

July 14, 2011

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 2010 Clean Water Act Section 303(d) list of impaired waters. In accordance with §303(d) of the Clean Water Act and 40 CFR §130.7, the U.S. Environmental Protection Agency (EPA) conducted a complete review of Rhode Island's 2010 §303(d) list and supporting documentation. Based on this review, EPA has determined that Rhode Island's 2010 §303(d) list meets the requirements of §303(d) of the Clean Water Act and EPA's implementing regulations. Therefore, by this order, EPA hereby approves the State's list, submitted on May 20, 2011.

The 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 its 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 §§ 305(b) and 303(d) of the Clean Water Act should be prepared in a manner to support their submission to EPA by April 1 of even numbered years in accordance with §§ 305(b) and 303(d) of the Clean Water Act and 40 CFR §130.7. In addition, waters should be assessed using Water Quality Standards that are approved and in place 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 §303(d) list. Through this effort, Rhode Island was able to consider and incorporate public comments in the development of the final list. A summary of the public comments and Rhode Island's responses to public comments was included in the final submittal.

We are pleased with the quality of your submission and appreciate the level of effort that the RI DEM devoted to preparing its 2010 §303(d) list. Your staff has done an excellent job of preparing a comprehensive and informative list, and providing EPA with supporting documentation and assistance.

My staff and I look forward to continued cooperation with RI DEM in implementing the requirements under §303(d) of the CWA. If you have any questions regarding EPA's review or this approval, please contact Steve Silva at (617) 918-1561 or have your staff contact Steven Winnett at (617) 918-1687.

Sincerely,

/s/

Stephen S. Perkins, Director
Office of Ecosystem Protection

Enclosure

cc: Angelo Liberti, RI DEM
Elizabeth Scott, RI DEM
Connie Carey, RI DEM
Stephen Silva, EPA
Lynne Hamjian, EPA
Ann Williams, EPA
Greg Dain, EPA
Steven Winnett, EPA

EPA NEW ENGLAND'S REVIEW OF RHODE ISLAND'S 2010 CWA SECTION 303(d) LIST

I. INTRODUCTION

EPA has conducted a complete review of Rhode Island's (RI) 2010 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, by this order, EPA hereby approves Rhode Island's 2010 final Section 303(d) list, submitted on May 20, 2011. The Section 303(d) list will be a component of the State's *2010 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 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 2010 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 May 5, 2009 memorandum on *Information Concerning 2010 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*. The 2010 memorandum also recommended that the states also rely upon EPA earlier guidance memoranda entitled *Information concerning 2008 Clean Water Act Section 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions* (October 12, 2006) and *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act* (July 29, 2006) (<http://www.epa.gov/owow/tmdl/guidance.html>).

EPA reviewed Rhode Island's 2010 C*onsolidated* A*ssessment & L*isting M*ethodology 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 2010 Section 303(d) list that had appeared on the previous list in 2008 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*, 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 2010 Section 303(d) list to EPA, along with responses to comments it received, on May 20, 2011. The 2010 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 2011 through 2022.

The State submitted a pre-public release draft Section 303(d) list along with supporting documentation to EPA for its review on August 3, 2010. EPA provided comments on that draft on September 23, 2010. DEM replied to EPA's comments on November 17, 2010 and EPA commented back on February 2, 2011. DEM released its draft 303(d) list documents to the public and began its public notice period on April 6, 2011, with notice posted on DEM's website, press releases, and mailings and emails to many stakeholders. A public informational meeting was held on April 15, 2011; approximately 35 people attended. EPA submitted comments on the final draft list on May 6, 2011, the day the public notice period ended. Three parties, including EPA, submitted comments. In its final submission, the State gave responses to all comments, and explained the revisions made to the list prior to its submission to EPA for final approval.

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 but do not need a TMDL completed due to one of three 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 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.

Response to public comments

Following DEM’s public notice of the draft 303(d) list on April 6, 2011 and a public meeting on it on April 15, 2011, three parties, including EPA, submitted comments. The State provided a detailed Response to Comments summary along with submission of the final impaired waters list on May 20, 2011. The text of the Responsiveness document grouped the public comments by respondent and provided the State’s responses to each question or issue raised.

