



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 1  
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BOSTON, MA 02114-2023

December 14, 2021

Sue Kiernan, Deputy Administrator  
Rhode Island Department of Environmental Management  
Office of Water Resources  
235 Promenade Street  
Providence, RI 02908

**SUBJECT: Approval of Buckeye Brook and Tributaries to Warwick Pond TMDLs**

Dear Ms. Kiernan:

Thank you for your submission of Rhode Island's Total Maximum Daily Loads (TMDLs) for the Buckeye Brook and Tributaries to Warwick Pond, for cadmium, copper, iron, and lead. These water bodies are included on the State's combined 2018-2020 303(d) list and were prioritized for TMDL development. The purpose of these six TMDLs is to address impairments of aquatic life use due to impairments to biodiversity, dissolved oxygen, and metals from point and nonpoint source pollution.

The U.S. Environmental Protection Agency (EPA) hereby approves Rhode Island's TMDLs for Buckeye Brook and Tributaries to Warwick Pond, received by EPA on November 19, 2021. EPA has determined that these TMDLs meet the requirements of Section 303(d) of the Clean Water Act (CWA) and of EPA's implementing regulations (40 CFR Part 130). Attached is a copy of our approval documentation.

My staff and I look forward to continued cooperation with the RI DEM in exercising our shared responsibility of implementing the requirements under Section 303(d) of the CWA.

If you have any questions, please contact Steven Winnett (617-918-1687) of my staff.

Sincerely,

/s/

Ken Moraff, Director  
Water Division

cc Jane Sawyers and Skip Viator, RI DEM  
Jackie LeClair, Michael Curley and Steven Winnett, EPA

## EPA NEW ENGLAND'S TMDL REVIEW

**TMDLs:** Total Maximum Daily Loads for Buckeye Brook and Tributaries to Warwick Pond

**STATUS:** Final

**IMPAIRMENT/POLLUTANT:** Buckeye Brook and the tributaries to Warwick Pond are impaired for biodiversity, low dissolved oxygen (DO), total iron, and dissolved cadmium, copper, and lead. The State believes that the TMDL limits on the four metals will address the impairments to biodiversity (expressed by the CWA Section 303(d) listing for benthic macroinvertebrate bioassessments) and dissolved oxygen, in addition to the metals impairments.

### **WATERBODY NAME, SEGMENT ID NUMBER AND POLLUTANTS:**

Buckeye Brook	RI0007024R-01	Total iron and dissolved cadmium, copper, and lead
Tributaries to Warwick Pond	RI0002024R-05	Total iron and dissolved cadmium

**Location:** Town of Warwick, Rhode Island.

**BACKGROUND:** The Rhode Island Department of Environmental Management (RI DEM) submitted to EPA the final Total Maximum Daily Load Analysis for Buckeye Brook and Tributaries to Warwick Pond (the “submission,” “TMDL” or “Report”) with a transmittal letter dated November 19, 2021, and received by EPA on the same day.

RI DEM listed Buckeye Brook on the State’s CWA Section 303(d) list of impaired waters in 1998 as not supporting fish and wildlife habitat and commenced a TMDL study in 2008. In the 2014 303(d) list cycle, RI DEM separated the Tributaries to Warwick Pond out as a separate water body and listed it as impaired for aquatic life use.

On December 8, 2017, RI DEM announced a public meeting on January 9, 2018, to release a draft set of TMDLs for Buckeye Brook and Tributaries to Warwick Pond, at which time it made copies of the draft document available to the public. The meeting on January 9, 2018, began a 30-day comment period, which closed on February 9, 2018. On that date, RI DEM announced a 90-day extension to the comment period, which then closed on May 10, 2018. EPA and RI DEM discussed EPA’s preliminary comments in a phone call on May 25, 2018, and EPA sent RI DEM its complete comments on August 16, 2018.

