

STATE OF NEW HAMPSHIRE

**2016 305(b) Category
4A, 4B, and 4C Impairments
Not Included in the 2018 305(b) Report**

January 3, 2020



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Introduction

In accordance with Section 303(d) of the federal Clean Water Act, states must prepare a list of impaired waters that require a Total Maximum Daily Load study every two years (i.e., the 303(d) List). The last approved 303(d) List was prepared by the New Hampshire Department of Environmental Services (NHDES) in 2012. The State’s final 2014 and 2016 Section 303(d) Lists of impaired waters were submitted to the US Environmental Protection Agency (USEPA) on March 27, 2017, and November 30, 2017, respectively. The USEPA issued partial approvals of the 2014 and 2016 Lists on March 16, 2018, and June 22, 2018, respectively. The 2014 partial approval covered all fresh waters and some estuarine waters, with the exception of Little Bay, the Bellamy River, the Cocheco River, the Upper Piscataqua River, Portsmouth Harbor, Little Harbor/Back Channel, Great Bay and Upper Portsmouth Harbor. The partial approval of the 2016 List had deferment of nearly the same list of waterbodies with one exception. The Cocheco River was included in the approved portion of the 2016 303(d) List. Due to the complexity of the assessment issues involved, the USEPA deferred action on the State’s list with respect to the aforementioned waterbodies until a later date when its review has been completed. Downloadable copies of the past lists as well as the draft 303(d) 2018 list are available on the NHDES website for review (<http://des.nh.gov/organization/divisions/water/wmb/swqa/index.htm>). This document provides a list of all surface waters and parameter combinations that were removed from categories 4A, 4B, or 4C impairments on the 2018 305(b) and the reasons why they were removed.

Assessment outcomes cover a spectrum from very good to very bad, coded as an alpha numeric scale that provides additional distinctions in cases where an impairment exists. In each of the deimpairments detailed within this document the 2016 and 2018 assessment status is highlighted applying the categories in the table below.

	Severe	Poor	Likely Bad	No Data	Likely Good	Marginal	Good
	Not Supporting, Severe	Not Supporting, Marginal	Insufficient Information – Potentially Not Supporting	No Data	Insufficient Information – Potentially Full Supporting	Full Support, Marginal	Full Support, Good
CATEGORY	Description						
Category 2	Meets standards					2-M or 2-OBS	2-G
Category 3	Insufficient Information		3-PNS	3-ND	3-PAS		
Category 4	Does not Meet Standards;						
4A	TMDL Completed	4A-P	4A-M or 4A-T				
4B	Other enforceable measure will correct the issue.	4B-P	4B-M or 4B-T				
4C	Non-pollutant (i.e. exotic weeds)	4C-P	4C-M				
Category 5	TMDL Needed	5-P	5-M or 5-T				

Bacteria for Primary Contact Recreation (i.e. swimming)

ATLANTIC OCEAN - CHAPEL BROOK (NHOCN000000000-04)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
ATLANTIC OCEAN - CHAPEL BROOK	NHOCN000000000-04	<i>Enterococcus</i>	NORTH HAMPTON	4A-P	3-ND

The Atlantic Ocean - Chapel Brook was originally impaired for *Enterococcus* for the primary contact recreation designated use in 2004 based on data collected at station BCHBASNHMCHAP. In 2016 it was discovered that station BCHBASNHMCHAP was mistakenly tied to the Atlantic Ocean - Chapel Brook (NHOCN000000000-04), but was actually located within the estuarine portion of Chapel Brook. It has since been re-associated to Chapel Brook (NHEST600031002-03) and all the data transferred. Chapel Brook (NHEST600031002-03) is currently assessed as category 2-M for enterococcus for the primary contact recreation designated use. Because the basis for the original impairment in 2004 was based on data not within the waterbody, and there is no additional data available, NHDES has deimpaired the Atlantic Ocean - Chapel Brook for *Enterococcus* for the primary contact recreation designated use. Because the data has aged out of the current assessment period (2013-2018) it has been placed in category 3-ND (no current data) for the 2018 cycle.

