UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

April 11, 2018

Alicia Good, Assistant Director
Rhode Island Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, RI 02908

Dear Ms. Good:

Thank you for your submission of the State of Rhode Island's 2016 Clean Water Act (CWA) Section 303(d) list of impaired waters. In accordance with Section 303(d) and 40 CFR §130.7, the U.S. Environmental Protection Agency, Region 1 (EPA) conducted a complete review of Rhode Island's 2016 Section 303(d) list and supporting documentation. Based on this review, EPA has determined that Rhode Island's 2016 Section 303(d) list meets the requirements of Section 303(d) of the CWA and EPA's implementing regulations. Therefore, by this letter, EPA hereby approves the State's Section 303(d) list, submitted to EPA on March 28, 2018.

Rhode Island's submission includes a list of water bodies for which technology-based and other required controls for point and nonpoint sources are not stringent enough to attain or maintain compliance with the State's Water Quality Standards. As required, this list includes a priority ranking for each listed water body and specifically identifies waters targeted for total maximum daily load (TMDL) development in the next two years. A long-term schedule for developing TMDLs for all waters on the State's list was also provided. The statutory and regulatory requirements, and EPA's review of the State's compliance with these requirements, are described in detail in the enclosed approval document.

Assessments of state waters conducted under Sections 305(b) and 303(d) of the CWA should be prepared in a manner to support their submission to EPA by April 1 of even numbered years in accordance with those sections of the CWA and 40 CFR §130.7. In addition, waters should be assessed using Water Quality Standards that are approved and in effect at the time of the assessment.

The Rhode Island Department of Environmental Management (RI DEM) has successfully completed a public participation process that provided the public an opportunity to review and comment on the State's 2016 Section 303(d) list. We understand you did not receive any public comments except for those which EPA provided. Thank you for your responses to our comments.

My staff and I look forward to continued cooperation with RI DEM in implementing the requirements of Section 303(d) of the CWA. If you have any questions regarding EPA's review or this approval, please contact Ralph Abele at (617) 918-1629 or have your staff contact Steven Winnett at (617) 918-1687.

Sincerely,

/s/

Ken Moraff, Director
Office of Ecosystem Protection

Enclosure

cc: Angelo Liberti, RI DEM

Elizabeth Scott, RI DEM
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Ralph Abele, EPA
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Greg Dain, EPA
Steven Winnett, EPA

EPA NEW ENGLAND'S REVIEW OF
RHODE ISLAND'S 2016 CWA SECTION 303(d) LIST

I. INTRODUCTION

EPA has conducted a complete review of Rhode Island's (RI) 2016 Section 303(d) list and supporting documentation and information. Based on this review, EPA has determined that Rhode Island'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. Therefore, EPA hereby approves Rhode Island's 2016 final Section 303(d) list, submitted on March 28, 2018. The Section 303(d) list will be a component of the State's *2016 Integrated Water Quality Report to Congress submitted pursuant to the Federal Clean Water Act Sections 305(b) and 303(d)* (the "IR"), which will be submitted later this calendar year. The statutory and regulatory requirements, and EPA's review of Rhode Island's compliance with each requirement, are described in detail below.

The purpose of this review document is to describe the rationale for EPA's approval of Rhode Island's 2016 Section 303(d) list. The following sections identify key elements to be included in the Section 303(d) list submittal based on the Clean Water Act and EPA regulations. See 40 CFR Section 130.7. The content of this review is based upon EPA's 2006 Integrated Report Guidance, which describes categories of water quality-related data and information that may be existing and readily available. See EPA's August 13, 2015 memorandum on *Information Concerning 2016 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions,* (available at https://www.epa.gov/sites/production/files/2015-10/documents/2016-ir-memo-and-cover-memo-8_13_2015.pdf). That document recommended that the 2016 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), issued July 29, 2005 (available at https://www.epa.gov/sites/production/files/2015-10/documents/2006irg-report.pdf) as supplemented by an October 12, 2006 memo and attachments, the May 5, 2009 memo and attachments, the November 15, 2010 memorandum, the March 21, 2011 memo and attachments, and the September 3, 2013 memorandum and attachments. All guidance, memoranda and attachments may be found at https://www.epa.gov/tmdl/integrated-reporting-guidance. 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.