On September 25, 2018, RI DEM publicly announced that in response to the comments it had received from EPA, the Rhode Island Airport Corporation (RIAC), Buckeye Brook Coalition, and Friends of Warwick Pond, the agency had decided that significant revisions were needed to the TMDLs, which they intended to update and re-release in draft form after also meeting with the commenters to discuss their concerns and RI DEM’s broad plans for revisions.

On June 1, 2021, RI DEM sent EPA its responses to EPA’s 2018 comments, along with an updated draft of the TMDL document, and made it clear it had done the same for the other

commenters. The updated draft was released to the public on August 2, 2021, beginning a 30-day comment period which closed on September 1, 2021. EPA sent final comments to RI DEM on July 12 and August 3, 2021.

The final submission includes the following:

- Final TMDL report for metals in the Buckeye Brook and tributaries to Warwick Pond;
- Implementation plan for achieving TMDL reductions, Chapter 6, pp. 76-92;
- Water quality data, Appendix A; and
- Public comments and response to comments, Appendix D.

The following review explains how the TMDL submission meets the statutory and regulatory requirements of TMDLs in accordance with Section 303(d) of the CWA, and EPA's implementing regulations in 40 CFR Part 130.

**REVIEWERS:** Steven Winnett (617-918-1687), E-mail: [winnett.steven@epa.gov](mailto:winnett.steven@epa.gov)

## REVIEW ELEMENTS OF TMDLs

*Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. Part 130 describe the statutory and regulatory requirements for approvable TMDLs. The following information is generally necessary for EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation.*

### **1. Description of Water Body, Pollutant of Concern, Pollutant Sources and Priority Ranking**

*The TMDL analytical document must identify the water body as it appears on the State/Tribe's 303(d) list, the pollutant of concern and the priority ranking of the water body. The TMDL submittal must include a description of the point and nonpoint sources of the pollutant of concern, including the magnitude and location of the sources. Where it is possible to separate natural background from nonpoint sources, a description of the natural background must be provided, including the magnitude and location of the source(s). Such information is necessary for EPA's review of the load and wasteload allocations which are required by regulation. The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as: (1) the assumed distribution of land use in the watershed; (2) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources; (3) present and future growth trends, if taken into consideration in preparing the TMDL; and, (4) explanation and analytical basis for expressing the TMDL through surrogate measures, if applicable. Surrogate measures are parameters such as percent fines and turbidity for sediment impairments, or chlorophyll *a* and phosphorus loadings for excess algae.*

Buckeye Brook and the tributaries to Warwick Pond are located in the City of Warwick, Rhode Island. The Report describes the pollutants of concern (total iron and dissolved cadmium, copper, and lead) that impair aquatic life use (Report pp. 10-13). It lists the water bodies as they appear on the State's combined 2018-2020 303(d) list (Report p. 9) and explains that the waters have been prioritized for TMDL development (Report p.13). The document also describes the TMDL study area, the streams, and the land uses (Report pp. 18-30).

The submission includes a discussion of the point and nonpoint sources that contribute to the water quality impairments as well as a discussion of the water monitoring and data that indicate the condition of the water bodies (Report pp. 32-69). The major sources of pollution to the watershed include urban runoff from stormwater outfalls and other non-point sources, T.F. Green Airport, and Truk-Away Landfill (Report pp. 70-73).

In addition to the direct effects of the four metals on the biology of instream life (including benthic macroinvertebrates) and biodiversity, RI DEM believes that total iron stimulates the growth of iron-fixing bacteria found in the stream. Growth of the bacteria directly affects benthic macroinvertebrates by covering and smothering the stream substrate, and by consuming a portion of the available dissolved oxygen (DO) in the direct aquatic environment, thus reducing DO levels.

**Assessment:** EPA concludes that the TMDLs meet the requirements for describing the waterbody segments, pollutants of concern, and priority ranking, and identifying and characterizing sources of impairment.

