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July 17, 2009

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
PHASE III - FINAL EIR/COMPREHENSIVE WASTEWATER MANAGEMENT PLAN

PROJECT NAME	: Chatham Comprehensive Wastewater Management Plan
PROJECT MUNICIPALITY	: Chatham
PROJECT WATERSHED	: Cape Cod
EOEA NUMBER	: 11510
PROJECT PROPONENT	: Town of Chatham
DATE NOTICED IN MONITOR	: June 10, 2009

As Secretary of Energy and Environmental Affairs, I hereby determine that the Phase III - Final Environmental Impact Report (FEIR) submitted on the above project **adequately and properly complies** with the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00).

Project Overview

The Town of Chatham's comprehensive wastewater management planning process has been undertaken for the purposes of:

1) Evaluating and planning for the impacts to the Town's marine and freshwater resources from existing development and anticipated future residential and commercial growth in the Town of Chatham over the 20-year project planning period (ending in 2030);

2) Evaluating and quantifying the Town of Chatham's existing and future contributions to nitrogen loading of coastal embayments and freshwater ponds from on-site septic systems over the project planning period;

3) Evaluating the feasibility of centralized and decentralized wastewater treatment options, including the upgrade and expansion of the Chatham Wastewater Treatment Facility (Chatham WWTF) to meet the estimated 2030 nitrogen control needs and Total Maximum Daily Loads (TMDLs) established for the marine embayments surrounding Chatham;

4) Evaluating alternative methods for the disposal of treated wastewater including on-site and off-site groundwater disposal and wastewater reuse for landscape spray irrigation, with the intent of reducing groundwater discharges from the Chatham WWTF;

5) Evaluating the feasibility of non-structural and non-traditional nutrient management techniques to further reduce nutrient loading to the marine embayments surrounding Chatham; and,

6) Reviewing the long-term effectiveness of regional wastewater treatment and disposal options involving the Towns of Chatham and Harwich.

As presented in the Phase III – FEIR, the Town's comprehensive wastewater management plan (CWMP) has been designed to achieve reductions of nitrogen loading sufficient to meet nutrient TMDLs established for the Town of Chatham's coastal embayments and freshwater ponds including Stag Harbor, Pleasant Bay, Sulphur Springs and Taylor's Pond. I note that the Pleasant Bay watershed area is located within the Towns of Chatham, Harwich and Brewster. Pleasant Bay been designated an Areas of Critical Environmental Concern (ACEC) and an Outstanding Resource Waters (ORW) under the Massachusetts Surface Water Quality Standards (314 CMR 4.00). Extensive areas of Priority and Estimated Habitat of rare wildlife have been mapped by the Natural Heritage and Endangered Species Program (NHESP) within the Pleasant Bay ACEC.

MEPA History

This project involves the development of a comprehensive wastewater management plan/facilities plan for the Town of Chatham. The environmental review of the project under MEPA was defined in a Special Review Procedure established by agreement between the Town of Chatham and the MEPA Office in April 1998. The Special Review Procedure called for the filing of four documents:

- Phase I - Needs Analysis;
- Phase II - Screening of Alternatives;
- Phase III - Draft EIR/Facilities Plan; and
- Phase IV - Final EIR/Facilities Plan.

Phase 1– Needs Analysis

The Phase I – Needs Analysis was submitted to the MEPA Office in September 1999 and was found adequate in October of 1999. The Secretary's Certificate on the Phase I - Needs Analysis required the Town to include in the Phase II submittal additional information pertaining to the Town's Needs Analysis, a discussion of the consistency of the CWMP with Executive Order 385, (Planning for Growth), and a discussion of the Town of Chatham's land use and open space goals.

Notice of Project Change

A Notice of Project Change (NPC) was filed with the MEPA Office on March 10, 2004 pursuant to Section 11.10(2) of the MEPA Regulations because more than three years elapsed between the publication of the Secretary's Certificate on the Phase I - Needs Analysis submittal and the Town's filing of the Phase II - Screening of Alternatives document with the MEPA Office. According to the comments received from the Department of Environmental Protection (MassDEP) and Massachusetts Coastal Zone Management (CZM) on the NPC submittal, the Town continued to demonstrate its commitment to the comprehensive wastewater management planning process and continued to work closely with MassDEP, the Cape Cod Commission (CCC), the Marine Estuaries Project (MEP) and others to develop appropriate nitrogen load limits (TMDLs) to be incorporated in the Town's CWMP for coastal embayments surrounding the Town of Chatham.

The NPC included the Town's request to modify the previously established April 1998 Special Review Procedure. The Town proposed to submit for MEPA review a Supplemental Needs Analysis, the Phase II - Screening of Alternatives document and the Phase III - Draft EIR/Facilities Plan document into one MEPA submittal entitled "Alternatives Analysis and Draft Environmental Impact Report (DEIR)/Draft Comprehensive Wastewater Management Plan". The proposed change to the Special Review Procedure allowed the MEPA review of the Town of Chatham's Comprehensive Wastewater Management Plan in three steps:

Phase I – Needs Analysis;
Phase II – Draft Environmental Impact Report/Draft CWMP; and,
Phase III - Final Environmental Impact Report /Final CWMP.

The Secretary's Certificate on the NPC submittal (April 9, 2004) found that the proposed changes to the Special Review Procedure were appropriate and acceptable. The Secretary's Certificate on the NPC required the Town to include in the Phase II document detailed responses to the issues raised in the comment letters previously submitted on the Phase I document and a discussion of the proposed project's consistency with Executive Order 385 (Planning for Growth), and the Town of Chatham's land use and open space goals.

Draft Environmental Impact Report /Draft CWMP- 2nd Notice of Project Change

The Town filed a Draft Environmental Impact Report (DEIR)/Draft CWMP with the MEPA Office on May 7, 2008. On June 13, 2008, I issued a Certificate on the DEIR/Draft CWMP submittal and determined that it adequately and properly complied with the Massachusetts Environmental Policy Act. The Secretary's Certificate required the Phase III - FEIR/Final CWMP submittal provide additional information and a response to comments pertaining to the Town's proposed Adaptive Management Plan, Restoration of Muddy Creek, Growth Management policies, regulations and bylaws and Mitigation.

State Permits and Jurisdiction

The project is undergoing review pursuant to Sections 11.03(5)(a)(3) and (5)(b)(2) of the MEPA regulations, because the project will likely involve the construction of sewer mains ten or more miles in length and the expansion of an existing wastewater treatment facility/disposal facility by more than 1,000,000 gallons per day (gpd). The project will require a Groundwater Discharge Permit and a 401 Water Quality Certificate from MassDEP. The project must be reviewed by the Natural Heritage Endangered Species Program (NHESP) and the Massachusetts Historical Commission (MHC) because portions of the project occur within Priority Habitat and within or adjacent to recorded archaeological sites and archaeologically sensitive areas, respectively. It may require Federal Consistency Review with the Massachusetts Coastal Zone Management (MCZM) Office. It may also require a Construction Access Permit from the Massachusetts Highway Department. The project should comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharges from a construction site. It will also require an Order of Conditions from the Chatham Conservation Commission and, on appeal only, a Superseding Order of Conditions from MassDEP.

The Town anticipates applying for State Revolving Fund (SRF) loans for subsequent planning and construction of proposed sewer project. Therefore, MEPA jurisdiction is broad and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

REVIEW OF THE PHASE III - FINAL ENVIRONMENTAL IMAPCT REPORT and FINAL CWMP

The FEIR contains a detailed description of the Town of Chatham's recommended CWMP. Phase 1 of the Chatham CWMP involves the upgrade and expansion of the existing WWTF, located on an 80.2-acres parcel of municipally-owned property on Sam Ryder Road in Chatham, to meet Enhanced Nitrogen Removal (ENR) standards.

The proposed facility upgrades will enable the Chatham WWTF to treat and dispose approximately 1.3 million gallons per day (MGD) of additional wastewater flows. Under Phase 1, the Town also proposes to expand its existing sewer collection and conveyance system to serve 61 Areas of Concern ((AOCs) – areas experiencing high groundwater and failing septic systems, and industrial/commericial areas)) in Chatham located primarily within the watersheds for Stage Harbor, Sulphur Springs and Taylor's Pond. Construction of Phase 1 is expected to be completed in 2030.

Phase 2 sewer construction activities will involve the further expansion of the Town's sewer collection and conveyance system to serve Chatham's remaining 33 AOCs. Phase 2 will include additional upgrades to the Chatham WWTF and the construction of approximately 11 miles of gravity sewers to collect and convey approximately 0.6 MGD of additional wastewater flow (1.9 MGD total wastewater flows) for treatment and on-site disposal at the Chatham WWTF. The Phase 2 sewer construction work is expected to begin in 2030 and be completed by 2040. Proposed upgrades to the Chatham WWTF will also include the construction of a new Sewer and Water Department maintenance and administration building. As noted in the FEIR, the Chatham CWMP incorporates reserved treatment capacity at the Chatham WWTF to also accommodate the potential wastewater flows from portions of the neighboring Town of Harwich.

Chatham's CWMP incorporates an Adaptive Management Plan (AMP) that outlines a process for reporting the results of the Town's ongoing annual groundwater quality and marine habitat monitoring program to identify the need for any adjustments or mid-course corrections to the phased construction of the sewer expansion project to achieve compliance with TMDLs for the coastal embayments surrounding Chatham. The Draft CWMP also includes a number of non-structural elements designed to reduce nutrient loading including proposed programs for controlling the use of fertilizer products on lawns, gardens and agricultural areas, stormwater management and water conservation.

Wastewater Treatment and Water Quality

Chatham Wastewater Treatment Facility

As described in the FEIR, the previously completed (1996) improvements to the Chatham WWTF have enabled the treatment facility to achieve nitrogen effluent concentrations of 5.6 parts per million (ppm).