OTTER BROOK - BONE BROOK - CALEB BROOK - REDMAN BROOK - UNNAMED BROOK (NHRIV801010805-05)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
OTTER BROOK - BONE BROOK - CALEB BROOK - REDMAN BROOK - UNNAMED BROOK	NHRIV801010805-05	<i>Escherichia coli</i>	LANCASTER, KILKENNY	4A-M	3-ND

Otter Brook - Bone Brook - Caleb Brook - Redman Brook - Unnamed Brook was originally impaired for *Escherichia coli* for the primary contact recreation designated use in 2002 based on data collected at station 02-OTT. In 2010 it was discovered that station 02-OTT was mistakenly tied to Otter Brook - Bone Brook - Caleb Brook - Redman Brook - Unnamed Brook, but was actually located within Otter Brook - Unnamed Brook (NHRIV801010805-06). It has since been re-associated to NHRIV801010805-06 and all the data transferred. Otter Brook - Unnamed Brook (NHRIV801010805-06) is currently assessed as category 4A-P for *Escherichia coli* for the primary contact recreation designated use. Because the basis for the original impairment in 2002 was based on data not within the waterbody, and there is no additional data available, NHDES has deimpaired Otter Brook - Bone Brook - Caleb Brook - Redman Brook - Unnamed Brook (NHRIV801010805-05) for *Escherichia coli* for the primary contact recreation designated use. Because there is no other data in which to make an assessment, it has been placed in category 3-ND (no current data) for the 2018 cycle.

SALMON BROOK - EMERSON BROOK (NHRIV700010802-07)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
SALMON BROOK - EMERSON BROOK	NHRIV700010802-07	<i>Escherichia coli</i>	SANBORNTON	4A-P	3-ND

Salmon Brook - Emerson Brook was originally impaired for *Escherichia coli* for the primary contact recreation designated use in 2008 based on data collected at station 05-SLB. In 2010 it was discovered that station 05-SLB was mistakenly tied to Salmon Brook - Emerson Brook (NHRIV700010802-07), but was actually located within Salmon Brook (NHRIV700010802-10). It has since been re-associated within Salmon Brook and all the data transferred. Salmon Brook (NHRIV700010802-10) is currently assessed as category 4A-P for *Escherichia coli* for the primary contact recreation designated use. Because the basis for the original impairment in 2010 was based on data not within the waterbody, and there is no additional data available, NHDES has deimpaired the Salmon Brook - Emerson Brook (NHRIV700010802-07)

for *Escherichia coli* for the primary contact recreation designated use. Because there is no other data in which to make an assessment, it has been placed in category 3-ND (no current data) for the 2018 cycle.

Bacteria for Secondary Contact Recreation (i.e. boating)

ATLANTIC OCEAN - CHAPEL BROOK (NHOCN000000000-04)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
ATLANTIC OCEAN - CHAPEL BROOK	NHOCN000000000-04	<i>Enterococcus</i>	NORTH HAMPTON	4A-M	3-ND

The Atlantic Ocean - Chapel Brook was originally impaired for *Enterococcus* for the secondary contact recreation designated use in 2010 based on data collected at station BCHBASNHMCHAP. In 2016 it was discovered that station BCHBASNHMCHAP was mistakenly tied to the Atlantic Ocean - Chapel Brook (NHOCN000000000-04), but was actually located within the estuarine portion of Chapel Brook. It has since been re-associated to Chapel Brook (NHEST600031002-03) and all the data transferred. Chapel Brook (NHEST600031002-03) is currently assessed as category 2-G for *Enterococcus* for the secondary contact recreation designated use. Because the basis for the original impairment in 2010 was based on data not within the waterbody, and there is no additional data available, NHDES has deimpaired the Atlantic Ocean - Chapel Brook for *Enterococcus* for the secondary contact recreation designated use. Because the data has aged out of the current assessment period (2013-2018) it has been placed in category 3-ND (no current data) for the 2018 cycle.

