

**STATE OF RHODE ISLAND  
2022 IMPAIRED WATERS REPORT  
DECEMBER 2021**



**Runnins River**

**Rhode Island Department of Environmental Management  
Office of Water Resources  
235 Promenade Street  
Providence, RI 02908**

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## **INTRODUCTION**

The Rhode Island Department of Environmental Management's Office of Water Resources has prepared this Impaired Waters Report to provide a complete list of all impaired waterbodies in the State of Rhode Island including:

- Category 5: Known as the 303(d) list. Waterbodies identified as impaired and requiring development of a Total Maximum Daily Load<sup>1</sup>.
- Category 4: Other impaired waterbodies not requiring development of a TMDL because:
  - Waterbodies for which a TMDL has been developed (Category 4A)
  - Waterbodies where other pollution control requirements are reasonably expected to result in attainment of water quality standards (Category 4B)
  - Waterbodies having impairments not caused by a pollutant (Category 4C)

## **Clean Water Act Requirements**

The federal Clean Water Act (CWA) Section 303(d) requires states to identify and list those waterbodies that are not expected to meet state water quality standards after the implementation of technology-based controls and, as such, require the development of TMDLs. States must include on the list the specific cause(s) of the impairment (if known). Rhode Island's 303(d) list of impaired waters developed by the Rhode Island Department of Environmental Management (RIDEM) fulfills this CWA requirement. The 303(d) listing requirement is part of a process detailed in the CWA, which requires all states to do the following:

- Establish water quality standards (WQS) (including Water Designated Uses and Water Quality Criteria to protect those uses) for the state's surface waters.
- Monitor water quality conditions of the state's waters.
- Assess water quality conditions of the state's waters and develop biennial reports describing the water quality conditions (CWA section 305(b)).
- Identify and list impaired waters (that is those waters that do not meet WQS with existing required technology-based pollution controls alone) in the state's 303(d) list.
- Set priority rankings (i.e. a schedule for development of TMDLs) for all impaired waters included on the 303(d) list.
- Determine TMDLs for each listed waterbody and each cause of impairment that establish acceptable pollutant loads from both point and nonpoint pollution sources that allow the impaired waterbody to meet WQS.
- Submit the 303(d) list and all TMDLs to United States Environmental Protection Agency (USEPA) for approval.
- Incorporate TMDLs into the state's continuing planning process.

These CWA requirements provide a mechanism to integrate and implement water quality

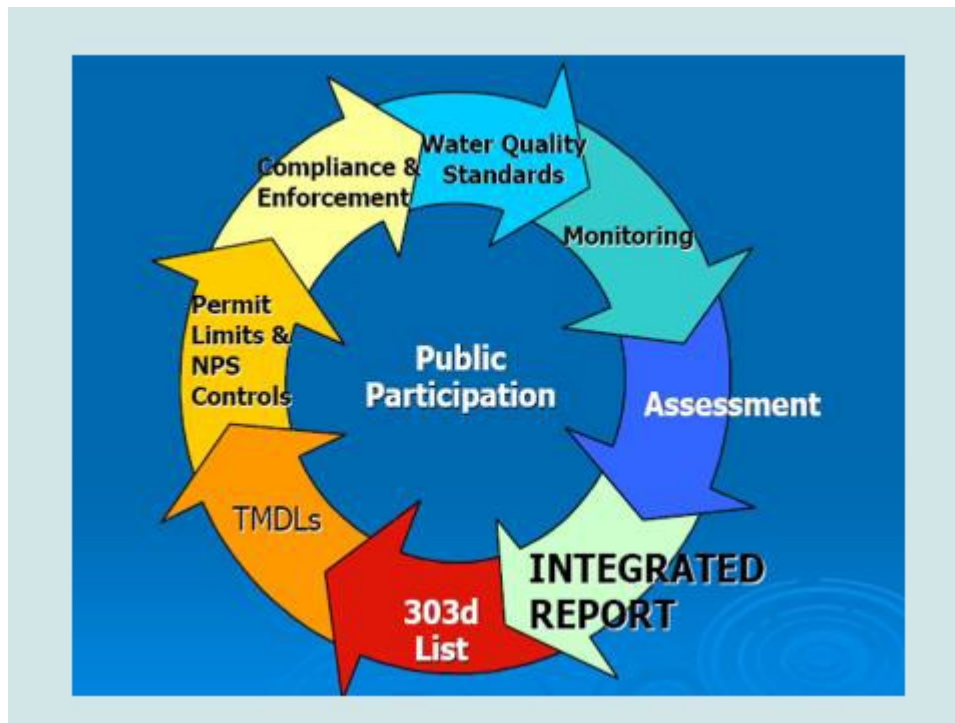
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<sup>1</sup>TMDL is Total Maximum Daily Load and refers to the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. The term also refers to the waterbody specific studies completed to determine the allowable pollutant levels and the pollution control activities needed to restore water quality.

efforts for the restoration and protection of the nation’s aquatic resources. They are embedded in Rhode Island’s water quality management framework which consists of a five-step process:

- Monitor the quality and condition of water resources.
- Based on an assessment of available data, characterize the condition of the water resource, and identify stressors or causes of degradation.
- Develop a plan or strategies to restore and protect water resource conditions to achieve specified goals.
- Implement the strategies to protect and restore water quality and aquatic habitat.
- Evaluate results and cycle through the process again using information to adapt management considering new information.

The following graphic describes these CWA responsibilities implemented by RIDEM as part of this process.



Rhode Island’s water quality management framework is a systems management approach purposefully designed to address water resource protection and restoration in a holistic manner. It acknowledges the continuing implementation of established governmental programs to regulate various water pollution sources, protect aquatic habitat and facilitate water quality improvements. Building on these programs, it incorporates the use of a watershed-based approach to facilitate more effective management of our water resources. The aim is to integrate management activities related to water quality and aquatic habitats within a given watershed. The framework provides a process for government and other stakeholders to prioritize problems and work collaboratively on a watershed basis to optimize

results in terms of both environmental outcomes and the other societal benefits associated with improved water quality and habitat. A more detailed description of the state's overall management approach can be found in the updated State Guide Plan Element Report 121: Water Quality 2035 (RI Division of Planning, 2016)<sup>2</sup>.

### **305(b) Water Quality Assessment Process**

Section 305(b) of the CWA requires states to survey their water quality for attainment of the fishable/swimmable goals of the CWA and to report the water quality assessments biennially (every even year). Each waterbody or waterbody segment is assigned a waterbody identification (WBID) number for tracking purposes to assist with water quality assessments, mapping, reporting, and/or trend analysis. The attainment of the CWA goals is measured by determining whether waters support their designated uses (defined as the most sensitive and therefore governing water uses which the class is intended to protect). For the purposes of the 305(b) water quality assessments, seven designated uses are evaluated<sup>3</sup>:

- Fish and Wildlife Habitat (Aquatic Life Use)
- Drinking Water Supply
- Shellfish Consumption
- Shellfish Controlled Relay and Depuration
- Fish Consumption
- Primary Contact Recreation
- Secondary Contact Recreation

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<sup>2</sup> [http://www.planning.ri.gov/documents/LU/water/2016/SGP\\_WQMP\\_Approved%2010.13.16.pdf](http://www.planning.ri.gov/documents/LU/water/2016/SGP_WQMP_Approved%2010.13.16.pdf)

<sup>3</sup> Only the designated uses associated with the waterbody's classification is assessed.

Designated uses are the goals or intended uses for surface waterbodies, whether they are being attained or not. Table 1 lists the designated uses as they appear in the 305(b) assessment process, the comparable designated use as described in the Rhode Island Water Quality Regulations, and the applicable water classification to which the designated uses apply.

Table 1 Designated Uses for Surface Waters as Described in the Rhode Island Water Quality Regulations and 305(b) Assessments.