The existing treatment capacity of the Chatham WWTF (150,000 gpd) was established by MassDEP in a 1996 Administrative Consent Order (ACO). The Chatham CWMP proposes the phased upgrade and expansion of the Chatham WWTF that will include the Phase 1 construction of an Orbal biological nitrogen oxidation removal process system to provide treatment levels capable of achieving nitrogen effluent concentrations of 3 parts per million (ppm). The Chatham WWTF site is located upgradient of the Cockle Cove embayment and the Sulphur Springs and Taylor's Pond watersheds.

As described in the FEIR, the Town conducted a review of hydrogeological studies, hydraulic load testing and other groundwater modeling analyses pertaining to the existing Chatham WWTF site and concluded that the proposed increases to on-site disposal and groundwater recharge of treated effluent from the Chatham WWTF will not impact existing groundwater table mound heights and nutrient loading to the Cockle Cove and Taylor's Pond. Although the Town's modeling indicates that the TMDL threshold for nitrogen loading to Suphur Springs would be minimally exceeded under Phase 1 and Phase 2 of the Town's sewer expansion project, both MassDEP and CCC have agreed that the Town's modeling parameters pertaining to groundwater flows may be conservative. The Town has agreed to work closely with MassDEP, CCC and the University of Massachusetts School of marine Science and Technology (UMass SMAST) to conduct additional hydrogeologic investigations to document groundwater flow and potentially greater nitrogen attenuation of the downgradient Cockle Cove salt marsh system.

In its previous comments on the Draft EIR/Draft CWMP, MassDEP indicated that a portion of the Chatham WWTF's groundwater discharge site is located within the Zone II of the Town's Indian Hill public drinking water supply well. As a result, the facility's effluent discharge will need to include disinfection to meet Total Organic Carbon (TOC) limits of less than 3 mg/L treatment pursuant to MassDEP's Interim Guidelines on Reclaimed Water (Revised), January 3, 2000. As described in the FEIR, the Town has worked closely with MassDEP to identify TOC treatment alternatives. According to the information provided in the FEIR, MassDEP has subsequently agreed not to require the Chatham WWTF to meet MassDEP's TOC limits because the Indian Hill Well was taken out of production by the Chatham Water Department in 1999 due to the presence of trace amounts of contaminant (tetrachloroethylene (PCE)) and is not presently anticipated to be re-activated and reused as a water supply production well. MassDEP will require the Town to re-evaluate disinfection technology alternatives for the facility should the Town elect to re-activate and reuse the Indian Hill Well in the future.

The Town of Chatham's CWMP includes a commitment to conduct groundwater monitoring around the periphery and downgradient of the Chatham WWTF site to identify any impacts on groundwater resources and embayments surrounding the Town of Chatham. This groundwater monitoring program is expected to be incorporated into a MassDEP groundwater discharge permit for the Chatham WWTF. In its comments, the CCC has recommended that Town's groundwater monitoring program include monitoring for water levels, stream flow and water quality. I ask that the Town work closely with MassDEP, CCC and the Pleasant Bay Resource Management Alliance during the final design of its water quality monitoring program.

Marine Embayments

The Town of Chatham continues to participate in the Massachusetts Estuaries Project (MEP) to conduct water quality sampling and identify nutrient loading problems for the Town's coastal embayments. MEP was created by MassDEP, and UMass SMAST to define the nitrogen limits of coastal estuaries in southeastern Massachusetts.

The Technical Reports produced by the MEP, together with the Linked Water Quality Model and citizen water quality monitoring efforts, were used by MassDEP and the US Environmental Protection Agency (EPA) to establish Total Maximum Daily Loads (TMDLs) for nitrogen loading to Chatham's coastal emabyments and their tributaries. According to the comments received from MassDEP, CCC and others, the estimated nitrogen loading reductions resulting from the Town's proposed phased sewer expansion program are consistent with published TMDLs for Chatham's estuaries and salt marsh embayment systems including; the Stage Harbor/Oyster Pond system, the Taylor's Pond/Mill Creek system and the Pleasant Bay/Upper Muddy Creek/Lower Muddy Creek/Bassing Harbor system. According to MassDEP, the Town will need to provide MassDEP with additional information to demonstrate the maximum nitrogen load that can be assimilated in the Sulphur Springs/Bucks Creek/Cockle Cove system. The Town of Chatham's CWMP also includes a commitment to design and implement a long-term embayment monitoring program that will monitor water quality, eel grass coverage and benthic infauna habitat of Chatham's embayments to document the reductions in watershed nitrogen loads achieved from the Town's phased sewer construction program. The Town should work closely with MassDEP during permitting to ensure that the Town's embayment monitoring program includes compliance milestones to measure the CWMP's success in achieving target reductions of nitrogen loading sufficient to meet nutrient TMDLs established for the Town of Chatham's coastal embayments and freshwater ponds.

Muddy Creek Basin Restoration

The Muddy Creek watershed to Pleasant Bay is shared between the Towns of Chatham, Harwich and Brewster. According to the comments from CCC, sixtyfour percent of the nitrogen load to Muddy Creek originates from the Town of Harwich and thirtysix percent from the Town of Chatham. In addition to reserving capacity at the Chatham WWTF to accept a portion of the Town of Harwich's future wastewater flows, the Town of Chatham has identified the restoration of an old dyke located in the Muddy Creek basin to change the habitat of the upper portion of the creek to a freshwater body or the installation of a 8-16 foot wide culvert at the Route 28 crossing as a means of naturally removing a large amount of nitrogen from Muddy Creek and Pleasant Bay. According to the Town, the enhanced restoration of the Muddy Creek to a partial freshwater system could also reduce the extent of needed sewers currently proposed in the Town's recommended CWMP. As indicated in the FEIR, the Pleasant Bay Resource Management Alliance (Pleasant Bay Alliance) has obtained funding for additional evaluations pertaining to the potential impacts to surrounding resource areas associated with the restoration of Muddy Creek.

Freshwater Ponds

The Final CWMP/FEIR includes an evaluation of the impacts of phosphorous groundwater loading from residential land use on the water quality of large freshwater ponds and lakes located in Chatham.

Using water quality monitoring results collected as part of the Cape Cod Ponds and Lakes Stewardship (PALS), the Town has identified the need for restoring and protecting the water quality of two of Chatham's seven Great Ponds; Lovers Lake and Stillwater Pond. According to the Town, the proposed CWMP will significantly reduce phosphorous to groundwater and phosphorous loading to these ponds and will go a long way to meet the nutrient loading thresholds established in the Town of Chatham's *Action Plan for the Town of Chatham Ponds, November 2003*.

Adaptive Management Planning

The Chatham CWMP includes an AMP that will report to MassDEP the results of the Town's annual ground water monitoring of the Chatham WWTF site and embayment monitoring of Chatham's coastal embayments to document the reductions in watershed nitrogen loads achieved from the Town's phased sewer expansion construction program. The AMP will assist the Town to evaluate the Town's compliance with established TDMLs and identify the need for adjustments or mid-course corrections to Phase 2 of the Chatham CWMP. I strongly encourage the Town to consult with the Pleasant Bay Resource Management Alliance in designing the Town's water quality monitoring program and ask that the Town include the CCC and the Pleasant Bay Resource Management Alliance in the distribution of its annual water quality monitoring report.

Wetlands

According to the information provided in the FEIR, the Town's proposed WWTF upgrades and sewer expansion construction activities will be located primarily within existing roadway right-of-ways and will not result in any direct impacts to wetland resource areas subject to protection under the MA Wetlands Protection Act. The Town should submit a Request for a Determination of Applicability (RDA) to the Chatham Conservation Commission regarding the extent and boundaries of any jurisdictional wetland resource areas located within the project's WWTF site and sewer corridors. I am confident that the Chatham Conservation Commission's review will evaluate the Town's phased construction program and its erosion and sedimentation control plans and mitigation commitments to ensure that the project will be constructed in a manner consistent with the MassDEP Stormwater Management regulations and the Wetlands Protection Act performance standards.

Rare Species

The existing Chatham WWTF site is not located within Priority or Estimated Habitat for any state-listed rare plant and wildlife species as indicated in the current 13th Edition of the MA Natural Heritage Atlas.

The FEIR indicates that two rare species; the Pine Barrens Bluet (*Enallagma Recurvatum*) and the New England Bluet (*Enallagma Laterale*), have been located within the vicinity of the northern border of the facility which may require further review and future inclusion in the MA Natural Heritage Atlas. According to NHESP's comments on the FEIR, portions of the Town's sewer expansion project may include mapped Priority Habitat. NHESP anticipates being able to address any potential concerns associated with the Town's proposed sewer expansion project through the MESA review process. Should NHESP subsequently find that the project will require a Conservation and Management Permit pursuant to the Massachusetts Endangered Species Act (MESA), the Town will need to notify the MEPA Office to explain these impacts and discuss the Town's avoidance/mitigation strategies. I ask that the Town continue to work closely with NHESP and the Chatham Conservation Commission to identify those portions of the Town's Phase 1 and Phase 2 construction activities that that may require MESA review and to identify necessary project construction and post-construction conditions and commitments to avoid an adverse impact to the habitats of state-listed species.

Historical/Archeological Resources

In comments submitted on the FEIR, the Massachusetts Historical Commission (MHC) has requested that the Town provide the MHC with a US Geological Survey topographical map that locates the Town's phased project area and scaled project plans showing existing and proposed conditions to enable MHC to determine if pump stations and other sewer project elements are located within and/or adjacent to recorded archeological sites and archaeologically sensitive areas. These plans should be submitted to MHC as early as possible during the design phase corresponding to each project development phase. If MHC deems the project to have an "adverse effect" on historic or archaeological resources, the Town will need to notify the MEPA Office to describe the Town's commitment to work with MHC to implement appropriate avoidance/mitigation strategies.

Sewering and Growth Management

The FEIR/Final CWMP includes a discussion of the potential future build-out of the proposed Phase 1 and Phase 2 sewer areas and the consistency with Executive Order #385 which discourages unintended growth within areas planned for sewering. In May 2005, the Town passed a new section of the Town of Chatham's *Rules and Regulations of the Sewer Department* designed to limit new growth that might occur in newly sewered areas of Chatham. As described in the FEIR, the Town has adopted a 'flow-equivalent 'regulation that would limit the development or redevelopment of existing properties by restricting the number of bedrooms allowed to the number of bedrooms the property is currently allowed under Title 5 and local zoning.

