



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

February 25, 2020

Robert Scott, Commissioner
New Hampshire Department of Environmental Services
Water Division
6 Hazen Drive, Box 95
Concord, NH 03302-0095

Re: New Hampshire's 2018 Clean Water Act §303(d) List

Dear Mr. Scott:

Thank you for submitting New Hampshire's 2018 Clean Water Act ("CWA") §303(d) list of water quality limited segments on August 8, 2019, as amended on January 3, 2020 and January 17, 2020. We received the January 17th amendment on January 27th.

In accordance with CWA §303(d) and 40 CFR §130.7, the U.S. Environmental Protection Agency (EPA) has conducted a review of the State's list, including supporting documentation. Based on this review, EPA has determined that New Hampshire's list of water quality limited segments still requiring Total Maximum Daily Loads (TMDLs) meets the requirements of CWA §303(d) and EPA implementing regulations. Therefore, EPA approves New Hampshire's 2018 final §303(d) list.

The letter sent by the New Hampshire Department of Environmental Services (NHDES) on January 3, 2020 requested that EPA remove from consideration the State's de-listings of many waterbody segments for dissolved oxygen percent saturation. The de-listings were a result of the New Hampshire legislature's action to remove dissolved oxygen percent saturation from the State's water quality standards. EPA supports the State's decision to return these assessment units to the §303(d) list, as the recent legislative changes to the State's water quality standards are not currently in effect for CWA purposes.

The State's January 17, 2020 letter requested that EPA remove from consideration the State's decision to exclude from the list nitrogen impairments, among other impairments in the following assessment units in the Great Bay estuary: Little Bay, Bellamy River, Upper Piscataqua River, Portsmouth Harbor, Little Harbor/Back Channel and Great Bay. EPA last approved the nitrogen listings for these assessment units in the context of New Hampshire's 2012 CWA §303(d) list. EPA's action on the State's 2014 and 2016 CWA §303(d) list submissions did not result in a change to the listing status of these assessment units for nitrogen

or any other parameters, and they remain on the list insofar as they were previously identified as impaired.

NHDES's January 17, 2020 letter noted that because there were delays in data processing and quality control, only one year of data (in addition to the data from the 2016 cycle) was available for the 2018 assessment of the above-referenced Great Bay estuary assessment units. The letter indicated that when the State addresses those assessment units in the 2020 list submission, there will be three additional years of data. NHDES indicated that it has already begun the process of compiling the 2020 CWA §303(d) list.

Thank you for your hard work in developing the 2018 CWA §303(d) list. My staff and I look forward to continuing our work with NHDES to implement the CWA. If you have any questions or need additional information please contact Ralph Abele at 617-918-1629 or Toby Stover at 617-918-1604.

Sincerely,

/s/

Ken Moraff, Director
Office of Water

Enclosure

cc: NHDES: Clark Freise, Ted Diers, Gregg Comstock, Ken Edwardson, Matt Wood

EPA REVIEW OF NEW HAMPSHIRE'S 2018 SECTION 303(d) LIST

INTRODUCTION

EPA has conducted a review of New Hampshire's 2018 section 303(d) list, supporting documentation and other information. Based on this review, EPA has determined that New Hampshire's list of water quality limited segments (WQLSs) still requiring total maximum daily loads (TMDLs) meets the requirements of section 303(d) of the Clean Water Act ("CWA" or "the Act") and EPA implementing regulations. The statutory and regulatory requirements for New Hampshire's 2018 section 303(d) list, and EPA's review of New Hampshire's compliance with each requirement, are described in detail below.

On January 3, 2020 New Hampshire Department of Environmental Services (NHDES) requested that EPA remove from consideration the State's delistings of many waterbody segments for dissolved oxygen percent saturation. The delistings were a result of the New Hampshire legislature's action to remove dissolved oxygen percent saturation from the State's water quality standards. EPA supports the State's decision to return these assessment units to the §303(d) list, as the recent legislative changes to the State's water quality standards are not currently in effect for CWA purposes.

On January 17, 2020 NHDES requested that EPA remove from consideration the State's decision to exclude from the list nitrogen impairments, among other impairments in the following assessment units in the Great Bay estuary: Little Bay, Bellamy River, Upper Piscataqua River, Portsmouth Harbor, Little Harbor/Back Channel and Great Bay. EPA last approved the nitrogen listings for these assessment units in the context of New Hampshire's 2012 CWA §303(d) list. EPA's action on the State's 2014 and 2016 CWA §303(d) list submissions did not result in a change to the listing status of these assessment units for nitrogen or any other parameters, and they remain on the list insofar as they were previously identified as impaired.

