

# Fresh Kills (1701-0012)

# Minor Impacts

## Waterbody Location Information

Revised: 12/29/2016

<b>Water Index No:</b>	(MW1.2) SI- 8 (portion 1)	<b>Water Class:</b>	SD
<b>Hydro Unit Code:</b>	Arthur Kill-Upper Bay (0203010402)	<b>Drainage Basin:</b>	Atlantic-Long Island Sound
<b>Water Type/Size:</b>	Estuary Waters 200.3 Acres	<b>Reg/County:</b>	2/Richmond (43)
<b>Description:</b>	reach fr mouth to Richmond/Main Cr confluence (tidal)		

## Water Quality Problem/Issue Information

Uses Evaluated	Severity	Confidence
Shellfishing	N/A	-
Public Bathing	N/A	-
Recreation	Stressed	Known
Aquatic Life	Stressed	Known
Fish Consumption	Stressed	Suspected

### Conditions Evaluated

Habitat/Hydrology	Unknown
Aesthetics	Fair

### Type of Pollutant(s) (CAPS indicate Major Pollutants/Sources that contribute to an Impaired/Precluded Uses)

Known:	Pathogens, Other Pollutant (floatable debris)
Suspected:	Low D.O./Oxygen Demand, Metals
Unconfirmed:	- - -

### Source(s) of Pollutant(s)

Known:	Urban/Storm Runoff, Other/Non-Permitted Sanitary Discharge, Onsite/Septic Systems
Suspected:	Private/Comm/Inst Discharges, Industrial Discharges
Unconfirmed:	Landfill/Land Disp.

## Management Information

**Management Status:** Strategy Implementation Scheduled or Underway  
**Lead Agency/Office:** Other/NYCDEP  
**IR/305(b) Code:** Water Attaining All Standards (IR Category 1)

## Further Details

### Overview

Fresh Kills is assessed as having minor impacts due to recreational uses and aquatic life that are considered to be stressed by pathogens, low dissolved oxygen and other pollutants from urban stormwater runoff, possible sanitary overflows, failing or inadequate onsite (septic) systems, small private wastewater treatment plant discharges, various industrial activities, and other urban sources. Runoff from the Fresh Kills Landfill (now closed) and industrial activity in the area have also been noted as contributing to water quality impacts. Fish consumption impacts are due to health advisories in adjacent waters limiting the consumption of certain species due to elevated PCB levels. These advisories are the primarily result of the contaminated sediment; the migratory range of some fish species is also a factor. This assessment is based on sampling conducted at one trib and is thought to be representative of the larger waterbody segment but water quality conditions have not been verified in all tribs within the segment.

### Use Assessment

Fresh Kills is a Class SD waterbody, assessed for general recreation use and support of aquatic life, but not for water supply or for public bathing.

Recreation use and aquatic life are considered to be supported but stressed due to pathogens, low dissolved oxygen and

other pollutants and conditions attributed to highly developed and urban watersheds. Overall aesthetic conditions of the waters are considered to be poor as well. (DEC/DOW, BWAM/LMAS, July 2013)

Fish consumption is considered to be stressed due to NYS DOH issued health advisories recommending limiting consumption of some species in adjacent waters. This waterbody is not included among the waterbody-specific health advisories for fish consumption, but since fish can migrate to this waterbody from other waters where such advisories are in place fish consumption is evaluated as stressed. Health advisories regarding the consumption of fish are revised regularly; for the most current advisories, go to [www.nyhealth.gov/environmental/outdoors/fish/fish.htm](http://www.nyhealth.gov/environmental/outdoors/fish/fish.htm). (NYS DOH Health Advisories and DEC/FWMR, Habitat, January 2014)

#### Water Quality Information

Water quality evaluations have been conducted through the NYCDEP City-Wide Long-Term CSO Control Planning Program as well as the long-standing NYCDEP Harbor Survey Sampling Program. The results of this sampling 2004 indicate that the impact of CSOs, stormwater discharges and dry weather sanitary flows cause periodic low dissolved oxygen and elevated pathogen levels. Modeling of water quality in these waters also show that dissolved oxygen standards in the Arthur Kill is not met at all times. Pathogen levels in The Kills typically meet applicable criteria. (NYCDEP, City-Wide Long-Term CSO Control Planning Program, June 2011)

The NYCDEP Harbor Survey Program uses primarily four indicators of water quality: fecal coliform bacteria, dissolved oxygen, chlorophyll a and water clarity. Significant improvements have been noted in all of these parameters since the 1970s and 80s. These improvements have coincided with considerable upgrades to the City's wastewater treatment facilities. In The Kills, including Fresh Kills, standards for bacteria and dissolved oxygen are typically met. (NYCDEP, Harbor Survey, 2014)

#### Source Assessment

Based on the surrounding land use and other knowledge of the waterbody, residential wastewater discharges – failing and/or inadequate onsite (septic) systems or illegal (unpermitted) connections to storm sewers – and urban storm runoff are the most likely sources of impacts to the waterbody.

#### Management Actions

Much of the historic issues and impacts from failing and/or inadequate residential onsite wastewater (septic) systems have been addressed through sewerage projects along the southern shore portion of Staten Island. The sewer systems improvements include a number of interceptor projects (Tottenville/West Branch, Oakwood Beach, Hylan Blvd) that now serve previously unsewered areas. Additional infrastructure improvements to address stormwater runoff control have been undertaken through the Staten Island Bluebelt program. This effort preserves natural drainage corridors, called Bluebelts, including streams, ponds, and other wetland areas and allows them to perform their functions of conveying, storing, and filtering stormwater, while providing an alternative to more costly traditional storm sewer infrastructure. In addition, the Bluebelts provide important community open spaces and diverse wildlife habitats. Along the south shore, the Bluebelt program is substantially complete, however efforts in Mid-Staten Island are ongoing. (NYCDEP, December 2016)

The Fresh Kills Landfill, widely considered the largest solid waste landfill in the world, operated from the 1940s until it was closed in March 2001. However, after the September 11, 2001 attacks on the World Trade Center, the landfill was temporarily reopened to receive and process much of the debris from the destruction. Various controls are in place at the facility to address leachate and other water quality issues. These include nine miles of cut-off walls and collection piping around the two largest landfill mounds which blocks direct flow to surface waters; capping of other mounds with impermeable geomembranes and pumping of leachate. The NYC Department of Sanitation treats the leachate at a complex known as the Fresh Kills Leachate Treatment Plant. This facility has a total capacity to treat of just over 1.0 MGD of landfill leachate. While in operation, the City had also installed a series of booms at the landfill to contain floatables and settleables from moving off site. However with the closing of the landfill, the site is not expected to be a source of floatables to the waterway. The site is now planned to be developed into a city park with reclaimed wetlands, recreational facilities and landscaped public parkland. The Fresh Kills Park project is planned to take place over a thirty–

year period. (DEC/DSHM and NYC DEP, April 2010)

#### Section 303(d) Listing

Fresh Kills is not included on the current (2016) NYS Section 303(d) List of Impaired/TMDL Waters. There appear to be no impacts/impairments that would justify the listing of this waterbody. (DEC/DOW, BWAM/WQAS, January 2016)

#### Segment Description

This segment includes the portion of the creek and tribs from the mouth to the confluence of Richmond and Main Creeks. The waters of the creek are designated Class SD.