Massachusetts Year 2004 Integrated List of Waters

and

A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury - Impaired Waters

Public Comments and Responses

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Introduction

This report summarizes and presents responses to the comments received on the *Proposed Massachusetts Year 2004 Integrated List of Waters* and the supplementary document entitled *A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters* both of which were prepared by the Massachusetts Department of Environmental Protection (MADEP) in fulfillment of reporting requirements of sections 305(b) (Summary of Water Quality Report) and 303(d) (List of Impaired Waters) of the Clean Water Act (CWA).

The integrated list format provides the current status of all previously assessed waters in a single multi-part list. Each waterbody or segment thereof is placed in one of the following five categories:

1) Unimpaired for all designated uses;
2) Unimpaired for some uses and not assessed for others;
3) Insufficient information to make assessments for any uses;
4) Impaired for one or more uses but not needing a TMDL; and
5) Impaired for one or more uses and requiring a TMDL.

Thus, the waters listed in Category 5 are the 303(d) List and, as such, are reviewed and approved by the EPA. The remaining four categories are submitted in fulfillment of the requirements under § 305(b).

The availability for public review and comment of the *Proposed Massachusetts Year 2004 Integrated List of Waters* was noticed in the April 24, 2004 edition of the Massachusetts Environmental Monitor, was posted with the proposed integrated list on the MADEP web site, and was provided directly to over fifty different watershed associations or other public interest groups. Copies of the document were available from the Division of Watershed Management's Watershed Planning Program office in Worcester and could be found at each MADEP Regional Service Center. The public comment period ended on June 1, 2004.

In September, 2004 the MADEP submitted to the EPA, and provided for public review and comment, a supplementary document to the *Proposed Massachusetts Year 2004 Integrated List of Waters*. This document, entitled *A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters*, asserts that a combination of federal, regional and state controls on mercury are the most effective means of remediating the mercury impairment to air-impacted waters and that Massachusetts is effectively implementing a comprehensive plan to address in-state mercury sources. Therefore, the establishment of waterbody-specific TMDLs under the traditional approach is not a wise use of resources, and would not effectively address the problem. Through this submittal, Massachusetts sought EPA approval to transfer ninety lakes and ponds from Category 5 (i.e., the 303d List) to Category 4b (i.e., "impaired, but not requiring a TMDL") of the *Proposed Massachusetts Year 2004 Integrated List of Waters.* Massachusetts worked closely with the EPA Region 1 on the development of this TMDL alternative pathway pilot project and meetings were held with environmental advocacy groups to explain the benefits of the proposed alternative and solicit their comments. The alternative regulatory pathway document was made available for public review and comment in the same manner as was followed for the *Proposed Massachusetts Year 2004 Integrated List of Waters* - it was noticed in the October 9, 2004 edition of the Massachusetts Environmental Monitor, was posted on the MADEP web site, and was distributed to a variety of interested parties. The public comment period for this document ended on November 19, 2004.

This document summarizes and provides responses to all comments received on both the *Proposed Massachusetts Year 2004 Integrated List of Waters*, and the supplementary mercury alternative document. In most cases, the comments are reprinted here in their entirety; however, some of the longer comment letters were excerpted or paraphrased, and some comments were edited slightly to conform to the format adopted for this document. A final version of the *Massachusetts Year 2004 Integrated List of Waters*, incorporating the comments and responses presented here, will be prepared and submitted to the EPA for final approval of the 303(d) List (i.e., Category 5). The following table presents a list of those who submitted comments and the pages on which they appear in this document.

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Responses to Comments on *Proposed Massachusetts Year2004 Integrated List of Waters*

1) The Coalition for Buzzards Bay (Mark Rasmussen, Executive Director)

(Note: By way of introduction Mr. Rasmussen wrote: "The Coalition for Buzzards Bay ("The Coalition") has reviewed the draft Massachusetts Year 2004 Integrated List of Waters ("2004 List"). As set forth herein and as further supported by the attached data, we make this formal request to include the embayments discussed below in the 2004 List as Category 5 waters requiring a TMDL for nutrients under § 303(d) of the Clean Water Act. Notably, some of these additions to the "impaired waters" list are necessary to correct an unjustified retrenchment from the 2002 List of impaired waters under circumstances where nutrient overenrichment has remained a significant problem that demands corrective action through the setting and implementation of TMDLs.

The Coalition is a non-profit membership organization dedicated to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed. We represent more than 2,400 individuals, families, organizations and businesses in southeastern Massachusetts who are interested I maintaining the health and ecological vitality of Buzzards Bay. As you are aware, we have conducted an important water quality monitoring program (or "Baywatchers") to document and evaluate nitrogen-related water quality and long-term ecological trends on an ongoing basis throughout the Buzzards Bay watershed since 1992. The program, conducted in partnership with the University of Massachusetts School of Marine Science and Technology, is overseen by Dr. Brian Howes and Tony Williams, and is recognized as the primary source of long-term data assessing the health of each of the Bay's 30 major harbors and coves from the Westport River on the southwest side of the Bay to Quisset Harbor on Cape Cod. In the past decade we have consistently documented numerous embayments in Buzzards Bay that exhibit often severe water quality and natural resource degradation related to nutrient overloading. The Coalition thus has a significant interest in ensuring the accuracy and comprehensiveness of the 2004 List, especially with respect to waters for which a TMDL is needed for nutrients and should be set.")

Comment: The federal Clean Water Act (CWA) section 303,33 U.S.C. § 1313, requires each state of "identify those waters within its boundaries for which the [technology-based or other existing] effluent limitations are not stringent enough to implement any water quality standard [WQS] applicable to such waters." 33 U.S.C. § 1313(d)(1)(A). EPA regulations and policy clarify that states must identify all segments of waterbodies which do not or may not within the next two years meet numeric water quality criteria, narrative criteria, waterbody designated or existing uses or antidegradation requirements. 40 C.F.R. §§ 130.7(b)(3),(5). In developing its list of all threatened or impaired waters, the state must use "all existing and readily available water quality-related data and information." 40 C.F.R. §130.7(b)(5). This data includes, at a minimum, waters identified in the most recent state section 305(b) report as "partially meeting" or "not meeting" designated uses or "threatened;" waters calculated by models not to meet water quality standards; or waters "for which water quality problems [including fishing, shellfishing, or recreational restrictions] have been reported" by local, federal or state agencies, *members of the public,* or academic institutions, 40 C.F.R. § 130.7(b)(5)(iii). This inclusive list of sources of information means that the state may not exclude information because of arbitrary limitations on what it considers acceptable data, nor may the state refuse to list any impaired or threatened water segment because it does not know the source of the pollutants causing the impairment.

Response: The regulation governing § 303(d) is actually worded such that states are required to "assemble and evaluate all existing and readily available water quality-related data and information to develop the § 303(d) list". This does not mean that states must use all data and information regardless of the quality or representativeness of that information. In fact, the EPA strongly encourages states to establish minimum data requirements and acceptable criteria for submitting data for consideration for listing. The MADEP has not set "arbitrary limitations on what it considers acceptable data", but has established minimum criteria for submitting data from external sources based on sound scientific principles and guidance from the EPA. Data can only be considered if they are in a format that can be analyzed and interpreted by the state within a reasonable time frame. The state may elect not to use data and information from external sources if documentation is lacking or incomplete with respect to the

appropriateness of using the information for use assessments. This may include insufficient information pertaining to sample collection procedures, QA/QC measures, representativeness of sampling sites and events, and whether data were collected under appropriate conditions for comparisons with water quality standards. Massachusetts concurs that state may not refuse to list any impaired or threatened water segment because it does not know the source of the pollutants causing the impairment. Waters found to be impaired by pollutants are 303(d)-listed whether or not the source of the pollutant is known.

Comment: The Coalition's testing, analysis and data clearly meet the reliability standards set by DEP and EPA for data from external sources. As you are aware, the Coalition for Buzzards Bay Water Quality Monitoring Program has partnered with the Coastal Systems Group at the University of Massachusetts – Dartmouth School for Marine Science and Technology (SMAST) personnel since the inception of the monitoring program in 1992. The SMAST Coastal Systems Group, headed by Dr. Brian Howes, is also the same lab that is managing the new DEP Estuaries Project. The Coalition's water quality monitoring sites notably mirror (and can be matched to) DEP's designated water segments, as depicted in the enclosed water quality maps. All methods used to produce our Baywatchers data are followed as listed in the 1996 EPA-approved Quality Assurance Project Plan (QAPP) and the 2001 QAPP approved by the EPA and Massachusetts DEP (dated 7/25/01). The Coalition's data through 2001 is also included in the following published (and citable) reports: Baywatchers III – Nutrient Related Water Quality of Buzzards Bay Embayments: A Synthesis of Baywatchers Monitoring 1992-1998; Baywatchers II 1999 Water Quality Poster; Baywatchers III 2002 Water Quality Poster (all of which are enclosed). We also enclose a CD-ROM containing the Coalition's water quality monitoring data through 2003. This data is presented in two electronic files, the first labeled allDO@003site20s and comprising a Microsoft Excel spreadsheet with data from 1992 to 2003 regarding dissolved oxygen, temperature and salinity; the second is an Excel spreadsheet labeled "CBB_9203Elgraphs" and contains raw nutrient data from 1992 to 2003. Both of these files include calculations of the Coalition's Buzzards Bay Health Index Scores for the noted parameters.

Based on the Coalition's water quality monitoring data, which meets the DEP's and EPA's reliability requirements (as detailed below), the following waters should be added to the Commonwealth of Massachusetts' 303(d) list of impaired ("Category 5") waters requiring a TMDL, for nutrients:

Little Buttermilk Bay, Bourne
Little River, Dartmouth
Nasketucket River, Fairhaven
Squeteague Harbor, Bourne/Falmouth
West End Pond, Cuttyhunk Island
Wild Harbor River, Falmouth

Additionally, the following waters, already listed in Category 5 for other contaminants, should be listed for *nutrients* (and thus require a TMDL for nutrients) in addition to the pollutants already listed for each:

Apponagansett Bay, Dartmouth
Aucoot Cove (Inner), Mattapoisett
Broad Marsh River, Wareham
Eel Pond, Bourne
Eel Pond, Mattapoisett
Little Sippewisset Marsh, Falmouth
Mattapoisett River, Mattapoisett
Nasketucket Bay, Fairhaven
Onset Bay – East River, Wareham
Sippican Harbor (Inner), Marion
Wild Harbor, Falmouth

Response: The MADEP completed a detailed review of the Coalition's information package included with their comment letter. To supplement this review we consulted GIS eelgrass datalayers, the Massachusetts Estuaries Project "Site-specific Nitrogen Thresholds Document" prepared by Brian

Howes, Roland Samimy and Brian Dudley, and the Technical Memorandum: Buzzards Bay 303(d) List - Embayment Analysis by Brian Howes and Roland Samimy (April 4, 2003). While this review did not lead to all of the 303(d) listings requested by the Coalition, all of the submitted data and information will be used in future assessments to highlight potential problem areas and identify possible sources of pollutants.

Six (6) of the waters (Little Buttermilk Bay, West End Pond (Cuttyhunk), Wild Harbor, Wild Harbor River, Little Sippewisset Marsh, and Mattapoisett River) were specifically cited by Howes and Samimy in the "Technical Memorandum" as having insufficient data or information to support including them on the 303(d) List. We concur with this assessment and do not plan to list them at this time.

Four (4) additional waters (Nasketucket Bay, Inner Aucoot Cove, Broad Marsh River and Sippican Harbor) either had very little data and information to support an assessment, or the representativeness of the Coalition's sampling location was questionable. The "Technical Memorandum" made no listing recommendation for Sippican Harbor or Broad Marsh River, and Nasketucket Bay supported stable eelgrass beds, an indicator upon which the DWM places substantial emphasis when assessing coastal embayments. Based on this evaluation, we do not plan to place these waters on the 303(d) List at this time.

Onset Bay/East River is on the proposed 2004 Integrated List for "pathogens" and "other habitat alterations". This latter stressor was added based entirely on eelgrass loss. As such, this impairment will effectively trigger a nutrient TMDL even though the data are not conclusive with respect to actually listing "nutrients" as a stressor.

Finally, the MADEP has reviewed data and information submitted by the CBB during the public review and comment period that suggest that sufficient evidence exists to place six (6) waters into Category 5 that were also recommended for 303(d)-listing in the "Technical Memorandum". These waters are: Little River, Nasketucket River, Squeteague Harbor, Apponagansett Bay, Eel Pond (Bourne) and Eel Pond (Mattapoisett). As a result, these six waters will appear in Category 5 of the 2004 Integrated List with "nutrients" listed as a stressor.

Comment: Two of the above-referenced waterbodies warrant particular further discussion given that they reflect an unjustified retrenchment from the 2002 List of violations of anti-degradation standards. At least one of these waterbodies, Squetegue Harbor (Segment ID MA95-55_2004), was included in the 2002 Category 5 list of waters requiring a TMDL for nutrients, is shown by the Coalition's data to continue to be impaired due to nutrient overenrichment, yet was removed from the 2004 List of Category 5 waters and instead listed in Category 2. Such a de-listing can only occur when either (1) a TMDL has been set; (2) a new assessment reveals that the waterbody is now meeting, or is expected presently to meet, all applicable water quality standards; or (3) the original basis for listing is determined to be flawed. Since there is no indication that any of these three criteria has been met, the de-listing of Squetegue Harbor from Category 5 is inappropriate and must be corrected.

Additionally, another waterbody, Apponagansett Bay)Segment ID MA92-39_2004), was included in the 2002 Category 5 list of waters requiring a TMDL for nutrients, is shown by the Coalition's data to continue to be impaired due to nutrient overenrichment, yet nutrients are no longer listed among the pollutants needing a TMDL for Apponagansett Bay in the 2004 List of Category 5 waters. The removal of *nutrients* from the list of pollutants needing a TMDL for Apponagansett Bay is similarly unjustified and must be corrected.

Response: The MADEP acknowledges that Apponagansett Bay and Squeteague Harbor had been listed as impaired by "nutrients" on the 2002 Integrated List. This stressor was removed for the Proposed 2004 List when it became apparent that considerable uncertainty existed with the historical eelgrass datalayer (1951). This mapping layer had served as the reference against which later eelgrass coverages were compared, thus calling into question the reliability of the original determination that these waters were impaired. Nonetheless, data submitted during the public comment period by the CBB indicates that these

waters do indeed exhibit elevated nitrogen and chlorophyll levels and, therefore "nutrients" will continue to be listed as a stressor to these two waterbodies.

2) Save the Bay (Kendra Beaver)

(Note: Footnotes and citations appearing in the original comment letter have been omitted here to conserve space. By way of introduction Ms. Beaver wrote: "Save the Bay has reviewed the Proposed Year 2004 Integrated List of Waters (2004 List) and submits that the list fails to meet the requirements of both §305(b) and §303(d) of the Clean Water Act (CWA). Save the Bay is particularly concerned with waters within the Narragansett Bay watershed that do not meet water quality standards (WQS) including the Blackstone, Mount Hope Bay (Shore), Narragansett Bay (Shore), Taunton, and the Ten Mile. Massachusetts Department of Environmental Protection (MADEP) has failed to monitor, assess, and develop total daily maximum loads (TMDLs) for an excessive number of water quality limited segments of great concern to Save the Bay. As you know, the current requirements for the Clean Water Act (CWA), TMDL program are specified in section 303 of the CWA and in the 1992 TMDL regulations, 40 CFS § 130.7. The 1972 National Clean Water Act (CWA) declares as a national goal the elimination of pollutant discharges into navigable waters by 1985. To meet this goal, the CWA required states to promptly submit TMDLs for all impaired water bodies, with lists of TMDLs initially due in 1979. Such a stringent deadline for submission of the TMDLs indicates a clear congressional intent that TMDLs be established in a matter of years, not decades.")