EPA reviewed Rhode Island's 2014 *Consolidated Assessment & Listing Methodology for 305(b) and 303(d) Integrated Water Quality Monitoring and Assessment Reporting* (RI CALM) used to develop the Section 303(d) list and the State's description of the data and information it considered during preparation of the list. EPA's review of Rhode Island's Section 303(d) list is based on an analysis of whether the State reasonably considered all existing and readily available water quality-related data and information, and reasonably identified waters required to be listed. EPA also closely examined all the

requests made by the State to remove water bodies from the 2016 Section 303(d) list that had appeared on the previous list in 2014 to ensure that only those which had the proper justification were allowed to be removed. The paragraphs below are arranged to reflect the organization of guidance from EPA, titled, *Recommended Framework for EPA Approval Decisions on 2002 State Section 303(d) List Submissions*, (available at https://www.epa.gov/sites/production/files/2015-10/documents/2002_06_04_tmdl_guidance_listapproval.pdf), transmitted in a memorandum from EPA Headquarters dated May 20, 2002.

II. STATUTORY AND REGULATORY BACKGROUND

Identification of WQLSs for Inclusion on Section 303(d) List

Section 303(d)(1) of the Act directs states to identify those waters within their 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 (WQS) 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 Section 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 Section 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 guidance (U.S. EPA, 2005) describes categories of water quality-related data and information that may be existing and readily available. 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 Section 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 the Region.

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 Section 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 guidance (U.S. EPA, 2005).

III. REVIEW OF RHODE ISLAND'S SECTION 303(d) SUBMISSION

Rhode Island's Department of Environmental Management (DEM) submitted a final 2016 Section 303(d) list to EPA on March 28, 2018. The 2016 Section 303(d) list includes all waters that have been assigned to EPA Category 5 in accordance with the RI CALM.[1] The Section 303(d) list contains a schedule prioritizing EPA Category 5 water bodies for TMDL development by 2017 through 2035.

On December 19, 2017, the State released the public review draft of its Section 303(d) list. On March 22, 2018, EPA provided comments to the State on that draft. These were the only comments DEM received. EPA had previously provided comments to DEM on an early version of the draft delisting document on September 18, 2017, and had several discussions with DEM after that. EPA received revised drafts of the delisting document from DEM on October 17 and November 10, 2017. DEM subsequently submitted its final 303(d) list documents to EPA on March 28, 2018.

Rhode Island has included all waters known or suspected not to be meeting water quality standards on the Section 303(d) list, or in EPA Category 4, as discussed below. Under its current listing approach, Rhode Island keeps a water body on its impaired waters list until it is shown that water quality standards are being attained, criteria are met for its placement in EPA Category 4, or the initial listing was incorrect. TMDLs for listed waters will be completed in accordance with the schedule established for its specific group, which reflect priority rankings and other relevant factors.

[1] The EPA categories 1-5 discussed herein refer to the listing categories described in EPA's listing guidance referenced in Section I above.

EPA Category 4 includes waters that are currently not meeting water quality standards and have an approved TMDL, or do not need a TMDL completed due to one of two reasons. Category 4A contains waters for which a TMDL has already been approved. Category 4B includes waters for which a "functionally equivalent" control action has been developed. An impairment caused by a pollutant is being addressed through other enforceable pollution control requirements. Waters in Category 4C are not attaining water quality standards but the cause is not associated with a pollutant. EPA reviews the Category 4 list to insure that the waters are categorized appropriately and do not belong in Category 5.

EPA Category 5, which corresponds to the Section 303(d) list, contains waters where available data and/or information indicate that the water is impaired or threatened by pollutants for one or more designated uses and a TMDL is required. The CWA and 40 CFR Section 130.7 require EPA to review and approve or disapprove the Section 303(d) list of impaired waters.

Public Participation

As noted above, the State released the public review draft version of its Section 303(d) list on December 19, 2017, along with supporting documentation, to the public and began its public notice period at the same time, with notice posted on DEM's website, press releases, and emails to more than 500 individuals and organizations. DEM held a public workshop to present the 2016 303(d) list on January 11, 2018, which was attended by approximately 20 people. DEM received no public comments during its public comment period, from December 19, 2017 through February 9, 2018.

IV. 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 Section 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. The assessment methodology used by Rhode Island is described in the RI CALM.

For the 2016 assessment cycle, DEM used the Single Category Reporting format which assigns an individual assessment unit to one IR Category.

As noted in the CALM, DEM strives to consider all readily available water quality data and related information in developing the Integrated Lists. In determining if data are appropriate, DEM considers quality assurance/quality control, data quality objectives, monitoring design, age of data, accuracy of sampling location information, data documentation and data format (hard copy versus electronic).