DEM received a comment from the Center for Biological Diversity suggesting that all ocean assessment units (AUs) within the waters of Rhode Island should be listed as impaired or threatened for pH due to increasing acidification of ocean waters resulting from increased uptake of atmospheric carbon dioxide. The Center also requested that DEM list a specific ocean AU as impaired because existing pollution controls are insufficient for ocean waters to meet the State’s water quality standards. DEM took no further action as a result of this comment due to the fact that there is no evidence of any impairment of a designated use in the State’s ocean AUs due to pH or acidification. Additionally, DEM is not aware of any modeling results or data that suggest that the ocean waters of Rhode Island do not currently attain or will fall out of attainment of the pH criteria by the next listing cycle.

In the absence of specific data showing exceedance of the existing marine pH criteria or data showing impairment of Rhode Island biota due to altered pH, EPA finds DEM’s omission of ocean acidification from its 303(d) list to be appropriate. As discussed in EPA’s recent 2012 Listing Guidance related to Ocean Acidification (at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/oa_memo_nov2010.cfm) EPA recommends that for future lists, States with marine waters (such as RI) include as part of their routine IR data request, a provision that solicits existing and readily available water quality-related data and information, including modeling and other non-site-specific data, for marine pH and natural background conditions. Also, as stated in the guidance, currently, EPA believes that not enough information is available to develop OA-related carbon dioxide TMDLs, and is deferring development of TMDL guidance related to OA listings until more information becomes available in the future. EPA encourages the commenter to submit data that is specific to Rhode Island marine waters during DEM data solicitations for future Section 303(d) lists.

The Center also suggested that Rhode Island revise its WQS in light of the most recent information on ocean acidification. Currently, Rhode Island's pH criteria are approved by EPA. After reviewing a wide range of information received in response to a Notice of Data Availability (NODA) on Ocean Acidification and Marine pH Water Quality Criteria, on April 15, 2010, EPA decided against revising the national marine pH criterion for aquatic life due to insufficient data. Therefore, EPA agrees that DEM's decision not to list at this time was reasonable.

With regards to the State's responses to the comments submitted by Steve Alfred, on behalf of the Town of South Kingstown, EPA finds that the State has adequately responded to those comments. The State accurately described its standards and process for considering all readily-available water quality data and related information in developing its Section 303(d) list. The State also adequately described how and to what extent the State takes into account natural background levels of contaminants in development of its Section 303(d) list, as provided for in the State's water quality regulations. Finally, although the State provided a response to the Town's comment relating to the State's use of a concentration based approach for bacteria TMDLs, that particular issue is outside the scope of issues relevant to EPA's review of the State's 303(d) list, and so EPA has no comment on that issue.

EPA also finds that DEM adequately responded to EPA's comments on the State's draft 303(d) list.

EPA has reviewed all of DEM's responses to the public comments received and concludes that Rhode Island has adequately responded to the public comments.

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 2010 assessment cycle, DEM used the US EPA's Assessment Database (ADB) to house the water quality assessment information and generate the Integrated Lists. It 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, and as described in Chapter III.D of the 2008 305(b) Report

(<http://www.dem.ri.gov/programs/benviron/water/quality/pdf/iwqmon08.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 actively solicited submittal of such data and information for consideration in developing the 2010 Integrated Report. In addition to data from the monitoring programs described within the 2008 305(b) Report (which includes the URI Watershed Watch program, the Wood-Pawcatuck Watershed Association, USGS, and DEM's ambient river rotation basin program), DEM received and reviewed data from the Narragansett Bay Commission, Providence Water Supply Board, and the Blackstone River Coalition for consideration in the development of the 2010 water quality assessments. The data used to generate the information for this report are generally from 2004 through 2008, however, some data collected in 2009 and 2010 were available for incorporation as well.

DEM also uses predictive models and dilution calculations in concert with ambient and discharge data to identify water quality limited segments. Examples of such listed waters include the Blackstone River, the Providence-Seekonk River, the Pawtuxet River, and the Barrington-Palmer-Runnins Rivers.

In order to prepare the 2010 Section 303(d) list, the State established a date by which data would be considered for this listing cycle. Data collected from the public (the solicitation of which was published on March 17, 2009) through April 30, 2009 are relied upon for these assessments. Assessment data are maintained by the State in the EPA Section 305(b) Assessment Database (ADB).

