UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
1 Congress Street, Suite 1100
BOSTON, MA 02114-2023

November 15, 2021

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

SUBJECT: **Approval of Nine City of Newport Drinking Water Reservoir TMDLs**

Dear Ms. Kiernan:

Thank you for your submission of Rhode Island's Total Maximum Daily Loads (TMDLs) for the nine City of Newport Drinking Water Reservoirs, for phosphorus. These water bodies are included on the State's 2018-2020 303(d) list and were prioritized for TMDL development. The purpose of these nine TMDLs for Rhode Island waters is to address nutrient-related impairments of aquatic life use and drinking water use due to nutrients from point and nonpoint source pollution.

The U.S. Environmental Protection Agency (EPA) hereby approves Rhode Island's TMDLs for the nine City of Newport Drinking Water Reservoirs, received by EPA on October 22, 2021. EPA has determined that these TMDLs meet the requirements of §303(d) of the Clean Water Act (CWA), and of EPA's implementing regulations (40 CFR part 130). Attached is 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 Brian Zalewsky, RI DEM
Jackie LeClair, Michael Curley, and Steven Winnett, EPA

EPA REGION 1'S TOTAL MAXIMUM DAILY LOAD (TMDL) REVIEW

TMDLs: Total Maximum Daily Loads for Total Phosphorus for the City of Newport Drinking Water Reservoirs

STATUS: Final

IMPAIRMENT/POLLUTANT: The nine drinking water reservoirs for Newport are impaired for total phosphorus (TP) and total organic carbon (TOC). Phosphorus impairs aquatic life use by contributing to algal blooms and TOC impairs drinking water use by contributing to elevated levels of trihalomethanes (TTHMs) in the finished drinking water. The ponds are designated Class AA, for public drinking water supply, contact recreation, and for fish and wildlife habitat. A set of TMDLs is submitted for total phosphorus. The State believes that limits on phosphorus will address the TOC impairments.

WATERBODY NAME AND SEGMENT ID NUMBER:

Gardiner Pond :	RI0007035L-01
Paradise Pond:	RI0007035L-02
North Easton Pond:	RI0007035L-03
South Easton Pond:	RI0007035L-04
St. Marys Pond:	RI0007035L-05
Lawton Valley Reservoir:	RI0007035L-06
Watson Reservoir:	RI0007035L-07
Nonquit Pond:	RI0007035L-08
Sisson Pond:	RI0007035L-10

Location: Towns of Little Compton, Middletown, Newport, Portsmouth and Tiverton, Rhode Island.

BACKGROUND: The Rhode Island Department of Environmental Management (RI DEM) submitted to EPA the final Total Maximum Daily Load Analysis for the City of Newport Drinking Water Reservoirs (the "TMDL," "submission," or "Report") with a transmittal letter dated October 21, 2021, which EPA received on October 22, 2021.

RI DEM released a draft Technical Approach for Development of Numeric Phosphorus and Chlorophyll-a Targets for the Newport Water Supply Reservoirs in February 2017. RI DEM sent EPA a partial draft TMDL document for review and discussion on May 25, 2018, which EPA and RI DEM discussed in a phone call on July 9, 2018. RI DEM sent EPA an internal loading analysis document on July 30, 2018, and a nitrogen analysis document on May 22, 2019 to which EPA responded with comments on December 20, 2019.

RI DEM sent EPA a draft version of the 2021 TMDL report on March 19, 2021, to which EPA responded with comments on March 31, 2021. RI DEM responded to all EPA's comments in advance of the release of the public review version of the TMDL report or in that version of the document.