The primary source of data generated for assessments is developed from programs consistent with the Water Monitoring Strategy (http://www.dem.ri.gov/bayteam/documents/DEM%20Water%20Monitoring%20Strategy%202005-

2010.pdf). There are a variety of data generated by programs outside of the Water Monitoring Strategy framework. This includes data generated by special projects, research, volunteer efforts, and the federal government. DEM reports that it is interested in and considers all such data, but the applicability to the assessment process may be limited by the sampling design and data quality objectives of those projects. Because such data generally have not been collected for assessment purposes, they may be of limited utility for application in assessments due to the frequency of sampling, indicators used, number of samples, etc. The data quality objectives outlined in the CALM are used to allow DEM to determine, in a consistent manner, whether these data can be used to make determinations about the water quality attainment status.

DEM also uses predictive models and dilution calculations in concert with ambient and discharge data to identify water quality limited segments. DEM discusses its monitoring approach and its partnerships with other data gathering organizations in its submission.

DEM solicited submittal of such data and information for consideration in developing the 2016 Integrated Report. For this listing cycle, DEM overcame the issues with its new database that had limited its data review during the 2014 cycle, and it conducted a comprehensive review of water chemistry from 2008 – 2013 that met its data qualifications, and some limited data from 2014 – 2016.

EPA has reviewed Rhode Island's description of the data and information considered in development of the Section 303(d) list, including but not limited to the State's methodology for identifying waters and the Rhode Island water quality standards. EPA concludes that the State properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 CFR Section 130.7(b)(5).

Waters included in Category 5 of the 2016 Section 303(d) list were assessed using the RI CALM. Based upon that assessment, a total of 190 water body segments have been assigned to Category 5 of the impaired waters list, with a total of 268 water body segment – impairment cause combinations.

NEW IMPAIRMENTS

Sixty-seven (67) water body segments identified in Table 1 are newly listed in 2016, with no previous listings.

Table 1 - Waters newly listed as impaired on the 2016 List

Water Body Name	Water Segment ID #	Cause of Impairment Added
Saunders Brook & Tribs	RI0001002R-12	Enterococcus
Herring Brook	RI0001002R-15	Enterococcus
Tucker Brook & Tribs	RI0001002R-21	Enterococcus
Sucker Brook & Tribs	RI0001002R-22	Enterococcus
Scott Brook & Tribs	RI0001003R-05	Enterococcus
West Sneech Brook & Tribs	RI0001003R-06	Enterococcus
Monastery Brook & Tribs	RI0001003R-07	Enterococcus
Unnamed Tribs to Blackstone River #1	RI0001003R-08	Enterococcus

Unnamed Tribs to Blackstone River #2	RI0001003R-09	Enterococcus
Mussey Brook	RI0001003R-16	Enterococcus
Spring Brook & Tribs	RI0001004R-02	Enterococcus
Millers River	RI0001006R-08	Enterococcus
Hawkins Brook & Tribs	RI0002007R-04	Enterococcus
Reaper Brook	RI0002007R-06	Enterococcus
Nine Foot Brook & Tribs	RI0002007R-11	Enterococcus
Unnamed Tribs to Stillwater Pond	RI0002007R-12	Enterococcus
West River & Tribs, segment A	RI0003008R-03A	Enterococcus
Hawkinson Brook & Tribs	RI0006014R-01	Enterococcus
Mishnock River & Tribs	RI0006014R-02	Enterococcus
Rush Brook & Tribs	RI0006015R-22	Enterococcus
Shippee Brook & Tribs	RI0006015R-23	Enterococcus
Westconnaug Brook & Tribs	RI0006015R-27	Enterococcus
Wilbur Hollow Brook & Tribs	RI0006015R-29	Enterococcus
Mill Pond	RI0007026E-02	Enterococcus
Founders Brook	RI0007032R-01	Enterococcus
Ashaway River & Tribs, segment B	RI0008039R-02B	Enterococcus
Beaver River & Tribs	RI0008039R-03	Enterococcus
Chickasheen Brook & Tribs, segment B	RI0008039R-05B	Enterococcus
Chipuxet River & Tribs, segment A	RI0008039R-06A	Enterococcus
Pasquiset Brook	RI0008039R-17	Enterococcus
Pawcatuck River, segment A	RI0008039R-18A	Enterococcus
Queens River & Tribs, segment A	RI0008039R-21A	Enterococcus
Queens River & Tribs, segment C	RI0008039R-21C	Enterococcus
Sodom Brook	RI0008039R-22	Enterococcus
Usquepaug River	RI0008039R-25	Enterococcus
Queens Fort Brook, segment A	RI0008039R-31A	Enterococcus
Sherman Brook	RI0008039R-34	Enterococcus
Brushy Brook & Tribs, segment A	RI0008040R-03A	Enterococcus
Brushy Brook & Tribs, segment C	RI0008040R-03C	Enterococcus
Falls River & Tribs	RI0008040R-07	Enterococcus
Moscow Brook & Tribs	RI0008040R-12	Enterococcus
Parris Brook & Tribs	RI0008040R-13	Enterococcus
Roaring Brook	RI0008040R-15	Enterococcus
Adamsville Brook & Tribs	RI0009041R-01	Enterococcus
Little Creek	RI0010031R-02	Enterococcus
Pachet Brook	RI0010031R-03	Enterococcus & Fecal coliform
Sin & Flesh Brook and Tribs, segment B	RI0010031R-05B	Enterococcus
Trib to Saugatucket Pond	RI0010045R-07	Enterococcus
Cold (Cole) Brook & Tribs	RI0010048R-01	Enterococcus
Tribs East of Cold Brook	RI0010048R-03	Enterococcus
Wilson Reservoir	RI0001002L-01	Mercury in Fish Tissue
Echo Lake (Pascoag Reservoir)	RI0001002L-03	Mercury in Fish Tissue
Smith & Sayles Reservoir	RI0001002L-07	Mercury in Fish Tissue
Burlingame Reservoir	RI0001002L-10	Mercury in Fish Tissue
Keech Pond	RI0001002L-11	Mercury in Fish Tissue

