

7.0 LOAD ALLOCATIONS

7.1 Background

The objective of a TMDL plan is to allocate allowable loads among the various pathogen sources so that the appropriate management actions can be taken to achieve the desired water quality results. The specific objective of the TMDLs for the Peconic Bay water bodies is to determine the required reductions in fecal coliform loadings from various nonpoint and point sources in order to meet the two water quality standards of 14 MPN/100mL as geometric mean and a 90th percentile value of less than 49 MPN/100mL. In cases where fecal coliform data were limited, total coliform data were applied, if possible. This occurred in only one instance: Stirling Creek. The incorporation of different sources into the TMDL is defined in the following equation (USEPA, 1999):

$$\text{TMDL} = \text{WLA} + \text{LA} + \text{MOS}$$

where:

WLA = waste load allocation (point sources)

LA = load allocation (nonpoint sources), and

MOS = margin of safety.

In addition, the selection of critical conditions that increase the overall protectiveness of the TMDL is an important element in the TMDL development process, along with consideration of seasonal variation and a margin of safety. These elements are described in the following sections.

7.2 Seasonal Variations and Critical Conditions

Fecal coliform bacteria concentrations can vary on a seasonal basis in some parts of the study area. The seasonality of shellfish bed closures reflects the cyclical nature of fecal coliform loads to receiving waters. Therefore, the closure periods (typically from May 1 through October 31) were chosen for analysis with the expectation that the pollution management plans developed for this period will protect the water body during the winter period (typically from November 1 through April 30). Although the May 1-October 31 timeframe was examined here, the shellfish area closure schedules in some of the water bodies may vary slightly from these dates (see Section 2.0 for discussion on the specific closure dates for individual water bodies).

In addition to being the period in which SRS sampling data are available, the 1997-2004 period contains a mix of wet years (above the long-term average) and average years. The year 2003 exhibited highest seasonal as well as annual precipitation among these seven years, therefore, was chosen as the critical year for TMDL development.

7.2.1 Margin of Safety

The margin of safety (MOS) is included in the TMDL development process to account for any uncertainty on loadings and the fate and transport of fecal coliform in the watershed. There are two basic approaches for incorporating the MOS (USEPA, 1999):

- Implicit incorporation of MOS using conservative model assumptions to develop allocations, or
- Explicit incorporation of MOS as a portion of the total TMDL and the remainder is used for the allocations.

The MOS was included in this study as a combination of the implicit and explicit approaches for the Peconic Bay estuarine systems as described in the following sections. A 10% explicit margin of safety was incorporated into the loading capacity.

A series of implicit approaches to increase the conservative (protective) nature of this analysis include the following:

- Use of seasonal data instead of the annual data for conservative assessment of water quality conditions in seasonally certified water bodies.
- Use of the year 2003 as critical condition in which precipitation was highest among the approximate seven years spanning the water quality period of record.
- Use of design (maximum) flows for the STP treatment facilities that contribute to Flanders/Reeves Bay rather than flows from recent discharge monitoring reports that are typically lower.

7.3 Allocation Scenario

As described in Section 3, the geometric mean (14 MPN/100mL) and the 90th percentile (49 MPN/100mL) criteria must be met in order to designate the water body for shellfish harvest. New York state standards set no averaging period (but specifies a minimum number of samples to be used for calculation of geometric mean and 90th percentile values) on which to calculate these values from the historic water quality data for comparison with the standards. The SRS data and the data compiled by NYSDEC in the past have shown that the geometric mean criterion is usually met and the 90th percentile criterion is often the difficult target to meet.

However, the estimated 90th percentile of the fecal coliform standards does not indicate that fecal coliform values at certified shellfishing areas are allowed to exceed the criteria ten percent of the time. Rather, the 90th percentile is a measure of water quality variation at a particular station compared to the variability inherent in the multiple-tube, multiple-dilution MPN method for examining water samples. When the variability of actual station data exceeds the inherent variability of the MPN procedure, there are likely to be some environmental factors (e.g., pollution sources) affecting water quality at that station that make the area unsuitable for shellfishing certification.

A statistical rollback method (Ott, 1995) describes a way to use the statistical characteristics of a set of water quality parameter results to estimate the distribution of future results after abatement processes are applied to sources. The method relies on basic dispersion and dilution assumptions and their effect on the mean and standard deviation of bacteria sample results at a monitoring site downstream from a source. The rollback method then provides a statistical estimate of the new population after a chosen reduction factor is applied to the existing pathogen source. In this load allocation process, compliance with the most restrictive of the dual fecal coliform criteria will determine the bacteria reduction needed. The target reductions developed for the Peconic Bay estuarine systems are provided in the following sections. These sections contain two tables for each water body: (1) loads of fecal coliform from watershed and waterfowl sources as determined through the application of the WTM and waterfowl occupancy and loading rates derived from Horsely and Witten (2003); and (2) summary of load reductions based on the rollback method, including a 10% MOS explicitly applied to the loading capacity.