Comment: Currently, TMDLs continue to be developed as required by the 1972 law, promulgated in 1985, amended in 1992 in addition to many court orders. As a result, and in accord with EPA guidance, the time frame for establishing TMDLs for individual water/pollutant combination is 8 to 13 years from the date of the original listing. TMDLs provide the mechanism for developing effective pollution control where technology-based point source controls have proven inadequate. TMDL development must happen quickly if they are to serve their intended purpose. Until recently states, territories, authorized tribes, and EPA have not developed many TMDLs and EPA is under court order to consent decrees in at least 22 states to ensure that TMDLs are established. According to the 2004 List it appears that Massachusetts has only completed 60 TMDLs since 1979 and has committed to completing only 7 TMDLs in 2004. The bottom line is that Massachusetts is putting off for generations what Congress had the clear intent of accomplishing in a few years. Massachusetts' submissions of TMDLs continue to fail to meet the CWA requirements that specifically call for prompt development of TMDLs for the impaired water bodies identified. Save the Bay submits that the 2004 List must be revised to meet the objectives of the CWA.

Response: It may be beneficial to clarify the manner in which the MADEP and EPA enumerate the TMDLs that have been approved, as well as those remaining to be done. Section 303(d) requires that TMDLs be calculated for pollutants that are causing impairments. For purposes of conducting assessments, the surface waters of Massachusetts have been parsed into "segments" or "assessment units". For lakes, ponds and smaller streams the entire named waterbody is a single segment, but larger streams are typically divided into several shorter segments that are assessed individually if data and information are available. Therefore, for listing "impairments" and tracking progress with developing TMDLs, reference is made to "segment-pollutant" or "segment-stressor" combinations. Each "segment-pollutant" combination requires a TMDL, but a single TMDL effort may address several of these at once. For example, a river might consist of three segments all listed for the two stressors, "nutrients" and "low dissolved oxygen". This constitutes six "segment-stressor combinations". However, one TMDL evaluation could address all six if the dissolved oxygen violations result from excessive nutrient loadings. Also, because a given segment can only appear in one category of the list (EPA guidance), not all approved TMDLs are included in Category 4a of the Massachusetts list. Rather, additional approved TMDLs are identified with segments remaining in categories 4c and 5 for other stressors. For example, if a segment has an approved TMDL for "pathogens" but is also impaired by "nutrients" it remains in Category 5 as needing a TMDL for "nutrients" with the approved "pathogens" TMDL noted. Category 5 of the *Proposed Massachusetts Year 2004 Integrated List of Waters* contains almost 800 segments representing over twice that number of pollutants requiring TMDLs and, while it is true that 60 segments representing approximately 75 approved TMDLs appear in Category 4a, an additional 60 approved TMDLs that are

highlighted in other categories. Thus, approximately 135 TMDLs had been approved by the EPA when the proposed list was prepared. TMDL development is an on-going activity and several more TMDLs have now been approved by the EPA, including 14 for nutrients, organic enrichment and low dissolved oxygen in the Assabet River and 13 pathogen TMDLs for the Palmer River and its tributaries. These will be noted in the final version of the 2004 document.

Many more TMDLs are currently in preparation, as alluded to in the Integrated List document and explicitly outlined in the MADEP's 2004-2005 Work Plan (see "Restore Degraded Water Quality" at http://www.mass.gov/dep/brp/epp/sg/cw/rstrwqwp.html) that provides detailed tasks and schedules for completing TMDLs. For example, the MADEP has made a substantial commitment to the Massachusetts Estuaries Project (MEP) (http://www.mass.gov/dep/smerp/about.htm) which will entail the development of TMDLs for 89 embayments in southeastern Massachusetts over the next several years. Monitoring is already underway in many of these embayments to provide data and information in support of this TMDL effort. Initial plans call for the completion of ten (10) nutrient TMDLs and six (6) bacteria TMDLs in selected MEP embayments by January, 2006. Other TMDLs to be completed in the next two years are for nutrients in multiple segments of the Nashua River watershed and Quaboag and South ponds (Chicopee watershed), and for bacteria in the Kickamuit River. Several additional TMDL efforts and monitoring projects in support of TMDL development are described in the Work Plan.

The MADEP and EPA Region 1 are pursuing several innovative approaches to manage more comprehensively selected categories of impaired waters on the Massachusetts 303(d) List (i.e., Category 5). For example, a general TMDL for bacteria addressing all water body segments impaired for pathogens in Massachusetts has been proposed. This approach was successfully employed in Little Harbor (Cohasset) and the Neponset, Shawsheen, and Palmer watersheds (a total of 50 TMDLs). More than 350 segments currently listed as impaired by "pathogens" could be managed with this proposed statewide TMDL strategy. Finally, Massachusetts has prepared *A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters* (see http://www.mass.gov/dep/brp/wm/tmdls.htm) that demonstrates that we have done all we can to reduce mercury in many lakes and that individual TMDLs for approximately 90 lakes are therefore not needed. Massachusetts contends that it is effectively implementing a comprehensive plan to address in-state mercury sources and that a combination of federal, regional and state controls on mercury are the most effective means of remediating the mercury impairment due to air-borne sources outside the state. Therefore, the establishment of waterbody specific TMDLs would not identify any new alternatives, beyond those measures already committed to by the Commonwealth, for managing the mercury impairments.

Comment: Earlier EPA Guidance dated August 8, 1997 addressing TMDL development timelines states "[e]ach EPA region should secure a specific written agreement with each state in the Region establishing an appropriate schedule for the establishment of TMDLs…" "These states schedules should be expeditious and normally extend from eight to thirteen years in length, but could be shorter or slightly longer depending on State-specific factors." EPA required that these schedules be in place by October 1, 1997. Save the Bay is not aware of whether such a schedule has been agreed to by MADEP and if so, whether it meets the requirements of the CWA and the Code of Federal regulations. On page 4 of the 2004 List it states that "The MADEP must develop over 1500 TMDLs in the next ten to fifteen years." MADEP does not have ten to fifteen years from 2004 to develop the TMDLs. The date for assessment was triggered in 1979 and development of TMDLs must be completed from the date the WQLS is listed.

The 2004 List also states that:

> "A key component of the 303(d) listing process is establishing timelines for TMDL development. The MADEP formulated a TMDL strategy in 1998 that presented a proposed approach based on the five-year watershed cycle. That strategy, however, assumed that the necessary resources would be available to maintain that schedule. Unfortunately, those resources did not materialize and the strategy as proposed could not be maintained. The 2002 Integrated List did not contain an actual update of the 1998 TMDL Strategy, but it did indicate that the priorities for TMDL development remained consistent with those reflected in the original document…..The MADEP

will consider the input and recommendations generated by this program evaluation, as well as the severity of the impairment and uses to be made of the waterbodies, to set priorities for TMDL activities…"

MADEP is not permitted by controlling law to delay its schedule once it is approved merely for lack of resources. If such delay were permitted EPA approved schedules would be meaningless.

Response: A specific time frame for developing TMDLs is not set forth in either the statute or regulation governing the TMDL program. However, the TMDL schedule called for in EPA's 1997 guidance - *New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs)* - was developed and noticed for public review and comment as part of the 1998 Massachusetts 303(d) List. Entitled *Proposed Total Maximum Daily Loads (TMDL) Strategy*, this document presented Massachusetts' intent to develop TMDLs in accordance with its rotating watershed management program and identified which watersheds would be targeted for TMDL development over the period 2000-2012. Furthermore, in 2001 Massachusetts, with the assistance of consulting services from CH2M HILL, convened a TMDL Steering Committee in 2001 to evaluate the TMDL Program and make recommendations for its improvement. This committee helped to set goals for prioritizing waters for TMDL development. As previously indicated, actual commitments to complete specific TMDLs are now included in each State-EPA Performance Partnership Agreement (PPA) and the most recent PPA and MA DEP Work Plan reflect the current priorities for TMDL development. The PPAs, subject to public review and comment, provide a detailed plan of work to be performed during a two-year time period and are reviewed annually. Massachusetts is committed to the development of TMDLs as expeditiously as possible and has devoted substantial monetary and personnel resources to this program.

Comment: Moreover, MADEP has refused to establish priorities for TMDL development. The law is clear; the list "**shall include** a priority ranking for **all** listed water quality-limited segments still requiring TMDLs, taking into account the severity of the pollution and the uses to be made of such waters and shall identify the pollutants causing or expected to cause violations of the applicable water quality standards. The priorities ranking shall specifically include the identification of waters targeted to TMDL development in the next two years." (Emphasis provided) 40 CFR 130.7(b)(iii)(4). The List states that MA will be placing a high priority on bacteria or nutrient related issues and states that work is underway for projected TMDL development in FFY05 for nine segments. Clearly, the 2004 List does not meet the requirements of the law as it does not include a priority ranking for all listed water quality-limited segments still requiring TMDLs. Without the required priorities, schedule, and considering Massachusetts' current pace of effectuating TMDLs, the likelihood of fully implementing the CWA remains a distance possibility.

Response: The EPA 2004 reporting cycle guidance recommends that states identify which TMDLs will be developed in each of the two years leading up to the next listing (i.e., 2006) and the approximate number of TMDLs to be derived for each year thereafter. Furthermore, "States need not specifically identify each TMDL as high, medium or low priority. Instead, the schedule itself can reflect the State's priority ranking." The TMDL schedule is intended to communicate the State's priorities to the public and the EPA and to assist with the allocation of resources to the TMDL development effort. As such, the schedule is not subject to approval by the EPA. Massachusetts' priorities for TMDL development over the next two years are reflected in the 2004-2005 Work Plan. As explained in the response to the first comment above, the nine candidate waters identified by name for TMDL efforts in FFY05 are not "segments" but comprise a larger number of individual "pollutant-segment" combinations for which TMDLs will be completed. Furthermore, this was not intended to be a complete list. The Work Plan should be consulted for a description of projected TMDL activities. Massachusetts contends that an effective mechanism currently exists within the framework of the watershed management cycle to establish meaningful priority rankings with stakeholder involvement. As waterbody assessments are made in Year 3 of the cycle Massachusetts establishes priorities, based on the water uses and severity of impairment, that are then reflected in the commitments for TMDL development specified in the PPA.

Comment: DEP monitoring efforts also do not appear to meet the requirements of controlling law. On page 3 of the 2004 List it states that "the scope of monitoring effort varies depending upon the resources

available and the prevailing water quality issues within each watershed." A firm monitoring schedule must be developed and MA must commit to implementing the schedule and committing necessary funding.

Response: Massachusetts acknowledges the lack of adequate resources for both ambient monitoring to assess the multiple uses of all surface waters, as well as targeted monitoring to support TMDL development and other water quality management strategies. EPA guidance is clear with respect to the need to develop lists of impaired waters based on credible scientific data and information so that limited TMDL program resources and clean-up plans are focused on the most severe problems. To make best use of limited resources, monitoring activities are conducted in accordance with the rotating watershed schedule; thus, waters are only monitored during one year out of five. Nonetheless, monitoring plans are carefully formulated after a detailed review is made of all data and information, from a variety of sources both inside and outside the MADEP. For example, the monitoring recommendations found in MADEP's watershed water quality assessment reports are reviewed along with data and information submitted by outside groups since the last assessment was completed in an effort to identify potential gaps that could be filled by the monitoring program. In 2001, the U.S. Geological Survey (USGS) collaborated with the MADEP to design a long-term water quality monitoring program for Massachusetts (*State Water Quality Network for Massachusetts*, USGS, 2001). The program design was guided, in part, by such mandates of the Clean Water Act as reporting under sections 305(b) and 303(d). It also included input from many organizations involved with water quality monitoring in Massachusetts. Building on this plan, the MADEP recently (June, 2004) submitted to the EPA a *Draft* version of *A Water Quality Monitoring Strategy for Massachusetts* in partial fulfillment of the PPA. This document will be used to guide internal deliberations pertaining to the enhancement of the MADEP monitoring program and to explore additional funding options.

Comment: There are still 349 waters listed as "Attaining some uses; others not assessed." Save the Bay is concerned that uses have not been assessed for the Blackstone, Mount Hope Bay (particularly the Cole River), Taunton (particularly the Broad Cove salt marsh) and the Ten-Mile. This number (349) combined with the 405 listed in category 3, as "No uses Assessed" is unacceptable and will not further progress in cleaning up the state's waters. Save the Bay questions whether the state has sufficient information to support a determination that some of the designated uses are attained in category 2 and none of the uses are threatened.

An aggressive monitoring plan is necessary for MADEP to adequately assess its waters and move forward with the TMDL program to address nonpoint pollution. MADEP has failed to "establish appropriate monitoring methods and procedure necessary to compile and analyze data on the quality of waters of the United States..." 40 CFR 1304.4 the lack of commitment to monitoring and assessment suggests that the 2004 List should not be approved. There are no current plans to develop TMDLs for all WQLS as required by the CWA.

Response: The MADEP prepares individual watershed assessment reports during Year 3 of the watershed management cycle. Assessment reports have been published for the Blackstone (2001), Mount Hope Bay (2002), and Ten Mile (2000) watersheds, and a report on the Taunton Watershed is anticipated in 2005. The main feature of the watershed assessment report is a summary of the water quality data and information used to assess the status of the designated uses as defined in the Water Quality Standards. This includes a description and results of the monitoring activities carried out by the MADEP in the previous year ("Year 2") as well as documentation of external sources of data utilized in the assessments. A stringent methodology is followed when making use-support determinations, so the only waterbody segments assessed are those for which adequate data and information are available. The insufficiency of ***resources*** for monitoring was acknowledged in a response to an earlier comment. Massachusetts takes issue, however, with the suggestion that it has failed to "establish appropriate monitoring methods and procedure[s] necessary to compile and analyze data on the quality of waters of the United States..." Massachusetts utilizes standard scientifically defensible field and laboratory methods that yield data of known and documented quality. All methods are documented in Standard Operating Procedure (SOP) documents and a Quality Management Plan for Massachusetts has been approved by the EPA. Details pertaining to the Massachusetts Water Quality Monitoring Program, including quality assurance and data management, can be found in *Massachusetts Year 2002 Integrated List of Waters*

Part 1 – Context and Rationale for Assessing and Reporting the Quality of Massachusetts Surface Waters, as well as at the MADEP website (see http://www.mass.gov/dep/brp/wm/envmonit.htm). Enhancements of the existing monitoring program will be realized through the implementation of *A Water Quality Monitoring Strategy for Massachusetts* described earlier.

Comment: The fact that 349 segments are listed as not assessed does not evidence any progress in implementing the TMDL program in Massachusetts. Save the Bay's position is that uses must be assessed as a priority in the Blackstone, Mount Hope Bay (Shore), notably South Watuppa Pond and the Taunton (with focus on Muddy Cove Brook and the Segreganset River.) Save the Bay does not know whether MADEP has used all available information in attempt to assess waters. If MADEP has not identified a priority ranking of all listed WQLS it is unlikely that the state scheduled monitoring has been planned on a priority basis. It is unclear when MADEP will obtain the necessary information to move the waters listed in category 3 to categories 1, 2 and 4 as required by controlling guidance.

Response: As stated in an earlier comment 405 segments are listed in Category 3 as "No uses assessed" and an additional 349 segments appear in Category 2 ("Attaining some uses; others not assessed). For the latter segments sufficient data were available to confidently assess some uses, but not others. Plans are formulated several months prior to the scheduled "Year 2" monitoring program carried out as one element of the MADEPs five-year watershed monitoring, assessment, and management program. As part of this planning process, monitoring coordinators review all available data and information and identify gaps that may be filled by monitoring. Field investigations that will provide data to support use assessment and other water quality management activities receive high priority when making final monitoring plans. Additional monitoring activities focus on assessing "unassessed" waters and confirming the listing status of other waters, as resources allow. During "Year 3" of the watershed cycle all available data and information are reviewed when completing watershed assessments. If the data are of known and documented quality they are used for assessing waters. Data lacking acceptable documentation may be used to corroborate other findings or to highlight issues in need of further investigation.

