From: **Kristy Senatori** ksenatori@capecodcommission.org
Subject: FW: EPA comment letter on draft CWA 208 update
Date: November 20, 2014 at 11:40 AM
To: Anne McGuire amcguire@capecodcommission.org

From: Hunter, Johanna [mailto:Hunter.Johanna@epa.gov]
Sent: Thursday, November 20, 2014 10:38 AM
To: Paul Niedzwiecki
Cc: Kristy Senatori; Erin Perry; Feuerbach, MaryJo
Subject: EPA comment letter on draft CWA 208 update

November 20, 2014
Paul Niedzwiecki, Director
Cape Cod Commission

Dear Mr. Niedzwiecki:

EPA is submitting this comment letter to the Cape Cod Commission (the Commission) on the draft Clean Water Act Section 208 Plan Update for Cape Cod. At this time, we offer the following comments on seven key topics that we believe would benefit from additional attention and/or clarification as you move toward a final version of the plan update: monitoring; pilot technologies and adaptive management; the use of policy and regulatory tools; TMDL vs MVP calculations; designation of waste management agencies; nitrogen reducing septic systems; and opportunities for regionalization of activities. Detailed below are our specific comments on each category, which are primarily technical at this point. We also, of course, intend to continue our dialogue with you and with the Commonwealth on the many legal, policy, and technical aspects of this very important, complex, and dynamic planning endeavor.

Finally, we want to take this opportunity to underscore the importance of the Commission submitting a Final 208 Plan Update to the Commonwealth by the beginning of 2015, consistent with the schedule outlined by you in an affidavit filed in connection with *Conservation Law Foundation v. EPA*, Case No. 1:11-cv-11657-MLW, litigation now pending in the United States District Court in Boston. We look forward to working with you to finalize the updated plan.

Monitoring
A comprehensive monitoring program will be critical to achieving a primary objective of the Cape Cod 208 Plan Update, which is to address the impacts of nutrient loading to the Cape Cod embayments and restore water quality.
To do so, it is necessary to track the progress of restoration. Although monitoring is mentioned in the Plan Update now, the details of the monitoring discussion (e.g., pilots, technologies, TMDL compliance, data management, assignment of nitrogen reduction credits, etc.) are not part of the Update. Instead, the Commission is relying on the ongoing work of its Monitoring Subcommittee to produce a report or document that it intends to provide advice and guidance on appropriate monitoring protocols for technology efficiency and total maximum daily loads, while identifying a process for consolidating all available monitoring data in a central location

and format. We are concerned that this approach—i.e., of reserving the details of monitoring for a separate document or guidance—downplays the importance of monitoring in the Update, and may also result in the monitoring discussion not getting the same level of review as the rest of the Update. Monitoring is a crucial part of the Update and should be addressed as much as possible in the final plan submittal with milestones and a schedule for developing detailed recommendations. As only one example, towns will need to know how their nitrogen removal credits are determined and monitoring is a central part of this process.

Adaptive Management and Pilots

The Commission recommends that communities use an adaptive management approach to carry out watershed planning and restoration. The Update identifies a wide range of traditional and more innovative technologies for consideration. The Region believes that the most environmentally effective and affordable solution for many watersheds will likely include a combination of traditional and innovative technologies that reduce the release of nutrients and other pollutants and then treat nutrients as it flows into ground water, wetlands, and/or surface waters. Although the hybrid scenario approach presents a sequential, step-wise approach for consideration of technologies, we believe that traditional and innovative approaches should be considered concurrently to best tailor an approach for each watershed, as it is the Region's view that time is of the essence when addressing nutrient impacts on water bodies given the tendency of those pollutants to be retained and to recycle in ecosystems, amplifying their adverse effects.