Bacteria for Shellfish Consumption

BERRYS BROOK (NHEST600031002-01-02)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
BERRYS BROOK	NHEST600031002-01-02	Fecal Coliform	RYE	4A-P	3-PNS

The NHDES Shellfish Program is responsible for implementing the National Shellfish Sanitation Program (NSSP) and for determining NSSP classifications. As described in the CALM, the Shellfish Consumption designated use is assessed based on the classifications assigned by the NHDES Shellfish Program. In the 2016 assessment cycle this assessment unit (i.e. shellfishing zone) was classified as "RESTRICTED," or in 305(b)/303(d) terms, impaired with a completed TMDL (4A-P). The classification of this assessment unit (i.e. shellfishing zone) has been re-classified to "PROHIBITED, SAFETY ZONE," or in 305(b)/303(d) terms, Insufficient information (3-PNS). In this case, the shellfish area was closed as a result of the creation of a new safety zone around a wastewater treatment plant.

LOWER LITTLE BAY GENERAL SULLIVAN BRIDGE (NHEST600030904-06-15)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
LOWER LITTLE BAY GENERAL SULLIVAN BRIDGE	NHEST600030904-06-15	Fecal Coliform	NEWINGTON, DOVER	4A-M	3-PNS

The NHDES Shellfish Program is responsible for implementing the National Shellfish Sanitation Program (NSSP) and for determining NSSP classifications. As described in the CALM, the Shellfish Consumption designated use is assessed based on the classifications assigned by the NHDES Shellfish Program. In the 2016 assessment cycle this assessment unit (i.e. shellfishing zone) was classified as "CONDITIONALLY APPROVED," or in 305(b)/303(d) terms, impaired with a completed TMDL (4A-M). The classification of this assessment unit (i.e. shellfishing zone) has been re-classified to "PROHIBITED, SAFETY ZONE," or in 305(b)/303(d) terms, Insufficient information (3-PNS). In this case, the shellfish area was closed as a result of the creation of a new safety zone around a wastewater treatment plant.

LITTLE HARBOR (NHEST600031002-02)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
LITTLE HARBOR	NHEST600031002-02	Fecal Coliform	RYE, NEW CASTLE	4A-M	3-PNS

The NHDES Shellfish Program is responsible for implementing the National Shellfish Sanitation Program (NSSP) and for determining NSSP classifications. As described in the CALM, the Shellfish Consumption designated use is assessed based on the classifications assigned by the NHDES Shellfish Program. In the 2016 assessment cycle this assessment unit (i.e. shellfishing zone) was classified as “CONDITIONALLY APPROVED,” or in 305(b)/303(d) terms, impaired with a completed TMDL (4A-M). The classification of this assessment unit (i.e. shellfishing zone) has been re-classified to “PROHIBITED, SAFETY ZONE,” or in 305(b)/303(d) terms, Insufficient information (3-PNS). In this case, the shellfish area was closed as a result of the creation of a new safety zone around a wastewater treatment plant.

Dissolved Oxygen for Aquatic Life Integrity

BEACHES IMPAIRED BECAUSE OF DATA COLLECTED ON THE PARENT WATERBODY

In the past, beaches (a.k.a. the child) inherited the aquatic life integrity assessments of the lake (a.k.a. the parent) they resided upon regardless of aquatic life integrity data collection within the beach assessment unit. Realizing that this generated redundancy in the database that did not help in the management of the lake water quality and created a certain level of confusion with the public, this practice ceased in the 2010 assessment cycle. However, not all of the disconnected aquatic life integrity assessments of the children (beaches) were caught at that time. In keeping with the current approach the following waterbodies have been moved to 3-ND (no current data) for dissolved oxygen saturation for the aquatic life integrity designated use. This move of the child beach does not impact the assessment of parent lake assessment unit.