RI DEM released its public review draft of the 2021 version of the TMDL report in an announcement to the public on June 9, 2021. EPA and RI DEM discussed the final draft in a phone call on July 7, 2021, and EPA sent final comments to RI DEM on August 3, 2021. RI DEM sent EPA its response to public comments for review on October 1, 2021. In addition to the final TMDL document, the submittal included, either attached or by reference, the following documents:

- Draft Technical Approach for Development of Numeric Phosphorus and Chlorophyll-a Targets for the Newport Water Supply Reservoirs dated February 2017;
- Comments from the City of Newport dated April 4, 2017 and August 3, 2021;
- Comments from Save the Bay dated July 9, 2021; and
- Comments from EPA to RI DEM dated March 31 and August 3, 2021.

The following review explains how the TMDL submission meets the statutory and regulatory requirements of TMDLs in accordance with § 303(d) of the Clean Water Act and EPA's implementing regulations in 40 CFR part 130.

REVIEWER: Steven Winnett (617-918-1687) E-mail: 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. § 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.

In 2014, the RI Department of Environmental Management (RI DEM) identified eight of the nine reservoirs as a high priority for TMDL development and listed them on the Clean Water Act Section 303(d) list of impaired waters as having aquatic life use and drinking water supply impairments due to elevated levels of total phosphorus (TP) and total organic carbon (TOC). North Easton Pond had been placed previously on the 303(d) list for an impairment to aquatic life use – RI DEM added the drinking water use impairment to its listing in 2014. TP has been identified as the pollutant of concern.

The Newport drinking water reservoirs are located in the City of Newport, and towns of Little Compton, Middletown, Portsmouth, and Tiverton, RI. The Report describes the pollutant of concern, total phosphorus. The Report lists the water bodies as they appear on the State's combined 2018-2020 303(d) list (Report pp.7-9) and explains that they are a high priority for TMDL development (Report p.10). The document also describes the TMDL study area, the reservoirs, and the land uses (Report pp. 13-18).

High levels of phosphorus in the reservoirs can lead to elevated levels of trihalomethanes (TTHMs) in the drinking water, which are the by-products of the disinfection process. They are formed when chlorine compounds used for disinfection interact with the organic carbon generated by the decomposition of dead algae in the reservoirs, and from other natural sources. Algae are produced when excessive amounts of nutrients, predominantly phosphorus in freshwaters, stimulate algal growth. The TMDLs are designed to reduce phosphorus levels, which will reduce the amount of live algae (measured by levels of chlorophyll-a), which will reduce the amount of total organic carbon from decomposing algae, which will reduce the amount of TTHMs generated by the disinfection of drinking water.

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. 20-24). The major sources of pollution to the watershed include urban runoff from stormwater outfalls, runoff from erosion, livestock operations and agriculture, on-site septic systems, atmospheric sources, waterfowl and wildlife, the Tiverton landfill, and internal cycling of nutrients from within the reservoirs themselves.

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

2. Description of the Applicable Water Quality Standards 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 Newport drinking water reservoirs are impaired by phosphorus and total organic carbon (TOC). (Report p. 7). RI DEM's goals for the TMDLs are to:

- Reduce total phosphorus levels to 18 µg/L (0.018 mg/L);
- Reduce algal abundance to levels represented by chlorophyll-a levels of 11 µg/L;
- Reduce TOC to 3.6 mg/L; and
- Reduce the levels of TTHMs to the Maximum Contaminant Level (MCL) of 80 µg/L.

Rhode Island regulations classify the reservoirs and tributaries as Class AA waters. *See* Report, pp. 10; 250 RICR 150-05-1.25(K)(14). Class AA waters "are designated as a source of public drinking water supply (PDWS) or as tributary waters within a public drinking water supply watershed . . . for primary and secondary contact recreational activities and for fish and wildlife habitat. These waters shall have excellent aesthetic value." 250 RICR 150-05-1.9(B)(1). For Class AA waters, Rhode Island regulations provide both numeric and narrative criteria applicable to phosphorus (RI Water Quality Regulations: 250 RICR 150-05-1.10(D)(1)), including that average total phosphorus shall not exceed 25 µg/L (0.025 mg/L) and that phosphorus shall not be present in such concentration that would impair any designated use assigned to the waterbody or cause undesirable or nuisance aquatic species associated with cultural eutrophication (Report p. 11). For these TMDLs, RI DEM set a more stringent numeric target than 25µg/L because RIDEM determined that a lower target is necessary to attain the designated use of drinking water supply by controlling algae and cyanobacteria in the reservoirs. Based on extensive studies described in the TMDL document (Report pp. 64-78), RI DEM established TMDL targets of 18 µg/L (0.018 mg/L) and chlorophyll-a targets of 11 µg /L (0.011 mg/L) for the nine reservoirs. The phosphorus target includes an explicit 10% margin of safety (Report p. 63).