Georgiaville Pond	RI0002007L-02	Mercury in Fish Tissue
Waterman Reservoir	RI0002007L-04	Mercury in Fish Tissue
Beach Pond	RI0005010L-01	Mercury in Fish Tissue
Carbuncle Pond	RI0005011L-01	Mercury in Fish Tissue
Bowdish Reservoir	RI0005047L-03	Mercury in Fish Tissue
Clarksville Pond	RI0005047L-08	Mercury in Fish Tissue
Flat River Reservoir (Johnson Pond)	RI0006013L-01	Mercury in Fish Tissue
Worden Pond	RI0008039L-07	Mercury in Fish Tissue
Breakheart Pond	RI0008040L-15	Mercury in Fish Tissue
Tillinghast Pond	RI0008040L-19	Mercury in Fish Tissue
Deep Pond (Charlestown)	RI0010043L-08	Mercury in Fish Tissue
Schoolhouse Pond	RI0010043L-09	Mercury in Fish Tissue

Sixteen (16) water body segments identified in Table 2 remain on the list from 2014 and have had one or more new impairments added in 2016.

Table 2 - Waters listed as impaired on the 2014 List with a new impairment added in 2016

Water Body Name	Water Segment ID #	Cause of Impairment Added
Abbott Run Brook South & Tribs	RI0001006R-01B	Enterococcus
Unnamed Trib #3 to South Branch Pawtuxet River	RI0006014R-08	Enterococcus
Chipuxet River & Tribs, segment B	RI0008039R-06B	Enterococcus
Perry Healy Brook & Tribs	RI0008039R-19	Enterococcus
Queens Fort Brook & Tribs, segment B	RI0008039R-31B	Enterococcus
Canonchet Brook & Tribs, segment A	RI0008040R-04A	Enterococcus
Canob Brook	RI0008040R-23	Enterococcus
Lily Pond	RI0010047L-02	Enterococcus
Dundery Brook	RI0010048R-02	Enterococcus
Blackstone River, segment A	RI0001003R-01A	Iron
Blackstone River, segment B	RI0001003R-01B	Iron
Lake Washington	RI0005047L-04	Mercury in Fish Tissue
Silver Spring Lake	RI0010044L-02	Mercury in Fish Tissue
Silver Lake	RI0010045L-05	Oxygen, Dissolved
Bailey's Brook & Tribs	RI0007035R-01	Phosphorus (Total)
Maidford River, segment A	RI0007035R-02A	Phosphorus (Total), Turbidity

In addition, the State added impairments for eight (8) water bodies (Table 3, below) whose other, previously listed impairments had been moved to Category 4A (impaired but has an approved TMDL).

Table 3 - Waters with existing listing(s) in Category 4A (has an approved TMDL), with a new impairment added in 2016

Water Body Name	Water Segment ID #	Cause of Impairment Added
Cherry Brook & Tribs	RI0001003R-02	Benthic-Macroinvertebrate Bioassessments
Moshassuck River & Tribs, segment A	RI0003008R-01A	Benthic-Macroinvertebrate Bioassessments

Sucker Brook	RI0007037R-01	Copper
Woonasquatucket River & Tribs, segment A	RI0002007R-10A	Enterococcus
Belleville Ponds	RI0007027L-02	Mercury in Fish Tissue
Barber Pond	RI0008039L-14	Mercury in Fish Tissue
Spectacle Pond	RI0006017L-07	Oxygen, Dissolved
Paradise Brook	RI0007035R-03	Phosphorus (Total), Turbidity

While EPA is not acting to approve or disapprove Rhode Island's listing methodology, we have reviewed the material and we conclude that the methodology DEM used to develop the impaired waters list is reasonable and consistent with Rhode Island's water quality standards, and with the Clean Water Act Section 303(d) regulations and EPA guidelines.