EPA supports the use of innovative technologies to restore the Cape's waters, and expects that some of these technologies will be a key part of an effective, sustainable, and affordable plan. However, many of the technologies discussed in the draft plan have not been widely used so their expected nitrogen reduction performance is uncertain. The Region has recommended that many of the new innovative technologies be piloted before they are incorporated into plans for wide-spread use around the Cape. The potential cost of failure and risk associated with the use of new or unproven technologies should be weighed against their potential for cost savings, enhanced remediation, and other environmental benefits (such as reduced energy use) if those technologies perform as hoped. In cases where pilots suggest that a technology will not perform as hoped, watershed plans should incorporate a "back up" plan using more certain approaches that will lead to restoration. To minimize risk and avoid having many communities expend funds and time to design and install technologies that may not perform as hoped, it is EPA's recommendation to pilot these technologies in a relatively small number of watersheds (but sufficient to provide a fair test of the technologies and their potential for transferability) before they are incorporated in a wide-spread fashion into communities' adaptive management approach.

Anticipated Regulatory and Policy Changes

The Update includes several recommendations for state regulatory and policy changes to support watershed planning, adaptive management and the implementation of restoration activities. Examples include watershed permitting, MEPA review, designation of nitrogen sensitive areas, mandating water abatement districts, assignment of nitrogen reduction credits, and the approval of Comprehensive Wastewater Management Plans and/or Targeted Nutrient

Management Plans. The Region not only anticipates a more comprehensive and detailed analysis of the merits of these proposals in the final Update, but also an explanation of how specifically the Commission and MassDEP will implement the waste management agency requirements of section 208. The Commission's task of identifying agencies to implement the Update is obviously related to the Governor's role in designating one or more waste treatment management agencies to carry out the Update, and the Region expects close coordination and consultation between MassDEP and the Commission while the Update is being finalized to ensure final determinations on these matters have been made, and have been made consistently, so that the Governor's designation(s) may be made at the time the Final Update is submitted to EPA.

TMDL/MEP versus MVP Loads.

The TMDL/MEP and MVP loads should be as consistent as possible, and where there are differences, they should be clearly explained. We recognize the benefits of using the MVP tool to develop watershed scenarios, as described in Chapter 4 of the Draft 208 Plan, across the Cape and to more easily incorporate changes in land and water use. However, if MVP loads differ from approved TMDL/MEP loads, the plan should explain why there are differences to avoid confusion on the part of the municipalities on Cape and the public as a whole. Provided the Commission can minimize or adequately explain differences between the TMDL/MEP and MVP loads, we recommend the Commission utilize the target loads (kg/yr) from the TMDL/MEP as the target loads in the watershed scenarios. Whatever planning tools are ultimately provided to the communities in conjunction with the Final Update, the Commission must ensure that they contain clear information about how the loads are calculated. In addition, the Final Report should clearly state that successful implementation of the TMDL is measured by attaining target water quality concentrations at sentinel stations, as consistent with the TMDL/MEP.

Nitrogen Reducing Septic Systems

Innovative and Alternative Nitrogen Reducing Septic Systems (commonly referred to as I/A systems or technologies) provide an important opportunity to reduce the release of nitrogen from onsite systems. The management of I/A technologies will be an important consideration as communities implement their restoration plans. The Plan should identify types of Management entities and their essential role and function. Wide use of I/A technologies requires management entities that can ensure high quality system installation and inspection, maintenance and operation, service provider training and certification, qualified installers and construction inspectors, performance tracking, etc. Also, in Massachusetts there is a very limited number of I/A systems approved by DEP for "general use," restricting home owners and towns in applying I/A technologies in areas requiring less than 50 percent reduction in nitrogen loads. The Plan should express that the Commission and DEP will take active roles to effectively and efficiently evaluate and approve current and future technologies to retrofit current systems or apply as new installations.

Opportunities for Regionalization of Activities

We recommend that MassDEP and CCC consider the benefits of establishing regional entitles to provide consistent management of some activities to reduce their cost. Regional entities could provide functions across community shared watersheds, sub-regions or across the county.