I encourage the Town of Chatham to consider additional growth control by-laws, regulations, and policies and note that the Town of Orleans has recently proposed (EEA #14414, May 6, 2009) to implement a "checkerboard" sewer connection by-law that will enable the Town of Orleans to select specific lots that will be connected to the municipal sewer system and lots that do not need sewering and therefore will not be allowed to connect to the new sewer system. The Town should adopt any proposed growth by-laws, regulations, and policies prior to the construction of any new sewers extensions.

The Town of Chatham's recommended CWMP proposes to extend sewers to areas of Chatham characterized as coastal floodplains and barrier beaches. In its previous comments on the Town's Phase II - Draft CWMP/DEIR submittal, Massachusetts Coastal Zone Management (CZM) indicated that the Town successfully demonstrated that the proposed sewering project has been designed to eliminate or minimize potential storm damage risks associated with sewering barrier beach areas by locating proposed pump stations outside of the 100-year flood zone and protecting this portion of the Town's proposed sewer collection system from potential wave action. As described in the FEIR, the Town has committed to incorporate a system of check valves into the new sewer collection system for barrier beach areas to minimize impacts in the event of a storm-related breach to the collection system.

Costs to Homeowners

As described in the FEIR/Final CWMP, the Town's proposed sewer expansion program will be constructed in two phases over 30 years and will cost an estimated $340 million dollars. The estimated operation and maintenance costs for the proposed sewer expansion program total approximately $38 million dollars. Each property owner connecting to the sewer system will incur a one-time connection cost averaging between $3,000 and $10,000 depending upon the distance of their home/business from the street, and an average monthly sewer utility cost of approximately $30.00 - $40.00. The project's capital costs will be paid through property taxes. Based on an estimated average Chatham property value of $600,000, the estimated property tax increase for Fiscal Year (FY) 2012 is $102.00 and will gradually increase to $210.00 in FY 2017. The Town anticipates smaller tax increases through FY 2033 and a decline in taxes associated with the sewer project from FY 2033 - 2054. I note the comments received from the Chatham Concerned Taxpayers and others pertaining to the project's estimated cost to homeowners. The Town should continue its public participation program to ensure that the Town's residents will continue to be afforded the opportunity to provide input in the final design and cost effectiveness of the Chatham CWMP.

Future Sewer Expansion

The Town's CWMP has been designed to also accommodate potential future additional wastewater flows from portions of the neighboring town Harwich.

I commend the Town for undertaking a study of potential regional approaches to address the wastewater treatment and disposal needs for the Towns of Chatham and Harwich, and the regional issues pertaining to nutrient loading, wastewater treatment and disposal affecting the Pleasant Bay coastal embayment. I ask the Town of Orleans, together with the Town of Harwich to the west to work together with MassDEP, the Cape Cod Commission and others to continue the discussion of possible opportunities to integrate the Town of Chatham's wastewater treatment planning efforts with the planning efforts being undertaken by the Town of Harwich.

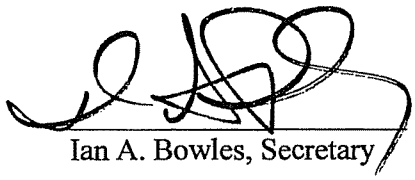
Mitigation

The FEIR provides a detailed description of the Town's proposed mitigation plan, and discusses the value of the proposed mitigation in terms of the resources it provides and the opportunities for open space protection, and active and/or passive recreation it affords.

Conclusion

After a thorough consideration of the comments received from MassDEP, the Cape Cod Commission, the Town of Chatham and others, I am satisfied that any outstanding design issues relating to sewer layout and construction phasing will be fully considered and addressed during state and local permitting. As noted elsewhere in this Certificate, the Town should continue to work closely with MassDEP, CCC and the Pleasant Bay Alliance during final project design.

July 17, 2009
DATE



Ian A. Bowles, Secretary

Comments received:

06/22/09	Massachusetts Historical Commission (MHC)
07/02/09	Natural Heritage and Endangered Species Program (NHESP)
07/10/09	Massachusetts Department of Environmental Protection (MassDEP) – SERO
07/06/09	Town of Chatham, Water & Sewer Departments
07/06/09	Cape Cod Commission (CCC)
07/09/09	Town of Chatham, Office of the Town Manager
07/10/09	Chatham Concerned Taxpayers
07/10/09	Pio Lombardo

EEA #11510 FEIR/FINAL CWMP
IAB/NCZ/ncz

June 16, 2009

Secretary Ian A. Bowles.
Executive Office of Energy & Environmental Affairs
Attn: Nicolas Zavolas, MEPA Unit
100 Cambridge Street, Suite 900
Boston, MA 02114

The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

RE: Comprehensive Wastewater Management Plan/ Final Environmental Impact Report, Town of Chatham. MHC #RC 21171. **EEA # 11510.**

Staff of the Massachusetts Historical Commission have reviewed the Final Environmental Impact Report (FEIR) submitted for the project referenced above. The project involves comprehensive assessment, analysis and evaluation of the Town of Chatham's wastewater needs through 2030 and the presentation of a preferred alternative for wastewater infrastructure expansions and upgrades. The project will include upgrades to the existing wastewater treatment plant and expansion of sewer system infrastructure within sewersheds town-wide. MHC previously commented on the draft EIR for the project in May of 2008 (MHC 5/21/2008). The wastewater treatment plant portion of the project (MHC #RC. 40177) was reviewed in 2006 and at that time that project, as proposed, was determined to be unlikely to affect historic and archaeological resources.

MHC notes that historic and archaeological resources have been considered within several sections of the FEIR, including Chapter 10, Summary of Environmental Impact Analysis (pg. 10-12) and the draft Section 61 Finding (Chapter 12, pg. 12-3). The draft Section 61 Finding indicates that the project proponent will consult with MHC regarding those portions of the collection system and pump stations proposed for location outside of existing road right-of-ways. Review of preliminary collection system infrastructure maps (FEIR Figure 9-1) determined that sewer line infrastructure will be installed primarily within and/or adjacent to existing road right-of-ways. MHC is unable to determine if all proposed pumping stations and system components would also be installed within roadways. As project plans are developed for the preferred project alternative, the project proponent should submit a USGS locus map with the project area clearly labeled and scaled existing and proposed conditions plans to the MHC for review and comment.

The submittal information to the MHC should occur as early as possible, once a feasible location and design has been selected. The submittal should not wait until final plans are developed. MHC review will assist to determine if any, as yet unidentified, historic and archaeological resources may be affected by project elements. For example, archaeological survey may be requested for project elements located in archaeologically sensitive areas.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800), Massachusetts General Laws, Chapter 9, Sections 26-27C (950 CMR 70-71), and MEPA (301 CMR 11). If you have any questions concerning this review, please feel free to contact Jonathan K. Patton, at this office.

Sincerely,

Brona Simon
State Historic Preservation Officer
Executive Director
State Archaeologist
Massachusetts Historical Commission

xc: J. Jefferson Gregg, Stearns & Wheler, LLC
Robert A. Duncanson, Department of Health and Environment, Town of Chatham
William G. Redfield, Water & Sewer Division, Town of Chatham
Steve Chrabascz, USDA-Rural Development, Wareham
Ron Lyberger, DEP-BRP
DEP-SERO
Sara Korjeff, Cape Cod Commission
Chatham Historical Commission
Chatham Historic Business District Commission

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Commonwealth of Massachusetts

Division of Fisheries & Wildlife

MassWildlife

Wayne F. MacCallum, *Director*

July 2, 2009

Ian Bowles, Secretary
Executive Office of Energy and Environmental Affairs
Attention: MEPA Office
Nicholas Zavolas, EOEEA No. 11510
100 Cambridge St.
Boston, Massachusetts 02114

Project Name:	*Comprehensive Wastewater Management Plan*
Proponent:	*Town of Chatham*
Location:	*Various locations throughout Chatham*
Project Description:	*Comprehensive Wastewater Management Planning Project*
Document Reviewed:	*Final Environmental Impact Report*
EOEEA #:	*11510*
NHESP Tracking No.:	*06-20151*

Dear Secretary Bowles:

The Natural Heritage & Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife has reviewed the Final Environmental Impact Report for the Town of Chatham's Comprehensive Wastewater Management Plan (CWMP). At this time, the NHESP would like to provide the following comments regarding state-listed species and their habitats.

This project consists of phased segments, which are located throughout various geographical areas, in the Town of Chatham. Please note that various areas within the Town of Chatham are located within *Priority* and *Estimated Habitat* as indicated in the 13th Edition of the MA Natural Heritage Atlas. The Chatham Wastewater Treatment Plant site is not currently mapped as Priority Habitat. Projects or activities located within Priority Habitat require review through a direct filing with NHESP for compliance with the Massachusetts Endangered Species Act (MESA 321 CMR 10.00).

The NHESP notes that the portions of the project, which are mapped as Priority Habitat, in the MA Natural Heritage Atlas, which is current at that time, would require review through a direct filing with NHESP for compliance with the Massachusetts Endangered Species Act (MESA 321 CMR 10.00). Please note that MESA provides a list of projects and activities which are exempt from review. Portions of this project may be exempt from a MESA review. In particular, the construction and or replacement of sewer lines may be exempt from review under the MESA (321 CMR 10.14(6)).

As the phases of the project move forward, the applicant is encouraged to consult with the NHESP to address any potential state-listed species concerns associated with the project and to establish which portions of the project may require a MESA review. We anticipate being able to address rare species concerns through the MESA review process.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. We appreciate the opportunity to comment on this project. If you have any questions about this letter, please contact Rebecca Skowron, Endangered Species Review Biologist, at (508) 389-6343.