II. STATUTORY AND REGULATORY BACKGROUND

Identification of Water Quality Limited Segments for Inclusion on the Section 303(d) List

Section 303(d)(1) of the Act directs States to identify those waters within its jurisdiction for which effluent limitations required by section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of section 303(d).

EPA regulations provide that States do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based

effluent limitations required by the Act, (2) more stringent effluent limitations required by State or local authority, and (3) other pollution control requirements required by State, local, or federal authority. See 40 CFR §130.7 (b) (1).

Consideration of Existing and Readily Available Water Quality-Related Data And Information

In developing section 303(d) lists, States are required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the State's most recent section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate non-attainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any section 319 nonpoint assessment submitted to EPA. See 40 CFR §130.7(b) (5). In addition to these minimum categories, States are required to consider any other data and information that is existing and readily available. EPA's 2006 Integrated Report Guidance describes categories of water quality-related data and information that may be existing and readily available. See EPA's March 21st, 2011 memorandum on *Information Concerning 2012 Clean Water Act Sections 303(d), 305 (b), and 314 Integrated Reporting and Listing Decisions* which recommended that the 2012 integrated water quality reports follow the *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305 (b) and 314 of the Clean Water Act* (2006 Integrated Report Guidance (IRG)) issued July 29, 2005 (available at http://www.epa.gov/owow/tmdl/2006_IRG/) as supplemented by the October 12, 2006 memo and attachments, the May 5, 2009 memo and attachments, the November 15, 2010 memo, the March 21, 2011 memo and attachments, the September 3, 2013 memo and attachments, the August 13, 2015 memo and attachments and the December 22, 2017 memo and attachments. All guidance, memoranda and attachments may be found at: <https://www.epa.gov/tmdl/integrated-reporting-guidance-under-cwa-sections-303d-305b-and-314>

While States are required to evaluate all existing and readily available water quality-related data and information, States may decide to rely or not rely on particular data or information in determining whether to list particular waters. In addition to requiring States to assemble and evaluate all existing and readily available water quality-related data and information, EPA regulations at 40 CFR §130.7(b)(6) require States to include as part of their submissions to EPA, documentation to support decisions to rely or not rely on particular data and information and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; and (3) any other reasonable information requested by EPA.

Priority Ranking

EPA regulations also codify and interpret the requirement in section 303(d)(1)(A) of the Act that States establish a priority ranking for listed waters. The regulations at 40 CFR § 130.7(b)(4) require States to prioritize waters on their section 303(d) lists for TMDL development, and also to identify those WQLSs targeted for TMDL development in the next two years. In prioritizing and targeting waters, States must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. See section 303(d)(1)(A). As long as these factors are taken into account, the Act provides that States establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, and State or national policies and priorities. See 57 FR 33040, 33045 (July 24, 1992), and EPA's 2006 Integrated Report Guidance and the 2006, 2009, 2011, 2013, 2015 and 2017 memoranda and attachments.

III. ANALYSIS OF NEW HAMPSHIRE'S SUBMISSION

On January 24, 2019 the New Hampshire Department of Environmental Services (NH DES) released for public comment and review a draft version of its 2018 section 303(d) list as part of the State's 2018 Integrated Report (IR). Public comments on the draft version of the 2018 303(d) list were accepted until March 15, 2019. The final version of the 2018 303(d) list was issued on August 8, 2019 and amended on January 3, 2020 and on January 17, 2020. The State's August 8, 2019 section 303(d) list submittal included the following specific components:

1. The State of New Hampshire's 2018 section 303(d) list content introduction;
2. The State of New Hampshire's 2018 section 303(d) list;
3. A list of waters / impairments being removed or delisted from New Hampshire's section 303(d) list;
4. A list of waters/impairments being added to New Hampshire's section 303(d) list
5. New Hampshire's 2018 sections 305(b) and 303(d) Consolidated Assessment and Listing Methodology (CALM) and NHDES's Response to Public Comments on the CALM;
6. New Hampshire's Response to Public Comments on the January 24, 2019 draft 303(d) list; and
7. Technical Support Document for the Great Bay Estuary Aquatic Life Use Support Assessments 2018 305(b) Report/303(d) List

New Hampshire's section 303(d) list contains water segments for which available data and/or other information indicates that a water segment is not meeting water quality standards because it is impaired or threatened by one or more pollutants for one or more designated uses, and for which a Total Maximum Daily Load (TMDL) is therefore required to be established. EPA's regulations at 40 CFR §130.7 require EPA to review and approve, or disapprove, a State's section 303(d) list.