Comment: Only 60 TMDLs have been completed to date and the number is simply unacceptable. Only seven TMDLs have been completed in the last two years, as 53 were listed as completed in the 2002 list. Moreover it is not clear whether a schedule for implementation [has] been set with a monitoring schedule to ensure that sufficient data is obtained to document progress of the implementation actions towards attainment of WQS.

Response: Although the pace may not be entirely satisfactory a great deal of TMDL work has been completed and much more work is underway. A brief summary of the progress made to date on TMDL development in Massachusetts was presented as part of the response to Save the Bay's first comment. Over 160 TMDLs have been approved by the EPA and several more are pending approval following completion of the public review process. In addition, many more TMDLs are in development as outlined in the MADEP Work Plan. Finally, EPA Region 1 and the MADEP are pursuing a comprehensive statewide TMDL for waters impaired by bacteria and Massachusetts has proposed an innovative alternative regulatory pathway for managing approximately 90 lakes impaired by mercury from atmospheric sources. The success of all of these TMDL efforts rests with their implementation through various regulatory and non-regulatory mechanisms, so ultimate progress will be revealed by an increase in the number of waters that are in compliance with water quality standards, as determined from the MADEP's ambient water monitoring and assessment programs. The ambient monitoring program, which is carried out in accordance with a rotating watershed schedule, is embodied in "A Water Quality Monitoring Strategy for Massachusetts" that will be posted at the MADEP website in the near future.

Comment: Waters are expected to attain all designated uses in the near future. Guidance states that the placement of waters in category 4B is based on 130.7(b)(iii) and must be supported by the existence of "other pollution control requirements (e.g., best management practices) required by local, state, or federal authority that are stringent enough to implement WQS. EPA expects that the State will demonstrate that these control requirements will achieve WQS within a reasonable period of time. The state must demonstrate that "other pollution control requirements" required by local, state or federal authorities are

expected to address all water-pollutant combinations and attain all WQS in a reasonable period of time. It is inappropriate to claim insufficient guidance and leave this entire category blank.

Response: With the exception of the mercury alternative regulatory pathway proposal to list in Category 4b 90 lakes impaired solely by atmospheric sources of mercury, Massachusetts did not list waters in this category. As stated above, Category 4b of the Integrated List was created for impaired waters for which "other pollution control requirements (e.g., best management practices) required by local, state, or federal authority that are stringent enough to implement WQS". As such, waters listed here would not require the development of TMDLs. The alternative to using this category, however, is to leave waters on the 303(d) List where TMDLs are required. Thus, it is not clear why Save the Bay would take issue with Massachusetts' decision not to attempt to de-list waters by placing them in Category 4b. The EPA guidance pertaining to listing waters in Category 4b are prescriptive and call for preliminary loading reductions and assurances that water quality standards will be met through implementation of the proposed water pollution control measures. In many cases the level of effort required to present a case for listing a segment in Category 4b rather than Category 5 may be equal to or greater than the effort needed to complete a TMDL. Preliminary proposals by several states (including Massachusetts) to list waters in 4b were not accepted by the EPA. Massachusetts decided that it would be better to leave potential Category 4b segments on the 303(d) List (Category 5) where they are candidates for TMDL development.

Comment: Category 4c includes waters where impairment is not caused by a pollutant. It is unclear whether there is a schedule for monitoring to confirm that there continues to be no pollutant-caused impairment to support actions necessary to address the cause(s) of impairment. Save the Bay is particularly concerned about the combined sewer overflow issue on the Quequechan River and impairments affecting the fish run site on the Three-Mile River in Taunton.

Response: As previously discussed, the MADEP performs watershed monitoring and assessment activities in accordance with a five-year rotating watershed schedule. Monitoring coordinators review the watershed assessment reports as well as the various categories of the most recent Integrated List when developing their monitoring plans. The MADEP also welcomes monitoring suggestions and requests from other parties. The Taunton watershed was monitored in 2001 and a completed assessment report is anticipated in 2005. If the data confirm that pollutants impair one or more uses then the MADEP will list the applicable segments in Category 5 of the next update of the Integrated List in 2006. The Three Mile River is currently listed on the 303(d) List as impaired by "pathogens" and one site on this river was monitored in 2001. Monitoring of the Taunton watershed will be performed by the MADEP again in 2006. The Quequechan River is currently listed in Category 4c as impaired by "habitat alterations". However, the City of Fall River is implementing a comprehensive CSO pollution abatement strategy that includes a deep-tunnel storage and treatment system. This project will reduce CSO's to less than four untreated discharge events per year. Monitoring of the Quequechan River to track the progress of the CSO abatement activities is recommended in MADEP's *Narragansett/Mt. Hope Bay Watershed 1999 Water Quality Assessment Report* (January, 2002). To that end, the Fall River Sewer Commission and Veolia Water North America are proposing to implement a monitoring program to evaluate existing conditions in Mount Hope Bay, determine the impacts of the remaining CSOs and to support the development of discharge requirements in the future.

Comment: There are approximately 758 listed segments in Category 5 waters, those requiring a TMDL. Resources must be dedicated to making progress. Completing 3.5 TMDLs per year does not meet the mandates of the CWA. The priorities must include (1) The Blackstone, specifically Beaver Brook, and all four listed segments in the Blackstone River, the Mill River, Mumford River, and West River (2) Mount Hope Bay (shore) must also be a priority, focusing on the Cole River, Kickamuit River, both segments of the Lee River, both segments of Mount Hope Bay and North Watuppa Lake (3) Narraganasett Bay Shore-with attention to all three segments of the Palmer River and Runnins River (4) Taunton – Muddy Cove Brook Pond, all three Taunton River Segments (5) Ten Mile River segments MA52-02 2002, MA52-03-2004 and the James V. Turner Reservoir.

Response: As explained previously, the MADEP is completing many more than 3.5 TMDLs per year and over 160 TMDL have now been approved by the EPA. TMDL development is a continuous process; many TMDLs await completion of the public review process and many more TMDLs are in preparation (refer to MADEP's Work Plan). As for waters cited in this comment, the EPA recently approved TMDLs for thirteen segments in the Palmer River Basin (September, 2004) and earlier (2000) had given conditional approval, subject to completion of the public review process, of TMDLs addressing impairments due to low dissolved oxygen levels in the Blackstone River. In this case, however, additional work is needed to develop a TMDL for phosphorus. To this end, staff time has been assigned to develop a detailed work plan to address nutrient issues in the Blackstone River. Nutrients in Mount Hope Bay will be addressed as an element of the Massachusetts Estuaries program (MEP) and a preliminary scope of work was formulated for the Taunton watershed that is being used as a vehicle to seek funding for a TMDL evaluation. Also awaiting a final public meeting is a TMDL, prepared collaboratively by the Rhode Island Department of Environmental Management (RIDEM) and the MADEP, for bacteria impairments in the Kickamuit River. Finally, RIDEM completed a bacteria TMDL for the Runnins River, a stream that forms the boundary between Rhode Island and Massachusetts for several miles. While Rhode Island completed the TMDL and gained EPA approval in August, 2002, recommendations for loading reductions also apply to portions of the watershed in Massachusetts, rendering a separate TMDL development effort by Massachusetts duplicative and unnecessary. Other priority waters for TMDL development are presented in the MADEP 2004-2005 Work Plan.

Comment: As past performance is the best indicator of future behavior it remains unlikely that TMDL development will occur at an efficient and sustained pace to assess and cleanup our waters at the pace intended by Congress. Save the Bay submits that MADEP must set forth priorities for all listed waters and commit to a schedule that meets the requirements of the CWA. Moreover, Save the Bay is concerned that MA does not have the resources to complete the 1500 TMDLs within an expeditious time frame as contemplated by Congress. Without firmly committing the state to a schedule of completion the TMDL list may be inadequate and amount to a constructive submission of no TMDLs. Massachusetts must commit the necessary resources and funding to ensure that TMDL creation, submission and future monitoring occurs at a faster pace and in the interim, prohibit new or increased discharges to WQLS which are already in violation of state water quality standards.

Response: Massachusetts believes that the MADEP's detailed 2004-2005 Work Plan and state-EPA Performance Partnership Agreement serve to demonstrate the progress made to date on listing and prioritizing impaired waters, completing TMDLs, and identifying priorities for future efforts. Regrettably, none of the states, nor the EPA, have all of the resources needed to complete TMDLs according to the proposed timeline for the large number of impaired waters that exist nation-wide. As part of the TMDL program evaluation conducted by the MADEP in 2001 CH2M Hill prepared a detailed workload model that estimates the amount of funding and personnel resources that would be needed to complete a specified number of TMDLs at varying levels of effort. This model, utilizing input from the Final 2002 Integrated List, estimated needed expenditures of over $10,000,000 over the next eighteen years and predicted that approximately 55 new staff would have to be added to the existing MADEP TMDL staff to complete all of the TMDLs for waters in Category 5 (i.e., the 303(d) List). Likewise, the MADEP recently developed *A Water Quality Monitoring Strategy for Massachusetts* that calls for 30 additional personnel to support the monitoring and assessment programs. This document will be used to guide internal deliberations pertaining to the enhancement of the MADEP monitoring program and to explore additional funding options. Nonetheless, Massachusetts has expended substantial monetary and personnel resources over the past several years in an effort to complete as many TMDLs as possible and is committed to maintaining this effort in the years to come.

3) Mystic River Watershed Association (Julie Horowitz, Mystic Monitoring Network Coordinator)

(Note: By way of introduction Ms. Horowitz wrote: "I am writing on behalf of the Committee on Water Quality of the Mystic River Watershed Association (MyRWA). While we are pleased at the inclusion of additional waters and pollutants requiring a Total Maximum Daily Load (TMDL) in the 2004 Integrated List, we feel strongly, based on data obtained through our Mystic Monitoring Network (MMN) and other

sources, that the list for the Mystic River Watershed remains incomplete. MMN data is collected under our DEP-approved QAPP. We have compiled data to support the following changes to the Integrated List")

Comment: The MyRWA requests that Winn Brook (Belmont) be listed as requiring TMDLs for pathogens and nutrients. The MMN has been monitoring Winn Brook for over three and a half years, and has documented several occasions during which Winn Brook has violated the Massachusetts State Water Quality Standard for allowable fecal coliform concentrations. Overall, the geometric mean fecal coliform concentration for Winn Brook water samples collected by the MMN from 7/12/2000 to 5/8/2002 was 844 cfu/100ml. In addition, from 6/12/2002 to 12/10/2003 the geometric mean for *E.coli* concentrations was 2061 cfu/100ml. The MMN also documented several occasions when *E.coli* concentrations exceeded 5,000 cfu/100 ml *E.coli*.

We are aware that DEP will not designate a waterbody as use-impaired based on nutrient concentrations alone. However, we are concerned that the high levels of nutrients measured in Winn Brook and several other waterbodies that are also included in the comments below will lead to impairments of the designated uses due to eutrophication. The MMN monitoring at Winn Brook has shown that there is an average of 1.45 mg/L nitrogen measured as nitrate + nitrite, and 0.13 mg/L phosphorus measured as total phosphorus in the water. While there are no established water quality standards for these parameters, we feel that these results are significantly elevated above normal background levels. We urge DEP to take into consideration these data in focusing future monitoring and assessment and subsequent establishment of TMDLs for these constituents. In addition, MyRWA requests information as to what additional measurements and assessments DEP requires for consideration to establish a nutrient TMDL.

Response: Upon review of the MMN QAPP and data submittal, Massachusetts concurs that Winn Brook should be listed in Category 5 as impaired by "pathogens". This will be reflected in the Final 2004 Integrated List. It is true that the MADEP will not identify Winn Brook as use-impaired based on nutrient concentrations alone. Nonetheless, the MADEP will evaluate the brook as a potential source of nutrients when the TMDL is developed for Little River and Alewife Brook, two downstream waterbodies that are listed for pathogens, nutrients and other pollutants.

Comment: The MyRWA requests that Wellington Brook (Belmont/Cambridge) be listed as requiring a TMDL for pathogens. Sampling conducted by the MMN along Wellington Brook in December 2001 in accordance with its DEP-approved QAPP yielded several locations with elevated bacteria counts. For example, a water sample taken behind the library at Common Street contained 65,000 fecal coliform cfu/100 ml. Another water sample from the southwest corner of Claypit Pond measured 9,455 fecal coliform cfu/100 ml. In addition, a water sample from the north outlet of Blair Pond before the railroad contained 9,091 fecal coliform cfu/100 ml. Subsequent sampling in January 2003 at Common Street indicated fecal coliform concentrations of 13,000 cfu/100ml, 12,200 cfu/100ml and 12,600 cfu/100ml. We believe that the magnitude of these exceedances warrants the inclusion of Wellington Brook on the Integrated List.

Response: This is essentially the same comment that was made by the MyRWA during their review of the 2002 Integrated List. At that time, only data from a single sampling date in 2001 were available from Wellington Brook and, prior to the development of the 2002 Integrated List, the MADEP had decided not to include this brook in the *Boston Harbor Water Quality Assessment Report* because a definitive recreational use assessment and listing decision could not be made from that single sampling occurrence. To be consistent with the way in which water quality standards are applied an impairment decision will not be based on a single sample (i.e., the geometric mean of five samples is <200 cfu/100mL but one of the five samples exceeds 400 cfu/100mL), nor will samples collected on one date from multiple stations on a river be considered adequate to assess this designated use. While two additional sampling events were completed by the MMN since the original comment was made, the overall data set remains insufficient to complete an assessment of Wellington Brook. To be evaluated for the primary contact recreational use the data must be representative of a sampling location (minimum of five samples per station recommended) over the course of the primary contact recreational season (April 1 through October 15). The dates of sampling by the MMN were 12/11/01, 1/28/03, and 2/25/03, none of which fall

within the recreational season. Finally, neither the data tables submitted with the comment, nor the prevailing MMN QAPP, provide adequate descriptions of the sampling site locations or of the brook itself, which does not appear on USGS topographical maps or Mass GIS layers. The limited data do suggest that there may be water quality problems contributing to potential use-impairment in Wellington Brook, and it, along with all other small tributary streams, would be evaluated, irrespective of their individual listing status, as part of any TMDLs developed for Alewife Brook.

Comment: The MyRWA requests that the Malden River (Malden/Medford/Everett) be listed as requiring a TMDL for nutrients. The MMN's monitoring on the Malden River has shown average concentrations of 0.60 mg/L N of nitrate + nitrite, and 0.09 mg/L P of total phosphorus in the surface water. While there are no established water quality standards for these parameters, we feel that these results are significantly elevated above normal background levels.

Response: As acknowledged, there are no numerical standards for nutrients in the Massachusetts Surface Water Quality Standards and the MADEP does not place waters on the 303(d) List solely on the basis of nutrient concentration data. Narrative criteria for nutrients at 314 CMR 4.05 (5)(c) and the antidegradation provisions at 314 CMR 4.04(5) prohibit the discharge from point sources of nutrients in amounts that would promote the accelerated growth of algae or aquatic plants ("encourage cultural eutrophication") and require best management practices for the control of nonpoint sources of nutrients. On a case-by-case basis the MADEP will use evidence of eutrophic conditions, such as wide ranges in dissolved oxygen concentration, elevated chlorophyll values or biological surveys (in combination with nutrient concentrations) that reveal algae or plant "bloom" conditions that result in one or more impaired uses, to add waters to the 303(d) List. However, nutrient concentrations above normal background levels do not, in and of themselves, constitute use-impairment. Nonetheless, these data can be used to highlight potential problem areas in need of further monitoring and assessment.