305(b) Designated Use	RI WQ Regulations Designated Use	Applicable Classification of Water	Designated Use Definition
Drinking Water Supply <sup>a</sup>	Public Drinking Water Supply	AA	The waterbody can supply safe drinking water with conventional treatment.
Swimming / Recreation	Primary Contact Recreation	AA <sup>a</sup> , A, B, B1, B{a}, B1{a}, SA, SA{b}, SB, SB{a}, SB1, SB1{a} <i>(all surface waters)</i>	Swimming, water skiing, surfing, and similar water contact activities where a high degree of bodily contact with the water, immersion and ingestion are likely.
Swimming / Recreation	Secondary Contact Recreation	AA <sup>a</sup> , A, B, B1, B{a}, B1{a}, C <sup>b</sup> , SA, SA{b}, SB, SB{a}, SB1, SB1{a}, SC <sup>b</sup> <i>(all surface waters)</i>	Boating, canoeing, fishing, kayaking or other recreational activities in which there is minimal contact by the human body with the water and the probability of immersion and/or ingestion of the water is minimal.
Aquatic Life Support / Fish, other Aquatic Life, and Wildlife	Fish and Wildlife Habitat	AA, A, B, B1, B{a}, B1{a}, C <sup>b</sup> , SA, SA{b}, SB, SB{a}, SB1, SB1{a}, SC <sup>b</sup> <i>(all surface waters)</i>	Waters suitable for the protection, maintenance, and propagation of a viable community of aquatic life and wildlife.
Shellfishing / Shellfish Consumption	Shellfish harvesting for direct human consumption	SA, SA{b}	The waterbody supports a population of shellfish and is free from pathogens that could pose a human health risk to consumers
Shellfish Controlled Relay and Depuration	Shellfish harvesting for controlled relay and depuration	SB, SB{a}	Waters are suitable for the transplant of shellfish to Class SA waters for ambient depuration and controlled harvest.
Fish Consumption	No specific analogous use, but implicit in "Fish and Wildlife Habitat"	AA <sup>a</sup> , A, B, B1, B{a}, B1{a}, C <sup>b</sup> , SA, SA{b}, SB, SB{a}, SB1, SB1{a}, SC <sup>b</sup> <i>(all surface waters)</i>	The waterbody supports fish free from contamination that could pose a human health risk to consumers.

<sup>a</sup> Class AA waters may be subject to restricted recreational use by State and local authorities.

<sup>b</sup> Class C/SC waters classifications are retained in the RI Water Quality Regulations, but no waters are assigned that classification at this time.

Designated use support status is determined by comparing available water quality information to the water quality standards established in the Rhode Island Water Quality Regulations. Table 2 lists the indicators used in evaluating attainment for each designated use. For the Impaired

Waters List presented in this document, the methodology for this cycle’s assessment process is outlined in RIDEM’s 2022 Consolidated Assessment and Listing Methodology (CALM) document: <http://www.dem.ri.gov/programs/benviron/water/quality/pdf/calm22.pdf>. The results of this analysis are then used to categorize each waterbody’s specific designated uses as *Fully Supporting* or *Not Supporting*. If data is considered insufficient or if no data is available to evaluate a designated use, it is considered *Not Assessed*. Waterbodies that are *Not Supporting* their designated uses as determined during the 305(b) assessment process are placed on the state’s List of Impaired Waters, which is developed in accordance with CWA Section 303(d).

Table 2 Designated Uses and Indicators for Attainment Evaluations.

Designated Use	Indicators Evaluated <sup>a</sup>
Drinking Water Supply	<ul style="list-style-type: none"> <li>• Compliance with SDWA standards (MCLs) in the finished drinking water <sup>b</sup></li> <li>• Finished Drinking Water Restrictions – use advisories associated with source water contamination <sup>b</sup></li> <li>• Treatment Requirements – contaminants in source water that requires more than conventional treatment <sup>b</sup></li> </ul>
Swimming/Primary and Secondary Recreation	<ul style="list-style-type: none"> <li>• <b>Enterococci</b> <sup>c</sup></li> <li>• <b>Fecal coliform bacteria</b> <sup>c</sup></li> <li>• Beach closure information for designated beach waters <sup>b</sup></li> <li>• Minimum water quality general criteria and aesthetics</li> </ul>
Fish, other Aquatic Life, and Wildlife	<ul style="list-style-type: none"> <li>• <b>Biological (macroinvertebrate) data including physical habitat information</b> <sup>c</sup></li> <li>• <b>Conventional parameters</b> <sup>c</sup></li> <li>• Toxic parameters in water column <sup>c</sup></li> <li>• Toxicity data <sup>c</sup></li> <li>• Minimum water quality general criteria and aesthetics (narrative criteria) <sup>c</sup></li> </ul>
Shellfish Consumption	<ul style="list-style-type: none"> <li>• <b>Fecal coliform bacteria</b> <sup>c</sup></li> <li>• <b>RI Shellfish Growing Area Monitoring Program classifications</b></li> <li>• Minimum water quality general criteria and aesthetics (narrative criteria) <sup>c</sup></li> </ul>
Shellfish Controlled Relay and Depuration	<ul style="list-style-type: none"> <li>• Based on National Shellfish Sanitation Program (NSSP) protocol</li> </ul>
Fish Consumption	<ul style="list-style-type: none"> <li>• <b>Fish consumption advisories for specific waterbodies</b> <sup>b</sup></li> </ul>

<sup>a</sup> Core indicators are represented in **bold** lettering.

<sup>b</sup> Evaluated by Rhode Island Department of Health (HEALTH)

<sup>c</sup> Evaluated using the Rhode Island Water Quality Regulations



### INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT

Since 2008, RIDEM has produced an Integrated Water Quality Monitoring and Assessment Report which integrates the state's Section 305(b) Water Quality Assessment Report and Section 303(d) Impaired Waters List into one document. Following US EPA issued guidance<sup>4</sup>, the Integrated Report provides a streamlined approach to assessing and reporting on water quality. The Integrated Report Guidance emphasizes the importance of monitoring and assessing waterbodies in each category to obtain the information needed to evaluate progress toward attainment of water quality standards, to address data gaps, and to ensure that waterbodies which currently meet water quality standards, continue to do so.

While the attainment status of each designated use is documented to facilitate tracking of information and to assist in addressing data gaps by directing water quality monitoring efforts, each waterbody is placed into only one of the five reporting categories in the Integrated Report. For example, a waterbody may be *Fully Supporting* for swimming use, but it may be *Not Assessed* for aquatic life use due to insufficient data.

The Integrated Report format provides five lists/categories of water quality assessment information, described in Table 3. The integration of assessment determinations follows a hierarchical approach where determination of impairment for any cause (pollutant) for any designated use will result in placement of the waterbody in Category 5 (Needs a TMDL). Similarly, there is a hierarchical approach to placement of a waterbody into Category 4A (TMDL completed) over 4B (Other pollution control measures) over 4C (Impairment not caused by a pollutant). Based on the state's consolidated assessment and listing methodology (CALM), each surface waterbody of the state is placed into one of the five assessment categories.

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<sup>4</sup> Memorandum from Suzanne Schwartz. Information Concerning 2010 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. May 5, 2009.  
([https://www.epa.gov/sites/production/files/2015-10/documents/2009\\_05\\_06\\_tmdl\\_guidance\\_final52009.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/2009_05_06_tmdl_guidance_final52009.pdf))



Table 3 Integrated Reporting Categories.

Category	Integrated Reporting Description	Meaning
1	<ul style="list-style-type: none"> <li>Attaining all designated uses</li> <li>No use is threatened</li> </ul>	<ul style="list-style-type: none"> <li>Considered "fully supporting" all designated uses</li> </ul>
2	<ul style="list-style-type: none"> <li>Attaining some designated uses</li> <li>No use is threatened</li> <li>Insufficient or no data is available to assess other uses</li> </ul>	<ul style="list-style-type: none"> <li>Some uses are "fully supporting", more data is needed for other designated uses</li> </ul>
3	<ul style="list-style-type: none"> <li>Insufficient or no data is available to assess any use</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring is needed</li> </ul>
4	<ul style="list-style-type: none"> <li>Impaired or threatened for one or more use but does not require a TMDL because:</li> </ul>	<ul style="list-style-type: none"> <li>Impaired or threatened but no TMDL development needed</li> </ul>
4A	<ul style="list-style-type: none"> <li>TMDL has already been completed</li> </ul>	
4B	<ul style="list-style-type: none"> <li>Other pollution control measures are reasonably expected to result in attainment of water quality standard in near future</li> </ul>	
4C	<ul style="list-style-type: none"> <li>Impairment is not caused by a pollutant (e.g. aquatic invasive species)</li> </ul>	
5	<ul style="list-style-type: none"> <li>Impaired or threatened for one or more uses and requires a TMDL</li> </ul>	<ul style="list-style-type: none"> <li>Development of TMDL needed</li> <li>303(d) Impaired Waters List</li> </ul>

Impaired waterbodies can be moved from Category 5 and Category 4 to Category 1, if, in accordance with the CALM, recent data indicates that the waterbody is now meeting all water quality standards for all designated uses. Alternatively, an impaired waterbody can be moved from Category 5 and Category 4 to Category 2, if, in accordance with the CALM, recent data indicates that the waterbody is now meeting water quality standards for some designated uses and is not assessed for other designated uses.

As described above, the five Integrated Report Categories represent assessment status under Section 305(b) while Category 5 represents the reporting requirements under Section 303(d) of the Clean Water Act. Only Category 5 (Impaired Waters List) of the Integrated Report is subject to US EPA approval and public participation requirements. Therefore, while all the lists (Categories 1-5) are made available for public information and education purposes, RIDEM seeks comments only on the Category 5 list (303(d) List of Impaired Waters).

### Summary of Ambient Water Quality Monitoring Data

RIDEM strives to consider all readily available water quality data and related information in developing the 305(b) water quality assessments and 303(d) Impaired Waters List. To achieve this goal, certain data quality assurance (QA) and quality control (QC) procedures must be met to include the data in the assessment process. Detailed requirements for data considered in this cycle can be found in the 2022 CALM.

