UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

September 20, 2012

Kenneth L. Kimmell, Commissioner
Department of Environmental Protection
1 Winter Street
Boston, MA 02108

Re: Approval of the Northeast Regional Mercury TMDL: Addendum for Massachusetts

Dear Commissioner Kimmell:

Thank you for your Department's submittal of the *Northeast Regional Mercury TMDL: Addendum for Massachusetts* (Control Number 377.0) on September 13, 2012. This Addendum TMDL was developed with the intention of adding 20 water body segments to the previously approved Northeast Regional Mercury Total Maximum Daily Load.

The U.S. Environmental Protection Agency (EPA) hereby approves Massachusetts's Mercury TMDL Addendum. 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 a copy of our approval documentation.

We are very pleased with the quality of your TMDL submittal from the Division of Watershed Management, and commend your efforts to continue to address mercury contamination in Massachusetts' waters. My staff and I look forward to continued cooperation with the Massachusetts DEP in exercising our shared responsibility of implementing the requirements under Section 303(d) of the CWA.

Sincerely,

/s/

Stephen S. Perkins, Director
Office of Ecosystem Protection

Enclosure

cc:
Rick Dunn, MassDEP
Kim Groff, MassDEP
Art Johnson, MassDEP
Steve Silva, EPA
Andrea Traviglia, EPA

EPA NEW ENGLAND'S TMDL REVIEW

DATE: September 20, 2012

TMDL: Northeast Regional Mercury TMDL: Addendum for Massachusetts

STATUS: Final

IMPAIRMENT/POLLUTANT: Mercury TMDL Addendum for 20 Water Body Segments

BACKGROUND:
The Massachusetts Department of Environmental Protection (MassDEP) submitted a draft Addendum TMDL on June 11, 2012. A public comment period was held from June 20 to July 30, 2012. MassDEP submitted to EPA Region 1 the final *Northeast Regional Mercury TMDL: Addendum for Massachusetts* (Control Number: CN 377.0) with a transmittal letter dated September 13, 2012. In addition to the Addendum TMDL itself, the submittal included, either directly or in reference, the following documents:

- Northeast Regional Mercury TMDL Report (NEIWPCC, 2007)
- Proposed Massachusetts Year 2012 Integrated List of Waters
- Approval of the **Northeast Regional Mercury TMDL**: Review Memo and Approval Letter (dated: Dec. 20, 2007)

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.

REVIEWERS: Andrea Traviglia (617-918-1993) e-mail: traviglia.andrea@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.

Introduction

The *Northeast Regional Mercury TMDL* (Regional TMDL) was approved by EPA in 2007. The Regional TMDL outlined a strategy for reducing mercury concentrations in fish in New York and the New England states' fresh waterbodies so that water quality standards could be met. In the Northeast, the majority of mercury pollution is a result of atmospheric deposition. Thus, the

TMDL was based primarily on reduction of atmospheric deposition, which can be achieved through reductions in anthropogenic mercury emissions. The seven northeast states (CT, ME, MA, NH, NY, RI and VT) submitted the Regional TMDL to EPA. Because the states span two different EPA regions, EPA Region 1 made the approval decision on the portion of the TMDL that applies to waters in the six New England states (CT, ME, MA, NH, RI and VT) and EPA Region 2 made the approval decision on the portion that applies to waters in New York State.

In the interim since the Northeast Regional Mercury TMDL was finalized in 2007, MassDEP completed the 2002-2008 Surface Water Quality Assessment Report that identified an additional 20 mercury impaired segments (see Attachment 1). This *Northeast Regional Mercury TMDL: Addendum for Massachusetts* (CN: 377.0) was developed by MassDEP with the intention of adding these segments to the Northeast Regional Mercury TMDL, which was approved for Massachusetts by EPA Region 1 on December 20, 2007.

On March 12, 2012 these 20 segments were included in Category 5 of the Proposed Massachusetts Year 2012 Integrated List of Waters (Proposed 2012 Integrated List) pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act. Three of the 20 segments were originally listed in Category 5 in the Final 2010 Integrated List of Waters. These 20 impairments were also presented in Appendix 4 of the Proposed 2012 Integrated List as segments proposed for coverage under previously approved TMDLs (see Section 11 Public Participation of this document). As described in Section 11 below, MassDEP provided public notice for these Addendum TMDLs and addressed all comments received.