For water bodies within the towns of Riverhead and Southampton, part of the load from urban stormwater determined through the application of WTM was attributed to MS4s. These loads were treated as a part of “waste load allocation” (WLA) category in accordance with EPA guidance. Based upon the field reconnaissance, review of the land use and watersheds maps and using best professional judgment, a

percentage of the existing estimated load of MS4 was assigned to the conveyances. The remainder of the stormwater load was assumed to flow directly from private properties to watercourse and is considered as a component of nonpoint source load – “Load allocation” (LA). As nonpoint source load includes the waterfowl load and runoff from rural land and the stormwater directly discharged to the watercourses (treated as NPS), a reduction of 25 percent was assumed (based upon best professional judgment) to be maximum that could be reasonably achieved. This percentage reduction was used to calculate the load allocation (LA).

7.3.1 Dering Harbor (1701-0050)

Table 7-1. WTM Fecal Coliform Loads to Dering Harbor

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	47,722
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	270
Waterfowl	2,628
TOTAL LOAD (Billions)	50,620
Water Body (ha)	97.12
Billions FC Load/ha/yr	521

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 18,732 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-2. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Dering Harbor

Rollback Based on Station 5.2	Condition	Units	Dering Harbor	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	50,620	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	50,620	-	-
TMDL	LA	(billion FC/yr)	45,558	5,062*	10
	WLA	(billion FC/yr)	0	-	-
	MOS	(billion FC/yr)	5,062	-	-
	TMDL	(billion FC/yr)	50,620	5,062	10

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 138.68 billion FC/day.

*Dering Harbor load reductions are based on the 10% MOS due to a relatively small margin of assimilative capacity. That is, the existing conditions exhibit fecal coliform levels that are not in exceedance but are close. For protective reasons, the TMDL was set at the existing estimated loads and the 10% MOS provides a load reduction necessary to maintain compliance with the numeric standards.

7.3.2 Budds Pond (1701-0234)

Table 7-3. WTM Fecal Coliform Loads to Budds Pond

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	14,264
OTHER NONPOINT SOURCES	
Rural Land	607
Forest	30
Waterfowl	166
TOTAL LOAD (Billions)	15,067
Water Body (ha)	6.07
Billions FC Load/ha/yr	2,482

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 3,784 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-4. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Budds Pond

Rollback Based on Station 109	Condition	Units	Budds Pond	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	15,067	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	15,067	-	-
TMDL	LA	(billion FC/yr)	5,356	9,116	64.5
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	595	-	-
	TMDL	(billion FC/yr)	5,951	9,116	64.5

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 16.30 billion FC/day.

7.3.3 Stirling Creek (1701-0049)

Table 7-5. WTM Fecal Coliform Loads to Stirling Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	48,865
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	164
Waterfowl	563
TOTAL LOAD (Billions)	49,592
Water Body (ha)	20.64
Billions FC Load/ha/yr	2,420

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 30,842 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-6. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Stirling Creek

Rollback Based on Station TC-3	Condition	Units	Stirling Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	49,592	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	49,592	-	-
TMDL	LA	(billion FC/yr)	35,751	9,869	28
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	3,972	-	-
	TMDL	(billion FC/yr)	39,723	9,869	28

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 108.83 billion FC/day.

7.3.4 Town and Jockey Creeks (1701-0235)

Table 7-7. WTM Fecal Coliform Loads to Town and Jockey Creeks

SOURCES	TJ-1 Billion FC/year	TJ-2 Billion FC/year
POINT SOURCES		
Sewage Treatment Plant	0	0
RESIDENTIAL/URBAN LAND^{1,2}		
MS4 Contribution ³	0	0
Non-MS4 Contribution ⁴	80,798	59,844
OTHER NONPOINT SOURCES		
Rural Land	-	-
Forest	72	34
Waterfowl	805	148
TOTAL LOAD (Billions)	81,675	60,026
Water Body (ha)	29.95	5.67
Billions FC Load/ha/yr	2,727	10,587

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 37,465 (TJ-1) and 16,589 (TJ-2) billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-8. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Town and Jockey Creeks

Rollback Based on Station 2.1	Condition	Units	Town and Jockey Creeks	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	81,675	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	81,675	-	-
TMDL	LA	(billion FC/yr)	19,921	59,541	76
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	2,213	-	-
	TMDL	(billion FC/yr)	22,134	59,541	76

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 60.64 billion FC/day.