Assessment Unit Name	Assessment Unit ID	Parameter	Town(s) - Primary Town Listed First	2016	2018
ROBINSON POND - CAMP WINAHUPE BEACH	NHLAK700061203-06-03	Dissolved oxygen saturation	HUDSON	4A-M	3-ND
PAWTUCKAWAY LAKE - PAWTUCKAWAY STATE PARK BEACH	NHLAK600030704-02-02	Dissolved oxygen saturation	NOTTINGHAM	4A-M	3-ND
ROBINSON POND - TOWN BEACH	NHLAK700061203-06-02	Dissolved oxygen saturation	HUDSON	4A-M	3-ND
PAWTUCKAWAY LAKE - TOWN BEACH	NHLAK600030704-02-03	Dissolved oxygen saturation	NOTTINGHAM	4A-M	3-ND

Non-Native Aquatic Plants for Aquatic Life Integrity

Exotic macrophytes are non-native, fast-growing aquatic plants, which can quickly dominate and choke out native aquatic plant growth in the surface water. Examples of exotic macrophytes include variable milfoil (*Myriophyllum heterophyllum*), Eurasian milfoil (*Myriophyllum spicatum*), fanwort (*Cabomba caroliniana*) and water chestnut (*Trapa natans*). Such infestations are in violation of Env-Wq 1703.19, which states that surface waters shall support and maintain a balanced, integrated and adaptive community of organisms having a species composition, diversity and functional organization comparable to that of similar natural habitats of a region.

Assessment Category 4C represents cases where a waterbody is impaired or threatened for one or more designated uses but does not require the development of a TMDL because the impairment is not caused by a pollutant.

SUNAPEE LAKE (NHLAK801060402-05-01)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary Town Listed First	2016	2018
SUNAPEE LAKE	NHLAK801060402-05-01	Non-Native Aquatic Plants	SUNAPEE, NEW LONDON, NEWBURY	4C-M	3-PNS

Variable milfoil has been eradicated at all known locations, with no new locations documented in the last six years. Continued monitoring is warranted to ensure the infestation was eradicated and does not return. Because there is always the potential for variable milfoil to re-colonize in the lake due to outside factors, Sunapee Lake (NHLAK801060402-05-01) has been changed from 4C-M to 3-PNS for Non-Native Aquatic Plants for the aquatic life designated use.

WWTFs No Longer in 'Significant Non-Compliance' for Aquatic Life Integrity

Assessment Category 4B is reserved for cases where a waterbody is impaired or threatened for one or more designated uses but does not require the development of a TMDL because other pollution control requirements are reasonably expected to result in attainment of the water quality standard in the near future.

One form of Category 4B is triggered when a wastewater treatment facility (WWTF) is currently in "significant non-compliance" of its NPDES permit (as defined by USEPA), or is on the "exceptions list" (i.e. facilities that are in significant non-compliance for two or more quarters), for one or more of its permitted water quality based pollutant effluent limits. Water quality based effluent limits are limits derived from modeling or dilution calculations to meet water quality standards.

SOUHEGAN RIVER (NHRIV700060906-16)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary Town Listed First	2016	2018
SOUHEGAN RIVER	NHRIV700060906-16	Total Suspended Solids (TSS)	AMHERST, MILFORD	4B-T	3-PAS

The Milford WWTF was in violation of its NPDES permit (effective March 24, 2000) in January, March, April and May 2015 for effluent TSS monthly average concentration limit violations. The facility was in "significant non-compliance" for exceeding its effluent TSS monthly average concentration limits in excess of 40% for at least two months during two consecutive quarter review periods and in any excess for at least four months during two consecutive quarter review periods.

The 4B impairment of the Souhegan River (NHRIV700060906-16) for Aquatic Life Integrity due to excess Total Suspended Solids (TSS) has been removed. The Milford WWTF is no longer in significant non-compliance, and the Souhegan River has been placed in Category 3 (Insufficient Information).