Comment: The MyRWA requests that Mill Brook (Arlington) be listed as requiring a TMDL for nutrients. The MMN results from Mill Brook indicate average concentrations of 1.18 mg/L N of nitrate + nitrite, and 0.10 mg/L P of total phosphorus in the surface water. While there are no established water quality standards for these parameters, we feel that these results are significantly elevated above normal background level.

Response: The response to the previous comment is likewise applicable to this comment.

Comment: The MyRWA requests that Mill Creek (Chelsea/Revere) be listed as requiring a TMDL for pathogens and that it be included in the development of TMDLs for other pollutants listed for the Chelsea River. Sampling by the MMN in Mill Creek on July 22, 2003 indicated high concentrations of *Enterococcus* at the upstream end of Mill Creek. Proceeding upstream these results were 3,842 MPN/100 ml and 593 MPN/100 ml respectively. In the Boston Harbor Watershed 1999 Water Quality Assessment Report the Chelsea River was described as an "urban river" with extensive commercial and industrial uses. The Chelsea River is listed for a broad suite of pollutants requiring TMDLs. Segment MA71-06, Chelsea River, location is identified as "Confluence with Mill Creek, Chelsea/Revere, to confluence with Mystic River". While Mill Creek and Chelsea River are identified as separate waterbodies, they are tidally connected. The volume of freshwater contributed by Mill Creek is small in comparison to the tidal flow from Chelsea River. As a result of the waterbodies' hydrodynamics, the majority of pollutants identified in the Chelsea River are likely transported to Mill Creek as well. For this reason, we feel strongly that Mill Creek should be included on the integrated list of impaired waters, as an extension to the TMDLs required for the Chelsea River.

Response: As explained earlier, a definitive recreational use assessment and listing decision cannot be made from a single sampling occurrence even if more than one location was sampled on that particular date. However, this comment prompted a review of the GIS datalayer pertaining to the status of shellfish beds that revealed that shellfishing in Mill Creek is prohibited due to water quality degradation. Therefore, Mill Creek will be listed in Category 5 as needing a TMDL for "pathogens" in the Final 2004 Integrated List. With regard to other pollutants that may affect Mill Creek, it is the policy of the MADEP not to make presumptive assessments based solely on water quality conditions that may prevail in nearby waters.

While it is acknowledged that mixing of water from Mill Creek and the Chelsea River inevitably occurs to an undocumented extent, assessment decisions are often based on the magnitude and extent of standards violations. Actual water quality data from Mill Creek, along with tidal and mixing information describing it's hydrodynamic relationship with the Chelsea River, are needed to determine which stressors affecting the Chelsea River might also be contributing to use impairment in Mill Creek. The above argument notwithstanding, any TMDL calculations performed for the Chelsea River will take into consideration potential pollutant loadings from point and nonpoint sources as well as from tributaries to the river. Thus, irrespective of its actual listing status, Mill Creek will be included in the broader context of the derivation and implementation of TMDLs for the Chelsea River, including the elimination of confirmed sources of pollution.

Comment: The MyRWA requests that the Aberjona River and Upper Mystic Lake (Woburn/Winchester) be listed as requiring a TMDL for arsenic. We would like to direct your attention toward a recent human and ecological health risk assessment prepared by the EPA for sections of the Aberjona River Watershed south of Rt. 128 down through the Mystic Lakes (Baseline Human Health and Ecological Risk Assessment Report: Wells G&H Superfund Site, Aberjona River Study Operable Unit 3, US EPA June 2003). In that report, EPA identified 6 sites that pose unacceptable current or future risk to human health due to arsenic contaminated sediments. In addition, EPA identified unacceptable ecological risk at 22 sampling locations. In the majority of the cases this risk arose from arsenic contamination, although in several locations elevated levels of chromium, lead, and copper also posed unacceptable risk. The majority of the locations with unacceptable ecological risk are located in the Wells G&H wetland and in a former cranberry bog. Two sites within the Upper Mystic Lake were also identified as having arsenic levels in sediments that posed unacceptable risk to benthic organisms. We request that DEP take EPA's findings on contaminated sediments into consideration.

Response: This comment was previously submitted by the MyRWA for the 2002 Integrated List. At that time the available information on the contamination of the Aberjona River was difficult to interpret within the context of the Massachusetts Surface Water Quality Standards (refer to *Massachusetts Year 2002 Integrated List of Waters – Part 3 – Public Comment Responsiveness Document*). Since that time more data and information have been published relative to the upstream Superfund sites and their impact on the Aberjona River and Mystic lakes. In particular, the EPA risk assessment report cited above, as well as a revised version that was released in September, 2004, were reviewed in response to this comment. Quoting from the executive summary of the latter document, "the risk to invertebrates from high arsenic concentrations in sediments was located mainly in reaches 1 and 2, with limited areas of reach 6 (Mystic Lake) having arsenic concentrations minimally above level associated with risk. However, no risk to other receptors, including fish, were identified from exposure to arsenic in the Mystic Lakes." From this, the MADEP has concluded that the upper reaches of the Aberjona River do exhibit impairment from arsenic and "metals" will be added to the list of stressors for the Aberjona River segment MA71-01. The argument for designating Upper Mystic Lake as impaired by metals, on the other hand, is less compelling. Sediment arsenic levels in the lake were only "minimally above" those associated with risk and the MADEP typically does not 303(d)-list a segment solely on the basis of sediment metal concentrations because no standards have been adopted for aqueous sediments. As a result, a decision was reached to not place Upper Mystic Lake on the 303(d) List at this time.

4) Neponset River Watershed Association (Steven Pearlman, Water Quality Analyst)

Comment: As you know, the Neponset River Watershed Association (NepRWA) has conducted significant sampling of stream segments within the Neponset River Watershed. NepRWA data was cited extensively in your "Boston Harbor 1999 Water Quality Assessment Report", published in October, 2002. Data from NepRWA sampling done as late as 2001 was used in that Report. We have now analyzed the results of our *sampling from 2001 through March, 2003*, most of which DEP has not yet seen (*we have attached a copy of the Draft CMWN Final Report 2003 which contains full sampling results for each monitored stream segment*). By comparing these sampling results to your "Proposed listing of the condition of Massachusetts' water pursuant to Sections 303(d) and 305(b) of the Clean Water Act", we have identified

a number of stream segments that we feel should be added to either Category 4a Waters ("TMDL is Completed") or Category 5 Waters ("Waters requiring a TMDL").

Response: It is important to note that, since publication of the 2002 Integrated List, an entirely new statewide assessment was not carried out for use in the development of the 2004 List. Watershed assessments are continuously carried out according to the Massachusetts watershed management cycle. Therefore, for purposes of reporting under the CWA, Massachusetts provides new assessment information only for those watersheds that have completed the monitoring and assessment phases since the submittal of the previous 305(b) Report or 303(d) List (now combined into a single Integrated List of Waters). This is consistent with the EPA *Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act* published on July 21, 2004, which indicates that *"EPA believes that State methodologies that account for the data collection and analysis process under a rotating basin approach can fit with the regulatory requirements to consider all existing and readily available data and information in developing Section 303(d) lists… States may choose to update the 2002 Integrated Report, or Section 303(d) list and 305(b) report using data and information that have become available subsequent to the approval of the 2002 Integrated List or Section 303(d) and 305(b) report."*

The *Massachusetts Year 2002 Integrated List of Waters* – or, to be exact, the 303(d) portion of the List – was approved by the EPA on October 1, 2003. Consistent with the EPA guidance quoted above, the 2004 Integrated List represents an update of the 2002 submittal based on new assessments completed for the Deerfield, Millers, Ipswich, and Shawsheen watersheds and the Islands and Buzzards Bay coastal drainage areas. A new assessment of the Neponset Watershed was not completed for the 2004 Integrated List and recent data and information submitted with the above comment were unavailable at the time the last Neponset Watershed assessment was completed (see *Boston Harbor 1999 Water Quality Assessment Report*, MADEP/DWM, October, 2002). Furthermore, the 2003 *Citizen Water Quality Monitoring Network (CMNW) Report* submitted with the comment is still in DRAFT form. Nonetheless, since the new information was submitted during the public comment period, and a determination was made that it met the MADEP's requirements for external data sources, the MADEP did review this report in light of the comments that follow.

Comment: NepRWA proposes that, based on bacteriological sampling by CMNW from 2001 through 2003, four brooks be listed in Category 4a (i.e., "impaired, but covered by an approved TMDL"). These are Pecunit Brook, Steep Hill Brook, Spring Brook and Beaver Brook.

Response: The Massachusetts Surface Water Quality Standards (WQS) and the method for assessing recreational uses are summarized in the introductory information provided in the *Proposed Massachusetts Year 2004 Integrated List of Waters.* The *Primary Contact Recreation Use* is suitable for any recreational or other water use in which there is prolonged and intimate contact with the water with a significant risk of ingestion of water during the primary contact recreation season (1 April to 15 October). These include, but are not limited to, wading, swimming, diving, surfing and water skiing. The chart below provides an overview of the guidance used to assess the status (support or impaired) of the *Primary Contact Recreation Use*. Excursions from criteria due to natural conditions are not considered impairment of use.

Variable	***Support*** Criteria are met, no aesthetic conditions that preclude the use	***Impaired*** Frequent or prolonged violations of criteria and/or formal bathing area closures, or severe aesthetic conditions that preclude the use
Bacteria (MA DPH 2002b) Minimum Standards for Bathing Beaches State Sanitary Code (MA DEP 1996)	At "public bathing beach" areas: Formal beach postings/advisories neither frequent nor prolonged during the swimming season (the number of days posted or closed cannot exceed 10% during the locally operated swimming season).	At "public bathing beach" areas: Formal beach closures/postings >10% of time during swimming season (the number of days posted or closed exceeds 10% during the locally operated swimming season).

	Other waters: Samples* collected during the primary contact season must meet criteria**. Shellfish Growing Area classified as "Approved" by DMF.	Other waters: Samples* collected during the primary contact season do not meet the criteria**.

***** Data sets to be evaluated for assessment purposes must be representative of a sampling location (minimum of five samples per station recommended) over the course of the primary contact season. Samples collected on one date from multiple stations on a river are not considered adequate to assess this designated use. An impairment decision will not be based on a single sample (i.e., the geometric mean of five samples is <200 cfu/100mL but one of the five samples exceeds 400 cfu/100mL). The method detection limit (MDL) will be used in the calculation of the geometric mean when data are reported as less than the MDL (e.g. use 20 cfu/100mL if the result is reported as <20 cfu/100mL). Those data reported as too numerous to count (TNTC) will not be used in the geometric mean calculation; however frequency of TNTC sample results should be presented.

** Class B standards for bacteria that would be applicable to the four brooks in question are as follow:

- At public bathing beaches, as defined by MDPH, where *E. coli* is the chosen indicator: No single *E. coli* sample shall exceed 235 *E. coli* /100 mL and the geometric mean of the most recent five *E. coli* samples within the same bathing season shall not exceed 126 *E. coli* / 100 mL.

- At public bathing beaches, as defined by MDPH, where *Enterococci* are the chosen indicator: No single *Enterococci* sample shall exceed 61 *Enterococci* /100mL and the geometric mean of the most recent five *Enterococci* samples within same bathing season shall not exceed 33 *Enterococci* /100mL.

- Current standards for other waters (not designated as bathing beaches), where fecal coliform bacteria are the chosen indicator: Waters shall not exceed a geometric mean of 200 cfu/100 mL in any representative set of samples, nor shall more than 10% of the samples exceed 400 cfu/100mL. (This criterion may be applied on a seasonal basis at the discretion of the MA DEP.)

An approved TMDL for fecal coliform bacteria already exists for the Neponset Watershed. NepWRA's interest in having these four brooks listed in Category 4a is grounded in having these brooks covered by the TMDL, thus making them candidates for the implementation of remedial actions. Listing them in this category, however, is contingent upon having sufficient data and information to determine that they are indeed impaired. MADEP reviewed the new CMNW data from Pecunit, Steep Hill, Spring and Beaver brooks in light of the Massachusetts assessment methodology, described above, to determine their appropriate listing status. Results of this review are presented below:

Pecunit Brook

One station (PEB008, @ Elm St.) on this stretch of river has data from multiple sampling dates that fall within the "primary contact recreation season (see above)." Three samples within the target season were reported each in 1999, 2000, 2001, and 2002.

Analyses based on the DEP assessment methodology –

1. None of the stations sampled have a representative number of samples (5) in the target season in any one year.
2. If all four years are pooled for Station PEB008 the geometric mean of fecal coliform concentrations is 170 (N=12), which is below the 200 cfu/100 mL primary contact recreation criterion.
3. If samples are pooled as in #2 (above) there is only one exceedance of the 400 cfu/100 mL (N=12), which represents less than 10% of the samples.
4. Although data are limited temporally in any particular year, there is a general pattern of values between 200 cfu/100 mL (geometric mean criterion) and 400 cfu/100 mL (single sample criterion) that is of concern.

Conclusion – As in the MADEP *1999 Boston Harbor Water Quality Assessment Report*, this segment would be listed as **supporting** for the primary contact recreational use. However, an **"alert status"** designation should be added because of the somewhat elevated fecal coliform levels during both wet and dry weather.

Steep Hill Brook

One station on this stretch of river (SHB021 @Central and West Sts.) has data from multiple sampling dates that fall within the primary contact recreation season. Three dates were sampled once each during the target period in 1999, 2000, 2001 and 2002.

Analyses based on the DEP assessment methodology –

1. None of the stations sampled have a representative number of samples (5) in the target season in any one year.
2. If all four years are pooled for Station SHB021 the geometric mean of fecal coliform concentrations is 99 (N=12), which is well below the 200 cfu/100 mL primary contact recreation criterion.
3. If samples are pooled as in #2 (above) there is only one exceedance of the 400 cfu/100 mL (N=12), which represents less than 10% of the samples.
4. Although data are limited temporally in any particular year, there is a slight pattern of values between 200 cfu/100 mL (geometric mean criterion) and 400 cfu/100 mL (single sample criterion) during wet weather dates that is of concern.

Conclusion – This segment was not assessed in the MADEP *1999 Boston Harbor Water Quality Assessment Report*, but based on these new data it would be listed as **supporting** for the primary contact recreational use. However, an **"alert status"** designation should be added because of the somewhat elevated fecal coliform levels during wet weather.

Spring Brook

The one station on this stretch of river (SPB016 @ Rt. 27) has data from three sampling dates that fall within the primary contact recreation season during each year of 1999, 2000, 2001 and 2002.

Analyses based on the DEP assessment methodology –

1. None of the stations sampled have a representative number of samples (5) in the target season in any one year.
2. If all four years are pooled for Station SPB016 the geometric mean of fecal coliform concentrations is 91 (N=12), which is well below the 200 cfu/100 mL primary contact recreation criterion.
3. If samples are pooled as in #2 (above) there is only one exceedance of the 400 cfu/100 mL (N=12), which represents less than 10% of the samples, and that sample occurred in 1999.
4. Although data are limited temporally in any particular year, there is a general pattern of low values at this station.

Conclusion – This segment is actually an unnamed tributary to the Neponset River at Rte. 27, Walpole ("locally considered Spring Brook") and was not assessed in the MADEP *1999 Boston Harbor Water Quality Assessment Report*. Based on these new data it would be listed as **supporting** for the primary contact recreational use.

Beaver Brook

Two stations on this stretch of river (BEB013 and BEB025) have data that fall within the primary contact recreation season. Station BEB013 was sampled three times each during 1999 and 2000, twice during

2001, and once during 2002. Station BEB025 was sampled once in 2002 during the target season. It is unclear from this report where the stations are located and why the station location was changed.