Note: A TMDL was not calculated for Zone TJ-2 because, based on available water quality data, there were no coliform concentration exceedances

7.3.5 Goose Creek (1701-0236)

Table 7-9. WTM Fecal Coliform Loads to Goose Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	93,127
OTHER NONPOINT SOURCES	
Rural Land	1,064
Forest	333
Waterfowl	1,065
TOTAL LOAD (Billions)	95,589
Water Body (ha)	39.25
Billions FC Load/ha/yr	2,435

¹“Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 49,858 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-10. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Goose Creek

Rollback Based on Station G4	Condition	Units	Goose Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	95,589	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	95,589	-	-
TMDL	LA	(billion FC/yr)	27,788	64,714	71
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	3,088	-	-
	TMDL	(billion FC/yr)	30,875	64,714	71

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 84.59 billion FC/day.

7.3.6 Hashamomuck Pond (1701-0162)

Table 7-11. WTM Fecal Coliform Loads to Hashamomuck Pond

SOURCES	HP-1 Billion FC/year	HP-2 Billion FC/year
POINT SOURCES		
Sewage Treatment Plant	0	0
RESIDENTIAL/URBAN LAND^{1,2}		
MS4 Contribution ³	0	0
Non-MS4 Contribution ⁴	40,238	36,995
OTHER NONPOINT SOURCES		
Rural Land	2,603	3,668
Forest	91	842
Waterfowl	392	1,500
TOTAL LOAD (Billions)	43,324	43,005
Water Body (ha)	14.57	55.44
Billions FC Load/ha/yr	2,973	776

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 16,556 (HP-1) and 11,637 (HP-2) billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-12a. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Hashamomuck Pond, Zone HP-1

Rollback Based on Station FC-1.1	Condition	Units	Hashamomuck Pond (HP-1)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	43,324	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	43,324	-	-
TMDL	LA	(billion FC/yr)	4,153	38,710	90
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	461	-	-
	TMDL	(billion FC/yr)	4,614	38,710	90

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 12.64 billion FC/day.

Table 7-12b.

Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target
TMDL Loads in Hashamomuck Pond, Zone HP-2

Rollback Based on Station 350	Condition	Units	Hashamomuck Pond (HP-2)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	43,005	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	43,005	-	-
TMDL	LA	(billion FC/yr)	21,520	19,094	50
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	2,391	-	-
	TMDL	(billion FC/yr)	23,911	19,094	50

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 65.51 billion FC/day.

7.3.7 Richmond Creek (1701-0245)

Table 7-13. WTM Fecal Coliform Loads to Richmond Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	22,015
OTHER NONPOINT SOURCES	
Rural Land	2,637
Forest	86
Waterfowl	913
TOTAL LOAD (Billions)	25,651
Water Body (ha)	33.6
Billions FC Load/ha/yr	763

¹ "Urban land" is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 10,028 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-14. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Richmond Creek

No Station Data Available	Condition	Units	Richmond Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	25,651	-	-
	Permitted Point Source Contributions	(billion FC/yr)	-	-	-
	Total Existing Loads	(billion FC/yr)	25,651	-	-
TMDL	LA	(billion FC/yr)	4,317	20,854	83
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	480	-	-
	TMDL	(billion FC/yr)	4,797	20,854	83

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 13.14 billion FC/day.

7.3.8 Downs Creek (1701-0247)

Table 7-15. WTM Fecal Coliform Loads to Downs Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	9,603
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	333
Waterfowl	230
TOTAL LOAD (Billions)	10,166
Water Body (ha)	8.5
Billions FC Load/ha/yr	1,196

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 3,311 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Note: A TMDL was not calculated for Downs Creek due to the lack of data associated with the water body.

7.3.9 Deep Hole Creek and Unnamed Pond (1701-0247)

Table 7-16. WTM Fecal Coliform Loads to Deep Hole Creek and Unnamed Pond

SOURCES	Deep Hole Creek Billion FC/year	Unnamed Creek Billion FC/Year
POINT SOURCES		
Sewage Treatment Plant	0	0
RESIDENTIAL/URBAN LAND^{1,2}		
MS4 Contribution ³	0	0
Non-MS4 Contribution ⁴	34,817	9,991
OTHER NONPOINT SOURCES		
Rural Land	507	122
Forest	-	-
Waterfowl	344	151
TOTAL LOAD (Billions)	35,668	
Water Body (ha)	12.55	14.00
Billions FC Load/ha/yr	2,842	10,263

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 20,341 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-17. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Deep Hole Creek

Rollback Based on Station FC-9C	Condition	Units	Deep Hole Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	35,668	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	35,668	-	-
TMDL	LA	(billion FC/yr)	24,830	8,079	30
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	2,759	-	-
	TMDL	(billion FC/yr)	27,589	8,079	30

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 75.59 billion FC/day.