In general, the primary source of data generated for assessments is developed from programs that fall under the umbrella of Rhode Island's Water Monitoring Strategy (<http://dem.ri.gov/programs/benviron/water/quality/surfwq/pdfs/ri-water-monitoring-strategy-19.pdf>). The RIDEM Office of Water Resources (RIDEM-OWR) has a primary role in implementing the strategy by both conducting monitoring programs and supporting monitoring by other entities. Collectively, the monitoring programs are aimed at gathering the ambient water quality data needed to assess water quality conditions and support management decisions.

The RIDEM-OWR ambient water quality monitoring program collects data on the state's rivers and streams using a rotating basin approach (<http://www.dem.ri.gov/pubs/qapp/ambirivr2.pdf>). Adopted in 2004, the approach has been successful in addressing large data gaps and EPA's requirement that states increase the percentage of assessed waters. This approach integrates biological, chemical, and physical monitoring and involves an intensive data collection effort in a watershed. Almost 300 stations have been sampled statewide over five-year cycles providing a comprehensive dataset that supports a more complete assessment of water quality conditions in rivers and streams than was possible before.

Over the past ten years, the Office of Water Resources has invested considerable resources to advance the state's river and stream biological monitoring and assessment program. Development of a stronger biological monitoring and assessment program has highlighted the need to move from using a Reference Site Approach to a Reference Condition Approach, where possible. Prior to the 2016 assessment, RIDEM used a Reference Site Approach statewide to evaluate macroinvertebrate communities in Rhode Island rivers and streams in conducting Aquatic Life Use support decisions, when macroinvertebrate data was available. Under the Reference Site Approach, biological conditions in rivers and streams were measured against conditions observed at a reference station. Because healthy biological communities may vary, instead of using one reference station, the Reference Condition Approach is developed using multiple stations to account for natural differences. Further details on the Reference Condition Approach to biological assessments are in the 2022 CALM.

Data limitations restrict applicability of the new Reference Condition Approach to only the Coastal Plains and Hills ecoregion of the state (generally the interior, non-coastal areas of RI). Within the state's two Lowland ecoregions (Long Island Sound and Narragansett/Bristol), core sites with minimal disturbance have not been identified in sufficient numbers to support index development in these areas of the state. Furthermore, because streams in the state's Lowland ecoregions are more typically characterized by non-riffle low gradient systems, it is not appropriate to apply the new approach, which was developed using riffle habitat data, to these lowland streams. A grant to the New England Interstate Water Pollution Control Commission from the EPA Southern New England Program (SNEP) Program launched a cooperative effort with the State of Rhode Island and the Commonwealth of Massachusetts to evaluate development of an Index of Biotic Integrity (IBI) for low gradient non-riffle systems.

Due to significant differences in stream order, size of contributing watershed, and other physiographic features, the developed approach and wadeable, riffle metrics of the Reference

Condition Approach for the Coastal Plains and Hills ecoregion are not applicable to the state's larger non-wadeable rivers. This approach has also not been applied in lakes or ponds.

Much of the data available on the quality of the state's lakes is generated by the University of Rhode Island Watershed Watch program that has coordinated volunteer-based monitoring in lakes for since 1988. RIDEM-OWR financially supports this sizable lake water quality monitoring effort that also collects data on selected tributary streams and coastal waters. For this cycle, the tributary stream and coastal water data was used to highlight areas where further monitoring by RIDEM/OWR is warranted. The lakes data continued, as in the past, to be the primary source of data for assessments.

The RIDEM-OWR also conducts program-specific monitoring activities including targeted water quality investigations of impaired waters conducted in support of TMDLs, bacteriological monitoring of shellfish growing areas, and effluent monitoring of wastewater discharges. Since 2004, the RIDEM-OWR has also provided support to sustain fixed-site monitoring stations in Narragansett Bay via agreements with URI-Graduate School of Oceanography (URI-GSO). RIDEM-OWR along with the RI Water Resources Board also supports water quality and stream flow gage measurements via an agreement with USGS. There is a variety of other data generated by programs outside of the Water Monitoring Strategy framework that are also used in the assessment process. With each 305(b) assessment cycle, the RIDEM Office of Water Resources actively solicits submittal of such data and information for consideration in developing the Integrated Report.

With the release of the 2022 303(d) List for public review, the Department considers this biennial assessment cycle to be completed. Any new data or information made available to the Department during the public comment period will be considered for inclusion in this cycle on a case-by-case basis. In general, data and information made available during the public comment period is evaluated for use during the next assessment cycle and development of the next biennial Integrated Report.

### **Terminology Used to Describe Common Impairments and Causes**

A general explanation of the terminology used to describe impairments is provided below:

- Biodiversity Impairments are characterized according to the type of biological data and evaluation that led to the listing. The cause terms used include: *Benthic Macroinvertebrate Bioassessment*; *Sediment Toxicity Tests*; *Whole Effluent Toxicity (WET) Tests*. One macroinvertebrate bioassessment term is used according to the evaluation that led to the listing: *Benthic Macroinvertebrate Bioassessment* is determined by sampling of riffles in wadeable streams/rivers in high gradient Ecoregions, using the Rapid Bioassessment Protocol (RBP).
- Nutrient Impairments are specified according to the element causing the impairment. Generally, for freshwaters, *Total Phosphorus* is listed as the cause of the impairment, and for saltwaters, *Total Nitrogen* is listed as the cause of the impairment.

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- Pathogen Impairments are listed as *Enterococcus* or *fecal coliform* to reflect the actual bacteria indicator that led to the listing.
- Mercury Impairments are characterized according to the media impacted as either fish tissue (*mercury in fish tissue*), water column (*mercury in water column*) or sediments (*mercury*).
- Total Toxics and Unknown Toxicity Impairments are characterized according to the type of biological data and evaluation that led to the listing. The cause terms used include: *Sediment Bioassays, WET Tests, Ambient Bioassays – Chronic Aquatic Toxicity*.

**Observed Effects**

The Integrated Report format allows for tracking monitoring observations that may indicate a decline in water quality. These monitoring observations, called Observed Effects, represent responses to pollutants or other stressors causing impairment. Such Observed Effects can include excess algal growth, chlorophyll a, taste and odor, color, sedimentation/ siltation, and noxious aquatic plants.

## INTEGRATED REPORT CATEGORY 5 (303(d) LIST) – IMPAIRED WATERS REQUIRING TMDL DEVELOPMENT

### Overview

The 303(d) List identifies waterbodies within the State that are not currently meeting Rhode Island Water Quality Standards and that require a TMDL be developed addressing the identified water quality impairment or pollutant. This list is compiled by RIDEM-OWR and is based upon the most recent comprehensive assessment of water quality conditions, as described above. The 303(d) list establishes a scheduled time frame for development of TMDLs and is used to help prioritize the State's water quality monitoring and restoration planning activities. It is important to note that the scheduling is not necessarily representative of the severity of water quality impacts, but rather reflective of the priority given for TMDL development with consideration to shellfishing waters, drinking water supplies, and other priority areas identified by partner agencies and organizations, or the public.

The 303(d) list reflects the dynamic process of tracking the quality of the state's waters. As data gaps have been filled and the geographic coverage and/or scope of monitoring efforts expanded, both the number of new waterbodies and new impairments (for waterbodies previously listed for other pollutants) on the 303(d) list has increased. Concurrently, actual water quality improvements in response to upgrades at wastewater treatment facilities or other pollution control efforts as well as refinements in sampling and analytical techniques, and assessment protocol have resulted in removing or delisting of waterbody impairments. Because many of the state's waterbodies are impaired for multiple parameters, waterbodies may still appear on the 303(d) list despite these improvements.

### Prioritizing Waters for TMDL Development

A key component of the 303(d) listing process is establishing timelines for TMDL development. In 2013, the U.S. Environmental Protection Agency (USEPA) announced a new program framework to identify and prioritize waterbodies for restoration and protection, entitled A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program (referred to as "the Vision"). The Vision is intended to help coordinate and focus EPA and State efforts to advance the effectiveness of the Clean Water Act Section 303(d) Program in the coming decade. RIDEM's approach to implementing EPA's Vision is outlined in Rhode Island's 303(d) Vision Framework – May 2016:  
<http://www.ri.gov/programs/benviron/water/quality/rest/pdfs/vision16.pdf>.

RIDEM's current focus for estuarine waters is on continued monitoring of water quality to characterize progress toward clean water goals, including understanding interannual variability, and collaboration with EPA and others on their various water quality modeling efforts involving Narragansett Bay. Additionally, RIDEM, in partnership with CT Department of Energy and Environmental Protection, have undertaken efforts to further characterize existing nutrient related conditions in the Tidal Pawcatuck River and Little Narragansett Bay, and work towards development of TMDLs, as resources allow. RIDEM and CT DEEP will look to continue collaboration with US EPA and others in this effort.