***Assessment**:* EPA concludes that RI DEM has properly presented its water quality standards, including the designated uses and numeric and narrative criteria, and identified rational targets for phosphorus and chlorophyll-α. To calculate the numeric water quality targets, RI DEM used a reasonable approach based on a logical sequence of physical and chemical effects, tracing the generation of TTHMs back to the controllable pollutant, phosphorus (Section 1, above). Presented with a variety of analytical options, RI DEM used a method which it judged best fit the logic train of effects, the water bodies' situation, and the data. RI DEM's approach is conservative and intended to cover worst-case conditions. EPA notes that the resulting concentration target for phosphorus is within the range of those determined in other research and case studies the State used, and has cited, in its development of the TMDL analysis method.

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.

RI DEM describes the methods used to establish the cause-and-effect relationship between the numeric phosphorus and chlorophyll-a targets and the identified pollutant sources. RI DEM used empirical models developed by Dillon and Rigler (1974) and Canfield and Bachmann (1981) to estimate current phosphorus loading in pounds per year to the reservoirs based on in-lake phosphorus concentrations (Report pp. 78-83). RI DEM then used the models to back calculate the allowable phosphorus loads to the reservoirs using the 18 µg /l phosphorus target. The final allowable loads are the mean of the results of the two models, for each reservoir (Report pp. 78-79).

Modeling results indicated that reductions in annual loads from 26 – 86% from controllable sources, depending on the reservoir, will be necessary to meet the TMDL goals based on the data used in the study (Report pp. 87-99). Inputs to the two models are described on pages 79 and 82, respectively.

RI DEM used the Watershed Treatment Model (WTM -- Center for Watershed Protection), which had previously been used for restoration projects in two of the reservoirs and two of the reservoirs' tributaries to apportion the allowable load between for the sources within each reservoir's contributing watersheds (Report p.84). RI DEM applied the percent load reduction required to attain the target load for each reservoir equally to urban sources and agriculture. Contributions from the failure of onsite wastewater treatment systems (OWTS) to surface waters are not allowable and are therefore given a reduction of 100%. No reductions were applied to the contributions from forest, wetlands, and atmospheric deposition. As the contributions of internal cycling of nutrients in each reservoir are highly uncertain, RI DEM applied no reduction to internal cycling.

Rhode Island's water quality criteria for phosphorus apply year-round at all times. The TMDL concentration targets are more stringent than the phosphorus numeric criteria, are applicable 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.

***Assessment**:* EPA concludes that the loading capacities, having been calculated using water quality models well-known to EPA, and using observed concentration data and water quality targets consistent with or more stringent than the State's applicable narrative and numeric water quality criteria, have been appropriately set at levels necessary to attain and maintain applicable water quality standards, including designated uses. The TMDL targets (18 µg/L) are based on a reasonable approach for establishing the relationship between pollutant loading and water quality.

There is nothing in EPA's regulations that forbids expression of a TMDL in terms of multiple TMDL 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 loads and concentrations expressed in the TMDL document are set at levels which assure WQS will be met: target concentrations and loads calculated to meet the target concentrations.