Note: A TMDL was not calculated for Unnamed Pond due to the lack of data associated with the water body.

7.3.10 Halls Creek (1701-0247)

Table 7-18. WTM Fecal Coliform Loads to Halls Creek.

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	8,716
OTHER NONPOINT SOURCES	
Rural Land	116
Forest	150
Waterfowl	90
TOTAL LOAD (Billions)	9,072
Water Body (ha)	3.24
Billions FC Load/ha/yr	2,800

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 4,541 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Note: A TMDL was not calculated for Halls Creek due to the lack of data associated with the water body.

7.3.11 James Creek (1701-0247)

Table 7-19. WTM Fecal Coliform Loads to James Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	37,663
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	57
Waterfowl	334
TOTAL LOAD (Billions)	38,054
Water Body (ha)	12.55
Billions FC Load/ha/yr	3,032

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 21,760 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-20. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in James Creek

Rollback Based on Station FC-8A	Condition	Units	James Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	38,054	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	38,054	-	-
TMDL	LA	(billion FC/yr)	18,046	18,003	53
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	2,005	-	-
	TMDL	(billion FC/yr)	20,051	18,003	53

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 54.93 billion FC/day.

7.3.12 Flanders Bay (1701-0030)

The WTM results for the watershed zones that are contributing to specific station exceedances are shown in Table 7-21. The total fecal coliform load is estimated at 773,118 billion per year. Discharge from the three STPs are assumed to be at maximum permitted rates, but at the average observed fecal coliform concentrations (200 MPN/100 mL; PEP, 2001). The assumed percentage of non-STP loads that are associated with MS4 contributions is 75%.

Table 7-21. WTM Fecal Coliform Loads to Flanders Bay

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	14,794
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	520,751
Non-MS4 Contribution ⁴	173,584
OTHER NONPOINT SOURCES	
Rural Land	2,588
Forest	49,400
Waterfowl	12,002
TOTAL LOAD (Billions)	773,119
Water Body (ha)	443.54
Billions FC Load/ha/yr	1,743

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 164,807 billion FC/year.

³ 75% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 25% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-22. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Flanders Bay

Rollback Based on Station FC-15	Condition	Units	Flanders Bay	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	237,574	-	-
	Permitted Point Source Contributions	(billion FC/yr)	535,545	-	-
	Total Existing Loads	(billion FC/yr)	773,119	-	-
TMDL	LA	(billion FC/yr)	178,180	59,393	25
	WLA	(billion FC/yr)	24,787*	495,964	98
	MOS	(billion FC/yr)	22,552	-	-
	TMDL	(billion FC/yr)	225,519	547,600	74

*The WLA is apportioned to the STP (14,794 billion FC/year) and the MS4s (9,993 billion FC/year). This is associated with the following flows and FC concentrations:

- Riverhead STP (NPDES NY0078131): 1.3 MGD, 200 MPN/100ml, total of 3,588 billion FC/year;
- Brookhaven National Laboratory(NPDES NY0005835): 2.3 MGD, 200 MPN/100ml, total of 6,348 billion FC/year;
- Former NWIRP Calverton, NY (NPDES NY0025453): 1.76 MGD, 200 MPN/100ml, total of 4,857.6 billion FC/year.

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 617.86 billion FC/day.

7.3.13 Reeves Bay (1701-0272)

Table 7-23. WTM Fecal Coliform Loads to Reeves Bay

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	120,351
Non-MS4 Contribution ⁴	6,334
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	-
Waterfowl	4,577
TOTAL LOAD (Billions)	131,262
Water Body (ha)	169.16
Billions FC Load/ha/yr	776

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 75,024 billion FC/year.

³ 95% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 5% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-24. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Reeves Bay

Rollback Based on Station 210	Condition	Units	Reeves Bay	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	10,911	-	-
	Permitted Point Source Contributions	(billion FC/yr)	120,351	-	-
	Total Existing Loads	(billion FC/yr)	131,262	-	-
TMDL	LA	(billion FC/yr)	8,183	2,728	25
	WLA	(billion FC/yr)	3,925	116,425	97
	MOS	(billion FC/yr)	1,345	-	-
	TMDL	(billion FC/yr)	13,453	117,809	91

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 36.86 billion FC/day.