Sincerely,

Thomas W. French

Thomas W. French, Ph.D.
Assistant Director

cc: J. Jeffrey Gregg, Stearns & Wheeler
Chatham of Board of Selectmen
Chatham Conservation Commission
Chatham Planning Board
DEP Southeastern Regional Office, MEPA Coordinator

MEMORANDUM

TO: Nicholas Zavolas, Environmental Reviewer, MEPA Unit

THROUGH: Jonathan Hobill, Acting Deputy Regional Director, Bureau of Resource Protection
David Johnston, Acting Regional Director
Millie Garcia-Serrano, Deputy Regional Director, BWSC
Laurel Carlson, Acting Deputy Regional Director, BWP

CC: Elizabeth Kouloheras, Chief, Wetlands and Waterways and Team Leader, Cape Cod Watershed
Jeffrey Gould, Chief, Water Pollution Control
Brian Dudley, Nutrient Management, Cape Cod Watershed
Richard Rondeau, Chief, Water Supply
Richard Keith, Chief, Municipal Services
Pamela Truesdale, Municipal Services
Gerard Martin, Chief, Site Management

FROM: Sharon Stone, SERO MEPA Coordinator

DATE: July 10, 2009

RE: FEIR EOEEA #11510 – CHATHAM – Comprehensive Wastewater Management Plan (CWMP)

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"For Use in Intra-Agency Policy Deliberations"

MassDEP's Boston Office and Southeast Regional Office (Cape Cod Office) have reviewed the Town of Chatham's Comprehensive Wastewater Management Plan (CWMP), EOEEA #11510, and finds that it adequately addresses the relevant issues regarding the implementation of wastewater and nitrogen mitigation. The recommended alternative is eventually to provide sewer town-wide by 2040 in two phases: Phase 1 will be completed by 2030 and will address necessary nitrogen reductions to meet the Total Maximum Daily Load (TMDL) requirements as established by MassDEP based on the findings of the Massachusetts Estuaries Project (MEP). Phase 2 will be completed by 2040 and will extend sewer service to the remaining areas of Chatham not covered under Phase 1.

The primary goal of this CWMP is to achieve water quality improvements and habitat restoration in the impaired estuarine and embayment systems identified by the MEP and TMDL processes. Wastewater, as load from on-site sewage treatment and disposal systems has been identified as the primary contributor to the controllable nitrogen load and therefore this CWMP concentrates on sewering options to eliminate on-site systems. Restoration targets are based on reestablishing eelgrass or benthic animal communities.

Achieving threshold nitrogen concentrations in the water column at specified sentinel stations will improve conditions sufficiently to realize habitat restoration.
The plan is based on the findings of the MEP reports for specific Chatham embayments and for Pleasant Bay as a whole.

Phase 1 will treat 1.3 MGD on an average annual basis and Phase 2 will treat 1.9 MGD on an annual average basis with discharge at the existing infiltration beds. Scenario modeling by the University of Massachusetts/Dartmouth's School of Marine Science and Technology (SMAST) completed in February 2009 indicated that the nitrogen loads from the proposed WWTF at these flows will not meet the nitrogen threshold at the sentinel station at Buck's Creek. Further investigation will be required to determine the maximum nitrogen load which can be assimilated in the Buck's Creek/Cockle Cove/Sulfur Springs system and then to develop appropriate mitigation strategies to achieve threshold concentrations at design flow. MassDEP, however, believes that initial stages of the recommended plan must go forward to achieve initial levels of nitrogen reduction.

Discharge at the existing open sand infiltration beds has been designed at 30 gpd/sf. The typical loading rate for these types of beds is 5 gpd/sf; however, as noted in the CWMP, rigorous loading tests and modeling support this increased loading rate based on the rapidly permeable soils found at the site. MassDEP evaluated the load tests and modeling and approves these increased rates.

Recognizing that improvements in either the water quality or habitat quality will lag behind the implementation of infrastructure improvements, appropriate monitoring and compliance strategies must be identified. MassDEP position is that the CWMP must identify compliance milestones by which successful implementation will be measured. The CWMP addresses this point by committing to spend $15 to $20 million every two years through to completion of the project. The town has chosen this approach rather than targeting specific neighborhoods in order to retain as much flexibility in implementation as possible. MassDEP agrees that this is a viable approach; however, the CWMP lacks sufficient specificity in how this will be achieved. Particular details such as mechanism for appropriation of the money, process for borrowing and process for determining areas to be prioritized for sewering, etc. are not provided. In a response to comments, the town should provide these details which can then be appended to the CWMP. There should also be a mechanism, possibly through the permitting process, by which MassDEP will review and approve the two year plans one or two cycles in the future.

The CWMP also discusses the concept of adaptive management and the opportunities to allow for mid-course corrections. MassDEP endorses this approach and recognizes that while modeling can point to the right direction, on-the-ground reality may dictate adjustments to the overall plan.

The CWMP as presented is well thought out and presents a viable process for achieving the goals of water quality and habitat restoration.

Construction Activities - EPA
The project construction activities may disturb one or more acres of land and therefore, may require a NPDES Stormwater Permit for Construction Activities. The proponent can access information regarding the NPDES Stormwater requirements and an application for the Construction General Permit at the EPA website:
http://cfpub.epa.gov/npdes/stormwater/cgp.cfm

Bureau of Waste Site Cleanup
Based on the information provided in the FEIR, the Bureau of Waste Site Cleanup (BWSC) searched its database for disposal sites and release notifications. The subject project was not listed as a current site. In addition, no other disposal sites were listed in the immediate vicinity of the proposed project.

The Project Proponent is advised that, if oil and/or hazardous material is identified during the implementation of this project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) may be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary or prudent if contamination is present. The BWSC may be contacted for guidance if questions regarding cleanup arise.

The MassDEP Southeast Regional Office appreciates the opportunity to comment on this proposed project. If you have any questions regarding these comments, please contact Sharon Stone at (508) 946-2846.

N2

William G. Redfield, P.E.
Director

Colleen Furber
Administrator

Town of Chatham

Water & Sewer Departments
127 Old Harbor Road
Chatham, Massachusetts 02633
Tel: 508-945-5150 • Fax: 508-945-5152

July 2, 2009

MEPA Unit, Project #11510
Secretary, Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Town of Chatham's CWMP/FEIR, Project #11510

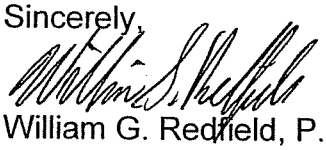
Dear Secretary of Energy and Environmental Affairs:

As I researched and drafted Article 11 of the December 6, 1993, Special Town Meeting that appropriated the first funds for the Town's Comprehensive Wastewater Management's Needs Assessment, I knew that the political, social, economics, and ecological needs of the Town had to be considered for the project to be successful. I was able to convince the Water and Sewer Commissioners to invite the Town Planner, Health Agent, and Water Quality Lab. Director to participate in the development of the scope of work required for addressing these concerns. With the knowledge and experience of these people the Town was able to develop a flexible management plan that incorporated new science into the study as the science was develops. This flexibility has made Chatham's nitrogen loading studies a standard for the Massachusetts Estuaries Program.

It is with great honor that I have had the opportunity to work for a community that is very conscious of its environment and was willing to appropriate millions of dollars to ensure the Comprehensive Wastewater Management Plan (CWMP) incorporated the latest and best information available. As I have always stated the acceptance of the CWMP will be the voter's approval of the appropriation to implement the CWMP's recommendations. This has been demonstrated at the May 6, 2006, Annual Town Meeting when $1.1 million was approved for the preliminary design of the wastewater treatment facility and the May 11, 2009, Annual Town Meeting that appropriated $59.51 million for the final design and

construction of the wastewater treatment facility and the first phase of the wastewater collection system's expansion.

Sincerely,



William G. Redfield, P.E.
Director

Jodi:MEPA

CAPE COD COMMISSION

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IN2

July 6, 2009

RECEIVED
JUL 9 – 2009
MEPA

VIA FACSIMILE (617) 626-1181/Regular Mail
Secretary Ian A. Bowles
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Chatham CWMP
MEPA Project Number – EOEEA #11510
Attn: MEPA Analyst Nicholas Zavolas, EOEEA No. 11510

Dear Secretary Bowles:

On June 30, 2009, a joint Cape Cod Commission (Commission)/MEPA public hearing was held and the Commission received comments on a Final Environmental Impact Report (FEIR) for the Chatham Comprehensive Wastewater Management Plan (CWMP).

Prior to this hearing, the Commission subcommittee received a copy of the Chatham CWMP. During the hearing, the Town's consultant, Nathan Weeks of Stearns & Wheler LLC, provided a presentation on the CWMP, and Commission staff provided an analysis of the CWMP in a staff report addressing the Chatham CWMP and FEIR. After consideration of this information, the subcommittee voted to adopt the Commission staff report as their comments to MEPA.

The subcommittee also voted at the June 30, 2009 public hearing to recommend to MEPA that the CWMP/FEIR provides adequate guidance to the town and regulatory agencies to permit the various aspects of the project, and that the CWMP/FEIR submitted by Chatham for the CWMP is sufficiently detailed so that a certificate can be issued by the Secretary.

The attached staff report provides comments as well as other relevant project issues that relate to the overall project and FEIR/CWMP planning process. These comments are in accordance with the 2009 Barnstable County Regional Policy Plan (RPP) in the resource issue areas of Natural Resources and Water Resources.

Thank you for considering our comments as you draft your Certificate. Please do not hesitate to contact Commission staff if you have any questions or concerns about the content of this letter or the attached staff report.

