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

December 6, 2007

Laurie Burt, Commissioner
Department of Environmental Protection
1 Winter Street
Boston, MA 02108

Re: Approval of the Quaboag and Quacumquasit Ponds Phosphorus TMDL Report

Dear Commissioner Burt:

Thank you for submitting the Quaboag and Quacumquasit Ponds Phosphorus Total Maximum Daily Load (TMDL) Report.

The U.S. Environmental Protection Agency (EPA) has reviewed the document entitled "Total Maximum Daily Loads of Total Phosphorus for Quaboag & Quacumquasit Ponds" (Final Report number: MA 36130-2005-1, Control number: CN216.1, Date: May 16, 2006) and it is my pleasure to approve the TMDL for total phosphorus in Quaboag Pond. EPA has determined, as set forth in the enclosed review document, that the TMDL for Quaboag Pond meets the requirements of Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 Code of Federal Regulations (CFR) part 130.

We commend your efforts to develop the "pollution prevention" TMDL on Quacumquasit Pond which is not currently impaired. This approach can encourage the maintenance and protection of existing water quality and help prevent further degradation to this waterbody. Although EPA does not approve pollution prevention TMDLs, EPA acknowledges the establishment of this TMDL consistent with developing information as set forth in CWA Section 303(d)(3).

Please pass on to your staff in the Division of Watershed Management and Massachusetts Estuary Program our congratulations for their excellent work in developing these TMDLs.

Sincerely,

/s/

Stephen S. Perkins, Director
Office of Ecosystem Protection

Enclosure

cc: Glenn Haas, MassDEP
Rick Dunn, MassDEP
Mark Mattson, MassDEP
Mike Hill, EPA

EPA NEW ENGLAND'S TMDL REVIEW

DATE: November 28, 2007

TMDL: Total Maximum Daily Loads of Total Phosphorus for Quaboag & Quacumquasit Ponds

STATUS: Final

IMPAIRMENT/POLLUTANT: Quaboag Pond -- Total Phosphorus (Segment Identification Number: MA36130 on the 2002, 2004 and 2006 CWA § 303(d) list), 1 TMDL for Nutrients; Quacumquasit Pond -- not impaired for Total Phosphorus, but a phosphorus pollution prevention TMDL was developed consistent with CWA §303(d)(3).

BACKGROUND: Total Maximum Daily Loads of Total Phosphorus for Quaboag & Quacumquasit Ponds, DEP, DWM TMDL Final Report MA 36130-2005-1, CN 216.1, May 16, 2006.

References cited in the Final TMDL Report were reviewed and considered by EPA during the review and approval of this TMDL.

REVIEWER: Mike Hill, e-mail: hill.michael@epa.gov, telephone number: (617) 918-1398

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 Waterbody, Pollutant of Concern, Pollutant Sources and Priority Ranking

The TMDL analytical document must identify the waterbody as it appears on the State/Tribe's 303(d) list, the pollutant of concern and the priority ranking of the waterbody. 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 chlorophyl a and phosphorus loadings for excess algae.

The TMDL document for Quaboag and Quacumquasit Ponds describes the water body segments, nature and cause or threat of the impairments due to total phosphorus. Impairments include nuisance aquatic plants, increased algae and algae blooms, low dissolved oxygen levels, water clarity and eutrophication. The document identifies excess total phosphorus as the cause of the impairments. The document identifies two ponds – Quaboag and Quacumquasit Ponds as needing a TMDL for total phosphorus. Quaboag Pond is included on Massachusetts' 2002, 2004 and 2006 Clean Water Act (CWA) §303(d) list (List) also known as Category 5 of the CWA §§303(d) and 305(b) lists (Integrated List) for nutrients and noxious aquatic plants. Quaboag Pond is also impaired for metals, but this TMDL does not address this impairment.