### Broad Observations on the 2022 303(d) list

The 2022 303(d) list identifies 192 assessment units (WBID Numbers) having at least one impairment in need of a TMDL. This compares with 198 assessment units on the 2018-2020 303(d) list and 190 assessment units on the 2016 303(d) list. For 2022, most of the impaired waters are rivers (110 WBIDs), followed by lakes (46 WBIDs) and estuarine waters (36 WBIDs).

Table 5 Summary of 2022 303(d) List Impairments by Basin and Waterbody Type.

Basin	River Assessment Units (WBID)	Lake Assessment Units (WBID)	Estuarine Assessment Units (WBID)	Total Assessment Units (WBID)
Blackstone	24	10 (↑2)	0	34
Coastal	13	7	1	21
Moshassuck	6	1	0	7
Narragansett	10 (↓2)	2 (↓9)	34	46
Pawcatuck	28	8	1	37
Pawtuxet	17	9 (↑2)	0	26
Ten Mile	1 (↑1)	0	0	1
Westport	1	0	0	1
Thames	1	5	0	6
Woonasquatucket	9	4	0	13
<b>TOTAL</b>	<b>110</b>	<b>46</b>	<b>36</b>	<b>192</b>

The 303(d) list reflects ongoing water quality management activities and priorities. Changes from the 2018-2020 303(d) list to the 2022 303(d) list include the addition of new impairments on waterbodies not previously listed and the delisting of impairments and/or certain waterbodies as described in greater detail below, as well as the shifting of time schedules for completion of TMDLs. The TMDL schedules presented in the 2022 303(d) list reflect the state's ongoing water pollution control strategies, as well as the state's current capacity to collect the necessary data and information needed to develop TMDLs.

### New Impairments

Table 6 lists the new waterbody impairments added to the 2022 303(d) list. Those waterbodies added to the 303(d) list for the first time in 2022 are noted by an asterisk. The Category 5 table at the end of the document lists all impairments associated with each waterbody.

Table 6 New Waterbody Impairments identified on the 2022 303(d) List.

Waterbody Name	Waterbody ID	Cause of Impairment
Pawtuxet River Main Stem	RI0006017R-03	Lead
Ten Mile River & Tribs	RI0004009R-01B	Enterococci
Chapman Pond	RI0006016L-02	Mercury in Fish Tissue
Tarbox Pond	RI0006012L-02	Mercury in Fish Tissue
Tarkiln Pond	RI0001002L-08	Mercury in Fish Tissue
Spring Lake (Herring Pond)	RI0001002L-04	Mercury in Fish Tissue
J.L. Curran Reservoir (Fiskeville Reservoir)	RI0006016L-02	Phosphorus, Total

### Impairments Removed from the 303(d) list

The reasons for “delisting” a waterbody impairment and removing it from the 303(d) list (Category 5) include:

- TMDL for the impairment has been completed and approved by EPA.
- Other pollution control requirements are reasonably expected to result in attainment of the water quality standard associated with the impairment.
- The impairment is not caused by a pollutant.
- Current monitoring data indicated that the water quality standard for the impairment is now being met.
- Original basis for listing was incorrect.
- Cause not appropriate, given changes to assessment and listing protocol.

During the 2022 cycle, RIDEM is proposing to remove 5 waterbody impairment causes from the 303d list (Category 5) because current monitoring data indicate that water quality standards for the impairment is now being met. A list of waterbody impairments proposed for delisting from the state’s 303(d) list is provided below; detailed documentation supporting the removal of these impairments from the 303d list is found in the separate Delisting Document.

RIDEM completed and EPA approved two TMDL plans during the 2022 cycle. The Newport Drinking Water TMDL included 18 waterbody impairment causes from 9 waterbodies while the Buckeye Brook TMDL included 9 waterbody impairment causes from 2 waterbodies. These waters will be moved from Category 5 to Category 4A.



Table 7 Waterbody Impairments Delisted in 2022 Integrated Reporting Cycle.

Waterbody Name	Waterbody ID	Cause of Impairment	Reason for Delisting*	Page Number in Delisting Document
Blackstone River	RI0001003R-01A	Lead	WQ	4
Blackstone River	RI0001003R-01B	Lead	WQ	4
Buckeye Brook & Tribs	RI0007024R-01	Dissolved Zinc	NC	11
Buckeye Brook & Tribs	RI0007024R-01	Benthic-Macroinvertebrate Bioassessments	TMDL	NA
Buckeye Brook & Tribs	RI0007024R-01	Dissolved Oxygen	TMDL	NA
Buckeye Brook & Tribs	RI0007024R-01	Total Iron	TMDL	NA
Buckeye Brook & Tribs	RI0007024R-01	Dissolved Cadmium	TMDL	NA
Buckeye Brook & Tribs	RI0007024R-01	Total Iron	TMDL	NA
Buckeye Brook & Tribs	RI0007024R-01	Dissolved Cadmium	TMDL	NA
Gardiner Pond	RI0007035L-01	Phosphorus, Total	TMDL	NA
Gardiner Pond	RI0007035L-01	Total Organic Carbon	TMDL	NA
Lawton Valley Reservoir	RI0007035L-06	Phosphorus, Total	TMDL	NA
Lawton Valley Reservoir	RI0007035L-06	Total Organic Carbon	TMDL	NA
Maidford River	RI0007035R-02A	Lead	WQ	
Nelson Paradise Pond	RI0007035L-02	Phosphorus, Total	TMDL	NA
Nelson Paradise Pond	RI0007035L-02	Total Organic Carbon	TMDL	NA
Nonquit Pond	RI0007035L-08	Phosphorus, Total	TMDL	NA
Nonquit Pond	RI0007035L-08	Total Organic Carbon	TMDL	NA
North Easton Pond (Green End Pond)	RI0007035L-03	Phosphorus, Total	TMDL	NA
North Easton Pond (Green End Pond)	RI0007035L-03	Total Organic Carbon	TMDL	NA
Pawtuxet River	RI0006017R-03	Lead	WQ	14
Saint Mary's Pond	RI0007035L-05	Total Phosphorus	TMDL	NA
Saint Mary's Pond	RI0007035L-05	Total Organic Carbon	TMDL	NA
Sisson Pond	RI0007035L-10	Total Phosphorus	TMDL	NA
Sisson Pond	RI0007035L-10	Total Organic Carbon	TMDL	NA
South Easton Pond	RI0007035L-04	Total Phosphorus	TMDL	NA
South Easton Pond	RI0007035L-04	Total Organic Carbon	TMDL	NA
Tribes to Warwick Pond	RI0007024R-05	Benthic-Macroinvertebrate Bioassessments Lead	TMDL	NA
Tribes to Warwick Pond	RI0007024R-05	Total Iron	TMDL	NA
Tribes to Warwick Pond	RI0007024R-05	Dissolved Cadmium	TMDL	NA
Watson Reservoir	RI0007035L-07	Total Phosphorus	TMDL	NA
Watson Reservoir	RI0007035L-07	Total Organic Carbon	TMDL	NA
Woonasquatucket River & Tribs	RI0002007R-10A	Dissolved Zinc	WQ	18

\* Reasons for Delisting - WQ: water quality standards met; NA: Cause not appropriate; NC: Original listing incorrect; TMDL: TMDL Approved.

## INTEGRATED REPORT CATEGORY 4A – IMPAIRED WATERS HAVING APPROVED TMDLS

### Rhode Island's Water Quality Restoration Program

The goal of RIDEM's TMDL program is to develop and implement studies aimed at restoring impaired waterbodies to an acceptable condition that meets water quality standards and supports their designated uses (e.g., shellfish harvesting, primary contact (swimming) and aquatic life support). There are several steps that are common to the development of most TMDLs:

- Identify the impaired waterbodies and pollutant(s) not meeting water quality standards.
- Assemble and review available data and information on the waterbody and its watershed.
- Identify stakeholders having an interest in the waterbody and/or watershed.
- Identify data gaps that need to be addressed to satisfactorily characterize water quality conditions and pollution sources causing the identified impairment, and other factors affecting the extent and severity of the impairment.
- If needed, develop and implement a monitoring plan (and Quality Assurance Project Plan) to collect additional data to further characterize water quality and pollution sources. As part of the assessment process, pollution sources are identified and their significance assessed including point sources, such as wastewater treatment facility discharges and stormwater outfalls, and non-point sources, such as septic systems and un-channelized runoff from agricultural and urbanized areas.
- Estimate the current amount of point and non-point sources entering the waterbody.
- Establish the TMDL water quality target (typically the applicable water quality standard) and estimate the allowable load of the pollutant that the waterbody can receive and still meet water quality standards (i.e., the total maximum daily load). A water quality model, based on either computer simulations or empirical equations, may be used. For bacteria TMDLs, a concentration-based approach may be applied whereby a percentage reduction in fecal coliform concentrations is determined to represent necessary pollutant reductions.
- Allocate allowable loads between point and nonpoint sources as well as a margin of safety.
- Develop an implementation plan identifying the specific actions necessary to achieve the waterbody's water quality target(s).
- Conduct public meeting(s) and formally solicit and respond to public comments.
- Submit the final TMDL to EPA for formal approval.

