mention of long term improvements. It is the periodic setbacks that need highlighting to ensure that the positive long-term trends are not permanently reversed. It should also be noted that the survey focused on the summer of 2000, but was issued in December of 2001. This is late, inexcusably so.



Peter B. Fleischer, currently writing a book on the New York City waterfront, was formerly a transportation and environment policy advisor to New York City Mayors David Dinkins and Rudy Giuliani.