7.3.14 Sebonac Creek (1701-0051)

Table 7-25. WTM Fecal Coliform Loads to Sebonac Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	11,541
Non-MS4 Contribution ⁴	3,847
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	41
Waterfowl	730
TOTAL LOAD (Billions)	16,159
Water Body (ha)	27.11
Billions FC Load/ha/yr	596

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 3,406 billion FC/year.

³ 75% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 25% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-26. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Sebonac Creek

Rollback Based on Station FC-3	Condition	Units	Sebonac Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	4,618	-	-
	Permitted Point Source Contributions	(billion FC/yr)	11,541	-	-
	Total Existing Loads	(billion FC/yr)	16,159	-	-
TMDL	LA	(billion FC/yr)	3,464	1,155	25
	WLA	(billion FC/yr)	4,842	6,699	58
	MOS	(billion FC/yr)	923	-	-
	TMDL	(billion FC/yr)	9,229	6,930	49

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 25.28 billion FC/day.

7.3.15 Scallop Pond (1701-0354)

Table 7-27. WTM Fecal Coliform Loads to Scallop Pond

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	1,597
Non-MS4 Contribution ⁴	14,381
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	3,399
Waterfowl	1,380
TOTAL LOAD (Billions)	20,757
Water Body (ha)	51
Billions FC Load/ha/yr	407

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 5,960 billion FC/year.

³ 10% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 90% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Note: A TMDL was not calculated for Scallop Pond because analysis of the monitoring data suggested that no exceedances exist. However, it must be noted that only 17 data points were available for analysis and it is recommended that this water body be evaluated on an annual basis. However, MS4 contributions were estimated based on 10% of residential land.

7.3.16 North Sea Harbor (1701-0037)

Table 7-28. WTM Fecal Coliform Loads to North Sea Harbor

SOURCES	NSH-1 Billion FC/year	NSH-2 Billion FC/year	NSH-3 Billion FC/year	NSH-4 Billion FC/year	NSH-5 Billion FC/year
POINT SOURCES					
Sewage Treatment Plant	0	0	0	0	0
RESIDENTIAL/URBAN LAND^{1,2}					
MS4 Contribution	32,580 ³	23,923 ⁴	15,943 ⁴	12,066 ⁴	16,713 ⁴
Non-MS4 Contribution	8,145	7,974	5,314	4,022	5,571
OTHER NONPOINT SOURCES					
Rural Land	-	-	-	-	-
Forest	301	170	83	106	1,327
Waterfowl	464	307	83	287	1,369
TOTAL LOAD (Billions)	41,490	32,374	21,423	16,481	24,980
Water Body (ha)	17	11.33	3.24	10.52	50.59
Billions FC Load/ha/yr	2,440	2,857	6,612	1,567	494

¹“Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

²This source includes the load from domestic pets of 22,706 (NSH-1), 18,732 (NSH-2), 5,756 (NSH-3), 7,663 (NSH-4), and 11,826 (NSH-5) billion FC/year.

³ 80% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data, and 20% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

⁴ 75% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data, and 25% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-29a. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in North Sea Harbor, Zone NSH-1

Rollback Based on Station FC-3.1	Condition	Units	North Sea Harbor (NSH-1)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	8,910	-	-
	Permitted Point Source Contributions	(billion FC/yr)	32,580	-	-
	Total Existing Loads	(billion FC/yr)	41,490	-	-
TMDL	LA	(billion FC/yr)	6,683	2,228	25
	WLA	(billion FC/yr)	831	31,749	97
	MOS	(billion FC/yr)	835	-	-
	TMDL	(billion FC/yr)	8,349	33,141	82

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 22.87 billion FC/day.

Table 7-29b. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in North Sea Harbor, Zone NSH-2

Rollback Based on Station FC-10	Condition	Units	North Sea Harbor (NSH-2)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	8,451	-	-
	Permitted Point Source Contributions	(billion FC/yr)	23,923	-	-
	Total Existing Loads	(billion FC/yr)	32,374	-	-
TMDL	LA	(billion FC/yr)	6,338	2,228	25
	WLA	(billion FC/yr)	9,014	15,859	62
	MOS	(billion FC/yr)	1,706	-	-
	TMDL	(billion FC/yr)	17,058	15,316	53

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 46.73 billion FC/day.