Analyses based on the DEP assessment methodology –

1. None of the stations sampled have a representative number of samples (5) in the target season in any one year.
2. If all four years are pooled for Station BEB013 the geometric mean of fecal coliform concentrations is 59 (N=9), which is well below the 200 cfu/100 mL primary contact recreation criterion.
3. If samples are pooled as in #2 (above) there are no exceedances of the 400 cfu/100 mL (N=9).

Conclusion – As in the MADEP *1999 Boston Harbor Water Quality Assessment Report*, this segment would be listed as **supporting** for the primary contact recreational use.

These modifications to the assessments will be reflected in the Final 2004 Integrated List of Waters. Note, however, that "alert status" appears only in assessment reports and, therefore, will not appear on the Integrated List.

Comment: The MADEP Boston Harbor 1999 Water Quality Assessment Report found that segment MA73-31, unnamed outlet from Massapoag Pond, supported primary and secondary contact recreation. However, based on the EPA's reaction to MADEPs methodology for assessing wet-weather pathogen problems in the 1999 Assessment, the MADEP now considers this segment as impaired for primary contact recreation due to wet-weather fecal coliform problems.

Response: Segment MA73-31 has already been listed in Category 4a where it is covered by the approved TMDL for bacteria in the Neponset Watershed. In response to the EPA's concerns relative to how wet-weather data were previously reviewed for assessment and listing purposes, the MADEP performed a complete statewide review of segments for which wet-weather data were available. As a result of this review a small number of segments in other watersheds were added to the proposed 2004 303(d) List (i.e., moved to Category 5).

Comment: NepRWA proposes that, based on nutrient data collected by the CMNW from 2001 through 2003, a total of eighteen (18) stream segments be added to Category 5 (i.e., "waters requiring a TMDL"). These are Purgatory, Steep Hill, Pine Tree, Traphole, Ponkapoag, Pecunit, Mill (2), Beaver, Hawes, Spring, School Meadow, Mine, and Beaver Meadow brooks; middle and lower mainstem Neponset River; East Branch Neponset River; and Neponset Estuary. In evaluating these segments, NepRWA considered the average percentage of samples where we found Total Nitrogen at greater than 0.1 mg/L and Orthophosphates at more than 0.08 mg/L; Orthophosphates from 0.01 to 0.08 mg/L were also factored in by assuming that two samples in this range were equal to one sample over 0.08 mg/L. These parameters are based on water quality thresholds in Dunne, Thomas and Luna B. Leopold, "Water in Environmental Planning," 1978, W. H. Freeman & Company, New York.

Response: Numerical standards for nutrients are not presently included in the Massachusetts Surface Water Quality Standards and the MADEP does not place waters on the 303(d) List solely on the basis of nutrient concentration data at this time. Narrative criteria for nutrients at 314 CMR 4.05 (5)(c) and the antidegradation provisions at 314 CMR 4.04(5) prohibit the discharge from point sources of nutrients in amounts that would promote the accelerated growth of algae or aquatic plants ("encourage cultural eutrophication") and require best management practices for the control of nonpoint sources of nutrients. On a case-by-case basis the MADEP will use evidence of eutrophic conditions, such as wide ranges in dissolved oxygen concentration, elevated chlorophyll values or biological surveys (in combination with nutrient concentrations) that reveal algae or plant "bloom" conditions that result in one or more impaired uses, to add waters to the 303(d) List. However, nutrient concentrations above normal background levels do not, in and of themselves, constitute use-impairment. For this reason the eighteen segments listed above would not be placed on the 303(d) List as stressed by "nutrients" without additional evidence of

biological degradation. It should be pointed out that nutrient criteria are currently in development for Massachusetts and numerical standards will likely be adopted by the Commonwealth in the future. These criteria will not be based on recommendations that appear in any single text book. Rather, they will be derived from site-specific field and laboratory investigations, conducted in accordance with EPA guidance, that measure biological responses to ranges of prevailing nutrient concentrations.

Comment: In the case of Steep Hill Brook (see previous comment) the MADEP's "1999 Boston Harbor Watershed Assessment" also cited nutrients as a "known cause" for rating this brook as only partially supporting aquatic life.

Response: This comment is in error. All uses for Steep Hill Brook (MA73-18) were "not assessed" in MADEP's 1999 *Boston Harbor Watershed Assessment*.

Comment: NepRWA proposes that, based on visual monitoring of low flows, a total of four (4) stream segments be added to Category 5 (i.e., "waters requiring a TMDL") due to "flow alterations". These are Massapoag Brook, Spring Brook, School Meadow Brook, and Steep Hill Brook. The MADEP "1999 Boston Harbor Watershed Assessment" listed flow alterations as a "suspected cause" for its partial support rating for aquatic life in the case of Massapoag Brook and MADEP's 1999 Technical Memorandum, "Boston Harbor Watershed 1999 Biological Assessment" noted an overabundance of fine particulate organic matter, which is often related to shallow, slow flowing water.

Response: The CWA distinguishes between "pollutants", such as nutrients, metals and pathogens, that all require TMDLs and "pollution", such as flow and habitat alterations or non-native species infestations, that do not require TMDLs. Thus, waters are not listed in Category 5 for "flow alterations." Waters for which impairments are confirmed due to flow alteration may be listed in Category 4c ("Impaired, not requiring a TMDL"). However, a segment would not be listed as impaired solely on the basis of a "suspected" cause, nor would "shallow, slow-flowing water" necessarily constitute impairment. Rather, "suspected" causes of impairment are typically listed in MADEP's watershed assessment reports to highlight the need for future confirmatory investigations.

Comment: NepRWA proposes that Lake Massapoag be added to Category 5 (i.e., "waters requiring a TMDL") due to "mercury" because a health advisory pertaining to the edibility of finfish from this waterbody was issued by the MADPH since the last assessment of the Neponset watershed was completed.

Response: The MADEP acknowledges the recent MADPH health advisory for Massapoag Lake, so the *Final 2004 Integrated List of Waters* will indicate that this pond is indeed impaired but will be managed through the implementation of the MADEP's *TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters*, which asserts that a combination of federal, regional and state controls on mercury are the most effective means of remediating the mercury impairment to air-impacted waters. Massachusetts is effectively implementing a comprehensive plan to address in-state mercury sources. Therefore, the establishment of waterbody-specific TMDLs under the traditional approach is not a wise use of resources and would not effectively address the problem. Massapoag Lake will actually be placed in Category 4c because it is also impaired by the presence of non-native species populations.

Comment: NepRWA proposes that, based on visual monitoring of siltation, the following segments be added to Category 5 (i.e., "waters requiring a TMDL") due to "siltation": Beaver Meadow, Pine Tree, Pequid and Traphole brooks. The MADEP "1999 Boston Harbor Watershed Assessment" placed Traphole Brook on "Alert Status" due to sediment deposition (as well as high levels of phosphorus).

Response: The effects of siltation, sedimentation, litter and other debris can all be difficult to ascertain beyond obvious aesthetic considerations and, therefore, more emphasis is placed on habitat assessment and the condition of the biological communities living in those waters when assessing uses. Three of these brooks were found to be "supporting" the aquatic life use based on the results of actual macroinvertebrate and fish population surveys and, thus, are not included in Category 5. The fourth brook

(Pine Tree) was "not assessed" for aquatic life. The designation "Alert Status" is used in MADEP watershed assessment reports to identify potential problems that are not of a magnitude or frequency to be considered impairments at the time of the assessment, but that should be monitored carefully in the future. Depending upon the actual character of the silt, sediment or debris exhibited at these sites, future remedial actions, if necessary at all, will likely not require the derivation of TMDLs, but will focus on the implementation of BMPs or litter and trash pick-up, etc.

Comment: NepRWA feels that Hawes Brook, listed in the MADEP 1999 Boston Harbor Watershed Assessment Report as partially supporting aesthetic uses due to odors, should be added to Category 5.

Response: Hawes Brook (MA73-16) is covered by an approved TMDL for "pathogens", "taste, odor & color", and "objectionable deposits" and has been placed in Category 4a accordingly.

Comment: NepRWA feels that the Upper Mainstem Neponset River should be listed in Category 5 because past inspections at the NPDES discharge point for Certainteed Roofing have indicated color problems.

Response: Although an "Alert Status" has been assigned to this segment (MA73-01), all uses except fish consumption were found to be "supported" in the most recent assessment of the Neponset River watershed. In fact, the MADEP 1999 Boston Harbor Watershed Assessment Report does not cite a color problem at the Certainteed Roofing facility. Nonetheless, "color", when it is present in surface waters, usually impairs only the aesthetics use and is not typically the subject of a TMDL. "Color" will be added as a stressor to this segment if it is found to be a persistent problem in the future.

Comment: Based on visual observations, NepRWA feels that Steep Hill Brook should be added to Category 5 due to channelization, lack of riparian buffer, and dumping by neighbors.

Response: This segment (MA73-18) was "not assessed" for any uses in the MADEP 1999 Boston Harbor Watershed Assessment Report. Nonetheless, the removal of trash and debris are recommended in the report for this segment. As previously mentioned, Category 5 is reserved for segments impaired by "pollutants" and not stressors such as "channelization" and "trash and debris" that are not corrected through the TMDL process.

5) Town of Orleans Planning Department (George Meservey, Director)

Comment: The Town of Orleans is seeking to have Town Cove included on the State 303d list of Impaired Waters. At present, inadequate treatment of stormwater, runoff from local roads & State highways, and failing/deficient on-site sewage disposal systems all contribute to the threatened state of the waterbody. Town Cove experiences regular shellfish closures and high coliform counts during the summer months. Located adjacent to the Orleans business district, Town Cove is subembayment of Nauset Estuary, which is part of the Cape Cod National Seashore. The complexity of managing local, State highway, and private business stormwater and drainage make Town Cove a prime candidate for the 303d list.

One example of the levels of complexity that exist within the Cove's watershed and contribute to its declining water quality is the Cranberry Cove Plaza. The Plaza, located on State Highway Rt. 6A/28 has recently been redeveloped and consists of over 100,000 square feet of retail and grocery store space. The development and large paved parking area was built over a former cranberry bog in a low lying area adjacent to the Cove. Runoff discharges via a detention basin and a pipe that crosses the highway directly into Town Cove. Increased silting, shellfish closures and loss of shellfish habitat have been some of the more notable effects of this drainage. The Town is working towards solutions but the multitude of parties involved makes progress slow and difficult.

Nauset Estuary has been accepted into the Massachusetts Estuaries Program for water quality modeling. The development of TMDL's for nutrient loading is underway. Your assistance is greatly needed to

develop an effective solution to the coliform problems. Based on my understanding of the 303d program, I am hopeful that it will help us bring all contributing parties to the table for meaningful dialogue.

Response: The most recent MADEP water quality assessment report for Cape Cod was published in 2002 and, while Nauset Harbor was included as a segment, Town Cove was not. This indicates that the MADEP has never completed an assessment of Town Cove. Nonetheless, in response to this comment, an assessment of the shellfishing use in Town Cove was made by reviewing the MassGIS datalayer on the status of shellfish growing areas. This datalayer revealed that shellfish harvesting is approved by the Division of Marine Fisheries throughout most of Town Cove. However, shellfishing is "conditionally approved" in one small area of the Cove and is actually prohibited due to degraded water quality conditions in a second slightly larger area. Despite the relatively small portion of Town Cove affected by these designations, this information would lead to a determination of impairment of the shellfishing use in this segment. Therefore, Town Cove will be listed as impaired by "pathogens" in Category 5 (i.e. the 303d List) of the final 2004 Integrated List of Waters.

6) Tim Watts, Middleborough, MA

(Note: Mr. Watts first commented to the MADEP on the Taunton Watershed assessment and listing status after reviewing the Proposed Year 2002 Integrated List of Waters. At that time he wrote at length about his experiences and observations on the Taunton River and its tributaries and, in many cases, presented citizen-monitoring data from the Taunton River Watershed Alliance (TRWA) and photographs to corroborate his comments. A response to his original comments can be found in Massachusetts Year 2002 Integrated List of Waters – Part 3 – Public Comment Responsiveness Document.

In 2001 the MADEP performed water quality and biological monitoring throughout the Taunton watershed. Many of the segments discussed in Mr. Watt's original comments were included in those surveys. It was originally anticipated that the results of the 2001 surveys would be used, along with the information provided with Mr. Watt's comments, to complete a new assessment of the Taunton Watershed that would be reflected in the 2004 Integrated List of Waters. Unfortunately, the new Taunton Watershed Water Quality Assessment Report is still in preparation and, therefore, was not available in time to be included in the Proposed 2004 Integrated List of Waters. Nonetheless, it is now the intent of the MADEP to complete a new Taunton watershed assessment in 2005, well before the next integrated list of waters is due to the EPA in 2006. As previously explained to this commenter the MADEP will rely on the results of the above-mentioned surveys as well as other sources of data and information to complete the assessment. To this end, the MADEP will accept and review data and information pertaining to the quality of the waters in the Taunton watershed from any and all sources. However, for external sources of information the MADEP requires the following for listing purposes: 1) an appropriate Quality Assurance Project Plan including a laboratory Quality Assurance /Quality Control (QA/QC) plan, 2) use of a state certified lab (certified for the applicable analyses), 3) data management QA/QC are described, and 4) the information is documented in a citable report that includes QA/QC analyses. Nonetheless, data collected without a QAPP will still be reviewed and used to corroborate other monitoring results and to identify potential problems that are in need of further investigation.

The unfortunate circumstances pertaining to the delay in the completion of the Taunton Watershed assessment report were discussed directly with Mr. Watts in a telephone conversation held during the public comment period for the Proposed 2004 Integrated List. As a point of emphasis, however, Mr. Watts chose to re-submit in 2004 several of the comments he made back in 2002. Space constraints prohibit printing his letter here in its entirety. Rather, an attempt has been made to highlight comments aimed at specific waterbodies or segments and perceived impairments.)

Comment: The Taunton River segment (ma62-01) extending from the confluence of Town and Matfield Rivers to Route 24 Bridge, Taunton should be listed on the 303d list. In regards to this segment we are submitting some comments which we submitted for the 2002 listing because they are still relevant. This 20-mile segment of Taunton River, one of the largest rivers in the state of Massachusetts remains unassessed in 2004 despite the obvious degradation and impairment of its water by the City of Brockton

Sewer Treatment Plant. It fails in aesthetics. It smells like a sewer treatment plant through the whole segment and much of the bottom substrates are coated with thick layers of filamentous algae. This segment should also be listed as impaired by organic enrichment for obvious reasons. This segment also appears to fail Aquatic life support criteria for the toxic pollutant, ammonia. According to USGS sampling at Titicut St. gauging station the ammonia limit of 0.204 was exceeded several times between 1999 and 2002.

Response: On July 21, 2004 the EPA published *Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act.* The letter of transmittal accompanying this guidance contained the following language that provided the general framework for completing the Massachusetts Integrated List for 2004:

"EPA believes that State methodologies that account for the data collection and analysis process under a rotating basin approach can fit with the regulatory requirements to consider all existing and readily available data and information in developing Section 303(d) lists…"

The *Massachusetts Year 2002 Integrated List of Waters* – or, to be exact, the 303(d) portion of the list – was approved by the EPA on October 1, 2003. Consistent with the EPA guidance, quoted above, the 2004 Integrated List represents an update of the 2002 submittal based on new assessments completed for the Deerfield, Millers, Ipswich, and Shawsheen watersheds and the Islands and Buzzards Bay coastal drainage areas. Comments and information received in 2002 pertaining to the Taunton watershed were compiled and filed for later use in developing the Taunton watershed assessment report. Unfortunately this assessment was not completed in time to be included in the 2004 listing. The Taunton assessment is now projected to be completed in 2005 and all comments and information, including the results of the MADEP 2001 water quality and biomonitoring surveys, will be reviewed for use in that assessment.