Public participation is vital to the success of any water quality restoration effort. Wherever possible, RIDEM utilizes a "watershed approach" in developing TMDLs - evaluating watersheds as a whole, and partnering with local officials, environmental organizations, and others to identify problem areas, collect relevant water quality data, and identify potential pollution sources and solutions. RIDEM seeks input from stakeholders at key points in the TMDL development process. In the initial stages of developing the TMDL, stakeholders can play an important role by contributing both water quality data and their in-depth local knowledge of

the watershed. This information helps RIDEM to better characterize conditions in the waterbody and more easily identify pollution sources in the watershed. At the midpoint of the process, typically after supplemental water quality monitoring has been completed, RIDEM may host a meeting to discuss the monitoring results and to identify potential pollution sources and possible solutions. Finally, once a draft TMDL document is completed, it is made available for public review and comment for a 30-day period, and a public meeting is held to present the TMDL report and to seek public input on the report's findings and implementation plan.

**Status of TMDL Development**

Most recent TMDL development activities are focused on water quality impairments on Tributaries to Warwick Pond and Buckeye Brook, and the nine reservoirs that are sources of supply to the Newport Water System (Gardiner Pond, Nelson Paradise Pond, South Easton’s Pond, North Easton’s Pond, St Mary’s Pond, Sisson Pond, Lawton Valley Reservoir, Watson Reservoir and Nonquit Pond). Table 8 shows the waterbody impairments for which a TMDL has been completed by RIDEM and approved by US EPA are tracked in Category 4A. Note that if a TMDL has been completed for an impairment but there are other impairments requiring development of a TMDL, that waterbody will continue to appear in Category 5. To date, nine waterbodies for which a TMDL was completed have been found to be meeting water quality standards for the parameter in which it was impaired<sup>5</sup>. They have been removed from Table 8.

Table 8 Category 4A – Waterbody Impairments having Approved TMDLs.

<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Buckeye Brook & Tribs	RI0007024R-01	Benthic-Macroinvertebrate Bioassessments	12/14/2021
Buckeye Brook & Tribs	RI0007024R-01	Cadmium	12/14/2021
Buckeye Brook & Tribs	RI0007024R-01	Copper	12/14/2021
Buckeye Brook & Tribs	RI0007024R-01	Iron	12/14/2021
Buckeye Brook & Tribs	RI0007024R-01	Lead	12/14/2021
Buckeye Brook & Tribs	RI0007024R-01	Oxygen, Dissolved	12/14/2021
Tribs to Warwick Pond	RI0007024R-05	Benthic-Macroinvertebrate Bioassessments	12/14/2021
Tribs to Warwick Pond	RI0007024R-05	Cadmium	12/14/2021
Tribs to Warwick Pond	RI0007024R-05	Iron	12/14/2021
South Easton Pond	RI0007025L-04	Phosphorus, Total	11/15/2021
South Easton Pond	RI0007025L-04	Total Organic Carbon	11/15/2021

<sup>5</sup> The nine waterbodies removed from the table are Gilbert Stuart Stream (Fecal Coliform), Moswansicut Brook (Escherichia coli), Pawtuxet River South Branch (Enterococcus), Nooseneck River & Tribs (Enterococcus), Boyd Brook (Enterococcus), Greenwich Cove (05A Segment, Fecal Coliform), Woonasquatucket River (10A Segment, Zinc), and Blackstone River (01A and 01B Segments, Lead).

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Gardiner Pond	RI0007035L-01	Phosphorus, Total	11/15/2021
Gardiner Pond	RI0007035L-01	Total Organic Carbon	11/15/2021
Nelson Paradise Pond	RI0007035L-02	Phosphorus, Total	11/15/2021
Nelson Paradise Pond	RI0007035L-02	Total Organic Carbon	11/15/2021
North Easton Pond (Green End Pond)	RI0007035L-03	Phosphorus, Total	11/15/2021
North Easton Pond (Green End Pond)	RI0007035L-03	Total Organic Carbon	11/15/2021
Saint Mary's Pond	RI0007035L-05	Phosphorus, Total	11/15/2021
Saint Mary's Pond	RI0007035L-05	Total Organic Carbon	11/15/2021
Lawton Valley Reservoir	RI0007035L-06	Phosphorus, Total	11/15/2021
Lawton Valley Reservoir	RI0007035L-06	Total Organic Carbon	11/15/2021
Watson Reservoir	RI0007035L-07	Phosphorus, Total	11/15/2021
Watson Reservoir	RI0007035L-07	Total Organic Carbon	11/15/2021
Nonquit Pond	RI0007035L-08	Phosphorus, Total	11/15/2021
Nonquit Pond	RI0007035L-08	Total Organic Carbon	11/15/2021
Sisson Pond	RI0007035L-10	Phosphorus, Total	11/15/2021
Sisson Pond	RI0007035L-10	Total Organic Carbon	11/15/2021
Pierce Brook	RI0007028R-07	Enterococcus	9/17/2014
Pawcatuck River & Tribs	RI0008039R-18D	Enterococcus	9/17/2014
Pawcatuck River & Tribs	RI0008039R-18E	Enterococcus	9/17/2014
Spring Brook and Tributaries	RI0008039R-41	Enterococcus	9/17/2014
Acid Factory Brook & Tribs	RI0008040R-01	Enterococcus	9/17/2014
Baker Brook	RI0008040R-18	Enterococcus	9/17/2014
Scott Pond	RI0001003L-01	Oxygen, Dissolved	8/12/2014
Scott Pond	RI0001003L-01	Phosphorus (Total)	8/12/2014
Turner Reservoir North (Central Pond)	RI0004009L-01A	Aluminum	4/17/2014
Turner Reservoir North (Central Pond)	RI0004009L-01A	Cadmium	4/17/2014
Turner Reservoir North (Central Pond)	RI0004009L-01A	Oxygen, Dissolved	4/17/2014
Turner Reservoir North (Central Pond)	RI0004009L-01A	Phosphorus (Total)	4/17/2014
Turner Reservoir South	RI0004009L-01B	Aluminum	4/17/2014
Turner Reservoir South	RI0004009L-01B	Cadmium	4/17/2014
Turner Reservoir South	RI0004009L-01B	Oxygen, Dissolved	4/17/2014
Turner Reservoir South	RI0004009L-01B	Phosphorus (Total)	4/17/2014
Omega Pond	RI0004009L-03	Aluminum	4/17/2014
Omega Pond	RI0004009L-03	Cadmium	4/17/2014
Omega Pond	RI0004009L-03	Fecal Coliform	4/17/2014
Omega Pond	RI0004009L-03	Oxygen, Dissolved	4/17/2014
Omega Pond	RI0004009L-03	Phosphorus (Total)	4/17/2014
Ten Mile River & Tribs	RI0004009R-01A	Aluminum	4/17/2014

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Ten Mile River & Tribs	RI0004009R-01A	Cadmium	4/17/2014
Ten Mile River & Tribs	RI0004009R-01A	Enterococcus	4/17/2014
Ten Mile River & Tribs	RI0004009R-01A	Fecal Coliform	4/17/2014
Ten Mile River & Tribs	RI0004009R-01A	Iron	4/17/2014
Ten Mile River & Tribs	RI0004009R-01A	Lead	4/17/2014
Ten Mile River & Tribs	RI0004009R-01A	Phosphorus (Total)	4/17/2014
Ten Mile River & Tribs	RI0004009R-01B	Aluminum	4/17/2014
Ten Mile River & Tribs	RI0004009R-01B	Cadmium	4/17/2014
Blackstone River	RI0001003R-01A	Cadmium	4/22/2013
Blackstone River	RI0001003R-01A	Enterococcus	4/22/2013
Blackstone River	RI0001003R-01A	Fecal Coliform	4/22/2013
Blackstone River	RI0001003R-01B	Cadmium	4/22/2013
Cherry Brook & Tribs	RI0001003R-02	Copper	4/22/2013
Cherry Brook & Tribs	RI0001003R-02	Enterococcus	4/22/2013
Cherry Brook & Tribs	RI0001003R-02	Fecal Coliform	4/22/2013
Mill River	RI0001003R-03	Enterococcus	4/22/2013
Mill River	RI0001003R-03	Fecal Coliform	4/22/2013
Peters River	RI0001003R-04	Copper	4/22/2013
Peters River	RI0001003R-04	Enterococcus	4/22/2013
Peters River	RI0001003R-04	Fecal Coliform	4/22/2013
Branch River & Tribs	RI0001002R-01A	Enterococcus	9/22/2011
Branch River & Tribs	RI0001002R-01B	Enterococcus	9/22/2011
Chepachet River & Tribs	RI0001002R-03	Enterococcus	9/22/2011
Clear River & Tribs	RI0001002R-05C	Enterococcus	9/22/2011
Clear River	RI0001002R-05D	Enterococcus	9/22/2011
Pascoag River	RI0001002R-09	Enterococcus	9/22/2011
Tarkiln Brook & Tribs	RI0001002R-13B	Enterococcus	9/22/2011
Crookfall Brook & Tribs	RI0001004R-01	Enterococcus	9/22/2011
Long Brook & Tribs	RI0001006R-02	Enterococcus	9/22/2011
East Sneece Brook	RI0001006R-03	Enterococcus	9/22/2011
Burnt Swamp Brook & Tribs	RI0001006R-06	Enterococcus	9/22/2011
Cutler Brook & Tribs	RI0002007R-02	Enterococcus	9/22/2011
Latham Brook & Tribs	RI0002007R-05	Enterococcus	9/22/2011
Stillwater River & Tribs	RI0002007R-09	Enterococcus	9/22/2011
Moshassuck River & Tribs	RI0003008R-01A	Enterococcus	9/22/2011
Moshassuck River & Tribs	RI0003008R-01B	Enterococcus	9/22/2011
West River & Tribs	RI0003008R-03B	Enterococcus	9/22/2011
Moosup River & Tribs	RI0005011R-03	Enterococcus	9/22/2011