DELISTINGS

WATER BODIES/IMPAIRMENTS MOVED TO CATEGORY 2

For the 2016 Section 303(d) list, the State has, in its March 28, 2018 submittal, proposed to delist some or all of the impairments in thirty-six (36) water body segments included as impaired on the 2014 Section 303(d) list, either because they are now meeting water quality standards or the original basis for listing was incorrect. The following tables provide a summary of water body segments proposed for delisting for some or all of their impairments from 2014 to 2016. DEM supplied data on these waters as part of this listing cycle.

Water Body Segments Proposed For Delisting For All Of Their Listed Impairments

Six water body segments, previously listed for metals or pathogens, are meeting all their assessed designated uses and water quality criteria and are therefore proposed for complete delisting and placement in Category 2 (Table 4, below). At least one designated use remains unassessed.

Table 4 - Waters proposed for delisting for all of their listed impairments

Water Body Name	Water Segment ID #	Reason for Delisting
Coney Brook & Tribs	RI0008040R-05	Meets WQS for copper
Nooseneck River & Tribs	RI0006012R-05	Meets WQS for enterococcus
Boyd Brook	RI0006013R-01	Meets WQS for enterococcus
Moswansicut Stream	RI0006015R-16	Meets WQS for Escherichia coli
Great Salt Pond, Trim's Pond and Harbor Pond, segment C	RI0010046E-01C	Meets WQS for fecal coliform
Tiogue Lake	RI0006014L-02	Meets WQS for mercury in fish tissue

Water Body Segments Proposed For Delisting Some But Not All Of Their Impairments

Thirty (30) water body segments have been proposed for delisting for some but not all of their impairments (see Tables 5 and 6, below) and will remain listed in Category 5 for other impairments.

Nineteen (19) of those segments now meet water quality standards for one or more of their previously listed impairments, demonstrated by multi-year data sets. Thirteen (13) segments have been proposed for delisting because an impairment was incorrectly listed, as explained in the delisting document.

Table 5 – Waters proposed for delisting for some, but not all of their listed impairments

Waterbody Name	Water Segment ID #	Reason for Delisting
Wood River & Tribs, segment D	RI0008040R-16D	Meets WQS for aquatic-macroinvertebrate bioassessment, ambient bioassays -- chronic aquatic toxicity
Branch River & Tribs, segment B	RI0001002R-01B	Incorrectly listed for aquatic-macroinvertebrate bioassessment; Meets WQS for copper
Valley Falls Pond	RI0001003L-02	Incorrectly listed for aquatic-macroinvertebrate bioassessments
Clear River, segment D	RI0001002R-05D	Incorrectly listed for benthic-macroinvertebrate bioassessment
Blackstone River, segment A	RI0001003R-01A	Incorrectly listed for benthic-macroinvertebrate bioassessment
Blackstone River, segment B	RI0001003R-01B	Incorrectly listed for benthic-macroinvertebrate bioassessment
Woonasquatucket River & Tribs, seg C	RI0002007R-10C	Meets WQS for benthic-macroinvertebrate bioassessments
Woonasquatucket River, segment D	RI0002007R-10D	Meets WQS for benthic-macroinvertebrate bioassessments
Pawtuxet River Main Stem	RI0006017R-03	Incorrectly listed for benthic-macroinvertebrate Bioassessment; Meets WQS for cadmium
Runnins River & Tribs	RI0007021R-01	Incorrectly listed for benthic-macroinvertebrate bioassessment
Bailey's Brook & Tribs	RI0007035R-01	Incorrectly listed for benthic-macroinvertebrate bioassessment
Saugatucket Pond	RI0010045L-01	Incorrectly listed for benthic-macroinvertebrate bioassessment
Dundery Brook	RI0010048R-02	Incorrectly listed for benthic-macroinvertebrate bioassessment
Chipuxet River & Tribs, segment B	RI0008039R-06B	Meets WQS for cadmium and copper
Perry Healy Brook & Tribs	RI0008039R-19	Meets WQS copper
Canonchet Brook & Tribs, segment A	RI0008040R-04A	Meets WQS for copper
Pawtuxet River South Branch, B	RI0006014R-04B	Meets WQS for enterococcus
Greenwich Cove	RI0007025E-05A	Meets WQS for fecal coliform
Cedar Swamp Brook & Tribs	RI0006018R-01	Meets WQS for iron
Pawcatuck River & Tribs, segment E	RI0008039R-18E	Meets WQS for iron
Canob Brook	RI0008040R-23	Meets WQS for iron
Queens Fort Brook & Tribs, segment B	RI0008039R-31B	Meets WQS for lead
Mt. Hope Bay, segment A	RI0007032E-01A	Meets WQS for temperature
Mt. Hope Bay, segment B	RI0007032E-01B	Meets WQS for temperature
Mt. Hope Bay, segment C	RI0007032E-01C	Meets WQS for temperature
Mt. Hope Bay, segment D	RI0007032E-01D	Meets WQS for temperature