Pursuant to EPA's Integrated Report Guidance related to assessment and listing of waters pursuant to sections 305(b) and 303(d) of the CWA, States list their waters in one or more of five categories, depending on the status of each water body's attainment of water quality standards. Category 5 corresponds to the section 303(d) list. Category 4 is comprised of waters that are not meeting water quality standards, but for which a TMDL need not be established due to one of three reasons. Category 4A contains waters for which a TMDL has already been established and approved by EPA. Category 4B includes waters, for which a "functionally equivalent" control action has been developed and is being implemented, i.e., an impairment caused by a pollutant is being addressed through other pollution control requirements. Category 4C contains waters that are not attaining water quality standards due to pollution that is not associated with a pollutant. Although waters in Category 4 are not on the section 303(d) list, EPA reviews a State's Category 4 list to ensure that the waters are categorized appropriately and do not, in fact, belong on the section 303(d) list. NHDES included waters in Category 4 with its 2018 submission to EPA.

Public Participation

New Hampshire conducted a public participation process, in which it provided the public an opportunity to review and comment on the State's draft 2018 section 303(d) list. A public comment period opened on January 24, 2019 and closed on March 15, 2019. NHDES posted its draft list on the Department's website in multiple locations and notified nearly 1,500 stakeholders by direct email notification. During the preliminary review of the public comments received, NHDES realized that it was appropriate to list Mill Pond as impaired for cyanobacteria on the 2018 303(d) list. A separate public comment period was opened on March 26, 2019 to solicit comments on this waterbody for the cyanobacteria impairment only. NHDES received a total of 12 comment submissions on the January 24, 2019 version of the draft and the additional public comment period for Mill Pond. NHDES assigned a reference or section number to individual comments to aid in identifying instances when a NHDES response applied to multiple individual comments and to ensure that all comments had been appropriately addressed. On August 8, 2019 NHDES released the final version of the 2018 303(d) list which included the responses to all comments received on the draft 303(d) list.

A majority of the comments received during the comment period on the 2018 303(d) list pertain to the Great Bay Estuary. The evaluation of the State's responses to comments in this document will only relate to those comments and responses that do not pertain to the Great Bay Estuary. Since NHDES has withdrawn from delisting

consideration certain assessment zones in the Great Bay estuary for the 2018 cycle, EPA will evaluate the State's responses to Great Bay Estuary-related comments at a later date when those assessment zones are submitted for evaluation. EPA is also not taking action on a group of de-listings for dissolved oxygen percent saturation impairment that result from changes to New Hampshire's water quality standards which have also been withdrawn by the State from consideration for the 2018 cycle. The changes to the State statute that removed the dissolved oxygen percent saturation standards have not been approved by EPA. The State's numbering of its responses to comments will be retained in order to reduce potential confusion.

Summary of Comments Received on the January 24, 2019 draft 303(d) list:

1. Andrew Kohlhofer, Fremont, NH resident

Summary of Comment: The commenter is concerned with whether EPA and NHDES have the authority to make assessment decisions on New Hampshire waters as they do not meet the definition of "interstate navigable waters." Additionally, the commenter does not believe that NHDES has been specifically authorized by the State Legislature of New Hampshire to make assessment decisions on New Hampshire waters.

Summary of Response: NHDES explains that while these comments do not pertain to the CALM document or the 303(d) list, they do warrant a response. NHDES explains how EPA and NHDES define waters of the United States and waters of the State of New Hampshire and the authority of both agencies respectively. Additionally, NHDES explains how the Clean Water Act and New Hampshire's statutes define each agency's obligations to assess and report on the quality of New Hampshire's waters and notes that each agency is specifically obligated to do so.

2. Leslie Bergum, Ammonoosuc River-Volunteer River Assessment Program

Summary of Comment: The commenter raises two issues related to two assessment units of the Ammonoosuc River. The commenter expresses support for the listing of the Ammonoosuc River (NHRIV801030506-10) for aluminum and offers the sampling assistance of the Volunteer River Assessment Program if NHDES needs assistance with sampling of this assessment unit in the future. The second issue pertains to the Ammonoosuc River (NHRIV801030403-03) for violations of the Biological Oxygen Demand limit in the NPDES permit for the Bethlehem Wastewater Treatment Facility.

Summary of Response: NHDES responded by saying that the designation of this assessment unit into Category 4B-T was based on one quarter of data from late 2017 and early 2018 where the treatment plant did not meet its permit requirements. Since March 2018 the treatment plant has been in compliance and NHDES and EPA continue to provide oversight to ensure that the treatment plant maintains compliance with its permit requirements.

3. Michele L. Tremblay, Upper Merrimack River Local Advisory Committee

Summary of Comment: The commenter expressed concurrence with NHDES' assessment and listing decisions in the section of the Merrimack River from Franklin to Bow. The

commenter alerted NHDES that they are working with other partners on a Turkey River Watershed and Restoration and Management Plan and that they will be providing data on water quality and organism passage at a later date to NHDES.