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Tribs to Tiogue Lake	RI0006014R-05	Enterococcus	9/22/2011
Huntinghouse Brook	RI0006015R-11	Enterococcus	9/22/2011
Windsor Brook & Tribs	RI0006015R-30	Enterococcus	9/22/2011
Roger Williams Park Ponds	RI0006017L-05	Fecal Coliform	9/22/2011
Mashapaug Pond	RI0006017L-06	Fecal Coliform	9/22/2011
Meshanticut Brook & Tribs	RI0006017R-02	Enterococcus	9/22/2011
Dry Brook & Tribs	RI0006018R-02A	Enterococcus	9/22/2011
Simmons Brook & Tribs	RI0006018R-04	Enterococcus	9/22/2011
Belleville Upper Pond Inlet	RI0007027R-02	Enterococcus	9/22/2011
Frenchtown Brook & Tribs	RI0007028R-01	Enterococcus	9/22/2011
Hunt River	RI0007028R-03D	Enterococcus	9/22/2011
Sandhill Brook & Tribs	RI0007028R-05	Fecal Coliform	9/22/2011
Bailey's Brook & Tribs	RI0007035R-01	Enterococcus	9/22/2011
Maidford River	RI0007035R-02A	Fecal Coliform	9/22/2011
Maidford River	RI0007035R-02B	Fecal Coliform	9/22/2011
Paradise Brook	RI0007035R-03	Fecal Coliform	9/22/2011
Jamestown Brook	RI0007036R-01	Fecal Coliform	9/22/2011
Sucker Brook	RI0007037R-01	Enterococcus	9/22/2011
Ashaway River & Tribs	RI0008039R-02A	Enterococcus	9/22/2011
Chickasheen Brook	RI0008039R-05A	Enterococcus	9/22/2011
Meadow Brook & Tribs	RI0008039R-13	Enterococcus	9/22/2011
Mile Brook	RI0008039R-14	Enterococcus	9/22/2011
Pawcatuck River & Tribs	RI0008039R-18B	Enterococcus	9/22/2011
Pawcatuck River & Tribs	RI0008039R-18C	Enterococcus	9/22/2011
Taney Brook	RI0008039R-23	Enterococcus	9/22/2011
Tomaquag Brook & Tribs	RI0008039R-24	Enterococcus	9/22/2011
White Horn Brook & Tribs	RI0008039R-27B	Enterococcus	9/22/2011
Dutemple Brook	RI0008039R-30	Enterococcus	9/22/2011
Parmenter Brook & Tribs	RI0008039R-37	Enterococcus	9/22/2011
Breakheart Brook & Tribs	RI0008040R-02	Enterococcus	9/22/2011
Brushy Brook & Tribs	RI0008040R-03B	Fecal Coliform	9/22/2011
Canonchet Brook & Tribs	RI0008040R-04B	Enterococcus	9/22/2011
Phillips Brook & Tribs	RI0008040R-14	Enterococcus	9/22/2011
Wood River & Tribs	RI0008040R-16A	Enterococcus	9/22/2011
Fresh Meadow Brook & Tribs	RI0010045R-01	Enterococcus	9/22/2011
Belleville Ponds	RI0007027L-02	Phosphorus (Total)	12/28/2010
Belleville Upper Pond Inlet	RI0007027R-02	Phosphorus (Total)	12/28/2010
Tidal Pawcatuck River	RI0008038E-01A	Fecal Coliform	12/1/2010

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Tidal Pawcatuck River	RI0008038E-01B	Fecal Coliform	12/1/2010
Little Narragansett Bay	RI0008038E-02A	Fecal Coliform	12/1/2010
Little Narragansett Bay	RI0008038E-02B	Fecal Coliform	12/1/2010
Mastuxet Brook & Tribs	RI0008039R-11	Enterococcus	12/1/2010
Mastuxet Brook & Tribs	RI0008039R-11	Fecal Coliform	12/1/2010
Mt. Hope Bay	RI0007032E-01A	Fecal Coliform	1/14/2010
Mt. Hope Bay	RI0007032E-01B	Fecal Coliform	1/14/2010
Mt. Hope Bay	RI0007032E-01C	Fecal Coliform	1/14/2010
Mt. Hope Bay	RI0007032E-01D	Fecal Coliform	1/14/2010
Kickemuit River	RI0007033E-01A	Fecal Coliform	1/14/2010
Kickemuit River	RI0007033E-01B	Fecal Coliform	1/14/2010
Kickemuit River	RI0007033E-01C	Fecal Coliform	1/14/2010
Old Mill Creek	RI0007024E-02	Enterococcus	12/23/2008
Old Mill Creek	RI0007024E-02	Fecal Coliform	12/23/2008
Buckeye Brook & Tribs	RI0007024R-01	Enterococcus	12/23/2008
Buckeye Brook & Tribs	RI0007024R-01	Fecal Coliform	12/23/2008
Parsonage (Knowles) Brook	RI0007024R-02	Enterococcus	12/23/2008
Parsonage (Knowles) Brook	RI0007024R-02	Fecal Coliform	12/23/2008
Lockwood Brook & Tribs	RI0007024R-03	Enterococcus	12/23/2008
Lockwood Brook & Tribs	RI0007024R-03	Fecal Coliform	12/23/2008
Warner Brook	RI0007024R-04	Enterococcus	12/23/2008
Warner Brook	RI0007024R-04	Fecal Coliform	12/23/2008
Tribs to Warwick Pond	RI0007024R-05	Enterococcus	12/23/2008
Tribs to Warwick Pond	RI0007024R-05	Fecal Coliform	12/23/2008
Point Judith Pond	RI0010043E-06B	Fecal Coliform	6/28/2008
Point Judith Pond	RI0010043E-06C	Fecal Coliform	6/28/2008
Point Judith Pond	RI0010043E-06D	Fecal Coliform	6/28/2008
Point Judith Pond	RI0010043E-06K	Fecal Coliform	6/28/2008
Saugatucket River	RI0010045E-01	Fecal Coliform	6/26/2008
Indian Run Brook & Tribs	RI0010045R-02	Copper	6/2/2008
Indian Run Brook & Tribs	RI0010045R-02	Zinc	6/2/2008
Sands Pond	RI0010046L-01	Chlorophyll-a	6/2/2008
Sands Pond	RI0010046L-01	Phosphorus (Total)	6/2/2008
Sands Pond	RI0010046L-01	Turbidity	6/2/2008
Quidnick Reservoir	RI0006013L-04	Mercury in Fish Tissue	12/20/2007
J.L. Curran Reservoir (Fiskeville Reservoir)	RI0006016L-02	Mercury in Fish Tissue	12/20/2007
Watchaug Pond	RI0008039L-02	Mercury in Fish Tissue	12/20/2007
Meadowbrook Pond (Sandy Pond)	RI0008039L-05	Mercury in Fish Tissue	12/20/2007