Both formats (concentration and load) express targets designed to attain the designated uses of each waterbody segment. The load targets are based on a straightforward derivation from the concentration targets developed by Rhode Island for these TMDLs. Both formats 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). These approaches have been used by states for TMDL development and approved by EPA in the past.

In summary, the loading capacity targets, both concentration and load-based, 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 Allocation (LA)

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 phosphorus loads in pounds per year for agricultural sources, the apportionment of which from each reservoir's total allowable load is determined by the Watershed Treatment Model. The load allocation for failing septic or onsite wastewater treatment systems (OWTS) to surface waters is zero, as they are not allowable. Because there is insufficient data to determine how much of the stormwater runoff is from regulated vs. unregulated sources, RI DEM has chosen to allocate all urban stormwater runoff to the wasteload allocation (WLA – see Section 5, below). The TMDL documents the nonpoint sources from the contributing watersheds.

***Assessment**:* As discussed in Section 3 of this document (under loading capacity), RI DEM used a numeric water quality concentration directly related to the use-impairment that the TMDL is designed to address. RI DEM set water quality targets based on meeting the drinking water use in each water body; the load allocation is derived from the phosphorus concentration target developed specifically for the drinking use of the reservoirs. EPA concludes that the load allocations and concentration targets for phosphorus were derived using scientifically sound models and are adequately specified in the TMDLs at levels necessary to attain and maintain water quality standards.

5. Wasteload Allocation (WLA)

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 waste load allocations (WLAs) that are expressed as target phosphorus load in pounds per year for urban sources, the apportionment of which from each reservoir's total allowable load is determined by the Watershed Treatment Model. There are no permitted, wastewater point sources in the TMDL study area aside from the Tiverton landfill and municipal

and DOT-owned outfalls associated with roads and highways. The apportionment of the allowable load for each reservoir to the urban sources is made by the Watershed Treatment model.

Because of the difficulties of determining the relative amount of regulated and unregulated stormwater runoff from developed areas, EPA has allowed states to put both into the wasteload allocation. Consequently, RI DEM has allocated all stormwater from urban land uses[1] and the Tiverton landfill to the WLA.

The Tiverton landfill (Report pp. 88-10) is in the process of obtaining a Rhode Island Pollution Discharge Elimination System (RIPDES) Permit, and there are insufficient data currently available to determine the current phosphorus load from the landfill or a landfill-specific WLA. When permitted, effluent limitations for the five outfalls (001, 002, 004, 005, and 006) that discharge to Borden Brook and Quaker Creek, which flow into Nonquit Pond, will be based on the 18 µg /L phosphorus TMDL target.

***Assessment**:* RI DEM established load-based WLAs by applying the TMDL concentration target directly to each water body. Aggregate load WLAs were established for the stormwater sources in each water body because it is impossible 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 body, EPA has allowed states to include both sources in the WLA. RI DEM has used this approach and has allocated all load reductions for urban sources to the WLAs. The WLAs for the urban land-use categories and the landfill are based on the TMDLs' phosphorus concentration target, and the TMDL Report indicates that effluent limitations for the landfill will be based on the phosphorus concentration target 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 phosphorus concentration target developed through the analysis process (Report pp. 70-78) for the drinking water use (20 µg/L), resulting in a final concentration target of 18 µg/L. Because the 18 µg/L target was used in the empirical models to set the phosphorus loads, the margin of safety is included in the TMDL loads.

[1] Included in this category are: transportation (all roadways), commercial, industrial, institutional, and low-, medium-, and high-density residential land uses.

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

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).

The TMDLs address seasonal variation because the required phosphorus levels were calculated for conditions during the growing season from May to October, which is the critical season for algae and cyanobacteria growth, while phosphorus is discharged year-round. Therefore, the TMDL allocations protect designated uses during the entire year.

***Assessment**:* EPA concludes that seasonal variations have been adequately accounted for as the TMDLs were developed to be protective during the critical period for phosphorus and will therefore be more than adequately protective during the other seasons.