## 2. Description of the Applicable Water Quality Standards (WQs) and Numeric Water Quality Target

*The TMDL submittal must include a description of the applicable State/Tribe water quality standard, including the designated use(s) of the water body, the applicable numeric or narrative water quality criterion, and the antidegradation policy. Such information is necessary for EPA’s review of the load and wasteload allocations which are required by regulation. A numeric water quality target for the TMDL (a quantitative value used to measure whether or not the applicable water quality standard is attained) must be identified. If the TMDL is based on a target other than a numeric water quality criterion, then a numeric expression, usually site specific, must be developed from a narrative criterion and a description of the process used to derive the target must be included in the submittal.*

The TMDL submission states that Buckeye Brook and Tributaries to Warwick Pond are classified by Rhode Island as Class B waters and includes a description of the applicable water quality standards (Report p. 14). The numeric water quality targets are set for all waters at the appropriate numeric water quality criteria for the pollutants. For total iron, the criterion is a single chronic value of 1000 µg/L. For dissolved cadmium, copper, and lead, the numeric water quality targets are set at the appropriate water quality criteria, which are calculated based on the water’s hardness value (Report Table 5.1, p. 74, and below).

Range of Water Quality Criteria Used for the Buckeye Brook TMDLs (Reproduced from Buckeye Brook and Tributaries to Warwick Pond TMDL document, RI DEM 2021).

**Table 5.1 Range of Water Quality Criteria Utilized for the Buckeye Brook TMDL**

Hardness as CaCO <sub>3</sub> (mg/L)	Cadmium (µg/L)		Copper (µg/L)		Lead (µg/L)	
	Acute Criteria	Chronic Criteria	Acute Criteria	Chronic Criteria	Acute Criteria	Chronic Criteria
15	0.31	0.07	2.25	1.77	7.30	0.28
30	0.62	0.11	4.32	3.20	17.0	0.66
60	1.23	0.17	8.31	5.79	36.9	1.44
90	1.82	0.23	12.2	8.18	57.6	2.24
100	2.01	0.25	13.4	8.96	64.6	2.52

**Assessment:** EPA concludes that RI DEM has properly presented its water quality standards when setting a numeric water quality target.

## 3. Loading Capacity - Linking Water Quality and Pollutant Sources

*As described in EPA guidance, a TMDL identifies the loading capacity of a water body for a particular pollutant. EPA regulations define loading capacity as the greatest amount of loading that a water can receive without violating water quality standards (40 C.F.R. § 130.2(f)). The loadings are required to be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. § 130.2(i)). The TMDL submittal must identify the water body’s loading capacity for the applicable pollutant and describe the rationale for the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In most instances, this method will be a water quality model. Supporting documentation for the TMDL analysis must also be contained in the submittal, including the basis for assumptions, strengths and weaknesses in the analytical process, results from*

*water quality modeling, etc. Such information is necessary for EPA's review of the load and wasteload allocations which are required by regulation.*

*In many circumstances, a critical condition must be described and related to physical conditions in the water body as part of the analysis of loading capacity (40 C.F.R. § 130.7(c)(1)). The critical condition can be thought of as the "worst case" scenario of environmental conditions in the water body in which the loading expressed in the TMDL for the pollutant of concern will continue to meet water quality standards. Critical conditions are the combination of environmental factors (e.g., flow, temperature, etc.) that results in attaining and maintaining the water quality criterion and has an acceptably low frequency of occurrence. Critical conditions are important because they describe the factors that combine to cause a violation of water quality standards and will help in identifying the actions that may have to be undertaken to meet water quality standards.*

TMDL targets are expressed as instream concentrations set equal to Rhode Island's EPA-approved water quality criteria, which are applicable to all Clean Water Act purposes.

Rhode Island's water quality criteria for metals, and consequently the TMDL targets, apply year-round at all times and are therefore protective of water quality under all conditions and seasons. Achievement of those water quality goals will be assessed by ambient water quality monitoring.