CONNECTICUT RIVER (NHRIV801010404-02)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary Town Listed First	2016	2018
CONNECTICUT RIVER	NHRIV801010404-02	BOD, Biochemical oxygen demand	COLUMBIA, COLEBROOK	4B-T	3-PAS

The Colebrook WWTF was in violation of its NPDES permit (effective January 3, 2012) in February, March and April 2015 for effluent BOD monthly average concentration limit violations. The facility was in "significant non-compliance" for exceeding its BOD monthly average concentration limits in excess of 40 percent for at least two months during two consecutive quarter review periods. NHDES issued a Notice of Findings on October 16, 2015, to Colebrook to address

deficiencies at its WWTF and in turn eliminate its NPDES permit violations. It should be noted that the Colebrook WWTF (permit NH0100315) discharges directly to assessment unit NHRIV801010305-02. However, the outfall is approximately 150 feet upstream of assessment unit NHRIV801010404-02. Because the WWTF is more apt to affect the downstream assessment unit, any significant noncompliance issues will be associated to assessment unit NHRIV801010404-02.

The 4B impairment of the Connecticut River (NHRIV801010404-02) for Aquatic Life Integrity due to excess BOD, Biochemical oxygen demand has been removed. The Colebrook WWTF is no longer in significant non-compliance, and the Connecticut River has been placed in Category 3 (Insufficient Information).

BLOODS BROOK - UNNAMED BROOK (NHRIV801060301-05)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
BLOODS BROOK - UNNAMED BROOK	NHRIV801060301-05	Ammonia (Total)	PLAINFIELD	4B-T	3-PAS

The Meriden Village Water District (MVWD) WWTF was in violation of its NPDES permit (effective September 1, 2014) in May and June 2015, May and June 2016, and May and June 2017 for effluent ammonia nitrogen as nitrogen monthly average concentration limits. The facility has intermittently been in “significant non-compliance” during the period of July 2014 thru July 2017 for exceeding its effluent ammonia nitrogen as nitrogen monthly average concentration limits in excess of 40 percent for at least two months during two consecutive quarter review periods and/or in any excess for at least four months during two consecutive quarter review periods. MVWD has been working towards a groundwater discharge via Rapid Infiltration Basins (RIBs). Most recently in March 2017, MVWD applied for a temporary groundwater discharge permit to pilot test RIBs. On July 21, 2017 MVWD was issued a 2-year temporary groundwater discharge permit to pilot test RIBs located at the same site as the WWTF.

The 4B impairment of Bloods Brook - Unnamed Brook (NHRIV801060301-05) for Aquatic Life Integrity due to excess Ammonia (Total) has been removed. The MVWD WWTF is no longer in significant non-compliance, and Bloods Brook - Unnamed Brook has been placed in Category 3 (Insufficient Information).

SUNCOOK RIVER (NHRIV700060501-16)

Assessment Unit Name	Assessment Unit ID	Parameter Name	Town(s) - Primary	2016	2018
			Town Listed First		
SUNCOOK RIVER	NHRIV700060501-16	Phosphorus (Total)	PITTSFIELD, CHICHESTER	4B-T	3-PAS

The Pittsfield WWTF was issued NHDES AOC 16-014 WD on August 11, 2016, for Pittsfield to optimize its existing treatment processes to improve phosphorous removal capacity and efficiency, update its Facility Plan, and implement upgrades to its WWTF as necessary. Pittsfield has implemented chemical addition to eliminate its effluent phosphorous monthly average loading permit violations. Pittsfield has been in compliance with both its NPDES permit limit (1.5 lbs/day) and AOC interim limit (10 lbs/day) since June 2016.

The 4B impairment of the Suncook River (NHRIV700060501-16) for Aquatic Life Integrity due to excess Phosphorus (Total) has been removed. The Pittsfield WWTF is no longer in “significant non-compliance,” and the Suncook River has been placed in Category 3 (Insufficient Information).