Summary of Response: NHDES responded by expressing appreciation that the commenter took the time to review the data for the Merrimack River section of interest.

4. Fred Quimby, New Durham, NH resident

Summary of Comment: The commenter requested that Mill Pond (NHLAK700020102-04) in Alton, NH be added to the 2018 303(d) list as impaired for cyanobacteria hepatotoxic microcystins for the primary contact recreation designated use. The commenter provided historical perspective as well as observations in recent years of cyanobacterial blooms. Data from the University of New Hampshire showing elevated phosphorus was also included.

Summary of Response: Based on the additional information, NHDES gained a new perspective on the frequency of cyanobacterial blooms and the likelihood of blooms occurring and being reported by members of the public. This information in conjunction with the bloom that occurred in 2018 caused NHDES to place this waterbody in Category 5-M and to open a public comment period on this new listing decision. NHDES did not receive any new comments on this waterbody or its decision to list this waterbody as impaired for cyanobacteria hepatotoxic microcystins for the primary contact designated use.

5. Sarita S. Croce, Town of Merrimack

Summary of Comment: The commenter summarizes work conducted by CDM Smith and the Army Corps of Engineers on the Merrimack River which has determined that there are no aquatic health risks due to low dissolved oxygen and that there are no aquatic life or recreational use impairments on the river. The commenter also points out that pheophytin concentration can interfere with chlorophyll-a measurements and can give artificially high concentration values which is likely the case in the Merrimack River which is causing the assessment unit NHRIV700061206-24 to be listed for chlorophyll-a impairment. The commenter believes that NHDES' assessments should better align with the study that has been done and that the mainstem Merrimack River should not be classified as impaired for dissolved oxygen and chlorophyll-a. The commenter also raises questions about the methods that NHDES used to make the aluminum impairment decision in the Souhegan River and whether the latest criteria are being used and whether the latest EPA calculator tool was used to make the calculations.

Summary of Response: NHDES responded by pointing out the sampling and modeling limitations of the CDM Smith and Army Corps study. NHDES agreed with the comments regarding the potential impacts of pheophytin on chlorophyll-a, but explained that both substances can give a waterbody a green color which impairs the primary contact recreation designated use. NHDES explained that the chlorophyll-a threshold for impairment was not developed for a particular method, therefore it is applicable to both compounds. NHDES also explained that listing decisions are not based on a single

sample and most samples are corrected for pheophytin. An explanation of the samples used in the impairment decision shows that NHDES' decision was justified. NHDES points out additional limitations of the modeling study and how its decisions are justified. For the question regarding aluminum, NHDES explained that the EPA criteria are recent and NHDES has not yet adopted these new criteria into water quality standards, so the criteria cannot be used to make assessment decisions.

Identification of Waters and Consideration of Existing and Readily Available Water Quality Related Data and Information

EPA has reviewed the State's submission and has concluded that the State developed its section 303(d) list in compliance with section 303(d) of the Act and 40 CFR § 130.7. EPA's review is based on its analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed.

New Hampshire used the NHDES assessment database to develop its 2018 section 303(d) list. The same database was used to assist in the preparation of the biennial section 305(b) report. NHDES provides ongoing notice on its website to request data from outside sources. Information received from outside sources was assessed in accordance with the State's assessment methodology. In the development of the 2018 section 303(d) list, New Hampshire began with its existing partial EPA-approved 2016 section 303(d) list and relied on new water quality assessments to update the list accordingly. New Hampshire believes that information pertaining to impairment status must be well substantiated, preferably with actual monitoring data, for it to be used in section 303(d) listing.

Priority Ranking

As described in its methodology, New Hampshire established a priority ranking for listed waters by considering: 1) the presence of public health issues, 2) natural/outstanding resource waters, 3) threat to federally threatened or endangered species, 4) public interest, 5) available resources, 6) administrative or legal factors (i.e., NPDES program support or court order), and 7) the likelihood of implementation after the TMDL has been completed.

Individual priority rankings for listed waters are presented as the date shown on the section 303(d) list which indicates when the TMDL is expected to be completed. EPA finds that the water body prioritization and targeting method used by New Hampshire is reasonable and sufficient for purposes of section 303(d). The State properly took into account the severity of pollution and the uses to be made of listed waters, as well as relevant factors described above.

Waters which are not listed on New Hampshire's 2018 section 303(d) list

The following section provides a summary of NHDES' rationale supporting decisions not to include certain newly identified waters and certain waters previously listed on the State's 2016 303(d) list. As discussed below, the State has demonstrated, to EPA's satisfaction, good cause for not listing the following waters, as provided in 40 CFR §130.7(b)(6)(iv).