This *Northeast Regional Mercury TMDL: Addendum for Massachusetts* (Addendum TMDL) therefore presents information related to the newly listed segments only; all other Sections of the Regional TMDL that were approved in 2007 are incorporated by reference and remain applicable to this Addendum TMDL.

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 chlorophyll a and phosphorus loadings for excess algae.

A. Description of Waterbody, Priority Ranking, and Background Information

The Northeast Regional Mercury TMDL (Regional TMDL) was developed for inland waters within the seven states (CT, ME, MA, NH, NY, RI and VT) impaired by mercury primarily from

atmospheric deposition. This Addendum TMDL was developed by MassDEP with the intention of adding 20 newly identified impaired segments to the Regional TMDL (see Attachment 1). Massachusetts has a statewide advisory, but only list waters on their Section 303(d) lists that have been assessed and found to be impaired. Appendix A of the Regional TMDL report has been updated in the Addendum TMDL to include the names and segment IDs of the 20 additional impaired segments (See Addendum to Appendix A in the Addendum TMDL). The newly listed segments are also identified in the Table on pages 1-2 of the Addendum TMDL.

B. Pollutant of Concern

There are no revisions to the pollutant of concern, mercury, in the Addendum TMDL. Mercury is a multimedia global pollutant. Mercury is emitted to the air, transported and then deposited to the soil and beds of rivers, lakes and streams, where a number of biological and chemical processes occur in the soils, waterbodies, and sediments that cause mercury to react with organic materials to form methylmercury, a highly toxic form of mercury. Methylmercury builds up, or bioaccumulates, in the bodies of animals, so fish at the top of the aquatic food chain are likely to contain higher mercury concentrations than fish lower on the food chain. Humans and wildlife are exposed to unsafe levels of methylmercury by eating contaminated fish.

C. Pollutant Sources

There are no revisions made in the Addendum TMDL to the identification of potential sources of mercury in Massachusetts fresh waters (Section 6.0 of the Regional TMDL). Sources considered by the states in the development of the Regional TMDL included atmospheric mercury deposition, municipal wastewater treatment plants, non-municipal wastewater discharges, and stormwater. The states identified 97.9% of the total mercury load as coming from atmospheric deposition. Both natural and anthropogenic sources contribute to the atmospheric deposition mercury load. The Regional TMDL document identified natural sources as contributing 25% to the atmospheric deposition mercury load, while the remaining 75% is from worldwide anthropogenic sources.

Assessment:

EPA Region 1 concludes that the Addendum TMDL document, combined with Section 6.0 from the Regional TMDL document (as referenced in the Addendum TMDL), meets the requirements for describing the TMDL waterbody segments, pollutants of concern, identifying and characterizing sources of impairment, and priority ranking. Please see the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

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.

There have been no revisions to the water quality standards that apply to these impairments since the Northeast Regional Mercury TMDL was finalized in 2007 (see Section 3.0 of the Regional TMDL). The water quality standards for Massachusetts include a methylmercury fish tissue criterion of 0.3 ppm for human health protection. In developing the TMDL, these states used the consumption advisory fish tissue concentrations as the TMDL targets. The states indicated in the response to comments on the draft TMDL document that use of these fish tissue targets in the TMDL is appropriate, in part, because attainment of these targets will protect designated uses (fish consumption).

Assessment:

EPA Region 1 approved the use of fish tissue values as water quality targets to set the TMDL targets in the Regional TMDL (see EPA Approval documents dated Dec. 20, 2007), specifically 0.3 ppm for Massachusetts, and there have been no revisions to the water quality standards the Regional TMDL utilized. Therefore, EPA concludes that the Addendum TMDL meets the requirements for describing water quality standards and numeric water quality targets. Please see Section 3.0 of the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

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.

There are no revisions in the determination of the loading capacity in this Addendum TMDL from the Regional TMDL. As described in Section 7.0 of the Northeast Regional Mercury TMDL, the states determined the loading capacity for the region using the following steps: 1) determination of the existing point and nonpoint source loads, which are summed to determine the total existing source load; 2) calculation of the reduction factor needed to achieve the target

fish tissue concentration; and 3) calculation of the allowable mercury load by applying the reduction factor to the total source load. For Massachusetts, the reduction factor is based on the reductions needed to achieve the fish tissue target of 0.3 ppm (See Section 2 above); therefore the loading capacity is 1,750 kg/yr or 4.8 kg/day (See Table 8, Addendum TMDL).