Quacumquasit Pond is not impaired for total phosphorus, but the Commonwealth determined that a "pollution prevention" TMDL for total phosphorus is needed since the pond is a cold water fishery and linked to Quaboag Pond. A "pollution prevention" TMDL on Quacumquasit Pond will encourage the maintenance and protection of existing water quality and help prevent further degradation. The pollution prevention TMDL will serve as a guide to the public and help ensure that this waterbody does not become impaired for total phosphorus. The TMDL document makes clear that phosphorus loading limits are necessary to preserve water quality in this pond. Although EPA does not approve "pollution prevention" TMDLs, EPA acknowledges the establishment of this TMDL for the specific purpose of developing information pursuant to CWA §303(d)(3). Therefore, EPA's approval of the TMDLs submitted by MassDEP applies only to Quaboag Pond.

Pages 9 to 18 of the document provide an overview of the description of the waterbodies and pollutant of concern and pollutant sources. As stated in the Integrated List of Waters, the Commonwealth places a high priority on the development of TMDLs to address nutrients and noxious aquatic plants.

Assessment:

EPA concludes that the description, pollutants of concern and the priority ranking of the waterbody provided in the TMDL Report and Integrated List of Waters, as described above, are reasonable and consistent with accepted methods used in establishing nutrient TMDLs.

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 waterbody, 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 document identifies several provisions of the Commonwealth's water quality standards that are relevant to the cultural eutrophication in these waters, including numeric

criteria for dissolved oxygen and narrative criteria for aesthetics and nutrients on page 19. Quaboag Pond is a Class B warm water fishery and Quacumquasit Pond is a Class B cold water fishery. The Massachusetts water quality standard for dissolved oxygen in cold water fisheries is not less than 6 mg/l and not less than 5 mg/l in warm water fisheries. To develop a site specific water quality target from the narrative criteria, MassDEP identified the waterbodies' loading capacities and described the cause and effect relationship of phosphorus through various models, land use modeling, mass balance estimates, lake modeling and best professional judgment based on literature values to establish a water quality target of 7.09 kg/day or 30 ppb of phosphorus for Quaboag Pond and water quality target of 0.40 kg/day or 12 ppb of phosphorus for Quacumquasit Pond.

Assessment:

EPA concludes that Massachusetts has properly presented its numeric water quality standards and has made a reasonable and appropriate interpretation of its narrative water quality criteria for the designated uses of these ponds.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

As described in EPA guidance, a TMDL identifies the loading capacity of a waterbody 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 waterbody'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 waterbody 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 waterbody 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.

MassDEP identified the waterbodies' loading capacities and described the cause and effect relationship between the numeric target and impairment through various models, land use modeling, mass balance estimates, lake modeling and best professional judgment based on literature values. The loading capacity (30 ppb or 7.09 kg/day) for Quaboag Pond was set for the most critical time of the year - the summer growing season. The loadings account for seasonal variation because the loads are protective of the most sensitive time of the year. The most sensitive time of the year for shallow Quaboag Pond occurs during the summer, when the frequency and occurrence of nuisance algae blooms and macrophyte growth are the greatest. However, the loading capacity (12 ppb or 0.40 kg/day) for Quacumquasit Pond was based on the spring season when water column turnover occurs and total phosphorus is high as the nutrient

rich bottom waters are mixed with the surface waters. During the summer, phosphorus concentrations tend to decline due to a lack of nutrient inputs and the sedimentation of algae and associated phosphorus.

The TMDL phosphorus targets require a reduction of 30% in Quaboag Pond. In order to preserve the cold water fishery in Quacumquasit Pond a 33% reduction of phosphorus is established as a pollution prevention TMDL.

Assessment:

The TMDL document explains (see pages 19 to 40 of the TMDL report) and EPA concurs with the approach used to develop the target total phosphorus loading rates and in identifying sources of needed total phosphorus load reduction.

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.

Quaboag Pond: The loading capacity for Quaboag Pond was based on a mass balance approach which agreed with the measured spring concentration. The five models mentioned below were also considered. MassDEP stated that these models may not be appropriate for quick flow-through lakes where phosphorus inputs may not be retained and nutrient concentrations may be diluted due to spring snowmelt. Therefore, the mass balance approach was used.

The load allocation for Quaboag Pond is 6.06 kg/day and is broken into seven categories which are set forth in Table 10 of the TMDL document.