RI DEM has said that it considers the pollutant concentration targets in these TMDLs to apply daily. The allowable daily load is the criteria concentration, minus a 10% margin of safety, times the daily flow in the receiving water.

**Assessment:** EPA concludes that the loading capacities, having been set equal to the water quality criteria, have been appropriately set at levels necessary to attain and maintain applicable water quality standards, including designated uses. The TMDLs are based on a reasonable approach for establishing the relationship between pollutant loading and water quality in the streams and tributaries.

EPA's regulations at 40 C.F.R. § 130.7(c)(1) require that TMDLs identify water quality targets that are consistent with all applicable water quality standards.

There is nothing in the CWA or in EPA's regulations that prohibits expression of a TMDL in terms of concentration targets. TMDLs can be expressed in various ways, including in terms of toxicity, which is a characteristic of one or more pollutants, or by some "other appropriate measure." (40 C.F.R. § 130.2(i)). The target loading capacities expressed in the TMDL document are set at levels that assure WQS will be met (equal to the water quality criteria concentrations).

RI DEM states that the TMDLs are calculated by multiplying the applicable concentration criterion (minus a 10% margin of safety) by daily stream flow. The loading capacity expressed in this way is mathematically derived to assure that the sum of the loads to the receiving water diluted by the stream flow will result in a concentration at the water quality standards.

The concentration format expresses targets designed to attain the designated uses of each waterbody segment. They will achieve water quality goals for both dry and wet weather and for all storm events whenever they occur (i.e., on any given day). This approach has been used by states for TMDL development and approved by EPA in the past.

In summary, the loading capacity targets in the form of water quality concentrations are directly linked to Rhode Island's water quality criteria to achieve the designated uses of the waterbodies addressed by this TMDL report.

#### **4. Load Allocations (LAs)**

*EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity allocated to existing and future nonpoint sources and to natural background (40 C.F.R. § 130.2(g)). Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. § 130.2(g)). Where it is possible to separate natural background from nonpoint sources, load allocations should be described separately for background and for nonpoint sources.*

*If the TMDL concludes that there are no nonpoint sources and/or natural background, or the TMDL recommends a zero load allocation, the LA must be expressed as zero. If the TMDL recommends a zero LA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero LA implies an allocation only to point sources will result in attainment of the applicable water quality standard, and all nonpoint and background sources will be removed.*

The submission contains load allocations (LAs) that are expressed as target metals concentrations. Because there are insufficient data to determine the portion of stormwater runoff that is from regulated point sources vs. unregulated nonpoint sources, RI DEM has chosen to allocate all nonpoint sources of pollution, including unpermitted urban stormwater runoff, agricultural and atmospheric sources, to the wasteload allocation (WLA – see Section 5, below). EPA's November 22, 2002, TMDL guidance suggests that it is acceptable in such cases to allocate stormwater by gross allotments. In the absence of sufficient information to determine the relative contributions of regulated and unregulated sources of stormwater runoff to the water bodies, EPA has allowed states to include both sources in the WLA. The TMDL document identifies the nonpoint sources from the contributing watersheds.

**Assessment:** As discussed in Section 3 of this document (under loading capacity), RI DEM used numeric water quality concentrations directly related to the use-impairment that the TMDL is designed to address. RI DEM set water quality targets based on meeting the aquatic life use in each water body. EPA concludes that the load allocations expressed as concentration targets equal to the water quality criteria for the metals, and incorporated into the WLA as allowed by EPA, are adequately specified in the TMDLs at levels necessary to attain and maintain designated uses.