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, data in ADB, 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 2010 Section 303(d) list were assessed using the RI CALM. Based upon that assessment, a total of 162 water body segments have been assigned to Category 5 of the impaired waters list, with a total of 315 water body segment – pollutant combinations.

NEW IMPAIRMENTS

The State added 43 water body segments to Category 5 in 2010 that had not previously been listed for any impairment, as indicated in Table 1, below.

Table 1 - New water body segments, with impairments, added to Rhode Island's 2010 Section 303(d) List

<u>Water Body Name</u>	<u>Water Segment ID #</u>	<u>Cause of Impairment</u>
Acid Factory Brook & Tribs	RI0008040R-01	enterococcus bacteria
Alewife Brook	RI0008039R-01	iron, lead, copper
Boyd Brook	RI0006013R-01	enterococcus bacteria
Branch River & Tribs, segment A	RI0001002R-01A	enterococcus bacteria
Breakheart Brook & Tribs	RI0008040R-02	enterococcus bacteria
Burnt Swamp Brook & Tribs	RI0001006R-06	enterococcus bacteria
Cherry Brook & Tribs	RI0001003R-02	copper, fecal and enterococcus bacteria
Clear River & Tribs, segment C	RI0001002R-05C	enterococcus bacteria
Crookfall Brook & Tribs	RI0001004R-01	enterococcus bacteria
Cutler Brook & Tribs	RI0002007R-02	enterococcus bacteria
Dry Brook & Tribs	RI0006018R-02A	enterococcus bacteria
Dundery Brook	RI0010048R-02C	benthic-macroinvertebrate bioassess.
Dutemple Brook	RI0008039R-30	enterococcus bacteria
Fresh Meadow Brook & Tribs	RI0010045R-01	enterococcus bacteria
Hunt River	RI0007028R-03D	enterococcus bacteria
Huntinghouse Brook	RI0006015R-11	enterococcus bacteria
Meshanticut Brook & Tribs	RI0006017R-02	enterococcus bacteria
Mile Brook	RI0008039R-14	iron and enterococcus bacteria
Moosup River & Tribs	RI0005011R-03	enterococcus bacteria
Moshassuck River & Tribs, segment A	RI0003008R-01A	enterococcus bacteria
Moshassuck River & Tribs, segment B	RI0003008R-01B	enterococcus, benthic-macroinv. bioass.
Nooseneck River & Tribs	RI0006012R-05	enterococcus bacteria
Parmenter Brook & Tribs	RI0008039R-37	enterococcus bacteria
Pascoag River	RI0001002R-09	enterococcus, benthic-macroinv. bioass.
Pawcatuck River & Tribs, segment E	RI0008039R-18E	iron, lead, enterococcus bacteria
Perry Healy Brook & Tribs	RI0008039R-19	lead, copper
Phillips Brook & Tribs	RI0008040R-14	enterococcus bacteria
Pocasset River & Tribs, segment A	RI0006018R-03A	copper, chloride, enterococcus benthic-macroinvertebrate bioassess.
Potowomut River	RI0007028E-01A	fecal coliform bacteria
Queens Fort Brook & Tribs	RI0008039R-31B	iron, lead, turbidity
Silver Lake	RI0010045L-05	total phosphorus
Silver Spring Lake	RI0010044L-02	total phosphorus
Stillwater River & Tribs	RI0002007R-09	enterococcus bacteria
Sucker Brook	RI0007037R-01	enterococcus bacteria
Taney Brook	RI0008039R-23	enterococcus bacteria
Tribes to Tiogue Lake	RI0006014R-05	enterococcus bacteria
Tribes to Warwick Pond	RI0007024R-05	enterococcus and fecal bacteria
Unnamed Trib #3 to S. Branch Pawtuxet River	RI0006014R-08	lead
West Passage, segment K	RI0007027E-03K	fecal coliform bacteria
West Passage, segment L	RI0007027E-03L	fecal coliform bacteria
White Horn Brook & Tribs	RI0008039R-27B	enterococcus bacteria
Windsor Brook & Tribs	RI0006015R-30	enterococcus bacteria
Wood River & Tribs, segment A	RI0008040R-16A	enterococcus bacteria

Twenty five (25) water body segments identified in Table 2 remain on the list from 2008 and have had one or more new impairments added in 2010.