EPA approves the State's section 303(d) list without the following water body-pollutant combinations because the removal of these listings is consistent with EPA's regulations and EPA's Guidance for Assessment, Listing and Reporting Requirements.

Dissolved Oxygen for Aquatic Life Integrity

McQuesten Brook (NHRIV700060803-16)

McQuesten Brook has been extensively sampled (n=526) using both grab and data logger samples between 2013-2018 with no violations of the 5.0 mg/L dissolved oxygen concentration water quality standard. Extensive restoration activities have occurred on this waterbody since 2011 which has resulted in the removal of 4 dams, 1 obstruction and 2 culverts. As a result of the restoration activities, McQuesten Brook now meets water quality standards for dissolved oxygen concentration and is being delisted from Category 5-P (Not Supporting-Poor) to Category 2-G (Full Support-Good).

Mitigation Wetland (NHLAK600030708-03)

This waterbody was mistakenly listed as impaired for dissolved oxygen concentration and saturation in 2010. This was due to samples collected below the top 25% of the water column depth. The samples were collected at 1.5 meters, while the waterbody is only 2 meters deep and the waterbody does not thermally stratify, which changes the assessment procedure for dissolved oxygen. The samples should only have been analyzed for the top 25% of the water column. The ten samples that were collected in the upper 25% met standards, but it is not a sufficient sample size from which to make an impairment decision. Therefore, this waterbody is being delisted to Category 3-ND (Insufficient Information) from Category 5-M (Not Supporting-Marginal).

Beaches Originally Impaired Because of Data Collected on the Parent Waterbody (See Table of Waterbodies on pages 8-10 of NHDES' Waterbody Delisting Document)

This group of beach segments was listed as impaired due to data that was collected from the parent waterbody regardless of whether data were collected within the beach assessment unit. This practice lead to confusion for the public, and starting with the 2010 assessment cycle, NHDES stopped this practice and began delisting these segments. Delisting these segments has no impact on the parent waterbody listing. These segments are being delisted to Category 3-ND (Insufficient Information) from Category 5-M (Not Supporting-Marginal).

Chloride for Aquatic Life Integrity

Nashua River- Mine Falls Dam Pond (NHIMP700040402-02)

This assessment unit was originally listed as impaired for chloride in 2006 based on data collected at station MINNASD which was identified in 2014 as being located within the Nashua River- Canal Dike (NHIMP700040402-03) assessment unit. The location discrepancy has been corrected and the impairment data has been associated with the Nashua River-Nashua Canal Dike assessment unit which will now be listed as impaired in Category 5-M (Not Supporting-Marginal). The most recent data for Nashua River-Mine Falls Dam Pond is from 1998-1999 which is outside of the assessment period, so this assessment unit is being delisted into Category 3-ND (Insufficient Information).

Chlorophyll-a and Total Phosphorus for Aquatic Life Integrity

Blaisdell Lake (NHLAK700030302-02)

Blaisdell Lake has been meeting the chlorophyll-a threshold for the 10-year median since the 2014 cycle and the 10-year median for total phosphorus has never exceeded the oligotrophic threshold. The total phosphorus trend is decreasing and water clarity in the lake has been improving. Therefore, both parameters are being delisted to Category 2-M (Full Support-Marginal).

Captain Pond (NHLAK7000661102-03-01)

Captain Pond was previously listed as impaired for both chlorophyll-a and total phosphorus for aquatic life use. On September 28, 2017 EPA approved the “Total Maximum Daily Load for Phosphorus for Captain Pond, Salem, NH” which addresses both the chlorophyll-a and phosphorus impairments. As a result of the approval of the TMDL, both impairments are delisted to Category 4A-M (Not Supporting-Marginal).

Chestnut Pond (NHLAK700060502-03)

Chestnut Pond was previously listed for chlorophyll-a and total phosphorus impairment of the aquatic life use. Chlorophyll-a 10-year median values have been below the threshold for the past two listing cycles and chlorophyll-a values are showing a decreasing long-term trend. For these reasons the chlorophyll-a impairment is being delisted to Category 2-M (Full Support-Marginal). Total phosphorus median values have remained steady at 8.3 µg/L which is just above the 8.0 µg/L threshold. This impairment is being moved to Category 3-PNS (Insufficient Information-Potentially Not Supporting) due to the response variable (chlorophyll-a) now meeting standards. This conclusion is supported by the decision matrix for phosphorus impairment in the CALM document.