Thirteen (13) segments, shown in Tables 5 and 6, are proposed for delisting for their Aquatic- or Benthic-Macro-invertebrate Bioassessment impairments. Those impairments were found to have been incorrectly listed due to inappropriate use of the sampling protocol because the water bodies are not wadeable streams with riffle habitats. Consequently, these water body-impairment combinations are now considered unassessed for that impairment. EPA believes that DEM should assess these waters for biological impairments as soon as an appropriate biological sampling method is developed and available to be used.

Maidford River segment B, because it is downstream from the Maidford River segment A which is impaired for aquatic life use, should be a priority for assessment for conventional pollutants, and for benthic macroinvertebrate bioassessments as soon as an appropriate methodology is developed and available for use for the water body type.

EPA acknowledges that the lower portion of the Maidford River has been assigned a new water body ID beginning at the point where it becomes brackish (RI0007035E-01), and is appropriately classified as a salt water segment.

Wood River and Tribs was originally listed for its aquatic-macroinvertebrate bioassessment impairment based on observation of zero biological activity, but with no data. It is now proposed for delisting because more recent observation shows increased biological activity with many taxa present. As noted by DEM in the delisting document, it was also, later, incorrectly assessed for that impairment due to the use of an inappropriate sampling protocol, as discussed above. The segment was also listed for ambient bioassays – chronic aquatic toxicity due to toxic output from a site requiring remediation and compliance monitoring. Recent monitoring of the surface water showed no volatile organic compounds (VOCs) were present.

Table 6 – Waters proposed for delisting for some but not all impairments, and with approved TMDLs

Waterbody Name	Water Segment ID #	Reason for Delisting
Ten Mile River & Tribs, segment B	RI0004009R-01B	Incorrectly listed for benthic-macroinvertebrate bioassessment
Maidford River, segment B	RI0007035R-02B	Incorrectly listed for benthic-macroinvertebrate bioassessment
Pawcatuck River & Tribs, segment D	RI0008039R-18D	Incorrectly listed for benthic-macroinvertebrate bioassessment
Ashaway River & Tribs, segment A	RI0008039R-02A	Meets WQS for cadmium

In summary, EPA recognizes that Rhode Island's proposed delisting in 2016 of these previously Section 303(d)-listed water bodies has been done in accordance with Rhode Island's 2014 listing methodology (RI CALM) and consistent with Rhode Island's water quality standards. As provided in 40 CFR Section 130.7(b)(6)(iv), EPA requested that the State demonstrate good cause for not including these waters on its Section 303(d) list.

EPA has examined in detail all the supporting information provided by RI DEM and finds that the State has reasonably concluded that the water body-impairment combinations described above should no longer be on the 303(d) list for the indicated impairments. EPA therefore approves the State's Section 303(d) list without these water body-impairment combinations.

CATEGORY 4

The following tables show a summary of previously Section 303(d)-listed water bodies that have been moved to Category 4 in this listing cycle. These segments are impaired for one or more designated uses, but do not need a TMDL for one of three reasons specified. Water body segments in Category 4A already have a State developed TMDL which has been approved by EPA. Segments listed in Category 4B (Table 7, below) have other required control measures which are expected to result in attainment of an applicable water quality standard in a reasonable period of time. Category 4C contains water body segments for which the State has demonstrated that the failure to meet water quality standards is not caused by a pollutant, but rather by other types of pollution (Table 8, below).

Category 4A

No water bodies/impairments were moved to Category 4A during the 2016 listing cycle, with completed and EPA-approved TMDLs for the pollutant of concern. Consequently, no data are presented for the category. When applicable, EPA approves the State's Section 303(d) list without Category 4A waterbody-pollutant combinations because the removal of these listings is consistent with EPA's regulations and EPA's Guidance for Assessment, Listing and Reporting Requirements.