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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Tucker Pond	RI0008039L-08	Mercury in Fish Tissue	12/20/2007
Larkin Pond	RI0008039L-11	Mercury in Fish Tissue	12/20/2007
Hundred Acre Pond	RI0008039L-13	Mercury in Fish Tissue	12/20/2007
Yawgoo Pond	RI0008039L-15	Mercury in Fish Tissue	12/20/2007
Alton Pond	RI0008040L-01	Mercury in Fish Tissue	12/20/2007
Ashville Pond	RI0008040L-04	Mercury in Fish Tissue	12/20/2007
Wincheck Pond	RI0008040L-06	Mercury in Fish Tissue	12/20/2007
Yawgoog Pond	RI0008040L-07	Mercury in Fish Tissue	12/20/2007
Locustville Pond	RI0008040L-10	Mercury in Fish Tissue	12/20/2007
Wyoming Pond	RI0008040L-11	Mercury in Fish Tissue	12/20/2007
Browning Mill Pond (Arcadia Pond)	RI0008040L-13	Mercury in Fish Tissue	12/20/2007
Boone Lake	RI0008040L-14	Mercury in Fish Tissue	12/20/2007
Eisenhower Lake	RI0008040L-16	Mercury in Fish Tissue	12/20/2007
Indian Lake	RI0010045L-04	Mercury in Fish Tissue	12/20/2007
Upper Dam Pond	RI0006014L-04	Phosphorus (Total)	9/27/2007
Roger Williams Park Ponds	RI0006017L-05	Excess Algal Growth	9/27/2007
Roger Williams Park Ponds	RI0006017L-05	Oxygen, Dissolved	9/27/2007
Roger Williams Park Ponds	RI0006017L-05	Phosphorus (Total)	9/27/2007
Mashapaug Pond	RI0006017L-06	Excess Algal Growth	9/27/2007
Mashapaug Pond	RI0006017L-06	Oxygen, Dissolved	9/27/2007
Mashapaug Pond	RI0006017L-06	Phosphorus (Total)	9/27/2007
Spectacle Pond	RI0006017L-07	Excess Algal Growth	9/27/2007
Spectacle Pond	RI0006017L-07	Oxygen, Dissolved	9/27/2007
Spectacle Pond	RI0006017L-07	Phosphorus (Total)	9/27/2007
Sand Pond (N. of Airport)	RI0006017L-09	Oxygen, Dissolved	9/27/2007
Sand Pond (N. of Airport)	RI0006017L-09	Phosphorus (Total)	9/27/2007
Brickyard Pond	RI0007020L-02	Oxygen, Dissolved	9/27/2007
Brickyard Pond	RI0007020L-02	Phosphorus (Total)	9/27/2007
Warwick Pond	RI0007024L-02	Oxygen, Dissolved	9/27/2007
Warwick Pond	RI0007024L-02	Phosphorus (Total)	9/27/2007
Gorton Pond	RI0007025L-01	Excess Algal Growth	9/27/2007
Gorton Pond	RI0007025L-01	Oxygen, Dissolved	9/27/2007
Gorton Pond	RI0007025L-01	Phosphorus (Total)	9/27/2007
North Easton Pond (Green End Pond)	RI0007035L-03	Excess Algal Growth	9/27/2007
North Easton Pond (Green End Pond)	RI0007035L-03	Phosphorus (Total)	9/27/2007
Almy Pond	RI0010047L-01	Phosphorus (Total)	9/27/2007
Assapumpset Brook & Tribs	RI0002007R-01	Fecal Coliform	7/3/2007
Woonasquatucket River & Tribs	RI0002007R-10A	Zinc	7/3/2007

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Woonasquatucket River & Tribs	RI0002007R-10B	Fecal Coliform	7/3/2007
Woonasquatucket River & Tribs	RI0002007R-10C	Fecal Coliform	7/3/2007
Woonasquatucket River	RI0002007R-10D	Copper	7/3/2007
Woonasquatucket River	RI0002007R-10D	Lead	7/3/2007
Kickemuit Reservoir (Warren Reservoir)	RI0007034L-01	Excess Algal Growth	9/28/2006
Kickemuit Reservoir (Warren Reservoir)	RI0007034L-01	Fecal Coliform	9/28/2006
Kickemuit Reservoir (Warren Reservoir)	RI0007034L-01	Phosphorus (Total)	9/28/2006
Kickemuit Reservoir (Warren Reservoir)	RI0007034L-01	Taste and Odor	9/28/2006
Kickemuit Reservoir (Warren Reservoir)	RI0007034L-01	Turbidity	9/28/2006
Upper Kickemuit River	RI0007034R-01	Fecal Coliform	9/28/2006
Apponaug Cove	RI0007025E-01	Fecal Coliform	2/16/2006
Brushneck Cove	RI0007025E-02	Fecal Coliform	2/16/2006
Buttonwoods Cove	RI0007025E-03	Fecal Coliform	2/16/2006
Greenwich Bay	RI0007025E-04A	Fecal Coliform	2/16/2006
Greenwich Bay	RI0007025E-04B	Fecal Coliform	2/16/2006
Warwick Cove	RI0007025E-06A	Fecal Coliform	2/16/2006
Warwick Cove	RI0007025E-06B	Fecal Coliform	2/16/2006
Hardig Brook & Tribs	RI0007025R-01	Fecal Coliform	2/16/2006
Maskerchugg River	RI0007025R-03	Fecal Coliform	2/16/2006
Dark Entry Brook	RI0007025R-04	Fecal Coliform	2/16/2006
Tuscatucket Brook	RI0007025R-05	Fecal Coliform	2/16/2006
Baker Creek	RI0007025R-06	Fecal Coliform	2/16/2006
Southern Creek (Carpenter Brook)	RI0007025R-09	Fecal Coliform	2/16/2006
Greenwood Creek	RI0007025R-11	Fecal Coliform	2/16/2006
Gorton Pond Trib	RI0007025R-13	Fecal Coliform	2/16/2006
Mill Brook	RI0007025R-14	Fecal Coliform	2/16/2006
Saddle Brook	RI0007025R-16	Fecal Coliform	2/16/2006
Greenhill Pond	RI0010043E-02	Fecal Coliform	2/16/2006
Ninigret Pond	RI0010043E-04B	Fecal Coliform	2/16/2006
Factory Pond Stream & Tribs	RI0010043R-02	Fecal Coliform	2/16/2006
Teal Pond Stream	RI0010043R-04	Fecal Coliform	2/16/2006
Sakonnet River	RI0010031E-01A	Fecal Coliform	4/7/2005
The Cove, Island Park	RI0010031E-03B	Fecal Coliform	4/7/2005
Barber Pond	RI0008039L-14	Oxygen, Dissolved	6/26/2004
Yawgoo Pond	RI0008039L-15	Excess Algal Growth	6/26/2004
Yawgoo Pond	RI0008039L-15	Oxygen, Dissolved	6/26/2004
Yawgoo Pond	RI0008039L-15	Phosphorus (Total)	6/26/2004
Chickasheen Brook	RI0008039R-05A	Aquatic Plants - Native	6/26/2004

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>	<b>Date TMDL Completed</b>
Chickasheen Brook	RI0008039R-05A	Phosphorus (Total)	6/26/2004
Indian Run Brook & Tribs	RI0010045R-02	Fecal Coliform	7/31/2003
Mitchell Brook	RI0010045R-03A	Fecal Coliform	7/31/2003
Mitchell Brook	RI0010045R-03B	Fecal Coliform	7/31/2003
Rocky Brook & Tribs	RI0010045R-04	Fecal Coliform	7/31/2003
Saugatucket River & Tribs	RI0010045R-05B	Fecal Coliform	7/31/2003
Saugatucket River	RI0010045R-05C	Fecal Coliform	7/31/2003
Crooked Brook	RI0010044R-03	Fecal Coliform	2/19/2003
Barrington River	RI0007021E-01A	Fecal Coliform	9/30/2002
Runnins River & Tribs	RI0007021R-01	Fecal Coliform	9/30/2002
Palmer River	RI0007022E-01A	Fecal Coliform	5/15/2002
Pettaquamscutt River	RI0010044E-01A	Fecal Coliform	4/29/2002
Pettaquamscutt River	RI0010044E-01B	Fecal Coliform	4/29/2002
Mumford Brook	RI0010044R-10	Fecal Coliform	4/29/2002
Fry Brook & Tribs	RI0007028R-02	Fecal Coliform	1/25/2001
Hunt River	RI0007028R-03A	Fecal Coliform	1/25/2001
Hunt River & Tribs	RI0007028R-03B	Fecal Coliform	1/25/2001
Hunt River	RI0007028R-03C	Fecal Coliform	1/25/2001
Scrabbletown Brook	RI0007028R-06	Fecal Coliform	1/25/2001
Stafford Pond	RI0007037L-01	Excess Algal Growth	3/23/1999
Stafford Pond	RI0007037L-01	Oxygen, Dissolved	3/23/1999
Stafford Pond	RI0007037L-01	Phosphorus (Total)	3/23/1999

**INTEGRATED REPORT CATEGORY 4B – IMPAIRMENTS ADDRESSED BY OTHER POLLUTION CONTROL  
REQUIREMENTS**

There are no current 4B impairments listed in the 2022 Cycle.