Comment: Why are the two river segments (Salisbury Plain River, ma62-06 and Matfield River, ma62-32) not being listed as impaired by organic enrichment and low dissolved oxygen and aesthetics? According to the Matfield and Salisbury Plain River Watersheds Nonpoint Source (NPS) Pollution Assessment Report 2002 which was administered through the Massachusetts Department of Environmental Protection (MADEP), which was also a key manager and technical advisor to the Project these two river segments suffered from both organic enrichment and horribly low levels of dissolved oxygen. Was this Matfield and Salisbury Plain River Watershed Nonpoint Source (NPS) Pollution Assessment a valid study? If so then why was it not used in this 2004 assessment? Will it be used in future assessments, or will it be outdated information by then?

Response: The MADEP follows a rotating watershed monitoring and assessment schedule that does not allow for new assessments to be completed for every watershed in each listing cycle. Consequently, the *2004 Proposed Integrated List of Waters* did not include a new assessment of the Taunton Watershed, and the listing status of segments in this river basin remained essentially unchanged from 2002. The 2002 Nonpoint Source (NPS) Pollution Assessment Report, published in November, 2003 by ESS Group, Inc., was commissioned by the EOEA Massachusetts Watershed Initiative's (MWI) Taunton Watershed Team and was administered by the MADEP. However, it was published late in the development of the *2004 Proposed Integrated List of Waters* and, despite its validity, was not used for making listing decisions because a new assessment of the Taunton Watershed was not yet in progress. Nonetheless, a review of the NPS document, carried out in response to this comment, did indeed confirm the degraded water quality conditions in the Salisbury Plain and Matfield rivers. Therefore, "organic enrichment/low DO" will be added as contributing to the impairment of segments MA62-05, MA62-06 and MA62-32.

Comment: The Taunton River Watershed 2001 Biological Assessment at site TR03 Salisbury Plain River 2 km downstream from the Brockton Sewer Plant was found to be moderately impaired by the DEP surveyor. He made the following statements about this reach. "That habitat quality here was found to be highly comparable (actually better) to the reference condition suggests that water quality limits biological potential in this portion of the Salisbury Plain River. Metric values for the TR03 benthos were strongly suggestive of water quality degradation related to organic enrichment and low dissolved oxygen levels. Pollution sensitive EPT taxa, as well as algal scrapers – generally less tolerant of organic pollutants than

filter feeders and gatherer collectors, were virtually absent from the benthos sample taken here and suggest an oxygen stressed community. Community imbalance also characterized the TR03 benthic community, the result of the hyper dominance of a single family. Indeed, the Chironomidae comprise well over half of the assemblage observed at TR03. The numerical dominance of the chironomid Polypedilum flavum is particularly significant, as this species is considered very tolerant of organic pollution. It has been associated with sewage "recovery zones". Was this MA DEP bioassessment reviewed for the proposed listing? If not why?

The 2001 bioassessment of TR03 was similar to results documents by DEP during the last biomonitoring survey conducted here in 1996, when high densities of filter feeding hydropsychids and pollution tolerant chiromonids resulted in poorly performing metrics (especially EPT Index and Scrapers/Feeders) and an assessment of moderately impaired" (Fiorentino, 1996). That the TR03 macro invertebrate community remains structured in response to organic enrichment is not surprising given its location downstream from the Brockton WWTP. Nutrient loadings originating from the treatment facility's discharge probably not only shape benthic community structure and function in this portion of the river, but also account for the luxuriant algal growth and macrophyte cover observed here. Was the 1996 bioassessment reviewed? If not why?

Response: The MADEP often relies on the results of biological surveys to determine the condition or "health" of waterbodies, particularly rivers and streams. Macroinvertebrate, fish and periphyton (i.e., attached algae) communities, often in combination, have been used to assess the extent to which waterbodies are supporting aquatic life, as designated in the Water Quality Standards. In general, the MADEP relies on the use of the EPA Rapid Biomonitoring Protocol (RBP) III, a fairly rigorous assessment of the macroinvertebrate community, to assess the aquatic life use. Moreover, the MADEP has established the RBP III analysis as a minimum requirement for purposes of listing waters in Category 5 (i.e., the 303d List). The Taunton River Watershed 2001 Biological Assessment referred to in this comment did utilize the RBP III but was not completed until February 2, 2004 and was not used for the Proposed 2004 Integrated List because a new assessment of the Taunton Watershed was not planned until after the 2004 listing cycle. RBP II, the less intensive screening-level investigation that was utilized in the 1996 Taunton assessment is often not considered definitive unless water quality or other corroborating information is available. In this case, the information contained in the 2002 Nonpoint Source (NPS) Pollution Assessment Report, as well as the 2001 Biological Assessment, did confirm the impairment downstream from the Brockton POTW and, as described in the response to the previous comment, "organic enrichment/low DO" and "nutrients" will be added as stressors to segments MA62-06 and MA62-32.

Comment: Did DEP review discharge violations at the Brockton WWTP for this listing? If not why? "Inspections by EPA and the Massachusetts Department of Environmental Protection DEP) and the plant's own reports document equipment failures, operator errors, chemical feed problems and chronic bypassing of treatment equipment at the plant. This has led to excessive discharges of sewage solids, bacteria, ammonia and chlorine into the river, which flows to the Matfield River which downstream becomes the Taunton River". The above quote is from a June 4, 2003 (Release # 03-06-03) US EPA press release regarding violations at the Brockton Sewer Plant. Is the DEP reviewing agency aware of these ongoing violations? Does MA DEP consider excessive dischargers of sewage solids, bacteria, ammonia and chlorine as impairments to aquatic life and might they be aesthetically displeasing? Does MA DEP accept their own documentation as being valid? Do the attached chlorine violations at the Brockton Sewer Plant constitute violations of the aquatic life standard for toxic pollutants in the stream? As an example, according to plant records during July 2002 a chlorine violation of 0.192 mg/l occurred. It's our understanding that the state toxicity limit is 0.011 mg/l. During the summer more than 90% of the st[r]eam['']s flow at and below the discharge is effluent. What impact does a chlorine violation of this magnitude have on the streams aquatic life? Do these violations warrant listing the stream as being impaired for aquatic life due to chlorine toxicity?

Response: Information pertaining to the Brockton WWTP was not reviewed for the 2004 listing for the reasons cited in the responses above (i.e., a new Taunton Watershed assessment, which would consider this information, was not available at the time of the new listing). Nonetheless, as described above, a

review of the 2002 Nonpoint Source (NPS) Pollution Assessment Report has led to the addition of "organic enrichment/low DO" and "nutrients" as stressors to the segments downstream from the Brockton POTW.

Responses to Comments on *A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury - Impaired Waters*

(Note: The MADEP received four comment letters on the Alternative Pathway document. Two letters were generally supportive of the proposal and are reprinted below without any formal response. The other two letters are presented with responses, where applicable.)

7) Neponset River Watershed Association (Steven Pearlman, Water Quality Analyst)

The following comments are submitted by the Neponset River Watershed Association (NepRWA) and the Neponset River Land Holding Association. The latter Association shares many Board members with NepRWA and owns Willet Pond in Walpole, Westwood and Norwood. Willet Pond is currently on the 303(d) list due to mercury contamination.

Our organizations are supportive of the approach proposed by DEP in the above-mentioned document. It is our understanding that the mercury in Willet Pond is predominantly, if not wholly, from atmospheric sources, many of them located outside Massachusetts. DEP has presented a reasonable approach for significantly reducing mercury from these sources which we believe will be far more effective than the creation of a mercury TMDL.

On the other hand, we also believe that the approach proposed by DEP will not be successful until the state implements stronger measures to address the problem. Attachment B of the Final Public Comment Draft shows that of the nineteen mercury education and reduction measures that are recommended, Massachusetts has legislative authority to implement only two (thermometer ban and universal waste rule). This compares to 16 in Rhode Island, 15 in Maine, 12 in Connecticut, 10 in New Hampshire and 2 in Vermont. The current Administration has proposed legislation to obtain the legal authority to implement all the other measures, and for this reason we support its proposed TMDL Alternative for mercury. Should Massachusetts fail to obtain legislative authority or, having obtained legislative authority, fail to implement most if not all the measures listed in Attachment B, our organizations will recommend that DEP and EPA reconsider this proposed mercury management plan when the next (post-2004) revision of the Massachusetts Integrated List of Waters is proposed.

Because so much of Massachusetts' mercury problem comes from out of state sources, we are also concerned that EPA not allow every state to institute similar alternative management strategies, regardless of the level of effort it is making to reduce emissions of mercury. We believe that Massachusetts has been seriously addressing mercury issues over the last several years and is legitimately attempting to obtain legislative authority to implement additional control measures. We would hope that EPA would require a similar level of commitment from other states wishing to avail themselves of a mercury management strategy similar to that being proposed by Massachusetts.

8) New England Interstate Water Pollution Control Commission (Ronald F. Poltak, Executive Director)

(Note: Footnotes and citations appearing in the original comment letter have been omitted here to conserve space.)

The New England Interstate Water Pollution Control Commission (NEIWPCC) is writing in support of the *Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters*, known hereafter as the "Supplemental List," developed by the Massachusetts Department of

Environmental Protection (MA DEP). As you are aware, NEIWPCC is a congressionally authorized interstate commission that coordinates and facilitates policy initiatives and projects related to water pollution control, on behalf of our compact member sates, the New England States and New York.

Over the past two years, our member states have been working closely with EPA Region 1 on several TMDL Innovations Projects, including a project to develop regional recommendations for accurately reporting impaired waters in Category 4B of the Integrated List. The Supplemental List is a direct result of that regional effort and NEIWPCC applauds MA DEP for taking the lead on bringing it to fruition. Other states in the region are also expected to take the approach of utilizing an alternative reporting category for waters impaired due to mercury; RI DEM and ME DEP plan to submit similar lists. Further, all of our member states have provided input on this approach through the TMDL innovations process, and endorse the concept. It is with this background information that NEIWPCC respectfully requests the Commonwealth to take into consideration our comments on the Supplemental List as put forth below.

Federal and State Legal Frameworks Provide for the Use of an Alternative Regulatory Pathway as Described in the Supplemental List. The Federal Clean Water Act (CWA) requires states to assess and report on the quality of the Nation's waters. Specifically, Section 305(b) requires a comprehensive biennial assessment report and Section 303(d) requires a list of waters for which effluent limits are not sufficient to meet water quality standards (WQS). The EPA-recommended integrated assessment and reporting approach is utilized by many states including Massachusetts. Integration of the 305(b) report and the 303(d) list better enables water quality managers to demonstrate progress of the State's efforts to identify water quality problems, develop and implement restoration actions, and to ultimately achieve WQS in all of the State's waters.

40 CFS 130.7 titled "Total maximum daily loads (TMDL) and individual water quality-based effluent limitations' mandates how and when states should list impaired water bodies; these regulations are not altered by the EPA-recommended Integrated Guidance. The Supplemental List prepared by MA DEP meets the stringency and specificity of these regulations. Thus, concerns or misconceptions about the scaled-back nature of the Category 4 approach should be allayed. For example, 40 C.F.R. 130.7(b)(6)(iv) provides provisions allowing states, territories, and authorized tribes to demonstrate good cause for not including water bodies on newly submitted 303(d) lists that were included on previous 303(d) lists. *(Note: the 303(d) list as referenced in statute and regulation is documented as Category 5 of the Integrated Guidance).* Good cause includes, but is not limited to, more recent and accurate data, more sophisticated water quality modeling, flaws in the original analysis that led to the original water body listing, changes in conditions, e.g., new control equipment, or elimination of discharges. NEIPWCC supports MA DEP in its declaration that recent changes in conditions in the state's approach to eliminating mercury are substantial enough to warrant that all lakes and ponds impaired by mercury from atmospheric sources be addressed through Category 4 of the Integrated Guidance.

Within the bounds of the federal regulations described above, Category 4 of the Integrated Guidance offers two viable approaches that states may consider in making their listing decisions. Category 4B says that states must show that "other pollution control requirements (e.g., best management practices) required by local, State or Federal authority" are expected to address all water-pollutant combinations and attain all WQS in a reasonable period of time. EPA also expects that appropriate documentation be provided to support the state's decision to utilize Category 4B and not do a TMDL.

There is another alternative. The Integrated Guidance also provides that EPA, State, and territorial decision makers have the discretion to adopt approaches, on a case-by-case basis, which differ from the guidance. MA DEP has also proposed establishing a new category (4D), which would be specifically for mercury-impaired waters. Similar to the Category 4B approach, MA DEP would also need to demonstrate how other pollution control requirements would lead to attainment of WQS, where a TMDL would not, for waters listed on Category 4D. This approach is different in that it is tailored to manage in-state sources of mercury.

MA DEP has documented in their proposal, the ways in which it is addressing in-state mercury sources with existing federal, state, and local controls. MA DEP has provided documentation of the

feasibleness to address in-state sources within a reasonable time frame, given that allowance of an expansive use of the term reasonable is consistent with the expansive nature of the mercury problem worldwide. Further, MA DEP has committed to continue categorizing the mercury impaired waters as "impaired;" however, water body-specific TMDLs will not be required, as long as MA DEP can continue to demonstrate that they have adopted and are effectively implementing mercury reduction strategies that address in-state mercury releases to the environment. This approach ensures that, if mercury reduction strategies do not lead to the attainment of standards within a reasonable amount of time, a TMDL will then be required.

The mercury elimination approach prepared by MA DEP is robust and is already being implemented. In 1996, it was estimated that 59% of mercury in Massachusetts air emissions originated from out-of-state sources. This estimate has likely increased on account of Massachusetts' implementation of aggressive efforts to reduce in-state mercury sources over the last six years, and thus it is expected that a greater proportion now originates from out-of-state sources. The Supplemental List is focused on addressing in-state sources of mercury and thus improving water quality in the timeliest manner possible. TMDLs are most effective when the load and waste load allocations are established using accurate and plentiful data for all pollutant sources. This information is not currently available for out-of-state sources of mercury, which make up the majority of the load allocation for nonpoint sources of mercury that enter Massachusetts' waters through atmospheric deposition.

In addition to in-state mercury reduction efforts, a regional mercury reduction plan is also in place. The New England Governors/Eastern Canadian Premiers Mercury Action Plan (MAP), which was initiated in 1998, has already resulted in a 54% reduction in regional mercury emissions as of 2003. The ultimate goal of the MAP is virtual elimination of regional anthropogenic mercury emissions, with an interim goal of 75% emissions reduction by 2010. The MAP also includes a strategy to eliminate mercury from other sources, such as medical and consumer products, dental clinics, hospitals, schools, and laboratories. The combination of state and regional mercury elimination plans demonstrates that MA DEP is meeting the requirements of Category 4B, in that the impairment is being addressed through other pollution control requirements. Implicit in the MA DEP approach is the understanding that national controls on remaining mercury emission sources must be implemented in order for waters in Massachusetts to come into compliance with water quality standards.

MA DEP is already responsible under Massachusetts General Law (MGL) Chapter 21 for monitoring the waters of the Commonwealth. State law requires that MA DEP identify those waters that are impaired, and develop a plan to bring them back into compliance with the Massachusetts Surface Water Quality Standards. Specifically, the state must adopt standards of minimum water quality, which shall be applicable to the various waters, or portions of waters of the Commonwealth. More important to the discussion at hand, the state shall take all action necessary or appropriate to secure to the Commonwealth the benefits of the Federal Water Pollution Control Act, Public Law 92-500 (the Clean Water Act), as amended, and other federal legislation pertaining to water pollution control. Lastly, under Chapter 21, MA DEP should examine periodically the water quality of the various coastal waters, rivers, streams, lakes and ponds of the commonwealth, or separate portions of such waters, and publish the results of such examinations together with the standard of water quality established for the various waters or portions thereof. It is our belief that MA DEP will remain committed to the process of assessing waters of the state and regularly make determinations of whether their strategy for mercury is resulting in water quality improvements.