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, but the document includes a description of a monitoring plan. The TMDL proposes monitoring in both the reservoirs and the outlets of the major tributaries to the reservoirs and makes recommendations for engaging the municipalities and the local communities in the effort. RI DEM briefly discusses the monitoring plan in the TMDL report (Report p. 161).

***Assessment**:* Addressed, though not required. 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.

A detailed implementation plan is provided in the submission (Report pp. 107-156) that specifically addresses the major identified sources of pollution and gives specific recommendations for abating them. The plan contains specific recommendations with regard to the six minimum measures that comprise the Stormwater Phase II permit program, and discusses several types of specific corrective actions, including measures to reduce stormwater and agricultural runoff and its sources, and to control waterfowl.

Assessment: Addressed, though not required. 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: Although not required, reasonable assurance is addressed in the implementation plan. RI DEM's past and planned work with its watershed partners, backed up by its regulatory authority, provide reasonable assurance. 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.

RI DEM details its public participation process in the submission (Report pp. 157-159). Beginning in 2014, RI DEM has repeatedly consulted with the affected communities and experts about the Newport reservoir impairments and the development of the TMDLs, and has presented its plans and method for developing TMDLs, and the TMDLs themselves, in numerous meetings

with a range of affected stakeholders. RI DEM released a draft of the TMDL Technical Approach in February 2017 and responded to the comments it received.

For the current version of the TMDLs, RI DEM presented the draft TMDL report to the public at a virtual meeting on June 23, 2021. The meeting was announced on June 9, 2021, and was well publicized in a posting on RI DEM's website and emails sent to approximately 100 individuals and key stakeholders in advance of the meeting. Copies of the TMDL report were made available to the public through the email announcement two weeks before the meeting. Approximately 45 individuals attended the meeting representing a range of groups and individuals. The meeting began the 45-day comment period, during which stakeholders provided written comments to the agency. The agency received several comment letters during the comment period. The final TMDL submission includes the public comments and RI DEM's responses in Section 10 (pp. 170-177).

Assessment: EPA has reviewed the comments RI DEM received and the agency's responses to 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 of the TMDLs, provided adequate opportunities for the public to comment on the TMDLs, and has provided reasonable responses to the comments received.

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.

Comment: RI DEM's letter of October 21, 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 Total Phosphorus for the City of Newport Drinking Water Reservoirs**						
Number of TMDLs*			9						
Type of TMDLs*			Nutrients						
Number of listed causes/parameters (from 303(d) list)			18						
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_01	Gardiner Pond	RI0007035L-01	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N		N
R1_RI_2022_01	Paradise Pond	RI0007035L-02	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N		N
R1_RI_2022_01	North Easton Pond	RI0007035L-03	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N	RIR040036	N
R1_RI_2022_01	South Easton Pond	RI0007035L-04	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N		N
R1_RI_2022_01	St. Marys Pond	RI0007035L-05	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N	RIR040023	N
R1_RI_2022_01	Lawton Valley Reservoir	RI0007035L-06	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N	RIR040036 RIR040023	N
R1_RI_2022_01	Watson Reservoir	RI0007035L-07	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N	RIR040036	N
R1_RI_2022_01	Nonquit Pond	RI0007035L-08	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N	RIR040000	N
R1_RI_2022_01	Sisson Pond	RI0007035L-10	TMDL	Total Phosphorus	Total Organic Carbon Total Phosphorus	18 µg/L Total Phosphorus	N		N
TMDL Type			Point/NPS						

Establishment Date (approval)*	Nov 15, 2021
Completion (final submission) Date	Oct 22, 2021
Public Notice Date	Jun 9, 2021
EPA Developed	No
Towns affected* (in alphabetical order)	Little Compton, Middletown, Newport, Portsmouth, Tiverton, RI

*Abbreviations:
TMDL = TMDL
Protection Plan = PP
Alternative Restoration Plan = ARP