#### **5. Wasteload Allocations (WLAs)**

*EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to existing and future point sources (40 C.F.R. § 130.2(h)). If no point sources are present or if the TMDL recommends a zero WLA for point sources, the WLA must be expressed as zero. If the TMDL recommends a zero WLA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero WLA implies an allocation only to nonpoint sources and background will result in attainment of the applicable water quality standard, and all point sources will be removed.*

*In preparing the wasteload allocations, it is not necessary that each individual point source be assigned a portion of the allocation of pollutant loading capacity. When the source is a minor discharger of the pollutant of concern or if the source is contained within an aggregated general permit, an aggregated WLA can be assigned to the group of*

*facilities. But it is necessary to allocate the loading capacity among individual point sources as necessary to meet the water quality standard.*

*The TMDL submittal should also discuss whether a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur. In such cases, the State/Tribe will need to demonstrate reasonable assurance that the nonpoint source reductions will occur within a reasonable time.*

The submission contains a wasteload allocation for each segment that is expressed as the concentration target for each metal required to meet the water quality standards. As mentioned in the LA review (section 4 above), because information to support the development of separate allocations for load and wasteload allocations does not exist, the LA is included in the WLA for each segment.

In addition to the MS4 permits for the City of Warwick and the Rhode Island Department of Transportation included in the WLA, T.F. Green Airport is an individual permittee and Jay Packing Group is covered under the multi-sector general permit, with discharges to one or both of the impaired water bodies. RI DEM notes that administrative closure and remediation of Truk-Away Landfill, another major source in the WLA, is in progress (Report pp. 91-92).

**Assessment:** RI DEM established concentration-based WLAs by applying the TMDL concentration targets directly to the two water bodies. In addition to its plans to apply the TMDL targets in applicable permits, RI DEM established aggregate WLAs for the stormwater sources in each water body because the available information did not allow RI DEM to determine with any precision or certainty the actual and projected loadings for individual discharges or groups of discharges. EPA's November 22, 2002, TMDL guidance suggests that it is acceptable in such cases to allocate stormwater by gross allotments. In the absence of sufficient information to determine the relative contributions of regulated and unregulated sources of stormwater runoff to the water bodies, EPA has allowed states to include both sources in the WLA. RI DEM has used this approach and has allocated all load reductions for stormwater sources to the WLAs. RI DEM indicates that effluent limitations for the individual permittees will be based on the metals concentration targets when permitting is completed.

EPA concludes that the WLA components of the TMDLs are adequately specified at levels necessary to attain and maintain water quality standards in all the waterbodies.

## **6. Margin of Safety (MOS)**

*The statute and regulations require that a TMDL include a margin of safety to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA § 303(d)(1)(C), 40 C.F.R. § 130.7(c)(1)). EPA guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.*

An explicit MOS of 10% is included in the TMDLs by reducing by 10% the metals criteria to produce the final concentration targets (Report p. 74).



**Assessment:** EPA concurs that an adequate MOS is provided by the explicit 10% MOS for the four metals.

## 7. Seasonal Variation

*The statute and regulations require that a TMDL be established with consideration of seasonal variations. The method chosen for including seasonal variations in the TMDL must be described. CWA § 303(d)(1)(C), 40 C.F.R. § 130.7(c)(1).*

RI DEM is establishing year-round metals TMDLs based on the State's water quality criteria concentrations, which are applicable at all times, for all flows, and throughout the year. Seasonality is therefore not an issue.

**Assessment:** EPA concludes that seasonal variations have been adequately accounted for as the TMDLs were developed to be protective during the entire year and under all conditions.

## 8. Monitoring Plan for TMDLs Developed Under the Phased Approach

*EPA's 1991 document, Guidance for Water Quality-Based Decisions: The TMDL Process (EPA 440/4-91-001), and EPA's 2006 guidance, Clarification Regarding "Phased" Total Maximum Daily Loads, recommend a monitoring plan when a TMDL is developed using the phased approach. The guidance indicates that a State may use the phased approach for situations where TMDLs need to be developed despite significant data uncertainty and where the State expects that the loading capacity and allocation scheme will be revised in the near future. EPA's guidance provides that a TMDL developed under the phased approach should include, in addition to the other TMDL elements, a monitoring plan that describes the additional data to be collected and a scheduled timeframe for revision of the TMDL.*

These are not phased TMDLs. The document includes a description of monitoring to ensure that plans for implementing water quality improvement activities are adjusted as monitoring indicates changes in the water quality of the impaired segments. RI DEM discusses its plans for monitoring while and after the TMDL is implemented (Report p. 92).