NEIWPCC endorses the Supplemental List and the alternative pollution control plan proposed by MA DEP. NEIWPCC and its member states recognize the severity of the mercury problem in this country. NEIWPCC supports approaches the incorporate on-going and imminent control of in-state sources, rather than those that lack scientific defensibility and political merit.

9) Clean Water Action (John K. McNabb, Research Director)

Comment: Clean Water Action OPPOSES the proposed TMDL Alternative Regulatory Pathway Proposal and recommends instead that the Massachusetts Department of Environmental Protection prepare a Generic TMDL for the 90 water bodies presently on the Massachusetts Year 2004 Integrated List of Waters because of high mercury levels in fish.

We understand that this proposal would only apply to water bodies where the mercury deposition is entirely from atmospheric sources and that only about 50% of the deposition comes from in-state sources. However, while MassDEP has taken some major steps (reducing air emissions from trash incinerators & power plants) to reduce atmospheric deposition of mercury in Massachusetts, the Department's current Zero Mercury Plan needs more specific performance measures and deadlines. A stronger commitment from MassDEP to take all actions they are currently authorized to under existing state law is needed to reduce mercury deposition from Massachusetts's sources.

Response: The MADEP acknowledges the importance of performance measures, milestones and deadlines and has been a strong advocate of their inclusion in the NEG-ECP Mercury Action Plan as well as national and international plans to address mercury. Massachusetts's mercury reduction efforts are being implemented under both the Massachusetts Zero Mercury Strategy (MZMS) and the NEG-ECP Mercury Action Plan, which include numerous performance measures and deadlines. In particular, both call for the long-term virtual elimination of anthropogenic sources of mercury. Specific milestones include a 50% reduction goal by 2003 and 75% by 2010. Under these plans Massachusetts has already reduced emissions by between 60 and 70 percent. MADEP is committed to taking necessary actions to achieve the reduction goals included in the NEG-ECP MAP and MZMS, which will address in-state and in-region sources. This is being done through an adaptive management approach.

The statement that 50% of MA deposition comes from in-state sources is not supported and is likely incorrect. It is likely that, in light of the significant reductions achieved on in-state sources, substantially greater than 50% of MA deposition is now due to out-of-state sources.

Comment: Preparing a Generic TMDL for Mercury Deposition in Massachusetts Water Bodies would allow MassDEP to develop a more detailed assessment of the in-state contributors to mercury deposition and to develop a stronger program to reduce the use and emission of mercury in Massachusetts. MassDEP should also conduct an exhaustive analysis of its existing legal authority, and that of other state agencies, and based on that existing authority develop a specific plan with performance measures and deadlines to reduce in-state use and emissions of mercury to the greatest extent possible under the Generic TMDL. For example, under current law MassDEP has the authority to take, but has not taken, the following actions:

- require, as opposed to encourage, dentists to use mercury amalgam separators;
- prohibit disposal of mercury-containing products into landfill and incinerators;
- require periodic testing of fly ash from trash incinerators for mercury content – with public reporting to MassDEP – and requiring measures to prevent off-gassing or discharge of mercury from landfilled incinerator fly ash;
- support the Mercury Products Bill pending at the Mass. Legislative

Response: A generic TMDL would not add substantively to our understanding of the problem. The current MZMS and NEG-ECP MAP plans already include specific performance measures, which exceed federal requirements, and deadlines that have resulted in substantial reductions in mercury emissions from sources in Massachusetts. It is difficult to see how calculating a TMDL could conceivably result in mercury reductions beyond virtual elimination.

Responses to the specific items listed in the above comment are presented below:

1) The MADEP is committed to requiring dentists to use amalgam separators and will adopt regulations to this effect in 2006. The voluntary program referred to is designed to achieve substantial reductions ***earlier*** than they would have occurred through typical rulemaking. Since the program's inception last year, over 74% of MA dentists that generate amalgam wastewater are now using amalgam separators. Clean Water Action has been a valued member of the advisory committee providing input to the MADEP on this effort.
2) Any such prohibition would be essentially impossible to enforce as mercury is derived from thousands of consumer products that are relatively small in size and are often difficult, if not impossible, to differentiate from non-mercury products once in the trash. The MADEP's regulatory authority to categorically prohibit disposal of all mercury-containing items is also unclear. Disposal bans inappropriately place the burden of dealing with this issue solely on the consumer rather than fostering increased manufacture responsibility.
3) Testing of fly ash for mercury is a reasonable suggestion. Data from New Jersey indicate that mercury sorbed to fly ash is stable and does not significantly mobilize provided the material is not substantially heated. Thus it is unclear that such testing, which would divert resources from other priorities, would yield enough new information to justify the effort.
4) The MADEP has supported mercury products legislation for many years. Last year the MADEP supported the principles and goals embodied in the legislation then under consideration but indicated that, in light of resource reductions suffered by the agency, the MADEP would find it difficult to adequately administer this new program without additional resources.

10) Conservation Law Foundation (Steve Hinchman, Toni Hicks, Mark Sinclair)
Mercury Policy Project (Michael Bender), National Wildlife Federation (Catherine Bowes)

(Note: Footnotes and citations appearing in the original comment letter have been omitted here to conserve space.

By way of introduction the authors wrote:

The Conservation Law Foundation (CLF), National Wildlife Federation (NWF), and the Mercury Policy Project (MPP) offer the following comments regarding Massachusetts' TMDL Alternative Regulatory Pathway Proposal of Management for the Management of Selected Mercury-Impaired Waters.

Founded in 1966, CLF is a non-profit, member driven organization with offices located in Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. CLF advocates use law, economics and science to design and implement strategies that conserve natural resources, protect public health and promote vital communities in our region. Air and water quality issues are central to that mission.

MPP is a project of the Tides Center and co-founder of the New England Zero Mercury Campaign (a coalition of nongovernmental organizations from around the Region.) MPP was founded in 1998 and works at the local, national, and international level to promote policies and programs to reduce and eliminate anthropogenic mercury uses and releases, trade in mercury, and human and wildlife exposures.

National Wildlife Federation was founded in 1936 as a nationwide federation of grassroots conservation organizations, with a mission of protecting the earth's environment for future generations of people and wildlife. NWF advocates strong state and national policies to reduce the release of mercury into the environment.

Background

Mercury is a neurotoxin that impairs learning, memory and attention in developing children, and is linked to fatigue, memory loss and increased risk of heart attacks in adults. New Environmental Protection Agency (EPA) estimates indicate that one in six women of childbearing age have blood mercury levels that exceed safe limits for a fetus, translating to 630,000 infants born at risk each year in the United

States. Similarly, among wildlife populations, mercury is a significant factor in the decline of resident loon and merganser populations, and otter and mink.

Mercury contamination is widespread. Massachusetts, like all New England states, has imposed statewide fish consumption advisories on their inland lakes and rivers due to persistent high levels of methyl mercury in fish tissue. Under EPA and state rules, this advisory renders every water body in the state as impaired for mercury. Unfortunately, it is also a problem that is worsening. In 2001, the Massachusetts Department of Health expanded its previously issued statewide fish advisory cautioning pregnant women to avoid eating all freshwater fish due to concerns about mercury contamination, to include women of childbearing age who may become pregnant, nursing mothers and children under 12 years of age. Because mercury naturally cycles through the water system, there is a large historic reservoir of methyl mercury from anthropogenic sources. Thousands more pounds are added to this reservoir each year, primarily due to power plant and incinerator emissions.

Thus, given the scale of mercury impairment in Massachusetts, the longevity of the pollutant, and the deadly threat it represents, CLF believes that the states and EPA must move immediately and aggressively to eliminate further mercury emissions. At the same time, CLF recognizes that establishing TMDLs for airborne pollutants has proven difficult and time consuming, that there are inherent weaknesses in a state by state approach to mercury TMDL development and implementation given the widespread source of the problems, and that TMDLs, as implemented so far, have generally not resulted in dramatic pollution reductions. For these reasons, CLF is supportive of MADEP's proposed concept – to focus on mercury pollution reduction efforts rather than on TMDLs – but only if accompanied by firm commitments from Massachusetts, neighboring states and the EPA to specifically identify and implement comprehensive mercury pollution control strategies to achieve virtual elimination of anthropogenic mercury uses and releases by 2010.

CLF, NWF and MPP describe below some of the specific commitments that we believe would be necessary at the state, regional, and national level to demonstrate that a mercury TMDL is not required under the Clean Water Act. Unfortunately, based on EPA's proposed national rule on mercury regulation of utility sources (rejecting a rigorous MACT for coal-fired plants), it appears that Massachusetts will not be able to demonstrate that national management measures by EPA, in combination with state and local measures, can reasonably be expected to attain water quality standards in a reasonable period of time. However, CLF lays out an alternative path through which Massachusetts could demonstrate, in partnership with other New England states, that firm commitments to state and regional efforts will be adequate to ensure attainment – without the need for state-specific mercury TMDLs – provided EPA uses its authority to develop a regional mercury TMDL and implements its full responsibilities under the CAA to control mercury emissions. Under our analysis of the law, once the states commit to reduce in-state sources to achieve attainment, if EPA fails to commit to do its part to address out-of-state sources affecting New England, the responsibility under the TMDL provision will shift to EPA. We look forward to working with the Commonwealth to ensure that EPA becomes part of the solution to mercury pollution in New England.)

Comment: TMDLs are required by the Clean Water Act whenever effluent and thermal discharge limits are "not stringent enough to meet any water quality standard applicable to [state] waters." As interpreted by EPA regulations, TMDLs are required for all water quality-limited stream segments whenever attainment cannot be reached by use of (i) technology-based effluent limitations imposed by the Clean Water Act, (ii) more stringent effluent limitations required by state, local or federal authority, or (iii) other pollution control requirements required by state, local or federal authority.

The obligation to do a TMDL is lifted only if application of these various pollution control authorities will result in attainment of water quality standards (WQS). This standard – attainment of WQS – is also the core requirement under EPA's guidance documents. See EPA, Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act, at 5 (2003) (hereinafter EPA Guidance) ("[T]he State must demonstrate that 'other pollution control requirements (e.g. best management practices) required by local, State or Federal authority' are expected to address all water-pollutant combinations and attain all WQSs in a reasonable period of time."). To remove a water

body from the state's list of waters requiring a TMDL (Category 5) to a no-action list (Category 4B, impaired waters for which a TMDL is not required), EPA requires that state proposals be specifically supported by issuance of technology-based effluent limitations or more stringent effluent limitations that will result in attainment of WQS, or by a demonstration that other pollution control requirements will ensure attainment of WQS.

Response: If the actions identified in the proposal are effectively implemented by Massachusetts and by the EPA nationally and internationally we argue that the fish consumption advisories would be resolved. (Note: it is possible that some water bodies would continue to be impaired because of natural inputs and ecological conditions).

Comment: In this case, Massachusetts issued a statewide advisory in 1994 warning against consumption of freshwater fish due to mercury pollution. Under EPA and state rules, this advisory renders every water body in the state as impaired for mercury. The current proposal identifies approximately 90 water bodies as impaired solely by atmospheric deposition of mercury – and proposes to remove these 90 lakes and stream segments from the Category 5 priorities list. The state standard for consumption of mercury-tainted fish tissue is 0.3 mg Hg/kg. In the study selected for use by the report, the group of water bodies with the highest concentrations of mercury in fish tissue had contamination levels at an average of 1.26 mg Hg/kg. Thus, in order to demonstrate that effluent limitations and other pollution control measures will result in attainment of WQS the report concludes that, from a statistical point of view, Massachusetts must show that pollution control measures will reduce mercury by 76 percent. That target is subsequently undermined in a footnote, where the report acknowledges that the highest mean individual lake value found exceeds 2.5 mg Hg/kg and therefore reductions "approaching 90% will likely be needed in many MA water bodies."

Response: At the state level the MADPH uses a trigger of 0.5 ppm for fish consumption advisories, not 0.3 ppm. The EPA criterion is 0.3 mg/kg methyl mercury. The analysis demonstrating that a 76% reduction would be needed was intended to drive home the point that reductions well beyond Massachusetts' borders will be needed to address mercury impairments, not that this level of reduction in Massachusetts would resolve all mercury impairments in Massachusetts. The MADEP agrees that reductions of 90% or more will likely be needed for some water bodies, a conclusion identical to that reached by Minnesota in the generic TMDL that they recently proposed. The MADEP maintains that, if anything, this further supports our contention that calculating TMDLs will not inform nor alter policy decisions that are already being implemented in Massachusetts with the goal of virtually eliminating mercury releases.

Massachusetts does have a statewide advisory in effect due to concerns about atmospheric impacts to untested water bodies. Pursuant to EPA Guidance the Commonwealth is obligated to list and address only those waters where actual data exists documenting fish tissue exceedances however our goal is to address all impairments. We have conservatively identified a limited suite of water bodies that are clearly not impacted by point source discharges to address in this proposal. Furthermore, the adaptive management plan being implemented by MA addresses sources that are within MA's control, which impact many if not all water bodies in the state.

Comment: In addition to noting the above discrepancy, we believe there are fundamental problems with the report's methodology in developing reduction targets. Moreover, until a TMDL is completed and all necessary enforceable implementation measures are put in place under state and federal law, we do not believe that mercury emissions can be legally permitted under either the Clean Air Act or the Clean Water Act anyway. A debate over the required reduction targets would be academic at best, however, given the report's allocation of mercury emissions by area, with 47 percent attributed to sources in the New England and the Eastern Canadian Provinces region, 30 percent to other sources within the United States, and 23 percent to the global reservoir. Again, we note that these figures are outdated and problematic. But even using this data, and the lowest reduction target – 76 percent – it is clear that virtually all regional and national sources of airborne mercury pollution must be eliminated in order to avoid drafting a TMDL. In other words, accumulation of this deadly toxin in our environment has gotten so severe that to attain WQS no further airborne mercury emissions can be allowed.

Response: MA DEP agrees that some of the figures provided in the report may be outdated given the amount of implementation that has taken place over the last several years. The data is presently being updated and will be available later this year. The MADEP also agrees that virtual elimination of anthropogenic mercury sources is an appropriate goal and this is why ***both our state and regional plans addressing mercury pollution established virtual elimination as their goals***. Massachusetts and other states in New England are implementing plans towards this end. CLF suggests that to avoid doing a TMDL we need to *achieve virtual elimination* (which in the real world simply cannot occur immediately; furthermore TMDLs do not require instantaneous results). The commenters seem to suggest that lacking this, the MADEP should instead shift considerable resources away from actions that move us towards virtual elimination to calculate TMDLs, which will indicate that we need-----virtual elimination. To us, this makes little sense. The MADEP believes we should focus on implementation rather than spend significant time and resources trying to develop additional calculations. We believe that the adaptive management implementation of the existing regional and state mercury plans is a reasonable and necessary approach to achieving actual mercury pollution reductions and that is where our focus should be.

Note: TMDLs recently derived by Minnesota reached similar conclusions regarding in-state vs. out-of-state contributions and the levels of reduction needed to achieve water quality standards.

Comment: While the undersigned organizations applaud Massachusetts for its considerable progress in reducing mercury emissions from in-state sources, it cannot yet be said that Massachusetts has fully implemented all available mercury controls. More can and must be done under existing authority – both in-state and in concert with neighboring states and the EPA – before Massachusetts can make the required showing that no state-specific mercury TMDL is required for water bodies impaired solely from air deposition.

Response: Massachusetts does not claim to have implemented all available actions. We are, however, effectively implementing a comprehensive adaptive management strategy to get there, which substantially exceeds federal requirements as well as actions in most other states. In light of the scope of the mercury problem and the diversity of sources, this is an issue that cannot be solved all at once. Massachusetts and the other New England States are taking actions using an iterative approach and will address all significant sources.