Quacumquasit Pond: The loading capacity for Quacumquasit Pond was based on a combined approach of the mass balance of nutrients inputs from the flooding from Quagboag Pond into Quacumquasit Pond, land use inputs from export coefficients and literature estimates of septic and internal sediment sources. The current annual total phosphorus budget for Quacumquasit Pond is 199 kg/year or 0.55 kg/day and is set out in Table 8, page 38 of the TMDL document. The five lake water quality models' estimates (Vollenweider, 1975; Kirchner and Dillon, 1975; Chapra, 1975; Larsen and Mercier, 1975; and Jones and Bachmann, 1976) of the phosphorus loads predicted similar loads and concentrations as indicated in Appendix B to the TMDL.

The target load for Quacumquasit Pond is 146 kg/year or 0.40 kg/day which corresponds to a concentration of 12 ppb total phosphorus during the spring.

The load allocation is broken out into several categories as set out in Table 11 of the TMDL document.

Assessment:

MassDEP adequately describes and sets forth the load allocations for cultural and natural background sources. EPA concludes that the load allocations are adequately specified for the TMDLs at levels necessary to attain water quality standards.

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 wasteload allocations are set out in Tables 10 and 11 respectively for Quaboag Pond and Quacumquasit Pond. The wasteload allocation for Quaboag Pond includes the loading from the Spencer Wastewater Treatment plant (131 kg/year or 0.36 kg/day) and the loading from stormwater run-off (244 kg/year or 0.67 kg/year) as set out in Table 10 of the TMDL document. 40 C.F.R. § 130.2(h) provides that point source discharges must be addressed by the wasteload allocation component of a TMDL. Discharges involving process wastewater, non-contact cooling water, and other non-stormwater discharges are assigned individual waste load allocations pursuant to this regulation. Stormwater discharges, however, are less amenable to individual wasteload allocations. In recognition of this fact, EPA's November 22, 2002 guidance entitled "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs," provides that it is reasonable to express allocations for NPDES-regulated storm water discharges from multiple point sources as a single categorical or aggregate wasteload allocation when data and information are insufficient to assign each source or outfall individual WLAs. EPA's guidance recognizes that the available data and information usually are not detailed enough to determine waste load allocations for NPDES-regulated storm water discharges on an outfall-specific basis.

The wasteload allocations for Quacumquasit Pond were divided into two categories, one for backflooding from Quaboag Pond which accounts for the wasteload contribution to Quacumquasit Pond and for NPDES-regulated stormwater from the Quacumquasit Pond watershed.

Assessment:

EPA concludes that the wasteload allocations are adequately specified in the TMDL at a level sufficient to attain and maintain water quality standards (when combined with the load allocation).

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.

There are several components that contribute to the implicit margin of safety provided in this TMDL. (See pages 39 through 41.) First, both ponds meet the visibility standards for swimming. Quaboag Pond typically does not experience algal blooms until a total phosphorus concentration of 43 ppb during the critical summer growing season occurs. To meet the warm water fishery and aesthetic uses of the pond and provide a margin of safety, MassDEP selected 30 ppb of total phosphorus as the summer target total phosphorus concentration. MassDEP believes a concentration of 30 ppb of total phosphorus is reasonable for Quaboag Pond because the pond has a short residence time or quick flushing rate, which helps to reduce the frequency of algal blooms. In addition, the colored water of Quaboag Pond indicates the presence of dissolved organics that can bind total phosphorus reducing the bioavailability of phosphorous by algae and macrophytes.

A primary factor contributing to the dense aquatic macrophyte growth relates to the favorable conditions (i.e. shallow depth) in Quaboag Pond which provide an ideal habitat for the natural growth of rooted macrophytes. Management control of macrophytes is an essential component necessary to attain water quality standards.

Since Quacumquasit Pond is not presently impaired for total phosphorous at the critical time period (spring) at a concentration of 15 ppb, MassDEP believes a TMDL target of 12 ppb is reasonable.