Sincerely,

Elizabeth Taylor

Elizabeth Taylor
Subcommittee Chair

Cc: File
Nathan Weeks, Stearns & Wheler, LLC
Robert Duncanson, Director of Health & Environment, Town of Chatham
William Hinchey, Chatham Town Manager
William Redfield, Chatham DPW
Terrance Whalen, Principal Planner/DRI Liaison, Town of Chatham
Carole Ridley, Executive Director, Pleasant Bay Alliance
David Spitz, Town Planner/DRI Liaison, Town of Harwich

CAPE COD COMMISSION
STAFF REPORT

PROJECT	Town of Chatham, Comprehensive Wastewater Management Plan Final Environmental Impact Report, (EOEEA #11510)
SUBCOMMITTEE	Elizabeth Taylor (Chair), Lynne Pleffner, Roy Richardson, Roslyn Garfield, Roger Putnam, Sheila Lyons, and Peter Graham
COMMISSION STAFF	Tom Cambareri, Heather McElroy, Andrea Adams, Marisa Mejia, Kristy Senatori
DATE	June 25, 2009

On June 1, 2009, the Cape Cod Commission (Commission) received a Comprehensive Wastewater Management Plan (CWMP), Final Environmental Impact Report (FEIR), (EOEEA #11510) for the Town of Chatham. The CWMP/FEIR was noticed in the *Environmental Monitor* on June 10, 2009. The CWMP/FEIR meets a number of categorical MEPA thresholds that require a mandatory Environmental Impact Report for the project. The Town of Chatham has sought a joint MEPA/ Cape Cod Commission review of the CWMP/FEIR. The Town of Chatham filed a joint MEPA/ Cape Cod Commission-Development of Regional Impact (DRI) Environmental Notification Form (ENF) in March 1998; a Phase 1 Needs Assessment Report in September 1999; a notice of project change in 2004; and Draft CWMP/DEIR on May 7, 2008.

A Joint MEPA/DRI Public Hearing is scheduled for June 30, 2009 at 549 Main Street, Chatham Town Hall, in the Selectman's Meeting Room, in Chatham, and the close of comments to MEPA

is July 10, 2009. Commission staff's review and technical assistance to the town on the CWMP/FEIR has been guided by consistency with the Barnstable County Regional Policy Plan (RPP). Although compliance with the Minimum Performance Standards (MPSs) of the RPP are not required for MEPA approval, the comments in this staff report will also provide guidance to the town for the subsequent DRI review.

The town of Chatham is to be commended on completing this significant effort. It has been a long effort in which the Town took the lead for the region on many complex technical issues. The town leadership, officials and their consultant have done an outstanding job to bring this project to the stage of imminent implementation. The CWMP/FEIR provides a strategy for wastewater management and reductions of nitrogen loading to restore and protect Chatham's marine embayments, address other Areas of Concern (areas experiencing: high groundwater, failing systems, industrial/commercial areas) and an Adaptive Management Plan for its implementation. The CWMP/FEIR proposes a 20 year implementation schedule for Phase 1 to construct wastewater facilities for the immediate wastewater and nitrogen management needs of the town. The extension of sewers to the remaining part of the town will take another 10 years with an estimated completion date of 2040. The estimated Phase 1 costs are $210 million dollars (in 2007 dollars) over the initial 20 years. The Town has adopted a number of innovative approaches for funding the project. The town set-up has established a Capital Facilities Plan with the goal of not having to raise the tax-rate. Expected homeowner charges are estimated at $3,000 to 10,000 for hook-up and $400 for annual operation and Maintenance.

The CWMP/FEIR indicates that Chatham has received notification of funding opportunities including: the US Department of Agriculture grant/loan of $2.5 million, and MassDEP State Revolving Fund Loan of $55.6 million. It is the Town's intent to file for federal Stimulus funds by completing the "Initial Implementation Phase" design for DEP review approval prior to the completion of the DRI. The town will fund subsequent sewer collection phases in appropriations of $15-20 million every 2 years.

Commission staff has reviewed these reports and recommends that the Commission subcommittee can find that CWMP/FEIR provides adequate guidance to the town and regulatory agencies to permit the various aspects of the project. The staff report contains a brief review of the proposed project and offers comments on several technical and planning issues to provide further definition and define the use of the Adaptive Management Plan.

PROJECT DESCRIPTION

The Four Volume CWMP/FEIR is a significant and well written document that articulates Chatham's wastewater needs and proposes a comprehensive facilities management program to address those needs. The Chatham Comprehensive Wastewater Management Plan has been underway since 1998, in response to an Administrative Consent Order from the Department of Environmental Protection in 1987 as revised in 1998. A Needs Assessment Report was completed and reviewed by a Commission subcommittee as part of the joint MEPA/DRI public hearing on September 23, 1999. The Draft CWMP/DEIR was reviewed by the Commission in the summer of 2008. The FEIR is substantially the same as the DEIR with responses to comments and updated implementation status.

The CWMP/FEIR details a two phased implementation program to meet nitrogen Total Maximum Daily Loads (TMDLs) in Stage Harbor, Pleasant Bay, Sulphur Springs and Taylors Pond. Phase 1 actual wastewater flows are projected to be an average annual of 0.94 mgd. The actual Phase 2 wastewater flows will be 38% more than Phase 1, for an annual average flow of 1.3 mgd over thirty years. The 30-year Phase 2 design average annual flow, including Infiltration and Inflow, is 1.9 mgd, which accounts for approximately 32% of the flow.

The no-action alternative (#1) described in the CWMP/FEIR predicts that the present level of nitrogen loading would further impair coastal water quality as new development contributes additional nitrogen to these systems. Alternative (#2), which is a combination decentralized/centralized plan, was shown to be inefficient due to treatment levels, costs and necessary oversight. Commission staff concurs that the CWMP/FEIR preferred Alternative (#3) of phased sewering will more cost-effectively remove nitrogen to restore coastal water quality.

The CWMP/FEIR describes a technology screening process leading to the selection of infrastructure that includes: the estimated length of sewer lines (110 miles), number of grinder pumps (1200), lift stations (80), and an Orbal oxidation ditch treatment system that is proposed as a major and modular component of the wastewater facility.

The CWMP/FEIR also provides a comprehensive account of mitigation measures that will be required during the construction phase, including a description of the Plan's implementation timetable, reasonable financial options for handling the significant infrastructure cost, and institutional considerations to implement the plan over the duration.

NATURAL RESOURCES

The proposed treatment plant site and discharge locations appear to have few potential conflicts with wetlands or rare species habitat, at this time. In response to an information request by the Town on the presence of rare species on the treatment plant site, the Natural Heritage and Endangered Species Program (NHESP) provided a letter in August 2006 indicating that two rare species which had recently been reported near the project site, New England bluet and Pine barrens bluet, would likely result in mapping a portion of the project site as priority habitat for rare species. However, a review of the NHESP Habitat Atlases published in October 2006 and October 2008 indicates that no estimated habitat is mapped at the treatment plant site. This may simplify permitting for this portion of the project. However, the town should follow through with the Natural Heritage Program to determine what, if any actions should be taken to avoid impacts to the two species.

The effluent recharge site components of the project also do not appear to have wetland or rare species impacts, at this time. As the construction phase of each effluent recharge site comes online over the 30-year estimated time-frame of the project, potential impacts to rare species should be reviewed, and permits filed as necessary. Similarly, as the specific placement and construction phase of pumping stations occurs, each should be reviewed for impacts to rare species. Sewer line installation within the roadway or road shoulders will likely qualify for an exemption from MESA review. Provided that the construction impacts do not impact vegetated

areas outside of the road layout, installation of sewer lines should be consistent with RPP requirements to protect rare species and wetlands, as well.

The RPP prohibits activities that result in adverse impacts to rare species or their habitat. Consequently, in general, where conflicts with rare species habitat do arise, the primary planning approach should be to avoid, and then to minimize the impacts. Whatever impacts remain unavoidable will have to be mitigated. Commission staff will seek guidance from the Natural Heritage Program in recommending appropriate mitigation to the Cape Cod Commission for inclusion in the DRI permit that the Commission may issue on the Chatham CWMP.

Similarly, work within the roadway or road layout that may result in impacts to the 100 ft buffer to wetlands or vernal pools may be permitted, provided that best management practices are used to minimize the impacts and restore the site after construction.

WATER RESOURCES

Drinking Water

The protection of drinking water is a major goal of the RPP. The town of Chatham has undertaken appropriate actions to protect its drinking water quality. Land use controls and regulations that have been adopted and implemented over the last 30 years have been effective in protecting Chatham's water supply. Commission staff reviewed available drinking water data and found that Chatham drinking water supplies have low concentrations of nitrogen below 0.5 parts per million (ppm). These concentrations are well below state and federal drinking water regulations and the Regional Policy Plan's nitrogen loading standard of 5 ppm. The benefits of sewering the priority areas of the town for TMDL compliance and other Areas of Concern will have an additional benefit of protecting drinking water that originates in the Zone II areas by further reducing nitrogen and other contaminants from entering the Zone II areas. The town is in the process of developing new source approvals for new wells in the western part of town that are in a Potential Public Water Supply Area under the RPP. The Indian Hill Well is off-line due to concerns for pre-existing volatile organic contamination. During the course of the CWMP implementation and bringing new wells online, the town and regulatory agencies will continue to monitor drinking water and potential changes in aquifer conditions.

Fresh Water Ponds

Protection and restoration of the ecological integrity of fresh water ponds is also a goal of the Regional Policy Plan. Commission staff notes that the Town of Chatham has undertaken significant actions concurrent with the CWMP/FEIR including an assessment of the status and management needs of its fresh water ponds. Chatham town meeting approved additional funds for in-pond treatments of two of Chatham's Great Ponds; Lovers Lake and Stillwater Pond. The implementation of the Town-wide Phase 1 and 2 Plan will ultimately serve parcels in close proximity to the ponds that will have an additional benefit of removing septic system phosphorous. Continued implementation of the Stormwater management will also address phosphorous and bacterial sources from runoff. Commission staff will continue to work with the town through their participation in the PALS water quality snap-shot offered by the School of Marine Science and Technology. As the town continues to regularly evaluate the health of the

ponds and progresses in its in-pond and watershed protection efforts, improvements in water quality or new efforts as it may relate to the CWMP implementation will likely be reported under the Adaptive Management Plan

Marine Water Quality

The restoration and protection of the ecological integrity of marine waters is another major goal of the Regional Policy Plan. The Town of Chatham was one of the first Cape towns to engage the Massachusetts Estuary Project to better document the health and critical nitrogen loads for its marine waters. The MEP was developed by the Commonwealth in response to the need of coastal communities for irrefutable scientific evidence on the nature of their marine waters by using a more detailed approach to these assessments. This effort took a substantial period of time, in part, due to the many organizational and institutional matters that were required to be tested and resolved in this multi-million dollar, multiple-year project for Southeast Massachusetts. The MEP through the use of the "Linked Water Quality Model" and several years of citizen water quality monitoring results, determined the nitrogen thresholds for Chatham's marine waters in a series of reports, listed in the CMWP. These thresholds were then codified into TMDLs under the Federal Clean Water Act. These reports, as revised, indicate that the following embayment systems have been impaired due to nitrogen loading, primarily from septic systems in their watersheds. For the purposes of the RPP, these embayments and their watersheds are considered impaired and water quality improvement is the goal. Shown below are target percentages of nitrogen to be removed through wastewater collection according to a scenario listed in the MEP Technical Report to achieve compliance with the Final Total Maximum Daily Load.