Category 4B

Rhode Island is not proposing to add new waters into Category 4B in this listing cycle, but EPA re-evaluates the continued listing of the impairments for four waters that were previously placed into the Category in every listing cycle. The State's decision to include waters in Category 4B rather than on its 2016 Section 303(d) list is consistent with EPA regulations at 40 CFR Section 130.7(b)(1). These waters were previously identified on the State's Section 303(d) list. Under 40 CFR Section 130.7(b)(1), states are not required to list impaired waters where effluent limitations required by the CWA, more stringent effluent limitations required by state or local authority, or other pollution control requirements required by state, local, or federal authority, are stringent enough to implement applicable water quality standards. The regulation does not specify the time frame in which these various requirements must implement applicable water quality standards to support a state's decision not to list particular waters. EPA guidance states that water quality standards must be attained within the near future (U.S. EPA, 2005).

Monitoring should continue for these waters to verify that the water quality standard is attained as expected in a reasonable time frame. Where standards will not be attained through implementation of the requirements listed in 40 CFR Section 130.7(b)(1) in a reasonable time, it is appropriate for the water to be placed on the Section 303(d) list to ensure that implementation of the required controls and

progress towards compliance with applicable standards is tracked. If it is determined that the water is meeting applicable standards when the next Section 303(d) list is developed, it would be appropriate for the State to remove the water from the list at that time.

In this case, the State placed 4 segments into Category 4B in the 2008 listing cycle pursuant to 40 CFR Section 130.7(b)(1)(ii). To support this decision, the state must demonstrate, consistent with the regulation and EPA guidance (U.S. EPA, 2005), that there are "more stringent effluent limitations (including prohibitions) required by either State or local authority preserved by section 510 of the [Clean Water] Act, or Federal authority (law, regulation, or treaty)" sufficient to achieve applicable water quality standards for the pollutants of concern within a reasonable period of time. DEM and EPA will evaluate waters listed in Category 4B during subsequent listing cycles to ensure that they continue to meet the criteria and do not warrant placement in Category 5.

The four water body segments were moved to Category 4B in the 2008 listing cycle (Table 7, below). The estuarine segments of Mt. Hope Bay (RI0007032E-01A, 01B, 01C, 01D) have been impaired by thermal modifications and biodiversity impacts by the cooling water discharges from the Brayton Point Power Station in Somerset, MA. The plant had been withdrawing nearly one billion gallons of water per day for cooling water, then discharging it back to the Bay, raising bay temperatures approximately 1.5 degrees F. The elevated temperatures have degraded normal aquatic habitats, disrupted fish migration, and made the bay inhospitable to native species. The withdrawal itself is responsible for killing aquatic organisms directly in the plant. The elevated temperatures also violated water quality standards for temperatures.

EPA renewed the Brayton Point NPDES permit (No. MA0003654) on October 6, 2003, with strict limits to reduce total heat discharge and reduce water withdrawals. The limits were established to ensure that water quality standards would be met. The permit was appealed, and subsequently resolved, with the permit limits effective December 18, 2007. As part of its December 17, 2007 agreement to end all permit litigation, the owner of the power station, Dominion Energy, planned to install natural draft cooling towers as part of its compliance with the permit. EPA issued an administrative order which contained a schedule for compliance with the permit limits within 36 months of obtaining all construction and operating permits. Once compliance was achieved, it was expected that habitat quality would improve and annual fishery losses would be reduced by 94%.

As of May 2012, the Brayton Point Power Station had implemented operational measures designed to result in compliance with the permit requirements; the Station reduced its withdrawals and effluent through the use of the new, closed-cycle cooling towers. The Brayton Point Station permanently shut down in June 2017, and its thermal discharges to Mt. Hope Bay have ended.

Based on the information DEM provided in its 2016 303(d) list submission, EPA has determined that the four Mt. Hope Bay water body segments are appropriate for continued listing in Category 4B for the impairments to fish biodiversity. As noted above, EPA approves moving the water temperature impairments previously included in the 4B categorization of these four water bodies to Category 2 as conditions meeting the State's water temperature criteria have been restored.

The State will continue to assess the bay segments in subsequent listing cycles to determine whether

they should: 1) remain in Category 4B; 2) be placed into Category 5 again; or 3) placed into Category 1 or 2 because the segments are no longer impaired. The State will report back to EPA on the water bodies in the next listing cycle.