Activities that may especially benefit from a regional approach include monitoring, onsite wastewater system management (including operation and maintenance), and the extension of sewering.

For example, a regional monitoring entity could assist with or be responsible for the development of Quality Assurance Project Plans, sampling and analysis, data entry, trend analysis, calculation of nitrogen reductions, and oversight. The regional oversight of IA systems could provide better oversight of system installation, ensure adequate inspection, maintenance and operation takes place, and provide consistent training and performance tracking. The regionalization of septage management could also provide opportunities for its reuse. Regionalization of sewering brings down its relative cost and we recommend that the Commission and towns identify opportunities to tie multiple towns into a single wastewater system, especially in areas with multi-town watersheds or where it makes sense to extend sewering to serve nearby watersheds needing restoration.

Designation of Waste Management Agencies
The Commission proposes in the Draft Plan Update to delay the designation of waste management agencies until June 2015. We would like to discuss this date further with the Commission and DEP to ensure it fits with the timing of the Cape settlement agreement and subsequent Court Order. The Region intends to outline its expectations regarding the designation of the waste management agenc(ies), and the timing of such designation, in a subsequent letter to the Commission and MassDEP.

Our staff can meet and discuss any comments or questions you may have. Detailed below are chapter specific comments. Thank you and your staff for all the hard work that went into developing the draft plan update.

Best regards,
Johanna

Johanna M. Hunter, Chief
Watersheds and Nonpoint Program
EPA Region 1

Attachment A: Technical Comments

Executive Summary
Pg. vii. Impaired Waters and Total Maximum Daily Loads. The plan mentions that "The most recent list for Cape Cod waters is the Cape Cod Coastal Drainage Areas 2004-2008 Surface Water Quality Assessment Report." That document is the most recent water quality assessment of the Cape Drainage Area. The most recent 303(d) list for MA waters is from 2012 and is entitled "Massachusetts Year 2012 Integrated List of Waters" and is available at: http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html.
This section (and other sections of the draft Plan and Barnstable Cost Report v.2) mentions that TMDLs are enforceable under the federal Clean Water Act." The statement is incorrect. We

recommend scanning the document to correct all references that characterize TMDLs as being in and of themselves enforceable. Other federal, state, and local authorities are used to implement the TMDL. Many of those authorities are enforceable (e.g., NPDES MS4 permits, MA groundwater discharge permits, etc.).

Page vii. Safe Drinking Water Act. In the first paragraph, last sentence, the plan mentions that "There are 17 SDWA regulated public water suppliers on Cape Cod." This is incorrect since it does not include all three kinds of public water suppliers on the Cape: community, non-community non transient, and transient non-community suppliers. The section should clarify that it refers to the number of community water suppliers on Cape Cod. Also, when speaking about the number of contaminants regulated by the SDWA, "over 90" is generally used versus "83" as written in the report. Similar information was also included on Pg. 5-4 and should be updated.

Chapter 2: Cape Cod Baseline -- the People and the Place

Pg. 2-7. Eutrophication. The plan mentions that "The watershed nitrogen load that changes a healthy system to a eutrophic condition is defined as a critical threshold. This is legally referred to as a Total Maximum Daily Load (TMDL) under the federal Clean Water Act." The TMDL is not the load that changes a healthy system to a eutrophic one. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that load among the various sources of that pollutant.

Page 2-15. Nitrogen in Drinking Water Supplies. The legend in Figure 2-18 should read "community water supplies" not "public water supplies" since it seems to only include community supplies. The statistics for nitrogen levels in community drinking water supplies and years of data noted in the text are not consistent with the information provided in the corresponding Figure 2-19. In addition, Figure 2-19 has two different titles. One title indicates the data is for community wells and the other indicates non- community wells. The section should explain the discrepancies between the text and figure.

Page 2-17. Other Considerations. Massachusetts defines three categories of public water systems: community, non-community non-transient, and transient non-community. The term "semipublic" water systems is not used. The description of the number of contaminants and the types of samples in which they were detected is not clear.