Assessment:
EPA Region 1 found that the Northeast Regional Mercury TMDL submitted by the states adequately identified the loading capacity and accounted for critical conditions, and the states' overall methodology of calculating the loading capacity by applying a reduction factor to the total source load was acceptable (see Approval documents dated Dec. 20, 2007). MassDEP has not made revisions to the determinations in the Addendum TMDL; therefore, EPA concludes that the Addendum TMDL meets the requirements for loading capacity. Please see Section 7.0 of the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

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.

There are no revisions in the determination of the LAs in this Addendum TMDL from the Regional TMDL. Based on the 0.3 ppm target concentration, the load allocation for Massachusetts is 4.8 kg/day. The load allocations are gross allotments for all of the nonpoint sources collectively (predominantly atmospheric deposition) and apply on a region-wide basis. To determine the load allocations, the states first determined the loading capacity for each target concentration by applying the appropriate reduction factor to the total source load. As described in Section 7.3 of the Regional TMDL, the reduction factor is 0.74 for the 0.3 ppm target. The WLA was set at 2.1% of the loading capacity, as described below in the next section. The LA was determined by subtracting the WLA of 2.1% from the loading capacity for each target concentration, based on the TMDL equation: Loading Capacity = WLA + LA + MOS. Because this TMDL uses an implicit MOS rather than an explicit MOS (as described in Section 6 below) the value for MOS in this equation is zero,

Consistent with the definition of load allocation at 40 CFR 130.2(g), the Regional TMDL separated out the contributions from natural sources to the load allocation. Natural sources were estimated to contribute as much as 25% of the load allocations, and anthropogenic sources were assumed to contribute the remaining 75% of the load allocations. The Regional TMDL indicates that reduction efforts will focus on the anthropogenic portion of the load allocations.

Assessment:
EPA Region 1 approved the approach utilized in the Regional TMDL (see Approval documents dated Dec. 20, 2007) and MassDEP has not made revisions to the LA determinations. EPA concludes that load allocations are adequately specified in the Addendum TMDL at levels necessary to attain and maintain WQS. Please see the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

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.

There are no revisions in the determination of the WLAs in this Addendum TMDL from the Northeast Regional Mercury TMDL (Regional TMDL report Section 7.5). As described in the Regional TMDL, the WLAs work out to 0.104 kg/day for the states with a fish tissue target of 0.3 ppm. The states did not assign wasteload allocations to individual point sources; rather, the states established a gross wasteload allocation for each of the three reduction targets. This aggregate approach was taken due to the specific circumstances of this TMDL, including that the total wasteload allocation represents a very small fraction (only 2.1%) of the total allocation to the northeast states, the overwhelming majority (97.9%) of the mercury load is from widespread atmospheric sources, and waters significantly impacted by point sources have been excluded from the TMDL (and will be addressed through other means).

Assessment:
EPA Region 1 approved the approach utilized in the Regional TMDL (see Approval documents dated Dec. 20, 2007) and MassDEP has not made revisions to the WLA determinations. EPA concludes that wasteload allocations are adequately specified in the Addendum TMDL at levels necessary to attain and maintain WQS. Please see the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

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 no revisions made in the Addendum TMDL as to how the margin of safety was calculated in the Northeast Regional Mercury TMDL (Section 7.7, Regional TMDL report). The Regional TMDL identified several conservative assumptions that provide an implicit MOS. These factors include:

- The assumption that 25% of atmospheric sources of mercury are natural. According to the Regional TMDL, this load can be as low as 15%. The data is based on sediment cores taken from rural locations where the contributions from natural sources are likely to be higher. The Northeast Regional Mercury TMDL included more urbanized areas and would therefore have a lower range of contribution from natural sources;
- The percent reduction for the TMDL does not account for additional reductions in methylmercury that may occur as a result of the implementation of ongoing state and federal programs to reduce sulfur emissions. Reductions in sulfur deposition and sulfate-reducing bacterial activity will decrease the rate of mercury methylation.