Table 2 - Waters listed as impaired on the 2008 List with a new impairment added in 2010

<u>Water Body Name</u>	<u>Water Segment ID #</u>	<u>Cause of Impairment Added</u>
Ashaway River & Tribs	RI0008039R-02A	enterococcus bacteria
Blackstone River, segment A	RI0001003R-01A	cadmium, lead, enterococcus
Blackstone River, segment B	RI0001003R-01B	cadmium, enterococcus bacteria
Branch River & Tribs, segment	RI0001002R-01B	copper
Chipuxet River & Tribs	RI0008039R-06B	iron
Clear River & Tribs	RI0001002R-05D	enterococcus, benthic-macroinvert.
Latham Brook & Tribs	RI0002007R-05	lead, enterococcus bacteria
Mill River	RI0001003R-03	enterococcus bacteria
Moshassuck River & Tribs, segment C	RI0003008R-01C	benthic-macroinvertebrate bioassess.
Omega Pond	RI0004009L-03	cadmium, aluminum, dissolved oxygen, fecal coliform bacteria
Pawcatuck River & Tribs, segment B	RI0008039R-18B	enterococcus bacteria
Pawtuxet River South Branch	RI0006014R-04B	enterococcus bacteria
Peters River	RI0001003R-04	enterococcus bacteria
Pocasset River & Tribs, segment B	RI0006018R-03B	benthic-macroinvertebrate bioassess.
Scott Pond	RI0001003L-01	copper
Simmons Brook & Tribs	RI0006018R-04	benthic-macroinvertebrate bioassess.
Slater Park Pond	RI0004009L-02	cadmium, iron lead, aluminum
Tarkiln Brook & Tribs	RI0001002R-13B	enterococcus bacteria
Ten Mile River & Tribs, segment A	RI0004009R-01A	iron, aluminum, enterococcus bacteria
Ten Mile River & Tribs, segment B	RI0004009R-01B	cadmium, aluminum
Turner Reservoir, segment A	RI0004009L-01A	cadmium, aluminum
Turner Reservoir, segment B	RI0004009L-01B	cadmium, aluminum
West River & Tribs, segment B	RI0003008R-03B	benthic-macroinvertebrate bioassess.
West River & Tribs, segment C	RI0003008R-03C	benthic-macroinvertebrate bioassess.
Wood River & Tribs, segment D	RI0008040R-16D	copper

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

Table 3 - Waters with existing listings in Category 4A, with a new impairment added in 2010

<u>Water Body Name</u>	<u>Water Segment ID #</u>	<u>Cause of Impairment Added</u>
Belleville Upper Pond Inlet	RI0007027R-02	enterococcus bacteria
Woonasquatucket River & Tribs, C	RI0002007R-10C	benthic-macroinvertebrate bioassess.

Belleville Upper Pond Inlet has an approved TMDL for total phosphorus and Woonasquatucket River & Tribs, segment C has approved TMDLs for fecal coliform bacteria and zinc (Category 4A).

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 CATEGORIES 1, 2, OR 3

For the 2010 Section 303(d) list, the State has, in its May 20, 2011 submittal, delisted some or all of the impairments in 25 water body segments included as impaired on the 2008 Section 303(d) list either because they are now meeting water quality standards, data and/or information are lacking to determine their water quality status, or the original basis for listing was incorrect. The following tables provide a summary of water body segments delisted for some or all of their impairments from 2008 to 2010. DEM supplied up-to-date information on all the State's waters as part of this assessment cycle.

Water Body Segments Delisted For All Impairments

Four (4) water body segments that appeared on Rhode Island's 2008 303(d) list as impaired for bacteria or benthic-macroinvertebrate bioassessments have been delisted in 2010 for all impairments because either:

- the water body meets all designated uses and water quality criteria (Category 1);
- the basis for listing the water body's only impairment was in error ; or
- there are insufficient data to support the water body's continued listing.