Chapter 3: Nutrient Mitigation Technologies and Policies

Pg. 3-32 to 3-34. Traditional Infrastructure. (See also Pg. xii of the Executive Summary). The Plan Update recognizes that I/A technologies require management oversight for effective operation (homeowner and professional) and professional maintenance. Diligent responsible management entities are critical. Broad use of I/A technologies requires management entities that can ensure high quality system installation and inspection, maintenance and operation, service provider training and certification, qualified installers and construction inspectors, performance tracking, etc. Responsible management entities (RMEs) can include public utilities, stormwater-like utilities, regional service authorities, county entities, public wastewater treatment facilities (POTWs), and others. EPA has released voluntary guidelines for the management of onsite and clustered wastewater systems with further information about

management options. The Commission may wish to review and refer to these guides, entitled "Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems" dated March 2003 and "Handbook for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems."
Pg. 3-41 to 3-42. Wick Well. Chapter 3 identifies the technologies that EPA recommends be piloted, with the exception of wick wells. The Region is not sure if this was intentional or an oversight.

Chapter 4: The Cape Cod Model – Technical Review
Pg. 4-1. Watershed Approach. The plan mentions that "Many of these watersheds have established and enforceable total maximum daily loads (TMDLs)." As explained above, TMDLs, in and of themselves, are not enforceable.

Pg. 4-2. Targeted Watersheds. The discussion about watershed scenario development should discuss how the target loads for reduction were calculated. If loads differ from approved TMDLs and MEP reports, the plan should explain why there is variation between the MEP and MVP loads.

Pg. 4-4 to 4-6. Traditional and Non-Traditional Scenario Development. It is important that communities understand the full benefits and drawbacks of their selected approaches. To help communities with this process, the discussion about traditional and non-traditional scenario development should present an evaluation of the benefits and drawbacks of each scenario approach. The benefits and drawbacks of traditional approaches are summarized on pg. 4-5, however the section did not include a comparable discussion in the section about the drawbacks of non-traditional practices. While nontraditional approaches show promise and may be effective solutions, it is important to mention that many of the nontraditional approaches have not been widely used so their expected nitrogen reduction performance is less certain. Until their performance is established, their "nitrogen credit" is uncertain. As a result, many of the nontraditional approaches should be installed as pilots and monitored to better characterize their performance before they are widely used on Cape Cod. Communities should factor in the level of performance certainty and the cost of pilots and monitoring, when they are weighing the benefits of traditional vs. nontraditional technologies.

Pg. 4-11. Hybrid Watershed Planning Approach. The Region is pleased to see the inclusion of a hybrid watershed planning approach. The approach is clearly aimed at minimizing the use of sewering. The Region believes that the most environmentally effective and affordable solution for many watersheds will likely include a combination of wastewater source reduction through the use of conventional sewering, satellite and cluster systems, and/or IA systems and ecotoilets; fertilizer reduction; stormwater controls; and treatment of nutrients along their flow path using innovative technologies. Although the hybrid scenarios approach presents a sequential approach for consideration of technologies, we believe that all approaches must be on the table and should be considered together, to best tailor an approach that meets the unique environmental and community needs in the watershed.

Pg.4-13. Monitoring. The section mentions that two types of monitoring will be necessary

moving forward: compliance monitoring and performance monitoring. It is important to differentiate between the need for ongoing performance monitoring and pilot monitoring. We have recommended to the commission that many of the new technologies identified in plan be piloted, and recommend additional monitoring of pilots to fully understand their potential effectiveness on Cape Cod.