Assessment:
EPA Region 1 approved the approach utilized in the Regional TMDL (see Approval documents dated Dec. 20, 2007) and MassDEP has not made revisions to the MOS determinations. EPA concludes that the approach used in developing the TMDL provides for an adequate implicit MOS. Please see the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

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)).

There are no revisions made in the Addendum TMDL with respect to seasonal variation from the Northeast Regional Mercury TMDL (Section 7.8, Regional TMDL report). The Regional TMDL report stated that while "mercury deposition and concentrations in water may vary due to seasonal differences in wind patterns" this does not result in seasonal differences in concentrations in fish because mercury bioaccumulates in fish over their life spans.

Assessment:
EPA Region 1 approved the approach utilized in the Regional TMDL (see Approval documents dated Dec. 20, 2007) and MassDEP has not made revisions to accounting for seasonal variability. EPA concludes that the TMDL documents have adequately addressed seasonal variability. Please see the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

8. Monitoring Plan

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.

There are no revisions made in the Addendum TMDL with respect to the monitoring plan from the Northeast Regional Mercury TMDL (Regional TMDL report Sections 4.1, 4.2 and 9).

Assessment:

EPA Region 1 concluded that the Regional TMDL report adequately described plans for future monitoring to track effectiveness of the TMDL; although EPA was not approving these recommendations for monitoring through that decision.

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.

There are no revisions made in the Addendum TMDL with respect to the implementation plan section in the Northeast Regional Mercury TMDL (Regional TMDL report Section 9.0).

Assessment:

In the Regional TMDL, MassDEP had included a detailed discussion of implementation activities and outlined the mercury reduction efforts in each state, priorities and authorities, although not a required element of the TMDL approval. 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."

There are no revisions made in the Addendum TMDL with respect to the reasonable assurance discussion in the Regional TMDL (Regional TMDL report Sections 7, 9 and 10).

Assessment:

As detailed in the 2007 approval document, EPA believed that the Regional TMDL adequately quantified the water quality problem due to mercury in the waters covered by the TMDL and identified the load reductions needed in order for those waters to achieve water quality standards. The Regional TMDL described comprehensive ongoing and planned state, national and international activities designed to achieve substantial reductions from sources described in the load allocation. In addition, and most importantly, existing point source contributions are an insignificant part of the total source load. In light of these factors, EPA concluded that the Regional TMDL's wasteload allocation is reasonable. Therefore, as MassDEP has not made revisions to that section in the Addendum TMDL, EPA concludes that the TMDL documents have adequately addressed reasonable assurance. Please see the Regional TMDL and EPA's Northeast Regional Mercury TMDL Approval documents (dated: Dec. 20, 2007) for additional details.

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.

During the Regional TMDL process, each state handled the public participation process as dictated by state guidelines. MassDEP publicly announced the draft Regional TMDL on April 11, 2007 for a 59-day comment period. Following the comment period, the TMDL technical team considered all comments received, prepared a response to comments document, and made necessary revisions to the TMDL.

MassDEP publicly announced the Proposed 2012 Integrated List on March 12, 2012 and copies were distributed to key stakeholders. The public comment period covered 50 days and ended on April 30, 2012. MassDEP did not receive any comments related to the inclusion of these 20 segments on the 2012 Proposed List.

The public process for approval of the newly listed segments covered by this Addendum TMDL included publication of Notice of Availability in the Environmental Monitor on June 20, 2012 along with an email announcing the public comment period to a targeted list of organizations, stakeholders and key contacts. The public notice allowed 41 days for public comment and closed on July 30th, 2012. MassDEP received a set of comments from the Charles River Watershed Association. The responses to comments are included in Attachment 2 of the Addendum TMDL.

Assessment:
EPA concludes that MassDEP has done a sufficient job of involving the public in the development of the Addendum TMDL and provided adequate opportunities for the public to comment. In reviewing the TMDL document, EPA reviewed the public comments and the responses from MassDEP. EPA concludes that MassDEP adequately responded to public comments.

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 September 13, 2012, MassDEP submitted the Northeast Regional Mercury TMDL: Addendum for Massachusetts (CN 377.0). The documents contained all of the elements necessary to approve the TMDL.