**Assessment:** Addressed, though not a required element of the TMDL approval. EPA is taking no action on the monitoring plan.

## 9. Implementation Plans

*On August 8, 1997, Bob Perciasepe (EPA Assistant Administrator for the Office of Water) issued a memorandum, "New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs)," that directs Regions to work in partnership with States/Tribes to achieve nonpoint source load allocations established for 303(d)-listed waters impaired solely or primarily by nonpoint sources. To this end, the memorandum asks that Regions assist States/Tribes in developing implementation plans that include reasonable assurances that the nonpoint source load allocations established in TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. The memorandum also includes a discussion of renewed focus on the public participation process and recognition of other relevant watershed management processes used in the TMDL process. Although implementation plans are not approved by EPA, they help establish the basis for EPA's approval of TMDLs.*

An implementation plan that addresses the major identified sources of pollution is provided in the submission (Report pp. 76-92). The plan discusses MS4 stormwater management in detail, and measures that have been taken and are anticipated to reduce stormwater runoff and other

sources of pollutants to the impaired water bodies from identifiable (regulated) point and nonpoint sources.

EPA notes that RI DEM has included recommended reductions in metals necessary to meet the TMDL targets, based on the monitoring documented in the Report. These reductions are not the TMDLs but are included as useful information for implementing the TMDLs, and will decrease as pollutant levels improve through implementation activities.

**Assessment:** Although it is not a required element of the TMDL approval, RI DEM has included a description of implementation plans, priorities, and authorities. EPA is taking no action on the implementation plan.

## 10. Reasonable Assurances

*EPA guidance calls for reasonable assurances when TMDLs are developed for waters impaired by both point and nonpoint sources. In a water impaired by both point and nonpoint sources, where a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur, reasonable assurance that the nonpoint source reductions will happen must be explained in order for the TMDL to be approvable. This information is necessary for EPA to determine that the load and wasteload allocations will achieve water quality standards.*

*In a water body impaired solely by nonpoint sources, reasonable assurances that load reductions will be achieved are not required in order for a TMDL to be approvable. However, for such nonpoint source-only waters, States/Tribes are strongly encouraged to provide reasonable assurances regarding achievement of load allocations in the implementation plans described in section 9, above. As described in the August 8, 1997 Perciasepe memorandum, such reasonable assurances should be included in State/Tribe implementation plans and “may be non-regulatory, regulatory, or incentive-based, consistent with applicable laws and programs.”*

Reasonable assurance is not required because point sources are not given less stringent wasteload allocations based on the assumption of future nonpoint source load reductions.

**Assessment:** Not a required element of TMDL approval because RI DEM did not increase WLAs based on expected LA reductions. EPA is taking no action on reasonable assurance.

## 11. Public Participation

*EPA policy is that there must be full and meaningful public participation in the TMDL development process. Each State/Tribe must, therefore, provide for public participation consistent with its own continuing planning process and public participation requirements (40 C.F.R. § 130.7(c)(1)(ii)). In guidance, EPA has explained that final TMDLs submitted to EPA for review and approval must describe the State/Tribe’s public participation process, including a summary of significant comments and the State/Tribe’s responses to those comments. When EPA establishes a TMDL, EPA regulations require EPA to publish a notice seeking public comment (40 C.F.R. § 130.7(d)(2)).*

*Inadequate public participation could be a basis for disapproving a TMDL; however, where EPA determines that a State/Tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by EPA.*