Assessment:

EPA concludes that the margin of safety for the TMDLs is acceptable for Qucumquasit Pond because it is not presently impaired at its current phosphorus load. The margin of safety for Quaboag Pond is also acceptable as the target concentration of 30 ppb of total phosphorus is

significantly lower than the concentration where occasional water quality impairments occur at a concentration of 43 ppb of total 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)).

Assessment:

The TMDLs for the waterbody segments identified in the document are based on achieving the phosphorus loads during the most critical time period, i.e. the summer growing season for Quaboag Pond and the spring season for Quacumquasit Pond. Since the other seasons are less sensitive to phosphorus loading for these ponds, the TMDL is protective of all seasons throughout the year.

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.

Because these TMDLs are not "phased" TMDLs, a monitoring plan is not required in order to assure that data are available to update the TMDL. Nevertheless, in order to assess the progress in obtaining the TMDLs' water quality goals, MassDEP has recommended that a post-TMDL monitoring plan as set out on pages 47, 48 and 51 of the TMDL document be established. In addition, MassDEP is committed to monitoring this watershed every five years as part of conducting its ongoing water quality assessments in each watershed in Massachusetts.

Assessment:

EPA concludes that the anticipated monitoring by and in cooperation with MassDEP is sufficient to evaluate the adequacy of progress toward attainment of MAWQS, although not a required element of EPA's TMDL approval process. EPA recommends that MassDEP and the town work together to develop and implement the post-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.

The implementation plan for these TMDLs is described on pages 43 to 50 of the TMDL document.

Assessment:

EPA concludes that the approach set forth by MassDEP to implement these TMDLs is reasonable, although not a required element of the TMDL approval process. 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 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."

Although no regulated point source was given a less stringent allocation based on the assumption that non-point source load reduction would occur, MassDEP indicates that both point and non-point source allocation reductions will be necessary to meet MAWQS. The TMDL will be implemented through enforcement of regulations, availability of financial incentives and local, state and federal programs for pollution control. Wastewater treatment facilities are regulated under existing NPDES and Commonwealth permits. Communities subject to storm water NPDES permit Phase I and II coverage will address discharges from municipally-owned storm water drainage systems. Regulations that control some point source and nonpoint source storm water discharges include local implementation of the Commonwealth's Wetlands Protection Act, the Rivers Protection Act, Title 5 regulations for septic systems and other local regulations. Financial incentives include federal and state funds available under Sections 319 and 104(b) programs of the CWA as well as the State Revolving Loan Program. Other potential funds and assistance are available through Massachusetts' Department of Agriculture's Enhancement Program and the United States Department of Agriculture's Natural Resources Conservation Services. Additional financial incentives include income tax credits for Title 5 upgrades and low interest loans for Title 5 septic system upgrades available through municipalities participating in this portion of the state revolving loan fund program.

As stated above, MassDEP has in place a number of state regulatory and financial programs that will help to assure implementation of the TMDL will be achieved.

The TMDL provides a mechanism and incentive for community administrators to, among other things, seek funding, educate the public, and prioritize remedial actions. Moreover, for sources beyond the scope of federal and state jurisdiction (e.g., nonpoint source runoff), this TMDL provides communities with information for mitigating phosphorus sources.

The information generated from the TMDL document has already generated support from citizens (e.g., the Quaboag and Quacumquasit Lake Association) and the town of Brookfield. The town of Brookfield recently received a 319 nonpoint source grant in the amount of $270,833 to take the necessary steps to remedy existing problems related to phosphorus loading and to prevent any future degradation of these valuable resources.

Assessment:

Although not required because MassDEP did not establish less stringent WLAs in reliance on greater load reductions from nonpoint sources, EPA concludes that MassDEP has provided reasonable assurance that MAWQS will be met. The Commonwealth has provided a strong framework to encourage watershed management through statutory and regulatory authority to encourage implementation of these TMDLs.

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.

MassDEP publicly announced the development of the draft TMDL for public review and solicitation of comments on May 10, 2005. The public comment period closed on June 9, 2005. A public meeting was held on May 25, 2005. MassDEP has provided ample opportunity for the public to comment. Finally, MassDEP has provided a comprehensive record of the comments received and provided clear responses to those comments.