Ash Swamp Brook & Tribs is being delisted to Category 3 because the sampling station from which the data was obtained to determine impairment was subsequently found to be located in a different water body. With no other data available to assess the water body's impairment, it is now considered unassessed. The monitoring data actually was obtained from a water body named Catamint Brook. In additional correspondence dated July 6, 2011, DEM provided EPA with additional, more recent data showing that Catamint Brook is now meeting EPA's criteria for e.coli bacteria and will therefore not be listed as impaired.

Mud Brook and Nine Foot Brook and Tribs have been delisted and placed into Category 1 because data show they are now meeting water quality standards for their only listed impairment.

Silver Creek has been delisted and placed into Category 3 because the determination of impairment was based upon an inappropriate use of the relevant sampling protocol. With no other data available to assess whether an impairment exists, the water body is now considered unassessed (see Table 4, below).

EPA has examined in detail the supporting information provided by RI DEM and agrees that the State has reasonably concluded that these waters no longer need to be on the 303(d) list for the reasons provided. EPA approves their delistings.

Table 4 - Waters fully delisted – moved to Category 1 or 3

<u>Water Body Name</u>	<u>Water Segment ID #</u>	<u>Reason for Full Delisting</u>
Ash Swamp Brook & Tribs	RI0001006R-04	original listing basis for bacteria was incorrect
Mud Brook	RI0008039R-39	meets WQS for enterococci bacteria
Nine Foot Brook & Tribs	RI0002007R-11	meets WQS for benthic-macroinvertebrate bioassessment,
Silver Creek	RI0007026R-01	insufficient data to support listing for macro-invertebrate bioassessment

Water Body Segments Delisted For Some But Not All Of Their Impairments

Twenty (20) water body segments have been delisted for some but not all of their impairments (see Tables 5a-c below) and will remain listed in Category 5 for other impairments. Sixteen (16) of those segments are now meeting water quality standards for one or more of their previously listed impairments (RI placed those restored impairments into Category 2).

Multiple years of sampling data demonstrated that the following eleven (11) water bodies are now attaining their water quality standards for the impairments shown (Table 5a).

Table 5a - Waters delisted for some, but not all of their impairments – attainment demonstrated by multi-year data sets

<u>Waterbody Name</u>	<u>Water Segment ID #</u>	<u>Reason for Partial Delisting</u>
Abbott Run Brook North	RI0001006R-01A	meets WQS for aquatic-macroinvertebrate bioassessment
Abbot Run Brook South	RI0001006R-01B	meets WQS for aquatic- macroinvertebrate bioassessment
Blackstone River, segment A	RI0001003R-01A	meets WQS for copper
Blackstone River, segment B	RI0001003R-01B	meets WQS for copper
Canonchet Brook & Tribs	RI0008040R-04B	meets WQS for benthic-macroinvertebrate bioassessments
Omega Pond	RI0004009L-03	meets WQS for copper and lead
Tarkiln Brook & Tribs	RI0001002R-13B	meets WQS for benthic-macroinvertebrate bioassessments
Ten Mile River, segment A	RI0004009R-01A	meets WQS for copper
Ten Mile River, segment B	RI0004009R-01B	meets WQS for copper and lead
Turner Reservoir, segment A	RI0004009L-01A	meets WQS for copper, lead, and fecal bacteria
Turner Reservoir, segment B	RI0004009L-01B	meets WQS for copper, lead, and fecal bacteria

Seven (7) of the water bodies are being delisted for some but not all impairments using a small number of samples taken over a period of time less than one calendar year (Table 5b, below). For these water body-impairment combinations, the State provided other information in addition to the sampling data, which, in combination with the data, provided sufficient justification for EPA to approve the delistings. The additional information, which varied among the segments, included that data were collected over a wide range of conditions, that there were no permitted and/or unpermitted sources of waste water to the segment, that the contributing watershed was mostly forested, had intact riparian zones, and/or that the

water bodies originated in a drinking water supply reservoir. For all of the water body – impairment combinations, the State suggested that the original listings may have also been due to less precise monitoring and analytical techniques, in contrast to the clean sampling and rigorous analytical techniques, and quality assurance and quality control procedures now used.