Table 7-29c. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in North Sea Harbor, Zone NSH-3

Rollback Based on Station FC-7	Condition	Units	North Sea Harbor (NSH-3)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	5,480	-	-
	Permitted Point Source Contributions	(billion FC/yr)	15,943	-	-
	Total Existing Loads	(billion FC/yr)	21,423	-	-
TMDL	LA	(billion FC/yr)	4,110	1,370	25
	WLA	(billion FC/yr)	83	15,859	99
	MOS	(billion FC/yr)	466	-	-
	TMDL	(billion FC/yr)	4,659	16,764	80

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 12.76 billion FC/day.

Note: A TMDL was not calculated for Zone NSH-4 because, based on available water quality data, there were no coliform concentration exceedances.

Table 7-29d. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in North Sea Harbor, Zone NSH-5

Rollback Based on Station 104	Condition	Units	North Sea Harbor (NSH-5)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	8,267	-	-
	Permitted Point Source Contributions	(billion FC/yr)	16,713	-	-
	Total Existing Loads	(billion FC/yr)	24,980	-	-
TMDL	LA	(billion FC/yr)	6,200	2,067	25
	WLA	(billion FC/yr)	4,274	12,439	74
	MOS	(billion FC/yr)	1,164	-	-
	TMDL	(billion FC/yr)	11,638	13,342	58

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 31.88 billion FC/day.

7.3.17 Wooley Pond (1701-0048)

Table 7-30. WTM Fecal Coliform Loads to Wooley Pond

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	30,745
Non-MS4 Contribution ⁴	7,686
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	26
Waterfowl	378
TOTAL LOAD (Billions)	38,835
Water Body (ha)	14.16
Billions FC Load/ha/yr	2,743

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 15,421 billion FC/year.

³ 80% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 20% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-31. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Wooley Pond

Rollback Based on Station FC-4	Condition	Units	Wooley Pond	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	8,090	-	-
	Permitted Point Source Contributions	(billion FC/yr)	30,745	-	-
	Total Existing Loads	(billion FC/yr)	38,835	-	-
TMDL	LA	(billion FC/yr)	6,068	2,023	25
	WLA	(billion FC/yr)	993	29,752	97
	MOS	(billion FC/yr)	784	-	-
	TMDL	(billion FC/yr)	7,845	30,990	82

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 21.49 billion FC/day.

7.3.18 Noyac Creek (1701-0237)

Table 7-32. WTM Fecal Coliform Loads to Noyac Creek

SOURCES	NC-1 billion FC/year	NC-2 Billion FC/year
POINT SOURCES		
Sewage Treatment Plant	0	0
RESIDENTIAL/URBAN LAND^{1,2}		
MS4 Contribution ³	14,150	-
Non-MS4 Contribution ⁴	4,716	-
OTHER NONPOINT SOURCES		
Rural Land	-	-
Forest	863	606
Waterfowl	592	420
TOTAL LOAD (Billions)	20,321	606
Water Body (ha)	21.85	15.38
Billions FC Load/ha/yr	930	39

¹ "Urban land" is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 8,893 billion FC/year.

³ 75% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 25% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-33. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Noyac Creek, Zone NC-1

Rollback Based on Station FC-8.1	Condition	Units	Noyac Creek (NC-1)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	6,171	-	-
	Permitted Point Source Contributions	(billion FC/yr)	14,150	-	-
	Total Existing Loads	(billion FC/yr)	20,321	-	-
TMDL	LA	(billion FC/yr)	4,629	1,543	25
	WLA	(billion FC/yr)	5,070	9,080	64
	MOS	(billion FC/yr)	1,078	-	-
	TMDL	(billion FC/yr)	10,777	9,544	52

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 29.53 billion FC/day.

Note: A TMDL was not calculated for Zone NC-2 because, based on available water quality data, there were no coliform concentration exceedances

7.3.19 Sag Harbor (1701-0035)

Table 7-34. WTM Fecal Coliform Loads to Sag Harbor

SOURCES	SH-1 Billion FC/year	SH-2 Billion FC/year	SH-3 Billion FC/year	SH-4 Billion FC/year
POINT SOURCES				
Sewage Treatment Plant	0	0	0	0
RESIDENTIAL/URBAN LAND^{1,2}				
MS4 Contribution ³	11,250	10,547	87,659	20,185
Non-MS4 Contribution ⁴	3,750	3,516	29,220	6,728
OTHER NONPOINT SOURCES				
Rural Land	-	-	-	-
Forest	194	194	238	79
Waterfowl	307	152	4,216	343
TOTAL LOAD (Billions)	15,501	14,409	121,333	27,335
Water Body (ha)	11.33	5.67	155.8	12.55
Billions FC Load/ha/yr	1,368	2,541	779	2,178

¹ "Urban land" is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 8,799 (SH-1), 11,164 (SH-2), 68,780 (SH-3), and 9,839 (SH-4) billion FC/year.