Lake Winnepocket (NHLAK700030304-08)

Lake Winnepocket was previously listed for chlorophyll-a and total phosphorus impairment of the aquatic life use. The 10-year median values for chlorophyll-a have been at or below the threshold since the 2014 listing cycle. Total phosphorus 10-year median values have consistently been below the threshold for

oligotrophic lakes since 2010. Therefore, the chlorophyll-a and total phosphorus impairments are being delisted to Category 2-M (Full Support-Marginal).

Phillips Pond (NHLAK600030802-03-01)

Phillips Pond was previously listed for chlorophyll-a and total phosphorus impairment of the aquatic life use. On September 27, 2018, EPA approved the “Total Maximum Daily Load for Phosphorus for Phillips Pond, Sandown, NH”. As a result of the TMDL approval, both impairments are being delisted to Category 4A-M (Not Supporting-Marginal).

Cyanobacteria for Primary Contact Recreation (i.e., swimming)

Great Pond (NHLAK700061403-06-01) and Great Pond-Kingston State Park Beach (NHLAK700061403-06-02)

Great Pond and Great Pond-Kingston State Park Beach were both listed as impaired for cyanobacteria hepatotoxic microcystins in 2010 due to a cyanobacteria bloom that was documented in 2009. Since 2009 no blooms have been reported by either the Volunteer Lake Assessment Program monitors or by NHDES Beach Program staff. Phosphorus and chlorophyll-a 10-year median values are both below the thresholds for mesotrophic lakes. Due to the fact that no documented blooms have occurred recently and both phosphorus and chlorophyll-a are low, these two assessment units are being delisted from Category 5-M (Not Supporting-Marginal) to Category 2-M (Full Support-Marginal).

Kezar Lake (NHLAK700030303-03-01) and Kezar Lake-Wadleigh State Park Beach (NHLAK700030303-03-02)

Kezar Lake and Kezar Lake-Wadleigh State Park Beach were listed as impaired in 2008 for cyanobacteria hepatotoxic microcystins due to a bloom in 2008 and a history of blooms in the lake due to excess phosphorus. Restoration efforts in the lake allowed it to be delisted for total phosphorus and chlorophyll-a for the aquatic life use in 2012. The listing for primary contact recreation was retained and the last documented bloom occurred in 2012. The lake is extensively monitored by Volunteer Lake Assessment Program, NHDES staff and State Park staff. The 10-year median values for total phosphorus and chlorophyll-a are either equal to, or less than the threshold values for a mesotrophic lake. The lack of documented blooms since 2012, combined with total phosphorus and chlorophyll-a values that meet threshold values, and extensive monitoring, have resulted in these two assessment units being delisted from Category 5-M (Not Supporting-Marginal) to Category 2-M (Full Support-Marginal).

Mirror Lake (NHLAK700020106-02-01) and Mirror Lake-Mirror Lake Beach (NHLAK700020106-02-02)

Mirror Lake and Mirror Lake-Mirror Lake Beach were listed as impaired for primary contact recreation due to cyanobacteria hepatotoxic microcystins as a result of a documented bloom in 2008. The lake was sampled twice in 2011 and both samples were below the impairment threshold. This lake receives extensive monitoring through the Volunteer Lake Assessment Program as well as through sampling conducted by NHDES Beach Program staff. No blooms have been documented since 2008 and recent research

shows that cyanobacteria are present in the lake, but generally at low levels or in deep parts of the lake that would not affect the primary contact designated use. Total phosphorus is slightly higher than the threshold for mesotrophic lakes, but chlorophyll-a is below the threshold value. Based on the lack of recent documented blooms and the fact that chlorophyll-a levels are below the threshold value, these two waterbodies are being delisted from Category 5-M (Not Supporting-Marginal) to Category 2-M (Full Support-Marginal).

Phillips Pond (NHLAK600030802-03-01) and Phillips Pond Town Beach Sandown (NHLAK600030802-03-02)

Phillips Pond was listed as impaired for cyanobacteria hepatotoxic microcystins due to an overabundance of phosphorus inputs and internal phosphorus loading to the lake. On September 27, 2018, EPA approved the “Total Maximum Daily Load for Phosphorus for Phillips Pond, Sandown, NH” which addressed phosphorus loading in the lake and will provide a plan to insure attainment of water quality standards for cyanobacteria, total phosphorus, chlorophyll-a and dissolved oxygen. These two assessment units are being delisted to Category 4-A (Not Supporting-Marginal) as a result of the completion and approval of the TMDL document.