Table 5b - Waters delisted for some, but not all of their impairments – attainment demonstrated by a less than one year data set along with other information

<u>Waterbody Name</u>	<u>Water Segment ID #</u>	<u>Reason for Partial Delisting</u>
Abbott Run Brook North	RI0001006R-01A	meets WQS for copper and lead
Abbot Run Brook South	RI0001006R-01B	meets WQS for lead
Ashaway River	RI0008039R-02A	meets WQS for copper and lead
Chipuxet River & Tribs	RI0008039R-06B	meets WQS for lead
Maskerchugg River	RI0007025R-03	meets WQS for copper and lead
Mill River	RI0001003R-03	meets WQS for lead
Pocasset River	RI0006018R-03B	meets WQS for lead

Three (3) segments, Chipuxet River, Jamestown Brook, and Keach Brook were delisted for their benthic macro-invertebrate bioassessment impairments. Those impairments were found to have been inappropriately assessed by the sampling protocol because either the water body lacks riffles, has extremely low flow, flows intermittently, drains a wetland, and/or is influenced by saltwater. Consequently, these water body-impairment combinations are now considered unassessed. Two (2) additional segments, Hardig Brook and the Upper Kickemuit River, were delisted for their bioassessment impairments because the original basis for the listing was incorrect in that the sampling stations from which data were obtained to make assessments were subsequently found to be located in a different water body (Table 5c). They are now considered unassessed for these impairments. For Hardig Brook, the water body actually sampled (Gorton Pond Trib) is tidally influenced and therefore the sampling protocol used was inappropriate for assessment purposes. It is now considered unassessed. For the Upper Kickemuit River, the segment actually sampled is located in Massachusetts and is therefore outside DEM's jurisdiction.

Table 5c - Waters delisted for some but not all impairments – insufficient data to support listing or original listing basis incorrect

<u>Waterbody Name</u>	<u>Water Segment ID #</u>	<u>Reason for Partial Delisting</u>
Chipuxet River & Tribs	RI0008039R-06B	insufficient data to support listing for macro-invertebrate bioassessment
Hardig Brook & Tribs	RI0007025R-01	original basis for listing for benthic-macroinvertebrate bioassessment incorrect
Jamestown Brook	RI0007036R-01	insufficient data to support listing for macro-invertebrate bioassessment
Keach Brook & Tribs	RI0005047R-02	insufficient data to support listing for macro-invertebrate bioassessment
Upper Kickemuit River	RI0007034R-01	original basis for listing for benthic-macroinvertebrate bioassessment incorrect

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. EPA approves the delistings.

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 (Table 6, below) already have a State developed TMDL which has been approved by EPA during the 2010 listing cycle. 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. No water body segments have been newly placed in Category 4C in the 2010 listing cycle, so no data are presented here for the Category.

Category 4A

For the water bodies/impairments moved to Category 4A for this listing cycle, TMDLs for the pollutant of concern have been completed and approved by EPA. In all, 35 water body-pollutant combinations were placed in Category 4A during the 2010 listing cycle. Those 35 approved TMDLs, covering 27 water bodies, are identified in Table 6. EPA approves these delistings as consistent with EPA's regulations and EPA's Guidance for Assessment, Listing and Reporting Requirements.

Table 6 - Waters fully or partially moved to Category 4A – TMDL completed				
<u>Water Body Name</u>	<u>Water Body Segment ID</u>	<u>Water Body Towns</u>	<u>EPA Approved</u>	<u>TMDL Parameter(s)</u>
Belleville Ponds	RI0007027L-02	N. Kingstown	12/28/2010	Total Phosphorus
Belleville Upper Pond Inlet	RI0007027R-02	N. Kingstown	12/28/2010	Total Phosphorus
Buckeye Brook & Tribs	RI0007024R-01	Warwick	12/23/2008	Enterococcus bacteria Fecal Coliform bacteria
Indian Run Brook & Tribs	RI0010045R-02	S. Kingstown	6/2/2008	Zinc Copper
Kickemuit River, segment A	RI0007033E-01A	Swansea, Rehoboth	1/14/2010	Fecal coliform bacteria
Kickemuit River, segment B	RI0007033E-01B	Swansea, Rehoboth	1/14/2010	Fecal coliform bacteria
Kickemuit River, segment C	RI0007033E-01C	Swansea, Rehoboth	1/14/2010	Fecal coliform bacteria