³ 75% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 25% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Note: A TMDL was not calculated for Zones SH-1, SH-3, and SH-4 because, based on available water quality data, there were no coliform concentration exceedances

Table 7-35. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Sag Harbor, Zone SH-2

Rollback Based on Station FC-9	Condition	Units	Sag Harbor (SH-2)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	3,862	-	-
	Permitted Point Source Contributions	(billion FC/yr)	10,547	-	-
	Total Existing Loads	(billion FC/yr)	14,409	-	-
TMDL	LA	(billion FC/yr)	2,896	965	25
	WLA	(billion FC/yr)	5,250	5,297	50
	MOS	(billion FC/yr)	905	-	-
	TMDL	(billion FC/yr)	9,051	5,358	43

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 24.80 billion FC/day.

7.3.20 Northwest Creek (1701-0046)

Table 7-36. WTM Fecal Coliform Loads to Northwest Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	36,688
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	5,123
Waterfowl	1,772
TOTAL LOAD (Billions)	43,583
Water Body (ha)	65.56
Billions FC Load/ha/yr	665

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 10,543 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-37. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Northwest Creek.

Rollback Based on Station FC-7	Condition	Units	Northwest Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	43,583	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	43,583	-	-
TMDL	LA	(billion FC/yr)	4,177	38,941	90
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	464	-	-
	TMDL	(billion FC/yr)	4,642	38,941	90

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 12.72 billion FC/day.

7.3.21 Acabonac Harbor (1701-0031)

Table 7-38. WTM Fecal Coliform Loads to Acabonac

SOURCES	AH-1 Billion FC/year	AH-2 Billion FC/year	AH-3 Billion FC/year	AH-4 Billion FC/year	AH-5 Billion FC/year
POINT SOURCES					
Sewage Treatment Plant	0	0	0	0	0
RESIDENTIAL/URBAN LAND^{1,2}					
MS4 Contribution ³	0	0	0	0	0
Non-MS4 Contribution ⁴	48,290	43,625	16,191	16,162	13,027
OTHER NONPOINT SOURCES					
Rural Land	-	-	-	-	-
Forest	215	1,216	676	1,423	242
Waterfowl	219	1,599	318	934	241
TOTAL LOAD (Billions)	48,724	46,440	17,185	18,519	13,510
Water Body (ha)	8.09	59.08	11.74	34.40	8.9
Billions FC Load/ha/yr	6,023	786	1,464	538	1,518

¹ "Urban land" is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 31,126 (AH-1), 19,868 (AH-2), 4,257 (AH-3), 4,541 (AH-4), and 7,569 (AH-5) billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Note: A TMDL was not calculated for Zone AH-1 because, based on available water quality data, there were no coliform concentration exceedances

Table 7-39a. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Acabonac Harbor, Zone AH-2

Rollback Based on Station 133	Condition	Units	Acabonac Harbor (AH-2)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	46,440	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	46,440	-	-
TMDL	LA	(billion FC/yr)	25,600	17,996	45
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	2,844	-	-
	TMDL	(billion FC/yr)	28,445	17,996	45

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 77.93 billion FC/day.

Table 7-39b. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Acabonac Harbor, Zone AH-3

Rollback Based on Station FC-15	Condition	Units	Acabonac Harbor (AH-3)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	17,185	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	17,185	-	-
TMDL	LA	(billion FC/yr)	1,647	15,355	90
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	183	-	-
	TMDL	(billion FC/yr)	1,830	15,355	90

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 5.01 billion FC/day.

Table 7-39c. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Acabonac Harbor, Zone AH-4

Rollback Based on Station FC-4	Condition	Units	Acabonac Harbor (AH-4)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	18,519	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	18,519	-	-
TMDL	LA	(billion FC/yr)	1,253	17,126	93
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	139	-	-
	TMDL	(billion FC/yr)	1,393	17,126	93

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 3.82 billion FC/day.

Table 7-39d. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Acabonac Harbor, Zone AH-5

Rollback Based on Station FC-1	Condition	Units	Acabonac Harbor (AH-5)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	13,510	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	13,510	-	-
TMDL	LA	(billion FC/yr)	1,295	12,071	90
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	144	-	-
	TMDL	(billion FC/yr)	1,439	12,071	90

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 3.94 billion FC/day.