Pg. 4-13. Monitoring. I/A systems on the Cape are monitored and tracked by Barnstable Country at the Massachusetts Alternative Septic System Test Center. System monitoring is also required for classifying new technologies as "provisional use" and "general use" under DEP's regulations. However, the Commission's Monitoring Committee should review and discuss circumstances and conditions to design monitoring approach(s) and protocols to characterize issues for future decisions, and assess questions on current and long-term performance and baseline effluent loading, Pharmaceuticals and Personal Care Products (PPCPs) and Contaminants of Concern (CECs), sampling practices, effluent filters, two-compartment tanks, sampling ports, seasonal use, time of day/day of week, sampling practices, etc.

Chapter 5. Regulations

Section 5

Pg. 5-3. Impaired Waters and TMDLs. The plan mentions that "The most recent list for Cape Cod waters is Massachusetts Year 2012 Integrated List of Waters." It would be more accurate to say "The most recent impaired waters list for Massachusetts, including Cape Cod waters, is the Massachusetts Year 2012 Integrated List of Waters." The plan should also mention the existence of bacteria TMDLs for some waterbodies on Cape Cod. Where relevant, communities should incorporate bacteria reduction needs into their watershed approach.

Pg. 5-3 to 5-4. Nonpoint Source Pollution. Please note that MassDEP updated its statewide Nonpoint Source Management Program in 2014. As part of this effort, the MA Office of Coastal Zone Management also updated its Coastal Nonpoint Pollution Program 5-Year Implementation Plan and 15-year Program Strategy, and included it in the statewide plan. You may obtain a copy of the new plan from MaryJo Feuerbach (Feuerbach.maryjo@epa.gov) at EPA Region 1, or from Jane Peirce (jane.peirce@state.ma.us) at MassDEP.

Pg. 5-5. Municipal Separate Storm Sewer Systems (MS4). The section incorrectly mentions that the small MS4 general permit for New Hampshire is final. This is incorrect. A draft general permit has been released. EPA's website (www.epa.gov) offers helpful case studies and guidance to help communities develop stormwater management programs. Please also note that EPA has issued the draft MA MS4 permit.

5-6. The second sentence of the first paragraph reads indicated that NOI's for MS4 permit coverage be submitted within 90 days of the issuance of the draft permit, this should be changed to within 90 days of the issuance of the final permit following public the comment period.

5-7. The second sentence of the first paragraph reads indicated that NOI's for MS4 permit coverage be submitted within 90 days of the issuance of the draft permit, this should be changed to within 90 days of the issuance of the final permit following public the comment period.

Chapter 7. Cost and Financial Affordability

Pg. 7-9. 604(b) Water Quality Planning Grants. These grants are provided through federal EPA funding to states to carry out Section 604(b) of the Clean Water Act. For this reason, the program should be moved under the "Federal Funding" section.

Pg. 7-9. State Revenue. You may wish to include the MA Office of Coastal Zone Management's Coastal Protection Remediation grant program. Information is available from Jan Smith at jan.smith@state.ma.us.

Pg. 7-10. EPA Nonpoint Source Section 319 Grant Program. This section does not accurately portray the priority Section 319 activities funded in Massachusetts. Section 319 funding is provided from EPA to MassDEP. Each state identifies its program priorities in its Nonpoint Management Program Plan. A copy of the program plan may be obtained from EPA or MassDEP.

Barnstable County Cost Report, Updated April 2014 v2; and Technologies Matrix

The Barnstable Cost Report v.2 mentions that TMDLs are enforceable under the federal Clean Water Act." This statement is incorrect and we recommend scanning the document to correct all references to TMDLs as having enforceable authority.

Both the Cost Report and the Technologies Matrix mentions that MassDEP approves I/A Systems and I/A Enhanced Systems, at 19 mg/L and 13 mg/L, respectively. It should be noted that there are no MassDEP approved I/A technologies that meet a 13 mg/L effluent quality.In the Technologies Matrix a correction may be needed for information regarding Title 5 Septic System Replacement. In the matrix column P41 displays a "Low Value" of 34.375 mg/L, while column Q41 displays a "High Value" of 34.00 mg/L.