Assessment:

EPA concludes that MassDEP has done a sufficient job of involving the public in the development of the TMDL, provided adequate opportunities for the public to comment and has

fully addressed the comments received as set forth in the response to comment section of the TMDL document.

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 waterbody, the pollutant(s) of concern, and the priority ranking of the waterbody.

Assessment:

On May 24, 2006, MassDEP submitted a final TMDL for total phosphorus on the Quaboag and Quacumquasit Ponds. The document contained all of the elements necessary to approve the TMDL.

13. "Pollution Prevention" TMDL for Quacumquasit Pond

MassDEP recommends that the information contained in the TMDL for the Quacumquasit Pond be used to guide management activities in this pond to help maintain and protect existing water quality. For this non-impaired water, Massachusetts is proposing a "pollution prevention" TMDL consistent with CWA § 303(d)(3).

Pollution prevention TMDLs on waterbody segments can encourage the maintenance and protection of existing water quality and help prevent further degradation to waterbodies. Although EPA does not approve pollution prevention TMDLs, EPA acknowledges the establishment of these TMDLs consistent with developing information as set forth in CWA Section 303(d)(3). Therefore, EPA's approval of the TMDLs submitted by MassDEP applies only to Qauboag Pond for nutrients and noxious aquatic plants.

In terms of how this pollution prevention TMDL would be implemented, MassDEP proposes that the analyses conducted for the Quacumquasit Pond TMDL would apply in the future. Thus, the waste load and/or load allocation for each source and designated use would remain the same as specified in the TMDL document.

MassDEP is also recommending that the Quacumquasit Pond TMDL may, in appropriate circumstances, apply to this segment if it is listed for nutrient impairment in subsequent Massachusetts CWA § 303(d) Integrated List of Waters. EPA agrees that for this segment, this TMDL may apply if, after listing the water for nutrient impairment and taking into account all relevant comments submitted on the CWA § 303(d) list, MassDEP determines with EPA approval of the CWA § 303(d) list that the Quacumquasit Pond TMDL should apply if the water body becomes impaired by nutrients.

Data for Entry in EPA's National TMDL Tracking System and Regional Web Page							
TMDL Water Body Name *	**Quaboag Pond and Quacumquasit Pond (1 TMDL segment)**						
Number of TMDLs*	1*						
Type of Pollutant(s) *	Nutrients (phosphorus)						
Number of listed causes (from 303(d) list)	2						
Any Information/prevention TMDLs (Y/N)	Y (1)						
Lead State	Massachusetts						
TMDL Status	Final						
Individual TMDLs listed below (one line per segment-pollutant combination)							
TMDL Segment name	TMDL Segment ID #	TMDL Pollutant ID# & name	TMDL Impairment Cause(s)	Pollutant endpoint	Unlisted ?	NPDES Point Source & ID#	Segment still listed for something else? (Y/N)
Quaboag Pond	MA36130	515 (Total Phosphorus)	Nutrients, Noxious Aquatic Plants	30 ug/l Total Phosphorus	no	NPDES MS4 General Stormwater Permit; Spencer Waste Water Treatment Plant Id# MA0100919	Metals
303D3 Pollution Prevention TMDL segment name	***303D3 TMDL Segment ID #***	***303D3 TMDL Pollutant ID# & name***	***303D3 TMDL Impairment Cause(s)***	***303D3 Pollutant endpoint***	***Unlisted?***	***NPDES Point Source & ID#***	Listed for something else?
Quacumquasit Pond	Not Listed, UN-P2008-13	515 (Total Phosphorus)		12 ug/l Total Phosphorus	Yes Pollution Prevention TMDL	NPDES MS4 General Stormwater Permit; Spencer Waste Water Treatment Plant Id# MA0100919	Metals
TMDL Water Pollution Type	Point & Nonpoint Source (Stormwater)						
Cycle (list date)	2006						
Establishment Date (approval)*	Dec 6, 2007						
EPA Developed	No						
Towns affected*	Spencer, Brookfield, MA						

* = These data fields used in webpage entries