Toxics for Aquatic Life Integrity

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for DDD in 2006 for samples collected in 2003. These samples were reported as <9 µg/kg. 9µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the TEC threshold of 3.54 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for DDD for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for Acenaphthene in 2006 for samples collected in 2003. These samples were reported as <40 µg/kg and <50 µg/kg . 50µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the TEC threshold of 6.71 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below detection limit, but still violate the criteria. There are no current data for DDD for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for 2-Methylnaphthalene in 2006 for samples collected in 2003. These samples were reported as <40 µg/kg and

<50 µg/kg. 50µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the TEC threshold of 20.2 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for 2-Methylnaphthalene for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for DDE in 2006 for samples collected in 2003. These samples were reported as <9 µg/kg. 9µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the TEC threshold of 1.42 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for DDD for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for Dieldrin in 2006 for samples collected in 2003. These samples were reported as <9 µg/kg. 9µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the TEC threshold of 2.85 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for Dieldrin for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for Endrin in 2006 for samples collected in 2003. These samples were reported as <9 µg/kg. 9µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the TEC threshold of 2.67 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for Endrin for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for Heptachlor in 2006 for samples collected in 2003. These samples were reported as <9 µg/kg. 9µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as

half the detection limit. Half the detection limit is greater than the TEC threshold of 0.60 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for Heptachlor for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Ashuelot River-Fisk Mill Hydro (NHIMP802010403-04)

Ashuelot River-Fisk Mill Hydro was listed as impaired for Lindane in 2006 for samples collected in 2003. These samples were reported as <9 µg/kg. 9µg/kg is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the TEC threshold of 0.94 µg/kg which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for Lindane for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Black Brook (NHRIV700060801-05-02)

Black Brook was originally listed as impaired in 2006 for mercury due to two samples collected in 2000 that were incorrectly converted between nanograms and micrograms. The mistaken results were multiplied by 1000, which resulted in high values which caused the segments to be listed. There is currently no recent information to be used to assess this water body for mercury pollution, so this assessment unit is being delisted to Category 3-ND (Insufficient Information-No Data).

Cocheco River (NHEST600030608-01)

The Cocheco River was listed in 2006 for Biphenyl based on sediment data collected for the EPA National Coastal Condition Assessment. These data were mistakenly assigned to the impairment category as all of the samples were well below the impairment threshold. There are no current data for Biphenyl, so this assessment unit is being delisted to Category 3-ND (Insufficient Information-No Data).

Isinglass River (NHRIV600030605-11)

The Isinglass River was originally listed in 2006 as impaired for lead based on a sample taken in 2000. The sample was reported as <1 µg/L. 1µg/L is the detection limit and according to NHDES protocols, the value should have been entered as half the detection limit. Half the detection limit is greater than the chronic threshold of 0.12 µg/L which is what caused the assessment unit to be listed. NHDES has implemented additional QA/QC procedures to ensure that it does not make impairment determinations based on samples that are below the detection limit, but still violate the criteria. There are no current data for lead for this assessment unit, so it is being delisted to Category 3-ND (Insufficient Information-No Data).

Mascoma River (NHRIV801060106-20)

The Mascoma River was originally listed as impaired for aluminum based on high values at station 01-MSA. In 2014, NHDES clarified that the aluminum criteria in New Hampshire is based on the acid-soluble fraction, not total aluminum, which is consistent with EPA's 1988 ambient water quality criteria. It is likely that the acid-soluble fraction of a sample is lower than the total aluminum value. Sampling conducted between 2014 and 2017 has produced acid-soluble values that are below the chronic criteria of 87µg/L. Based on the recent sampling data, this assessment unit is being delisted to Category 2-G (Full Support-Good).

Salmon Brook-Emerson Brook (NHRIV700010802-07)

Salmon Brook-Emerson Brook was listed as impaired for aluminum in 2008 for data collected from station 05-SLB. It was discovered in 2010 that this station was mistakenly associated with Salmon Brook-Emerson Brook when it should have only been associated with Salmon Brook (NHRIV7000110802-10). The data have been transferred to the Salmon Brook assessment unit and the Salmon Brook-Emerson Brook assessment unit is now being delisted to Category 3-ND (Insufficient Information-No Data) due to the fact that there is no recent data for this assessment unit.

Sugar River (NHRIV801060407-16)

The Sugar River was originally listed as impaired for aluminum based on high values at station 01-SGR. In 2014, NHDES clarified that the aluminum criteria in New Hampshire is based on the acid-soluble fraction, not total aluminum, which is consistent with EPA's 1988 ambient water quality criteria. It is likely that the acid-soluble fraction of a sample is lower than the total aluminum value. Sampling conducted between 2014 and 2017 has produced acid-soluble values that are below the chronic criteria of 87µg/L. Based on the recent sampling data, this assessment unit is being delisted to Category 2-G (Full Support-Good).

pH for Aquatic Life Integrity

Colburn Hill Brook-Unnamed Brook (NHRIV801070203-21)

Colburn Hill Brook was originally listed for pH in 2010 and since 2012 has had less than 10% of samples exceed the water quality standard for pH of 6.5. Data were collected under similar weather and flow conditions as the samples that exceeded water quality standards. Since there has only been 1 exceedance in 16 samples (6.3%), this assessment unit is being delisted to Category 2-M (Full Support-Marginal).