**INTEGRATED REPORT CATEGORY 4C – IMPAIRMENTS NOT CAUSED BY A POLLUTANT**

In some instances, a waterbody may be considered impaired for causes that are not pollutants and therefore a TMDL is not required nor the appropriate approach to address the impairment. Such causes include flow, aquatic plants (both native and non-native aquatic plants), and non-native fish, shellfish or zooplankton. These impairments are identified for tracking purposes and are listed in Category 4C. These impairments are addressed by other programs. It is noted that where waterbodies are impaired by pollutants, they will appear in Category 4A if all impairments are addressed by TMDLs or Category 5 if TMDLs are required. Table 9 is a compilation of all non-pollutant impairments. Thirteen impairments were added to Category 4C for non-native aquatic plants in 2022. Waters added in 2022 have an asterisk next to their name.

Table 9 Integrated Report Category 4C – Non-Pollutant Waterbody Impairments.

<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>
Gardiner Pond	RI0007035L-01	Flow Regime Modification
Lawton Valley Reservoir	RI0007035L-06	Flow Regime Modification
Nelson Paradise Pond	RI0007035L-02	Flow Regime Modification
North Easton Pond (Green End Pond)	RI0007035L-03	Flow Regime Modification
Saint Mary's Pond	RI0007035L-05	Flow Regime Modification
Sisson Pond	RI0007035L-10	Flow Regime Modification
Alton Pond	RI0008040L-01	Non-Native Aquatic Plants
Annaquatucket Mill Pond	RI0007027L-01	Non-Native Aquatic Plants
Arnold Pond	RI0005011L-03	Non-Native Aquatic Plants
Asa Pond*	RI0010045L-02	Non-Native Aquatic Plants
Ashville Pond	RI0008040L-04	Non-Native Aquatic Plants
Barber Pond	RI0008039L-14	Non-Native Aquatic Plants
Barney Pond	RI0003008L-02	Non-Native Aquatic Plants
Beach Pond*	RI0005010L-01	Non-Native Aquatic Plants
Belleville Ponds	RI0007027L-02	Non-Native Aquatic Plants
Blackstone River	RI0001003R-01A	Non-Native Aquatic Plants
Boone Lake*	RI0008040L-14	Non-Native Aquatic Plants
Bowdish Reservoir	RI0005047L-03	Non-Native Aquatic Plants
Branch River & Tribs	RI0001002R-01B	Non-Native Aquatic Plants
Breakheart Pond	RI0008040L-15	Non-Native Aquatic Plants
Carbuncle Pond	RI0005011L-01	Non-Native Aquatic Plants
Carls Pond*	RI0001006L-08	Non-Native Aquatic Plants
Carolina Trout Pond	RI0008040L-02	Non-Native Aquatic Plants
Carr Pond (N. Kingstown)	RI0010044L-03	Non-Native Aquatic Plants
Chapman Pond	RI0008039L-01	Non-Native Aquatic Plants
Chipuxet River	RI0008039R-06C	Non-Native Aquatic Plants
Clarksville Pond	RI0005047L-08	Non-Native Aquatic Plants
Clear River	RI0001002R-05D	Non-Native Aquatic Plants
Clear River & Tribs	RI0001002R-05C	Non-Native Aquatic Plants
Coventry Reservoir (Stump Pond)*	RI0006013L-03	Non-Native Aquatic Plants
Echo Lake	RI0007020L-07	Non-Native Aquatic Plants

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>
Echo Lake (Pascoag Reservoir)	RI0001002L-03	Non-Native Aquatic Plants
Flat River Reservoir (Johnson Pond)	RI0006013L-01	Non-Native Aquatic Plants
Georgiaville Pond	RI0002007L-02	Non-Native Aquatic Plants
Glen Rock Reservoir	RI0008039L-19	Non-Native Aquatic Plants
Gorton Pond	RI0007025L-01	Non-Native Aquatic Plants
Happy Hollow Pond	RI0001006L-03	Non-Native Aquatic Plants
Hawkins Pond	RI0002007L-01	Non-Native Aquatic Plants
Hawkins Pond*	RI0005047L-09	Non-Native Aquatic Plants
Hundred Acre Pond	RI0008039L-13	Non-Native Aquatic Plants
Indian Lake	RI0010045L-04	Non-Native Aquatic Plants
Lake Washington	RI0005047L-04	Non-Native Aquatic Plants
Larkin Pond	RI0008039L-11	Non-Native Aquatic Plants
Locustville Pond	RI0008040L-10	Non-Native Aquatic Plants
Lower Sprague Reservoir*	RI0002007L-06	Non-Native Aquatic Plants
Maple Root Pond	RI0006013L-12	Non-Native Aquatic Plants
Meadowbrook Pond (Sandy Pond)	RI0008039L-05	Non-Native Aquatic Plants
Meshanticut Pond	RI0006017L-01	Non-Native Aquatic Plants
Mishnock Lake	RI0006014L-01	Non-Native Aquatic Plants
Olney Pond	RI0003008L-01	Non-Native Aquatic Plants
Omega Pond*	RI0004009L-03	Non-Native Aquatic Plants
Pawcatuck River & Tribs	RI0008039R-18E	Non-Native Aquatic Plants
Pawtuxet River Main Stem	RI0006017R-03	Non-Native Aquatic Plants
Peace Dale Reservoir*	RI0010045L-03	Non-Native Aquatic Plants
Pocasasset River & Tribs	RI0006018R-03A	Non-Native Aquatic Plants
Potowomut Pond	RI0007028L-01	Non-Native Aquatic Plants
Print Works Pond*	RI0006018L-05	Non-Native Aquatic Plants
Regulating Reservoir	RI0006015L-01	Non-Native Aquatic Plants
Reynolds Pond	RI0006012L-05	Non-Native Aquatic Plants
Robin Hollow Pond	RI0001006L-04	Non-Native Aquatic Plants
Roger Williams Park Ponds	RI0006017L-05	Non-Native Aquatic Plants
Round Top State Pond	RI0001002L-12	Non-Native Aquatic Plants
Saugatucket River	RI0010045R-05C	Non-Native Aquatic Plants
Secret Lake	RI0007027L-03	Non-Native Aquatic Plants
Shippee Saw Mill Pond*	RI0006015L-05	Non-Native Aquatic Plants
Silver Spring Lake	RI0010044L-02	Non-Native Aquatic Plants
Slack Reservoir	RI0002007L-03	Non-Native Aquatic Plants
Slatersville Reservoir	RI0001002L-09	Non-Native Aquatic Plants
Smith & Sayles Reservoir	RI0001002L-07	Non-Native Aquatic Plants
Sneech Pond	RI0001005L-01	Non-Native Aquatic Plants
Spring Grove Pond	RI0001002L-06	Non-Native Aquatic Plants
Spring Lake (Herring Pond)	RI0001002L-04	Non-Native Aquatic Plants
Sucker Pond*	RI0001002L-05	Non-Native Aquatic Plants
Tarbox Pond	RI0006012L-02	Non-Native Aquatic Plants
Tarkiln Pond	RI0001002L-08	Non-Native Aquatic Plants
Ten Mile River & Tribs	RI0004009R-01A	Non-Native Aquatic Plants

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<b>Waterbody Name</b>	<b>Waterbody ID</b>	<b>Cause of Impairment</b>
Ten Mile River & Tribs*	RI0004009R-01B	Non-Native Aquatic Plants
The Reservoir	RI0008039L-21	Non-Native Aquatic Plants
Thirty Acre Pond	RI0008039L-12	Non-Native Aquatic Plants
Three Ponds	RI0006017L-02	Non-Native Aquatic Plants
Tiogue Lake	RI0006014L-02	Non-Native Aquatic Plants
Turner Reservoir North (Central Pond)	RI0004009L-01A	Non-Native Aquatic Plants
Turner Reservoir South	RI0004009L-01B	Non-Native Aquatic Plants
Upper Dam Pond*	RI0006014L-04	Non-Native Aquatic Plants
Valley Falls Pond	RI0001003L-02	Non-Native Aquatic Plants
Wakefield Pond	RI0005047L-01	Non-Native Aquatic Plants
Wenscott Reservoir (Twin Rivers)	RI0003008L-05	Non-Native Aquatic Plants
Wilson Reservoir	RI0001002L-01	Non-Native Aquatic Plants
Wood River	RI0008040R-16B	Non-Native Aquatic Plants
Wood River & Tribs	RI0008040R-16C	Non-Native Aquatic Plants
Woonasquatucket Reservoir (Stump Pond)	RI0002007L-08	Non-Native Aquatic Plants
Woonasquatucket River	RI0002007R-10D	Non-Native Aquatic Plants
Woonasquatucket River & Tribs	RI0002007R-10B	Non-Native Aquatic Plants
Woonasquatucket River & Tribs	RI0002007R-10C	Non-Native Aquatic Plants
Wyoming Pond	RI0008040L-11	Non-Native Aquatic Plants
Mishnock Lake	RI0006014L-01	Non-native Fish, Shellfish, or Zooplankton
Tiogue Lake	RI0006014L-02	Non-native Fish, Shellfish, or Zooplankton

\*Waterbody or waterbody segment added in 2022.