Table 7 - Waters listed in Category 4B from previous listing cycles, other pollution controls in place

Water Body Name	Water Segment ID #	Other requirements in place
Mt Hope Bay, segment A	RI0007032E-01A	Brayton Point NPDES discharge permit
Mt Hope Bay, segment B	RI0007032E-01B	Brayton Point NPDES discharge permit
Mt Hope Bay, segment C	RI0007032E-01C	Brayton Point NPDES discharge permit
Mt Hope Bay, segment D	RI0007032E-01D	Brayton Point NPDES discharge permit

Category 4C

The State has demonstrated that the water body segments moved into Category 4C are not attaining water quality standards as the result of pollution rather than the presence of a pollutant. The Clean Water Act defines pollution as "the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water." The text of the 2016 list, and the data that DEM enters into EPA's ADB present good cause for the State to include these waters in Category 4C of its 2016 Integrated Report.

DEM also identified new impairments not caused by a pollutant loading to both water bodies already on the 303(d) list or with an approved TMDL for other causes, and to water bodies not previously listed for any impairment (Table 8, below). Waterbodies listed with an asterisk (*) have an approved TMDL for another impairment.

EPA concurs that the placement of these water bodies into Category 4C is appropriate, and has been done in accordance with Rhode Island's 2014 listing methodology (RI CALM) and consistent with Rhode Island's water quality standards.

Table 8 – Waterbody-impairment combinations newly placed into Category 4C – not impaired by a pollutant

Water Body Name	Water Segment ID #	Cause of impairment
Annaquatucket Mill Pond	RI0007027L-01	Non-native aquatic plants
Glen Rock Reservoir	RI0008039L-19	Non-native aquatic plants
Hawkins Pond	RI0002007L-01	Non-native aquatic plants
Indian Lake *	RI0010045L-04	Non-native aquatic plants
Saugatucket River, segment C *	RI0010045R-05C	Non-native aquatic plants

Priority Ranking

EPA also reviewed the State's priority ranking of listed waters for TMDL development. DEM has

prioritized its list through its establishment of a schedule from 2017 to 2035 for completing TMDLs for waters on the list. According to the State's 2014 CALM, this schedule reflects the high consideration the State has given to "shellfishing waters, drinking water supplies and other areas identified by the public as high priority areas." In addition, EPA reviewed the State's identification of WQLSs targeted for TMDL development in the next two years, and concludes that the targeted waters are appropriate for TMDL development in this time frame.

Combinations of water body segments and impairment are given a priority for TMDL development based on their place in DEM's schedule. There are 190 water body segments in Category 5 with 268 (water body segment × impairment cause) combinations. DEM's TMDL development schedule is as follows, with the number of water body segment-impairment combinations due for development by the date shown:

2017: 25
2018: 3
2020: 26
2022: 20
2023: 22
2024: 10
2025: 9
2026: 67
2028: 25
2030: 60
2035: 1

DEM recognizes that changes in priorities may take place as new waters are added to the list and as other information becomes available. Overall, Rhode Island is committed to completing TMDL development for all currently listed waters by the year 2035.

EPA concludes that Rhode Island's water body prioritization and identification of waters targeted for TMDL study and/or development is reasonable and sufficient for the purposes of Section 303(d). DEM properly examined and considered the severity of pollution and uses of the listed waters, as well as other relevant factors identified in EPA's regulations. Further, EPA has determined that DEM priority ranking ensures reasonable progress in addressing high priority waters with challenging water quality problems (Memo from Geoffrey H. Grubbs, Supplemental Guidance on Section 303(d) Implementation, August 13, 1992). EPA and DEM assess yearly the pace of TMDL development versus the universe of impaired waters in the State.

Water bodies on tribal lands

EPA's approval of Rhode Island's Section 303(d) list extends to all water bodies on the list with the exception of those waters, if any, that are within Indian Country, as defined in 18 U.S.C. Section 1151. EPA is taking no action to approve or disapprove the State's list with respect to waters within Indian

country at this time. EPA, or any eligible Indian Tribe, as appropriate, will retain responsibilities under Section 303(d) for those waters.

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. Nastri, 291 F.3d 1123 (9th Cir. 2002). See also EPA guidance (U.S. EPA, 2005). Waters identified by the State as impaired or threatened by nonpoint sources of pollution (NPS) were appropriately considered for inclusion on Rhode Island's 2016 Section 303(d) list. Rhode Island properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with Section 303(d) regulations and EPA guidance.

EPA concludes that DEM properly considered waters identified by the State as impaired or threatened in nonpoint assessments under Section 319 of the CWA in the development of the 2016 Section 303(d) list.