For the initial 2018 draft of the TMDL report, RI DEM hosted a public meeting on January 9, 2018, to announce the TMDLs, and provided a comment period from January 9, 2018, to February 9, 2018, which it later extended to May 10, 2018. Notice of this comment period and

the public meeting were sent via emails and letters to the affected communities, key stakeholders, and others on December 7, 2017. RI DEM received comments from four respondents during the comment period in 2018 (EPA, RIAC, Buckeye Brook Coalition, and Friends of Warwick Pond), and in response, spent three years substantially revising the TMDLs before releasing the updated TMDLs to the public in 2021. During the revision period, RI DEM provided opportunities for the four respondents to meet with RI DEM to discuss their concerns and the agency's plans for revisions.

On June 1, 2021, RI DEM provided the four 2018 respondents with its responses to their comments on the 2018 version and sent each respondent a copy of the updated draft TMDL report. RI DEM opened a 30-day public comment period for the 2021 draft report on August 2, 2021 (Report p. 92). RI DEM provided the comments it received and its responses to them in Appendix D of the final report (Report pp. 119 -133).

**Assessment:** EPA has reviewed the comments RI DEM received and the agency's responses to the comments. EPA concludes that RI DEM provided for full and meaningful public participation in the TMDL development process. RI DEM involved the public extensively during the development and revision of the TMDLs, provided adequate opportunities for the public to comment on the TMDLs, responded significantly to the comments it received during the development process, and has provided reasonable responses to the comments received on the final version of the TMDLs.

## **12. Submittal Letter**

*A submittal letter should be included with the TMDL analytical document and should specify whether the TMDL is being submitted for a technical review or is a final submittal. Each final TMDL submitted to EPA must be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for EPA review and approval. This clearly establishes the State/Tribe's intent to submit, and EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final submittal, should contain such information as the name and location of the water body, the pollutant(s) of concern, and the priority ranking of the water body.*

**Assessment:** RI DEM's letter of November 19, 2021, stated that the TMDL is being formally transmitted for EPA approval.

Data for entry in EPA's National TMDL Tracking System									
TMDL/Plan Name *				TMDLs for Buckeye Brook and Tributaries to Warwick Pond					
Number of TMDLs*				6					
Type of TMDLs*				Metals					
Number of listed causes/parameters (from 303(d) list)				10					
Lead State				Rhode Island					
TMDL Status				Final					
Individual TMDLs listed below									
Action ID#	Segment name	Segment ID #	TMDL, Protection Plan, OR Alternative *	Pollutant name(s)	Impairment PARAMETERS/Cause(s) name	Pollutant endpoint	Unlisted ?	RIP DES Point Source & ID#	Listed for anything else?
R1_RI_2022_02	Buckeye Brook and Unnamed Tributaries	RI0007024R-01	TMDL	Total Iron Dissolved cadmium Dissolved copper Dissolved lead	Benthic macroinvertebrate bioassessments Dissolved oxygen Total iron Dissolved cadmium Dissolved copper Dissolved lead	1000 ug/L total iron, Hardness-dependent WQ criteria for dissolved cadmium, copper, and lead	N	RIR40031 RIR040036 RI0021598 RIR 50X002	N
R1_RI_2022_02	Tributaries to Warwick Pond	RI0007024R-05	TMDL	Total Iron Dissolved cadmium	Benthic macroinvertebrate bioassessments Dissolved oxygen Total iron Dissolved cadmium	1000 ug/L total iron, Hardness-dependent WQ criteria for dissolved cadmium	N	RIR40031 RIR040036 RI0021598	N
TMDL Type			Point/NPS						
Establishment Date (approval)*			Dec 14, 2021						
Completion (final submission) Date			Nov 19, 2021						
Public Notice Date			Jun 9, 2021						
EPA Developed			No						
Towns affected* (in alphabetical order)			Warwick, RI						

\*Abbreviations:

TMDL = TMDL

Protection Plan = PP

Alternative Restoration Plan = ARP