Comment: Regarding in-state sources, to make the required showing no state-specific mercury TMDL is necessary, the State of Massachusetts would need to make binding commitments to the following actions to eliminate mercury pollution:

- Require, through NDPES permits, that all NPDES facilities (including municipal wastewater treatment plants) develop and implement mercury minimization plans and sampling requirements, and impose water quality based effluent limitations and conditions to that end;

Response: Overall, POTW effluent is a small source of mercury. The largest POTW in Massachusetts, maintained by the Massachusetts Water Resources Authority (MWRA), has a very aggressive mercury monitoring and reduction program with a zero discharge goal and an enforceable limit of 1 ppb. It should be noted however, that due to analytical interferences associated with wastewater it is difficult to accurately measure very low concentrations of mercury in the influent or effluent of those facilities. In most cases however, wastewater mercury partitions into sludge, which is being monitored at most POTWs. The MADEP is addressing this issue by focusing on major sources of the mercury entering wastewater such as the dental sector.

- Require air point sources to reduce emissions through implementation of Clean Air Act MACT requirements, and, in the case of utilities and other regulated sources for which no MACT rule has been promulgated, require “equivalent emission limitation by permit” pursuant to section 112(j), with implementation within the next three years;

Response: Massachusetts is already addressing major point sources in the state (MSWCs; coal-fired utilities) with requirements that meet or exceed EPA MACT determinations. Draft regulations for MWIs included emission limits 10-fold more stringent than the EPA MACT determination but were ultimately not needed as all MWIs in this state shut down by 2003.

- Adopt and require best management practices, including installation and proper maintenance of amalgam separators that achieve over 97% reduction in dental mercury releases to the environment, and prohibit disposal of dental amalgam into all waste streams;

Response: This action is already being undertaken. Regulations will be promulgated in 2006. Under a voluntary early adoption program 74% of dentists that generate amalgam wastewater in Massachusetts are already using amalgam separators.

- Prohibit hospitals and other health care facilities from discharging mercury into all waste streams;

Response: In principal the MADEP agrees with this objective. Considerable progress in this area has already been achieved in MA. MWRA has established a mercury discharge concentration of 1 ppb and has taken enforcement action on hospitals exceeding this value. Technologies exist that can achieve this so focusing on eliminating all mercury disposal, especially as effective alternatives for some uses are not available, may not be the most effective approach for this sector. Enforcing solid waste disposal bans for mercury products is difficult.

- Adopt comprehensive mercury legislation to require product labeling, mandate phase-outs and ban sales of mercury in switches, relays, measuring devices and other mercury-containing products, regulate and eliminate the use of elemental mercury, eliminate mercury releases from all combustion units and sources, mandate amalgam separators at all dental clinics, require manufacturers to pay for mercury collection programs, direct manufactures to test and disclose the mercury content of certain products used by health care facilities, ban the landfill disposal of mercury-added products, authorize the state to participate in a multi-state clearinghouse, and eliminate the use of mercury products in schools. Until such legislation is enacted, the Commonwealth will have to rely on voluntary efforts and education, which are important and have achieved some good results, but which do not constitute full implementation of Massachusetts' mercury control strategy.

Response: The MADEP agrees and supports mercury products legislation but will need additional resources to effectively implement such a program. Increased manufacturer responsibility, as opposed to reliance on disposal bans that impose full responsibility on consumers, is a preferable approach. Note that the Massachusetts MSWC rules, which require mercury source separation, have collected several thousand pounds of mercury and are not voluntary.

- Ban disposal of mercury under MADEP's solid waste regulations.

Response: As noted in a prior response, enforcing solid waste disposal bans for mercury products is difficult, if not impossible, and puts the onus on the consumer. MA DEP believes a better approach is to identify and eliminate sources of mercury prior to them entering the waste stream.

- State agencies and the state university system should cease purchasing mercury-added products unless it has been determined that alternatives are not cost-effective or available. Each year, the state should also report on the categories and quantities of alternatives to mercury-added products purchased in the prior fiscal year and outline the steps taken to investigate and purchase alternatives to mercury-added products.

Response: State purchasing requirements already give preference to non-mercury products. Data are not currently collected in a form that would allow the suggested report to be completed. The region is currently assessing data on mercury-added products sold in the Northeast, which number in the thousands. Gathering meaningful data on state purchases of such products every year would be a

huge task, require the diversion of resources away from other activities and would provide information of limited value.

- By December, 2005, certify to EPA that there has been full implementation in Massachusetts of all source specific emission reduction actions; source reduction and safe waste management actions; and all other action items in the New England Governors/Eastern Canadian Premiers' 1998 Mercury Action Plan.

Response: The MZMS and NEG-ECP MAP established aggressive but achievable goals including 50% reduction by 2003 (which was exceeded); and 75% by 2010 (which we are well on the way to meeting). Massachusetts has in fact already implemented many of the actions specified and is working towards the others. These are adaptive management plans that are iterative and long-term in nature. MA DEP agrees however that the implementation process needs to be routinely monitored and tracked into the future to determine its level of success and the potential need to put these waters back on category 5 of the Integrated List. The proposal thus includes biennial reporting.

Comment: Regarding regional sources, to make the required showing that no state-specific mercury TMDL is necessary, binding commitments would be needed from all of the New England states to implement the following actions to eliminate mercury pollution:

Response: It is not clear what is meant by "binding commitments". Each state has, and uses, its regulatory authority to implement the mercury action strategy. In some cases more authority may be needed and will be sought. See above for additional specific comments on the following bullets.

- Require, through NDPES permits, that all NPDES facilities (including municipal wastewater treatment plants) develop and implement mercury minimization plans and sampling requirements, and impose water quality based effluent limitations and conditions to that end;

- Require air point sources in New Hampshire, Rhode Island, Connecticut, Maine, and Vermont to reduce emissions through implementation of Clean Air Act MACT requirements, and in the case of utilities and other sources for which no MACT rule has been promulgated, require "equivalent emission limitation by permit" pursuant to section 112(j), with implementation of MACT controls within the next three years;

- Adopt and require best management practices, including installation and proper maintenance of amalgam separators that achieve over 97% reduction in dental mercury releases to the environment, and prohibit disposal of dental amalgam into all waste streams

- By December, 2005, all states would certify to EPA that there has been full implementation of all source specific emission reduction actions, source reduction and safe waste management actions, and all other action items in the New England Governors/Eastern Canadian Premiers' 1998 Mercury Action Plan.

Comment: In addition to state and regional reductions, the MADEP proposal acknowledges that attainment of WQS is mathematically impossible without "aggressive national actions to address out-of-region sources." The report is silent, however, regarding what out-of-region actions will occur and whether they will result in attainment of WQS in Massachusetts within a reasonable time. Without this information, the alternative pathway proposal is incomplete and does not meet the requirements…"delisting waters impaired by point sources must be supported by issuance of new effluent limits; delisting of waters impaired by nonpoint sources must be supported by (a) identification of controls to be relied upon, (b) authorities under which the controls are required, and (c) documentation that when fully implemented the controls will result in attainment of WQS". An analysis of out-of-region sources and pollution control efforts should be included in the final report.

Response: Massachusetts has clarified the need for national action including reductions required. With respect to the specific supporting documentation demanded. a) There are a potentially unlimited number

of combinations of sources and controls that could achieve the required reductions. It is beyond reason to expect Massachusetts or any other individual state to complete the full national assessment needed to determine optimal approaches. Furthermore, national decisions on these approaches are not controlled by the states. MA has and will continue to advocate for the strong national mercury reduction programs that are commensurate with our state and regional efforts.. This is why Massachusetts, the NEG-ECP MTF and ECOS QSC have all advocated for completion of the much-delayed National Mercury Action Plan (or Roadmap, as it is now called). b) The authorities will depend on the sources targeted but would likely involve a combination of the CAA, CWA and RCRA. c) This is essentially a TMDL calculation exercise that, as discussed above, we do not think will be particularly informative.

Comment: In the case of national emissions, the primary source of mercury is from coal-fired electric utilities. Regulation of mercury emissions from utilities was delegated to EPA for special review under § 112(j) of the Clean Air Act. Following that review, the EPA determined in 2000 that mercury emissions from utilities are a hazard to public health and that emission regulations are "appropriate and necessary." Under the provisions of Title V of the Clean Air Act, EPA should have promulgated Maximum Achievable Control Technologies (MACT) standards for mercury emissions from coal-fired power plants by December 20, 2002.

EPA, however, has yet to produce a national rule. In the absence of action by EPA, states must develop MACT permits on a case-by-case basis. While we are not aware of any source-specific mercury MACT standards, some states have begun to take action. Massachusetts and Connecticut, for example, have enacted mercury control requirements on power plants that require 85 to 95 percent reductions, respectively, starting as soon as 2007. This is not an extreme requirement: some facilities in the U.S. and Europe are already meeting those standards. Thus, a very high level MACT is possible. The EPA's draft proposed MACT rule, however, would only result in a 29 percent reduction by 2007. Even the EPA's alternative proposal, the mercury cap and trade rule, would only reduce emissions by 29 percent by 2008 and 70 percent by 2018. Thus, while the necessary reductions in mercury emissions are technologically and economically achievable, current EPA proposals are so weak that even at full scale implementation – a highly unreasonable fourteen years away – these other pollution controls will not result in attainment of WQS in Massachusetts or other New England states. Similar circumstances exist regarding emissions from other major airborne sources of mercury, such as municipal waste and medical incinerators.

Therefore, delisting of these water bodies from Massachusetts' 303(d) list of water bodies requiring a TMDL is inappropriate at this time, in large part because of EPA's failure to use its existing authorities to address the problem. Nonetheless, CLF concurs with MADEP's concern that development of a Massachusetts-specific TMDL for mercury would shed little light on the region's ability to control mercury sources in New England. Moreover, the proposal presents a strong argument that a combination of federal, regional, and state controls on mercury are the most effective means to remediate mercury impairment. Simply put, the mercury problem does not afflict Massachusetts alone, nor can it be solved by Massachusetts alone.

Response: Massachusetts recognizes the limitations of federal proposals for controlling mercury emissions from utilities which is why we have extensively commented on the inadequacies of the EPA proposals and why Massachusetts and Connecticut, as noted by CLF, have adopted stringent utility regulations (soon to be joined by New Hampshire). This is further evidence of the progress being made by the New England States. We have strengthened the language in our proposal to indicate the need for more aggressive national controls. However, as you are aware MA DEP does not have the authority to implement the necessary controls beyond our state boundary therefore our proposal is relying on EPA to achieve the national reductions required.

MASSACHUSETTS IS NOT PROPOSING TO DELIST THE IMPAIRED WATERBODIES. We are proposing to move waters impacted solely by atmospheric deposition to Category 4b, which is also a list of "impaired waters" where other actions are taking place to address the issue. A TMDL will not help solve the problem. Massachusetts and the other New England states are already implementing comprehensive plans to address the problem and stronger *NATIONAL* action is needed. TMDLs are not needed to reach this conclusion.

Comment: Removing water bodies impaired by atmospheric deposition of mercury from the Commonwealth's 303(d) priorities list is not the only solution, however. In the first place, as noted above, removal to category 4(b) is inappropriate and unlawful under statutory and regulatory provisions and the EPA's guidance document. Secondly, removal could be counterproductive as it would also remove the affected water bodies from annual review and eliminate them as a cleanup priority. Rather than delisting, CLF recommends that, consistent with the environmental and public health hazard represented by mercury pollution, Massachusetts elevate these contaminated water bodies to the top of its 303(d) priorities list and file a TMDL plan that petitions EPA to assume immediate responsibility to either coordinate a regional TMDL or enact stringent national pollution control requirements that would make production of a TMDL unnecessary. As part of its request, the Commonwealth should offer to make the in-state mercury reduction commitments listed above and to partner with EPA to develop a regional mercury TMDL. CLF further recommends that Massachusetts make clear in the proposal that should EPA refuse to take the lead responsibility to develop mercury TMDLs, the Commonwealth cannot and will not produce adequate and effective stand-alone mercury TMDL for Massachusetts. That is, despite the high priority Massachusetts places on eliminating mercury emissions, the report should state that the national and global scope of the problem effectively prohibit the Commonwealth from drafting a meaningful or enforceable TMDL.

Response: As indicated in the Alternative Proposal document, continued alternative listing of mercury-impaired water bodies would be contingent upon continued progress in implementing the state mercury reduction activities. This determination would be based on continued progress reviews. If anything, the alternative listing option provides participating states with an incentive to address mercury impairments and would not "eliminate them as a clean-up priority". As it currently stands, mercury is already low on the TMDL priority list of many states because of technical and resource concerns and the realization that much of the problem is beyond state control. In fact, TMDL "paralysis" likely impedes more extensive testing of water bodies in some states. MA DEP believes that taking the proposed action will raise the level of concern and emphasis on the need for national controls equivalent to those being implemented in MA and the New England region.

Comment: Under this scenario, the undersigned organizations believe that whether the EPA accepts or declines the Commonwealth's request, it must still take lead responsibility for the mercury issue, as it should. If EPA accedes to Massachusetts' request and approves the TMDL plan, it would, under the terms of that TMDL, be accepting responsibility to draft the regional portions of that TMDL. If EPA rejected the MADEP TMDL plan as inadequate, it would then be required to establish pollution loads itself.

We would also like to emphasize that we do not view this strategy as the states dumping an unwanted administrative burden on EPA. Rather, EPA is legally and logically the right agency to do the job. Mercury is ubiquitous in our region and comes from sources in scores of other states. EPA has already developed efforts to model mercury contamination in New England and trace the atmospheric deposition back to the various original sources. Thus, it has already done much of the necessary scientific work to develop a mercury reduction strategy for the region. Likewise, unlike the states, EPA has the legal ability to require national mercury source reductions through existing laws such as the Clean Air Act and Clean Water Act permitting. Thus, we look forward to working cooperatively with the Commonwealth to ensure that EPA fully utilizes its existing authority to eliminate this deadly hazard to public health and the environment.

We would also like to take this opportunity to point out that regardless of progress on TMDLs, mercury contamination must also be addressed and certified in Massachusetts' annual Water Quality Management (WQM) plans. The issuance of a statewide fish consumption advisory for mercury, inclusion of waters on the EPA approved 303(d) list, and inclusion of all water bodies in the 305(b) report designate the identified waters as an "area with substantial water quality control problems" pursuant to § 208 of the Clean Water Act. Moreover, where a substantial water quality control problem is located in two or more states, and is a problem for which area wide waste treatment management plans would be most effective, the area wide designation should be encompass the entire multi-state area. In the case of mercury contamination, the area wide designation should be the entire air shed of the Midwestern and

Northeastern United States: all states which also have statewide fish consumption advisories for mercury and have included affected waters on EPA approved 303(d) lists. Elements of the WQM plan for mercury must include, among other things, the establishment of a regulatory program to "regulate the location, modification, and construction of any facilities within such area which may result in any discharge in such area."

The § 208 planning tool is a critical component of the Clean Water Act's mandate to restore and maintain America's waters, and has recently been cited by the federal courts as an integral means to achieve the Act's goals. Massachusetts, like other states, has the obligation to annually update water quality management plans adopted pursuant to section 208. Likewise, EPA has a mandatory duty to approve updated plans and assure that adopted plans are consistent across the identified planning area. As a result, all control measures necessary to achieve compliance with water quality standards in Massachusetts, and throughout the planning area, should be identified and included in updated water quality management plans coordinated through EPA.

Response: The control measure has already been identified---it is virtual elimination of anthropogenic mercury emissions. Massachusetts is implementing a comprehensive, adaptive strategy that has already achieved substantial progress towards this goal. In addition, mercury has been identified as a high priority, not only in Massachusetts but also in the Northeast Region, in numerous documents that have been cited in this proposal and in the 303(d) listings. Mercury controls will be highlighted as an important issue in all applicable water quality management planning documents produced by the MADEP. The MADEP clearly remains committed to resolving this high-priority issue.