Loon Pond Brook (NHRIV700010104-06)

Loon Pond Brook was listed as impaired for pH in 2008 for data collected from station LOON-LPB1. It was discovered in 2010 that this station was mistakenly associated with Loon Pond Brook (NHRIV700010104-06) when it should have only been associated with Loon Pond Brook (NHRIV700010104-05). The data have been transferred to the correct assessment unit and the Loon Pond Brook assessment unit is now being delisted to Category 3-ND (Insufficient Information-No Data) due to the fact that there is no recent data for this assessment unit.

Nighthawk Hollow Brook-Ayers Branch-Unnamed Brook (NHRIV700060402-04)

Nighthawk Hollow Brook-Ayers Branch-Unnamed Brook was listed as impaired for pH in 2002 for data collected from station SUNUBRNS. It was discovered in 2009 that this station was mistakenly associated with Nighthawk Hollow Brook-Ayers Branch-Unnamed Brook (NHRIV700060402-04) when it should have been associated with Suncook River-Unnamed Brook (NHRIV700060402-18). The data have been transferred to the correct assessment unit and the Nighthawk Hollow Brook-Ayers Branch-Unnamed Brook assessment unit is now being delisted to Category 3-ND (Insufficient Information-No Data) due to the fact that there is no recent data for this assessment unit.

North Branch River (NHRIV600030702-09)

The North Branch River was listed as impaired for pH in 2008 for data collected from station 01-NBR. It was discovered in 2011 that this station was mistakenly associated with the North Branch River (NHRIV600030702-09) when it should have been associated with North Branch River-Unnamed Rivers (NHRIV600030702-07). The data have been transferred to the correct assessment unit and the North Branch River assessment unit is now being delisted to Category 3-ND (Insufficient Information-No Data) due to the fact that there is no recent data for this assessment unit.

Sugar River (NHRIV801060405-04)

The Sugar River was listed as impaired for pH in 2006 for data collected from station SUNSUN610. It was discovered in 2014 that this station was mistakenly associated with the Sugar River (NHRIV801060405-04) when it should have been associated with Sunapee Lake (NHLAK801060402-05-01). The data have been transferred to the correct assessment unit and the Sugar River assessment unit is now being delisted to Category 3-ND (Insufficient Information-No Data) due to the fact that there is no recent data for this assessment unit.

Wilson Pond Brook-To South Branch Ashuelot River (NHRIV802010303-26)

Wilson Pond Brook-To South Branch Ashuelot River was listed in 2010 for violations of the water quality standard for pH. Recent sampling (2012-2018) has shown 100% compliance with the water quality standard for pH. Based on the recent data, Wilson Pond Brook-To South Branch Ashuelot River is being delisted to Category 2-M (Full Support-Marginal).

Macroinvertebrates for Aquatic Life Integrity

Hewes Brook (NHRIV801040402-04)

Hewes Brook was listed as impaired for Benthic-Macroinvertebrate Bioassessments in the 2012 cycle based on a sample collected in 2010. Hewes Brook has several different habitat types that represent different gradient regimes. The sample collected in 2010 was collected from a low gradient portion of the stream, while samples collected in 2003 and 2015 were collected from higher gradient portions of the stream. The NH Index of Biotic Integrity is better suited to evaluate moderate to high gradient streams and is therefore

more applicable to the 2003 and 2015 samples, which both met the criteria for benthic macroinvertebrates. Based on the 2003 and 2015 samples, Hewes Brook is being delisted to Category 2-M (Full Support-Marginal).

Waters impaired by nonpoint sources of pollution

The State properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with section 303(d) and EPA guidance. Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the source of the impairment is a point and/or nonpoint source. EPA's long-standing interpretation is that section 303(d) applies to waters impacted by point and/or nonpoint sources. In 'Pronsolino v. Marcus,' the District Court for Northern District of California held that section 303(d) of the Clean Water Act authorizes EPA to identify and establish total maximum daily loads for waters impaired by nonpoint sources. Pronsolino v. Marcus, 91 F. Supp. 2d 1337, 1347 (N.D.Ca. 2000). This decision was affirmed by the 9th Circuit court of appeals in Pronsolino v. Natri, 291 F.3d 1123 (9th Cir. 2002). See also *EPA's Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act*, EPA Office of Water, July 29, 2005.