Attachment 1:
Newly Listed Massachusetts Freshwaters Impaired Solely by Atmospheric Mercury

Segment Name	Segment ID	New Impairment Cause
Blackstone		
Manchaug Pond	MA51091	"Mercury in Fish Tissue"
Cape Cod		
Bearse Pond[1]	MA96012	"Mercury in Fish Tissue"
Horseleach Pond	MA96144	"Mercury in Fish Tissue"
Lawrence Pond	MA96165	"Mercury in Fish Tissue"
Round Pond (East)	MA96260	"Mercury in Fish Tissue"
Round Pond (West)	MA96261	"Mercury in Fish Tissue"
Spectacle Pond	MA96306	"Mercury in Fish Tissue"
Spectacle Pond	MA96307	"Mercury in Fish Tissue"
Charles		
Beaver Pond	MA72004	"Mercury in Fish Tissue"
Cedar Swamp Pond[1]	MA72016	"Mercury in Fish Tissue"
Concord		
Ashland Reservoir[1]	MA82003	"Mercury in Fish Tissue"
Deerfield		
Ashfield Pond	MA33001	"Mercury in Fish Tissue"
Millers		
Moores Pond	MA35048	"Mercury in Fish Tissue"
Mount Hope Bay		
Sawdy Pond	MA61005	"Mercury in Fish Tissue"
Nashua		
Lake Shirley	MA81122	"Mercury in Fish Tissue"
Neponset		
Pettee Pond	MA73036	"Mercury in Fish Tissue"
Ponkapoag Pond	MA73043	"Mercury in Fish Tissue"
Reservoir Pond	MA73048	"Mercury in Fish Tissue"
Westfield		
Buckley Dunton Lake	MA32013	"Mercury in Fish Tissue"
Windsor Lake	MA32076	"Mercury in Fish Tissue"
[1.] Originally impaired on 2010 Integrated List		

Data for entry in EPA's National TMDL Tracking System	
TMDL Name	**Massachusetts Statewide Mercury TMDL** (Addendum to NE Regional Mercury TMDL)
Number of TMDLs*	20
Type of TMDLs*	Mercury
Number of listed causes (from 303(d) list)	3
Lead State	Massachusetts (MA)

Individual TMDLs listed below

TMDL Segment name	TMDL Segment ID #	TMDL Pollutant ID# & name	TMDL Impairment Cause(s)	Pollutant endpoint (Class: geometric mean;10% or SSM^{+})	Unlisted?	NPDES Point Source & ID#	Listed for anything else?
Manchaug Pond	MA51091	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		Non-native aquatic plants, DO
Bearse Pond	MA96012	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	2010		Non-native aquatic plants
Horseleach Pond	MA96144	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Lawrence Pond	MA96165	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Round Pond (East)	MA96260	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Round Pond (West)	MA96261	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Spectacle Pond	MA96306	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Spectacle Pond	MA96307	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Beaver Pond	MA72004	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Cedar Swamp Pond	MA72016	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	2010		Non-native aquatic plants, DO
Ashland Reservoir	MA82003	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	2010		Non-native aquatic plants
Ashfield Pond	MA33001	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Moores Pond	MA35048	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Sawdy Pond	MA61005	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Lake Shirley	MA81122	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		Eurasian water milfoil, myriophyllum spicatum,

							Non-native aquatic plants, DO, Excess algal growth, turbidity
Pettee Pond	MA73036	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Ponkapoag Pond	MA73043	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		Eurasian water milfoil, myriophyllum spicatum, Non-native aquatic plants
Reservoir Pond	MA73048	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		Non-native aquatic plants
Buckley Dunton Lake	MA32013	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		NO
Windsor Lake	MA32076	353 (Mercury in Fish Tissue)	Mercury in Fish Tissue (353)	0.3 mg/L mercury target fish tissue concentration	Y		Eurasian water milfoil, myriophyllum spicatum, DO
TMDL Type		Point & Nonpoint Sources					
Establishment Date (approval)*		Sep 20, 2012					
EPA Developed		No					
Towns affected*		Ashfield, Ashland, Barnstable, Becket, Bellingham, Canton, Douglas, Fall River, Lunenburg, Milford, Randolph, Sandwich, Sutton, Truro, Walpole, Warwick, Wellfleet, Westport, Westwood, Windsor					

[+]Class = Water Body Classification: 10% = no more than 10% of the samples shall exceed statistic; SSM = Single Sample Maximum