Little Narragansett Bay, seg. A	RI0008038E-02A	Westerly	12/1/2010	Fecal coliform bacteria
Little Narragansett Bay, seg. B	RI0008038E-02B	Westerly	12/1/2010	Fecal coliform bacteria
Lockwood Brook & Tribs	RI0007024R-03	Warwick	12/23/2008	Enterococcus bacteria Fecal coliform bacteria
Mastuxet River & Trib	RI0008039R-11	Westerly	12/1/2010	Enterococcus bacteria Fecal coliform bacteria
Mt. Hope Bay, segment A	RI0007032E-01A	Bristol, Portsmouth, Tiverton, and Warren	1/14/2010	Fecal coliform bacteria
Mt. Hope Bay, segment B	RI0007032E-01B	Bristol, Portsmouth, Tiverton, and Warren	1/14/2010	Fecal coliform bacteria
Mt. Hope Bay, segment C	RI0007032E-01C	Bristol, Portsmouth, Tiverton, and Warren	1/14/2010	Fecal coliform bacteria
Mt. Hope Bay, segment D	RI0007032E-01D	Bristol, Portsmouth, Tiverton, and Warren	1/14/2010	Fecal coliform bacteria
Old Mill Creek	RI0007024E -02	Warwick	12/23/2008	Enterococcus bacteria Fecal coliform bacteria
Parsonage (Knowles Brook	RI0007024R-02	Warwick	12/23/2008	Enterococcus bacteria Fecal coliform bacteria
Point Judith Pond, segment B	RI0010043E-06B	South Kingston, Narragansett	6/28/2008	Fecal coliform bacteria
Point Judith Pond, segment C	RI0010043E-06C	South Kingston, Narragansett	6/28/2008	Fecal coliform bacteria
Point Judith Pond, segment D	RI0010043E-06D	South Kingston, Narragansett	6/28/2008	Fecal coliform bacteria
Point Judith Pond, segment K	RI0010043E-06K	South Kingston, Narragansett	6/28/2008	Fecal coliform bacteria
Sands Pond	RI0010046L-01	New Shoreham (Block Island)	6/2/2008	Total Phosphorus
Lower Saugatucket River	RI0010045R-05C	South Kingston, Narragansett	6/28/2008	Fecal coliform bacteria
Tidal Pawcatuck River, segment A	RI0008038E-01A	Westerly	12/1/2010	Fecal coliform bacteria
Tidal Pawcatuck River, segment B	RI0008038E-01B	Westerly	12/1/2010	Fecal coliform bacteria
Tribes to Warwick Pond	RI0007024R-05	Warwick	12/23/2008	Enterococcus bacteria Fecal coliform bacteria
Warner Pond & Tribs	RI0007024R-04	Warwick	12/23/2008	Enterococcus bacteria Fecal coliform bacteria

Category 4B

Rhode Island is not proposing to add new waters into Category 4B in this listing cycle, but EPA is re-evaluating the continued listing of the impairments for four waters that were previously placed into the Category. The State's decision to include waters in Category 4B rather than on its 2010 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 be scheduled 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 (see 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 withdraws nearly one billion gallons of water per day for cooling water, then discharges 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 violate 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. Once compliance is achieved habitat quality will improve and annual fishery losses are expected to be reduced by 94%. 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, is planning to install natural draft cooling towers as part of its compliance with the permit. EPA has issued an administrative order which contains a schedule for compliance with the permit limits within 36 months of obtaining all construction and operating permits.

Based on the information RI DEM provided in its 2010 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 water temperature and fish biodiversity. The State will continue to assess the Bay segments in subsequent listing cycles to determine if the impairments remain appropriate for listing in Category 4B or if they warrant placement into Category 5 again. 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 control in place		
<u>Water Body Name</u>	<u>Water Segment ID #</u>	<u>Other requirements in place</u>
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

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 2011 to 2022 for completing TMDLs for waters on the list. According to the State’s 2009 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 162 water body segments in Category 5 with 315 (water body segment × impairment cause) combinations. DEM’s TMDL development schedule is as follows, with the number of combinations due for development by the date shown:

2011: 98
 2012: 1
 2014: 29
 2016: 117
 2018: 35
 2022: 35

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 2022.

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. Natri, 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 2010 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 2010 Section 303(d) list.