Percent of Septic System Derived Wastewater to be Removed from Watershed

Stage Harbor
Oyster Pond 100%
Oyster River 100%
Stage Harbor 100%
Mitchell River 50%
Mill Pond 50%
Little Mill Pond 50%

Sulphur Springs
Buck Creek 62%
Cockle Cove 0%

Taylor's Pond
Taylor's pond 60%
Mill Creek 100%

Pleasant Bay
Crows Pond 0%
Pleasant Bay 50%
Ryders Cove 75%
Frost Fish Creek 100%
Bassing Harbor 0%
Upper Muddy Creek 100%
Lower Muddy Creek 76%

Efforts to comply with the TMDL by reducing nitrogen loading will result in: 1) restoration of natural distribution of eelgrass as a habitat for shell and finfish, 2) prevent algae blooms, 3) protect benthic communities from impairment or loss, and 4) maintain dissolved oxygen concentrations that are protective of estuarine environments.

The CWMP demonstrates compliance with the TMDLs through a commitment to the 20 year Phase 1 sewer plan to remove appropriate levels of nitrogen to comply with TMDL target removal percentages. Chatham Town meeting has voted for 56 million dollars to begin the "Initial Implementation Phase" for Phase 1. The "Initial Implementation Phase" includes the upgrade to the Treatment facility and installation of the main sewer line that crosses through a

number of sewersheds to hook-up areas along Route 28 to the existing downtown sewered area. The Initial Implementation Phase will provide the backbone structure for the subsequent sewer expansions into the Phase 1 and 2 sewersheds. Chatham intends to expedite this work using federal Stimulus funds under the American Recovery and Reinvestment Act.

The FEIR has identified 80 sewersheds and 14 commercial areas that will ultimately be hooked-up to the facility at the end of Phase 2. It is important that an approach to measure progress becomes a more defined part of the plan's implementation. The CWMP indicates that the town will continue to work with regulatory agencies, SMAST and the Pleasant Bay Alliance to develop a standard protocol for documenting the compliance. Commission staff recommends that the Adaptive Management Plan and monitoring program also include interim reporting of the amount of wastewater or nitrogen load removed within impaired watersheds as sewersheds are hooked-up over time.

Treatment Facility and Effluent Recharge Site

The DEIR provided sufficient documentation to demonstrate that the existing wastewater treatment facility and effluent recharge site could be expanded to provide infiltration capacity to handle the average annual flows of the Phase 2 town-wide plan of 1.9 mgd. The June 2008 Modeling Tech Memo in the CWMP/FEIR Appendix G indicates that at 30 gpm/ft2 an infiltration area of 140,000 to 200,000 would be needed for Phase 1 and 2 and at the same time provide a 100 % redundancy. The Memo indicates the Town could delay construction of beds 7 and 8 to Phase 2 and that the town may want to consider steps to acquire additional land for buffer and/or contingency. The CWMP/FEIR has appropriately demonstrated the capacity of the site to accept the proposed wastewater flows. Chatham has also been in a dialogue with the Town of Harwich on their potential shared use of the site. Additional site characterization is acknowledged, if the two towns decide to pursue this matter.

The proposed Orbal treatment will achieve nitrogen concentrations of 3 ppm. The TMDL concentration for Cockle Cove is 3 ppm. Although the Orbal technology is new to Cape Cod, the technology is well founded with there being over 658 installed applications throughout the US.

Groundwater modeling was performed by the town's consultant and several Linked Water Quality Modeling scenarios conducted by SMAST was undertaken by the Town to better gauge the influence of the use of the site relative to receiving downgradient waters of Cockle Cove, Sulphur Springs and Taylor's Pond. The FEIR states that the results show that TMDL will be met at the Sentinel station in Bucks Creek and result in an acceptable nitrogen concentration in Cockle Cove. The modeling also showed that compliance with the Taylor's Pond TMDL concentration. The results indicated the TMDL threshold of 0.38 mg/l total nitrogen would be slightly exceeded in Sulphur Springs by 0.02 to 0.04 for Phase 1 and 2 conditions. The FEIR indicates that the modeling maybe conservative and that DEP stated that the Town can proceed with Phase 1 and 2 with further discussions among the parties to resolve opinions about groundwater underflow.

Commission staff concurs with DEP's recommendation to proceed with the Phase 1 and 2 sewer plan. The Town should continue to work with DEP, SMAST and Commission staff to resolve the issue of groundwater underflow and better incorporate attenuation in the upgradient bogs into the results. It is recommended that the town consider conducting additional hydrogeologic investigation to document the potential for substantial groundwater underflow which can be accomplished through the Groundwater Discharge Permit process.

A portion of the selected Chatham effluent recharge site is in a Zone II to Chatham's Indian Hill water supply well. The location of such sites in the Zone II is not prohibited by either state or county RPP regulations, when the objective of the facility is to improve water quality. However, recently revised Groundwater Discharge Permit Regulations adopted by the MassDEP includes stringent treatment standards for discharges in Zone IIs. One aspect of these regulations is meant to address the issue of pharmaceuticals and personal care products in wastewater by adopting a very low Total Organic Carbon (TOC) treatment level. The treatment of wastewater as proposed in the CWMP/FEIR will result in an effluent nitrogen concentration of 3 ppm, but to meet the new TOC standard would affect a significant cost to the town. The FEIR included a technical assessment on alternatives to meet this standard including the abandonment or wellhead treatment of the Indian Hill Well. Commission staff worked with the Cape Cod Water Protection Collaborative and DEP staff to further consider the ramifications and benefits of this new regulation on all Cape Cod Communities. Some relief in the regulations was subsequently adopted by DEP.

Although a portion of the discharge site is located in the Zone II it is unlikely that the circumstances of the Zone II delineation will be met over the next 30 years of this project's implementation with the Indian Hill well off-line. Additionally, current groundwater modeling indicates that the predominant groundwater flow pattern from the loaded site will be towards the coast, not the interior where the wells are located. Commission staff concurs with the resolution that the Town reached with DEP on this matter that the treatment plant can proceed as designed without substantial changes for TOC removal.

Commission staff concurred with the Draft-CWMP/DEIR proposal that disinfection may not warranted for treated effluent recharge at this site, given that there is essentially natural pathogen removal through the proposed sand beds and that the predominate groundwater flow direction is towards the coast, not into Water Supply areas. MassDEP has required disinfection and the chosen method is UV radiation.

The CWMP/FEIR includes a map of the present groundwater monitoring program for the effluent recharge site. The groundwater monitoring program is a component of the DEP Groundwater Discharge Permit which the town recently submitted to DEP. Commission staff will provide input on the monitoring program through that process. Commission staff recommends that the program include groundwater monitoring program for water levels, stream flow and water quality, based upon a review of the existing data. Additional parameters such as ammonia, alkalinity should be added and occasional monitoring of TOC and PCPP should be considered

Land Use and Flow Neutral Goal

Chatham has adopted a no-growth policy position for the CWMP. This policy addresses potential undesired growth that can accompany the installation of sewers. The growth neutral position has been implemented by the town as a sewer regulation which specifies that a parcel of land for development or re-development is only apportioned that amount of flow that would be allowed under Title 5 and/or other town zoning provisions. This does not mean that the CWMP limits all growth. The design sewer flow incorporates additional flows for buildout conditions according to zoning, which may not be attained for decades. The buildout conditions indicate a 33% and 35% increase for commercial and residential flows respectively. This is a conservative approach to designing flow capacity for the treatment facility. The CWMP also designates additional increase of 13% of existing commercial flows for infilling, affordable housing, laundry and Chatham Bars Inn.

Commission staff is working with the Water Protection Collaborative to develop regulatory guidelines that will be used by the state for evaluating flow-neutral policies. Staff recommends that town continue to participate in these discussions through the Collaborative. The town may want to consider if additional flow to accommodate more growth in the commercial and downtown areas should be allocated

Regional Wastewater Management

The CWMP/FEIR addresses a number of regional wastewater management issues within the context of Chatham's demonstrated needs. The CWMP/FEIR, in response to a question from the Pleasant Bay Alliance, indicates that sewer extensions for the Phase 1 Plan would prioritize the reduction of nitrogen in the watersheds to the south coastal embayments to Stage Harbor, Sulphur Springs, and Taylor's Pond. Commission staff recommends that the town participate in a regional study that will integrate the progression of planned sewering in the collective Pleasant Bay watershed with MEP scenarios to project the progress of improved water quality in the Bay to evaluate comparative milestones for TMDL compliance for Pleasant Bay. This assessment would be done independent of the FEIR/DRI timeframe, but inform decisions about the plan's phased implementation.

The reductions of nitrogen in the shared watersheds to Pleasant Bay including Muddy Creek involve neighboring towns of Harwich, Orleans and Brewster. A substantial portion of the Muddy Creek watershed falls in the Town of Harwich. Commission staff provided a nitrogen loading breakdown by town for the Pleasant Bay Resource Management Alliance Working Group. The existing attenuated nitrogen load for Muddy Creek is comprised of 36% from Chatham and 64% from Harwich. The Chatham CWMP/FEIR refers to discussions to potentially accept additional wastewater from Harwich.