7.3.22 Lake Montauk (1701-0031)

Table 7-40. WTM Fecal Coliform Loads to Montauk Lake

SOURCES	LM-1 Billion FC/year	LM-2 Billion FC/year	LM-3 Billion FC/year
POINT SOURCES			
Sewage Treatment Plant	0	0	0
RESIDENTIAL/URBAN LAND^{1,2}			
MS4 Contributions ³	0	0	0
Non-MS4 Contributions ⁴	98,939	31,912	361,078
OTHER NONPOINT SOURCES			
Rural Land	-	-	1,154
Forest	1,323	1,194	4,882
Waterfowl	911	794	10,041
TOTAL LOAD (Billions)	101,173	33,900	377,155
Water Body (ha)	33.59	29.54	371.1
Billions FC Load/ha/yr	3,012	1,148	1,016

¹ "Urban land" is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 35,194 (LM-1), 851 (LM-2), and 121,571 (LM-3) billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-41a. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Montauk Lake, Zone LM-1

Rollback Based on Station FC-20	Condition	Units	Lake Montauk (LM-1)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	101,173	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	101,173	-	-
TMDL	LA	(billion FC/yr)	47,977	47,865	53
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	5,331	-	-
	TMDL	(billion FC/yr)	53,308	47,865	53

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 146.05 billion FC/day.

Table 7-41b. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Montauk Lake, Zone LM-2

Rollback Based on Station FC-5	Condition	Units	Lake Montauk (LM-2)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	33,900	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	33,900	-	-
TMDL	LA	(billion FC/yr)	15,148	17,069	55
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	1,683	-	-
	TMDL	(billion FC/yr)	16,831	17,069	55

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 46.11 billion FC/day.

Table 7-41c. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Montauk Lake, Zone LM-3

Rollback Based on Station FC-30	Condition	Units	Lake Montauk (LM-3)	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	377,155	-	-
	Permitted Point Source Contributions	(billion FC/yr)	0	-	-
	Total Existing Loads	(billion FC/yr)	377,155	-	-
TMDL	LA	(billion FC/yr)	187,710	168,588	50*
	WLA	(billion FC/yr)	0	0	0
	MOS	(billion FC/yr)	20,857	-	-
	TMDL	(billion FC/yr)	208,567	168,588	50*

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 571.42 billion FC/day.

* Note: Load reduction is based on the TC exceedance which was greater than the FC exceedance. The load reduction based on FC exceedance is 81.6%.

7.3.23 Oyster Pond (1701-0169)

Table 7-42. WTM Fecal Coliform Loads to Oyster Pond

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	0
Non-MS4 Contribution ⁴	47,407
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	16,096
Waterfowl	1,501
TOTAL LOAD (Billions)	65,004
Water Body (ha)	55.44
Billions FC Load/ha/yr	1,172

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 4,447 billion FC/year.

³ 0% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 100% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Note: A TMDL was not calculated for Oyster Pond due to the lack of data associated with the water body.

7.3.24 Little Sebonac Creek (1701-0253)

Table 7-43. WTM Fecal Coliform Loads to Little Sebonac Creek

SOURCES	Billion FC/year
POINT SOURCES	
Sewage Treatment Plant	0
RESIDENTIAL/URBAN LAND^{1,2}	
MS4 Contribution ³	22,397
Non-MS4 Contribution ⁴	22,397
OTHER NONPOINT SOURCES	
Rural Land	-
Forest	6,514
Waterfowl	2,957
TOTAL LOAD (Billions)	54,265
Water Body (ha)	109.27
Billions FC Load/ha/yr	497

¹ “Urban land” is a combination of residential land, commercial land, industrial land, and roadways.

² This source includes the load from domestic pets of 9,934 billion FC/year.

³ 50% of the residential/urban load was attributed to MS4 conveyances, based on a review of maps in Chapter 2 and land use data.

⁴ 50% of the residential/urban load was attributed to stormwater not flowing through MS4 conveyances.

Table 7-44. Summary of Current Fecal Coliform Loads and Percent Reductions Necessary to Meet Target TMDL Loads in Little Sebonac Creek

Rollback Based on Station FC-3	Condition	Units	Little Sebonac Creek	Load Reduction (billion FC/yr)	Load Reduction (%)
Existing Conditions	Nonpoint Sources	(billion FC/yr)	31,868	-	-
	Permitted Point Source Contributions	(billion FC/yr)	22,397	-	-
	Total Existing Loads	(billion FC/yr)	54,265	-	-
TMDL	LA	(billion FC/yr)	23,901	7,967	25
	WLA	(billion FC/yr)	6,779	15,618	70
	MOS	(billion FC/yr)	3,409	-	-
	TMDL	(billion FC/yr)	34,089	20,176	43

Note: The TMDL value reported in the table is the annually integrated value. The TMDL (daily) value is 93.40 billion FC/day.