



Date: 03/12/18

Subject: Manhasset Bay Protection Committee electronic newsletter – March 2018

The Manhasset Bay Protection Committee is releasing the recently completed Water Quality Analysis Report which covers data collected during the summers of 2009 through 2015. While seven years of data is a long period of time to look at, it was still too short a time span to detect any trends.

The report and supporting documents will be posted to the Committee's "Water Quality Data" page at www.manhassetbayprotectioncommittee.org/waterquality.htm

Background of the Report

The Manhasset Bay Protection Committee, working with the Town of North Hempstead, contracted with the environmental engineering firm Fuss & O'Neill, Inc. for this work. The Committee requested a study which compiled seven years of bacteria and water quality data and connected it with weather and environmental events. The New York State Department of Health maintains a safe swimming standard based on how much bacteria is found in the water. The report also looked at dissolved oxygen data collected by the Interstate Environmental Commission. Dissolved oxygen is important for marine life to survive and can be low during the summer when there are not many storms to mix the water.

Key Conclusions

- Manhasset Bay is generally safe for swimming (where allowed), except within a day or two of rainfall.
- Rainfall significantly impacts water quality. Rainfall acts the fastest (same day) and has the largest impact on water quality near the densest development (Port Washington peninsula), where many stormwater outfalls are located. In contrast, the sampling stations on the western shore (Great Neck peninsula) and in the middle of the Bay show correlations with prior day rainfall. These findings are consistent with what is seen in other bays and harbors.
- The highest bacteria concentrations are on the eastern side of the Bay. At times, these bacteria counts are high even without rain, indicating that a factor other than stormwater may be affecting water quality here. Despite this, water quality at these beaches still meets the New York State swimming standards when there has not been rain.
- Dissolved oxygen (DO) concentrations are lowest at the head of the Bay (near Manhasset). This is consistent with conditions of shallower depth and less mixing with ocean waters.

Despite the many major storms (Super Storm Sandy and Hurricane Irene) and growth of population, no increase in bacteria was evident in Manhasset Bay. Further evidence of improved water quality is the abundant wildlife that have returned to the area, like the Harbor Seal pictured below who visited Town Dock on November 6, 2017(photo credit: Jennifer Wilson-Pines). Water quality is expected to continue to recover, especially with the continued diligence of the residents that share the watershed (for more on watersheds, visit:

www.manhassetbayprotectioncommittee.org/ManhassetBayWatershed.htm).

Key Recommendations

- Sampling of water quality parameters (DO, salinity, pH) should be taken at the same time and same locations as bacteria samples. This would allow for expansion of the data set.
- Investigation of stormwater outfalls discharging during dry weather would provide information on potential bacteria sources.
- Targeted sampling of stormwater outfalls during wet weather for parameters indicative of sewage (e.g., pharmaceuticals) would help identify non-stormwater sources of bacteria.
- Use of DNA-based testing could allow for confirmation or elimination of suspected human sources in areas where dry weather bacteria concentrations remain elevated.
- Electronically mapping the location of all outfalls within the Bay, including information on ownership, size, and condition, would provide a useful resource.
- Hydrodynamics within the Bay could be investigated to understand how tides and discharges interact to influence water quality. Tidal phase (i.e., flood, slack, ebb) could be included as an observation during water quality monitoring.



Where Do We Go From Here

Manhasset Bay is a vital resource which impacts the local and regional economy and the Manhasset Bay Protection Committee remains committed to implementing projects and activities that facilitate an improvement in water quality. Many of the key conclusions of this report, such as the improvement in water quality from more developed areas to less developed areas and the link between bacteria concentrations and stormwater runoff, are not a surprise and the reason we are already working in this area. Additionally, key recommendations of this report, such as watershed-wide



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planning and DNA-based testing, are already being pursued by the Committee. Other initiatives aimed at improving water quality include “Get Pumped LI!” and the Long Island Nitrogen Action Plan. However, despite all this great work, water quality cannot continue to improve without the help of everyone. Simple actions, such as picking up after pets, not over-fertilizing lawns, and keeping everything but stormwater out of storm drains, will make a big difference. The next report, due in 2019, will cover water quality data collected in 2016 and 2017.

How Everyone Can Help

Listed below are some examples of simple changes to everyday activities that will have a positive impact on Manhasset Bay, even in areas seemingly far from the Bay.

- Don't feed ducks, geese, or other birds: feeding birds tends to concentrate them in an area, leading to more bacteria entering the water from their droppings.
- Clean up after pets: dog (and even cat) waste that is left on the ground can be picked up by rain water and transported to Manhasset Bay, increasing bacteria counts.
- Do not put anything down a storm drain, ever. This water is not treated, but instead flows directly to Manhasset Bay.
- Clean up spills of fertilizer and pesticides: like pet waste, these spills can be picked up by rain water and transported to Manhasset Bay, where they can have adverse impacts on water quality. Visit northhempsteadny.gov/stopprogram (or call 311) to find out about hazardous material collections going on throughout the year.
- Don't fertilize before a rain storm and consider getting your lawn tested to learn how much fertilizer it needs. Also consider leaving grass clippings in place after mowing: they break down quickly and naturally fertilize the soil.
- Connecting downspouts to the sewer system is illegal. Remove these hook-ups and notify the Town or Village where you live if you see someone else doing this. Consider alternatives, such as rain gardens, for your downspout discharge.
- Review your County/Town/Village's annual stormwater report: as part of the requirements of the Phase II SPDES (MS4) permit, all municipalities are required to publically post their annual reports and receive public feedback.
- Volunteer: The Committee looks for volunteers throughout the year for various projects, such as habitat restoration, fish monitoring, and beach cleanups. E-mail the director at mbpcExec@gmail.com to sign-up for the Volunteer e-mail list.

Visit <http://www.manhassetbayprotectioncommittee.org> for more information.

Who We Are

The Manhasset Bay Protection Committee is an inter-municipal organization focused on addressing water quality and coastal issues in Manhasset Bay with a coordinated, watershed-level approach. The Committee has 15 member municipalities: Nassau County, the Town of North Hempstead, and 13 Villages who all voluntarily entered into an inter-municipal agreement. The Committee's goals are to protect, restore, and enhance Manhasset Bay so as to insure a healthy and diverse marine ecosystem while balancing and maintaining recreational and commercial uses.

Manhasset Bay is a vital resource which impacts the local and regional economy. The Manhasset Bay Protection Committee remains committed to implementing projects and activities that facilitate an improvement in water quality toward the swimmable, fishable goals of the Clean Water Act.

The Committee members are:

Nassau County
Town of North Hempstead
Baxter Estates
Flower Hill
Great Neck
Kensington
Kings Point
Munsey Park
Manorhaven
Plandome
Plandome Heights
Plandome Manor
Port Washington North
Sands Point
Thomaston



Manhasset Bay Protection Committee

We want to hear from you!

Please send us any comments, questions, etc. on this newsletter or the Bay

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