Enhanced natural attenuation is a potential approach for reducing nitrogen in the watershed to Muddy Creek. The CWMP/FEIR indicates that the response to preliminary characterization work conducted to modify a dike on the upper portion of Muddy Creek to convert it from a brackish to freshwater system to enhance attenuation was met with citizen opposition. It appears

from the CWMP/FEIR that this regional effort is targeting inlet modification over stream flow modifications

The CWMP/FEIR indicates the town will continue to participate and be open to potential regional opportunities for shared management, infrastructure and enhanced natural attenuation.

Stormwater, Fertilizer and other Non-Structural Management Strategies
The FEIR indicates that the Town has made excellent progress on its Stormwater management efforts and that it will continue to work with other towns and the region on educational efforts, including the Pleasant Bay Alliance and Project Storm.

Adaptive Management Approach
The Chatham CWMP/FEIR outlines an Adaptive Management Plan to help guide the implementation of the Plan and to monitor its success. Items outlined include:

- Implementation of Plan
- Documentation of capital expenditures
- Compliance with the groundwater discharge permit
- Reporting on Estuary water quality monitoring
- Summary of habitat assessments that may be completed by the Town, MassDEP, regional organizations, or others
- Continued coordination with the Pleasant Bay Alliance who is coordinating MEP model runs for the Pleasant Bay estuary
- Potential evaluations and changes as needed

Commission staff will work with the town and its consultant to provide additional detail on the Adaptive Management Plan through the DRI review. Additional items for consideration include:

- Reporting of the above data and its use for demonstrating achievement of the water quality goals of the TMDL,
- Reporting progress on the status of the CWMP implementation in regards to the areas sewered and percent of nitrogen removed and comparison to targeted percent removals,
- Estimated and planned accomplishments at regular intervals through Phase 1
- Incorporation of results from MEP scenarios being performed for neighboring towns,
- As sewering increases and potential water supplies are added over the long term that additional groundwater modeling should be conducted when necessary

Conclusion
In conclusion, Chatham's CWMP/FEIR represents the region's first truly comprehensive management plan to address coastal water quality degradation. Cape Cod Commission staff recommends that the town be permitted to proceed to the Development of Regional Impact review. Commission staff is available to assist the town in concluding the Plan's regulatory review and to work with Chatham and its neighboring towns on Plan's implementation.

cc: William Hinchey, Chatham Town Manager
William Redfield, Chatham DPW
Dr. Robert Duncanson, Director of Health and the Environment
Terry Whalen, Chatham Town Planner
Nate Weeks, Stearns and Wheler

Zavolas, Nicholas (EEA)

From: Chatham Concerned Taxpayers [chathamct@comcast.net]
Sent: Friday, July 10, 2009 3:55 PM
To: Zavolas, Nicholas (ENV); Bourre, Richard (ENV)
Cc: Robert A Duncanson
Subject: Proposed Final Comprehensive Wastewater Management Plan EIR for Town of Chatham (EOEA #11510) -- Comments of Chatham Concerned Taxpayers
Attachments: CCTCommentWW.doc

For Mr. Ian A. Bowles, Secretary
Executive Office of Energy and Environmental Affairs
Submitted by Fax and email to richard.bourre@state.ma.us and nicholas.zavolas@state.ma.us

Chatham Concerned Taxpayers is filing this comment on the proposed Final Comprehensive Wastewater Management Plan EIR for the Town of Chatham (EOEA #11510). We support the effort to mitigate and where possible eliminate the chemical pollution problem the Town is experiencing in its waters. Because of the immense expense to be borne by taxpayers, we believe every possible measure should be taken to make this project as cost-effective as possible. After as careful a review as our working group could make in the time available, we are not convinced that all has as yet been done to ensure the most cost-effective result.

Because of the reasons noted in our attached letter of comment, we request an additional 30 days for public comment.

Thank you.

Francis X Meaney
Philip Dupont

Chatham Concerned Taxpayers
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CHATHAM CONCERNED TAXPAYERS
P.O. Box 616
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617 512 7743

July 10, 2009

Mr. Ian A. Bowles Secretary
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office Fax (617) 626-1181
100 Cambridge Street
Boston, MA 02114

Re: Objections and other comments with respect to the proposed Final Comprehensive Wastewater Management Plan EIR for Town of Chatham (EOEA #11510)

Dear Secretary Bowles:

We applaud the diligence and persistence of town officials and the many Chatham environmentalists who have worked for years on identifying the problem and seeking a solution. We are all committed to solving the chemical pollution problem in Chatham's waters.

However, we believe insufficient attention has been given to the costs to taxpayers.

The plan calls for a traditional centralized wastewater disposal solution costing hundreds of millions for a town of 6500 permanent residents. We believe it is overbuilt and does not seek to take advantage of complementing and innovative technologies and methods that could lessen costs and also benefit the Cape's water supply.

1. TMDLs. The major nitrogen loading component involved in determining the TMDLs were the septic nitrogen loading thresholds established by SMAST for each sub-embayment. Failure to contract for a technical review by an independent qualified organization, with access to all of the data and models compiled with public funds, of the detailed process and logic which produced the septic nitrogen loading thresholds, not only runs the unacceptable risk that implementation of the proposed plan will result in unintended adverse ecological, economic and fiscal consequences, but could end up subjecting Town property owners to paying many millions of excessive tax dollars.

2. Changed conditions. Also, conditions in the waters have dramatically changed and the TMDLs established several years ago should be reexamined by state authorities. Our neighboring town of Orleans is also in the process of working through its Comprehensive Wastewater Management Plan. It engaged a world-respected environmental organization, the Woods Hole Group, to provide an independent critique of what town officials and their sewer consultant had proposed to meet the TMDLs

set for Orleans. In the report filed just last month, the Woods Hole Group found that Pleasant Bay appeared to currently meet state standards and in all probability no or limited sewering would be required, a potential saving of many millions for Orleans taxpayers. (See attachment.)

The massive break in North Beach has made a dramatic change in Pleasant Bay's ability to cleanse itself. At least 35% of Chatham's CWMP is involved with Pleasant Bay to one degree or another and it is highly likely that the North Beach breach represents an even more positive effect for Chatham and may well obviate any sewering at all for this 35% if not more. A similar evaluation should be done of the Chatham plan building on the work of the Woods Hole Group on Pleasant Bay. The Woods Hole Group would be a prime candidate to do the work because of its familiarity with the problem; it also has been employed in the past (and we believe is employed presently) by the Town of Chatham so its professional credentials are not in question. (We believe state authorities should release the underlying data with respect to the TMDLs; the Woods Hole Group should be asked to evaluate those standards as well.) Many millions of taxpayer dollars are at stake.

3. Assumptions. From the data we have examined we conclude that the proposed enlargement of the wastewater treatment plant is considerably beyond any reasonable projection of needed capacity. Chatham in the summer may have as many as 20,000 to 25,000 people in the peak day. The capacity designed for Phase 1 of the CWMP can accommodate over 60,000 people using their entire daily water usage of 64 gallons in ONE hour. Everyone would have to be flushing or showering or running the laundry or dishwasher all at the same time. Clearly, this is an overbuilt design.

While the CWMP has a few lines about adaptive management, in the case of the wastewater treatment plant, that won't work because the enlargement is to take place at the beginning of the process and the plan speaks of the first look at adaptation at the end of five years of operation. That's too late. Also, the connection build-out for Phase 1 is scheduled for 20 years, so whatever peak capacity is eventually decided upon won't be approached for 15 or 20 years. In the meantime, the plant would be operating inefficiently and costing more than it should. In this connection, it should be noted that the lead person Nathan Weeks for sewer consultant Stearns & Wheeler at a meeting of the Cape Cod Commission stated (June 2, 2008) that Chatham only had to connect two-thirds of the Town to solve the TMDL problem. Doing the final third would have nothing to do with combating environmental pollution. Therefore, there is no necessity for a designing a treatment plant now to add properties that don't require sewering even under the assumptions of the sewer consultant. Also, it should be noted that about 800 properties are shown in the plan as being sewered in Phase 1 even though the plan shows that such properties are not located in watersheds that require reduction of septic nitrogen loading. It would seem the cost of the project can be lowered by not connecting to properties that do not require it under the plan.

To save taxpayer money, the capacity of the wastewater treatment plant should be scaled down and it should be enlarged in multiple stages so that it will be operating as cost-efficiently as possible during the period of construction. If the treatment plant is built as currently designed and it turns out to be, as we believe we have shown, to be significantly underutilized, it will be operating inefficiently (wasting money) all the time. It will be too late to scale it back; it's been built. If the multiple stage approach is adopted to build to a more reasonable capacity, the plant can be much more easily attuned to need in

operations and in advancing to the next stage of enlargement. You can always upsize, you can't downsize once the mistake has been made.

There has been some discussion about the Town of Harwich perhaps agreeing to channel its wastewater to the Chatham plant. That possibility should not be taken into account until Harwich has in fact agreed to do that. If it should so decide to, at such time adaptive management can determine what efficient management requires. Such overcapacity also may create perverse incentives, such as encouraging more use of water or more construction of buildings to "feed" the wastewater treatment plant contrary to the objectives of a growth neutral policy. It would enable the intensification of development per acre, such as building of more apartments, condominium and other types of complexes, even high- rises, to augment seasonal influent levels which are highly cost-inefficient and less effective in producing desired effluent nitrogen concentrations.

4. Chatham's population. Between 1980 and 2005 Chatham's population grew from 6,071 to 6, 832 or 12% over 25 years, less than ½% per year. During the summer season, the estimates of town population range between 20,000 and 25,000. Again, because of the shortage of buildable land and the present town restriction that the sewer shall not be a cause or reason for allowing building that otherwise could not be built, we believe the capacity currently planned for the treatment plan is excessive and involves unnecessary expense for taxpayers.

Chatham's citizens in good part consist of people in or near retirement living on their life savings and Social Security. It has one of the oldest populations of any town in the state. The world economic collapse has had a devastating effect on their savings and incomes. Inhabitants of all Cape towns, including Chatham, have mean household incomes lower than the state average. We all share an appreciation for the beauty and character of Chatham and want its waterways to be cleansed of manmade chemical pollutants. However we want this to be achieved as sensibly and cost-effectively as possible. There is too much money at stake for Chatham taxpayers – as well as state and federal taxpayers – not to exhaust every opportunity to devise cost-savings measures to the greatest degree possible. Some of the points raised in this letter have been presented to town officials, who have responded, but we do not find their responses persuasive, so we are including them in this letter commenting on the proposed final Chatham Comprehensive Wastewater Management Plan. Also, because of the acceleration of timetable of this project, we do not believe the taxpayers of the Town have received sufficient information to make an informed cost-benefit analysis of the project and to ascertain the impact on their individual property taxes and other costs.

Comment period. We were not able to obtain from Town officials a marked-up final version showing changes from the draft CWMP, so we have not had the time we would have liked to prepare these comments. Also, the lack of an index in this very substantial document made cross referencing impossible. There are additional questions that have yet to be addressed. We do acknowledge that the Town did post the complete plan on the Town website and televised the public hearing, which also is available on the Town website. Town officials have been cooperative in supplying information to us when requested. To complete our review and to give other citizens the opportunity to obtain printed

copies of the plan and possibly comment, we respectfully request that the comment period be extended for 30 days.

As is apparent from our comments, we believe that the concept of adaptive management should be employed throughout the project, including in its very earliest stage, so that the considerations we raise can be addressed and factored in as the project moves forward.

Thank you for your consideration. We are available for any inquiry.

Very truly yours,

s/ FX Meaney
s/ Phil Dupont

Francis X Meaney
Philip Dupont

Attachment

Submitted by Fax and email to richard.bourre@state.ma.us and nicholas.zavolas@state.ma.us

Attachment

Orleans panel dissents on need for sewers

By Susan Milton in the Cape Cod Times
smilton@capecodonline.com
July 09, 2009 6:00 AM

ORLEANS — A committee of engineers and scientists is questioning the science behind the town's expensive sewer plans.

As requested by selectmen, the wastewater management validation and design committee spent the past eight months analyzing the need to build sewers on land bordering Little Pleasant Bay.

"We believe there are enormous risks with the Pleasant Bay report," validation committee vice chairman Edward Daly told the finance committee recently. "The analysis, the methodology used and the conclusions do not reflect things we know from what we have analyzed."

The bay report is part of the town's overall $150 million wastewater management plan, adopted by 75 percent of voters last October and about to enter its preliminary design phase.

For now, the questions are simply part of the design phase, emerging from an independent review sought by the selectmen last year. The board unanimously voted last week to forward the committee's questions to the state Department of Environmental Protection, the final arbiter.

But many in Orleans still remember how the business community's late-surfacing opposition to sewers in Orleans center radically curtailed the town's wastewater plans in the early 1980s and divided the town.

This time the debate is about the need for sewers around Little Pleasant Bay, the source of more than half of the sewage, according to the town's current plans.

That project would not begin until 2013 at the earliest. But the bay's wastewater also drives the design, size and cost of the town's overall wastewater treatment plans.

Expense questioned

Based on its own review of water samples, the committee of experienced, mostly retired engineers and scientists says the improving water quality of Pleasant Bay already meets state standards, so "why should we spend tens of millions of dollars (for sewers on) a system that's already working," Daly said to selectmen last week.

The committee also believes the 2007 inlet into Pleasant Bay will help flush the bay for the foreseeable future, avoiding the need for sewers.

It also has pages of questions about the computer model that the DEP is using to mandate what towns like Orleans must do to clean up their waters.

Critics say a majority of the committee opposed sewers from the start and cherry-picked data.

"I think (the validation committee's work) was a year's distraction, an attempt to undermine the work that had been done, not just by our committee but by many bodies in the town and the state," said chairman Augusta McKusick of the wastewater management committee.

'Widely Accepted Plan'

That committee has spent the past eight years identifying and researching the town's wastewater needs and moving the plan through town, state and federal approvals.

"This is a widely accepted, highly approved plan, well worked out with understandable questions that are going to be answered as we go along," McKusick said. "We want to move this forward."

State environmental officials invited the committee's questions and the chance to make changes, as needed, but also have repeatedly supported the work underlying the Pleasant Bay report by the Coastal Systems Program of the School of Marine Science and Technology (SMAST) at the University of Massachusetts-Dartmouth.

Chatham, which shares Pleasant Bay, also asked questions about the SMAST work before moving forward this year with its $300 million plan for sewers, according to Robert Duncanson, the town's director of health and environment.

"We're confident that the information, while it may not be absolutely perfect, more than supports our plan to move forward, recognizing that we're looking at a 30-year implementation plan here," he said. "There's plenty of time to make tweaks. Sooner or later, you have to start doing something."

Perennial problem

Orleans is trying to keep nitrogen and phosphorus from septic systems out of its coastal waters and ponds. Nitrogen feeds plants like algae that can overwhelm an ecosystem, robbing water of oxygen and killing off other plants and animals.

http://www.capecodonline.com/apps/pbcs.dll/article?AID=/20090709/NEWS/907090324/-1/NEWSLETTER100

Read more online:
http://orleansma.virtualtownhall.net/Pages/OrleansMA_BComm/WMVD

Zavolas, Nicholas (EEA)

From: Pio Lombardo [Pio@lombardoassociates.com]
Sent: Friday, July 10, 2009 3:12 PM
To: Zavolas, Nicholas (ENV)
Subject: Chatham Comprehensive Wastewater Management Plan FEIR
Attachments: 090710 Chatham FEIR comments.pdf

Mr. Zavolas:

Attached and pasted below is our comment on the referenced FEIR

July 10, 2009

Mr. Nicholas Zavolas
Massachusetts Environmental Policy Act Office
Executive Office of Energy & Environmental Affairs
100 Cambridge St.
Boston, MA 02114

Dear Mr. Zavolas: Re: Comprehensive Wastewater Management Plan
FEIR - Chatham, MA

In my professional opinion, the Wastewater Management Plan incorrectly summarily dismissed alternative on-site, cluster and wastewater collection systems, as well as groundwater treatment techniques for nitrogen removal. These alternatives have been proven to be technically on parity with the most sophisticated wastewater treatment systems and are significantly less expensive.

Your consideration of these comments will be greatly appreciated. Please do not hesitate to contact me at 8617-964-2924 or via email at Pio@LombardoAssociates.com.

Sincerely,

Pio Lombardo, P.E., DEE

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TOWN OF CHATHAM

OFFICE OF THE SELECTMEN
TOWN MANAGER
549 Main Street, Chatham, Massachusetts 02633
(508) 945-5100

July 9, 2009

Mr. Ian A. Bowles, Secretary
Executive Office of Energy and Environmental Affairs
Attention: N. Zavolas
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Town of Chatham FCWMP/FEIR
EOEA Number 11501

Dear Mr. Bowles:

I am writing to you to address a question raised by the Massachusetts Department of Environmental Protection (MassDEP) in regard to the Massachusetts Environmental Protection Act (MEPA) review of the above referenced project.

The Final Comprehensive Wastewater Management Plan and Final Environmental Impact Report (FCMP/FEIR) provides information in Chapter 11 – Summary of Recommended Plan on the timing of the Plan and the Town's commitment. Discussions with MassDEP staff indicated that they would like to see additional detail on this issue.

The purpose of this letter is to provide that detail to address MassDEP's question on Chatham's commitment to the Comprehensive Wastewater Management Plan (CWMP) Implementation Timeline.

The CWMP will be implemented to extend sewers and provide advanced wastewater treatment to address the nitrogen TMDLs in the marine waters around Chatham (Phase I) in a 20 year period from approximately 2010 to 2030. The sewers will be extended to the remaining portions of the Town (Phase 2) in the following 10 years (approximately 2030 to 2040) to further protect water resources, and to meet other Town goals of fiscal fairness on the cost distribution of the system.

Total capital costs of the Phase 1 and 2 sewer extensions is approximately $300,000,000. The Town has committed to submit for approval the following funding for this plan:

- Approximately $40 million for the implementation of the Phase I WWTF upgrade and expansion (approved at 2009 annual Town Meeting and Town Ballot).

- Approximately $20 million for the implementation of the "Initial Implementation" of the Phase 1 sewer area as illustrated in the attached Figure ES-4 (approved at 2009 Annual Town Meeting and Town Ballot).

- Approximately $150 million for the remaining portion of the Phase 1 collection system for 2012 to 2030 in increments of $15 to $20 million every two years for design and construction. These appropriations will be for the necessary borrowing as allowed through the SRF program administered by MassDEP, and the USDA Rural Development program.

- Approximately $90 million for the Phase 2 WWTF and collection system expansion for 2030 to 2040 in increments of $15 to $20 million every two years for design and construction. Again these appropriations will be for the borrowing through the SRF and USDA programs.

- SRF funding applications (Project Evaluation Forms or PEFs) will be submitted every two years for the funded projects. These applications will identify the areas to be sewered and the reasons why this area was selected as part of the most recent prioritization. The application will also identify the expected next two sewer extension areas for the next four years of implementation.

The Town of Chatham has established several criteria that will be used in the process of prioritizing areas for sewering, as presented in the FCWMP/FEIR. These criteria include:

- High priority watersheds based on total nitrogen TMDLs;

- Related capital projects where projects can be completed with mutual advantage;

- Proximity to existing wastewater infrastructure;

- Coordination with other infrastructure projects (roads, water, etc.), including MassHighway Route 28 work;

- Coordination with private development and re-development that offsets some public expense for infrastructure;

- Coordination with regional efforts; and,

- Prioritization recommendations of the Town's Technical Advisory Group (TAG) and Water and Sewer Advisory Committee.

The recommended plan provides guidance and flexibility on which areas should be addressed in order to achieve the TMDLs; however, it will be the ultimate decision of the Town to identify which areas will be addressed first through this process and to prioritize the remaining areas such that the Plan can be implemented efficiently.

The Town has committed to submit for approval $15 to $20 million funding requests every two years as indicated in the Town of Chatham 2005 and 2006 Fiscal Analyses (attached to the FCWMP/FEIR as Appendix V and W). Attached to this letter is the latest 2009 Fiscal Analyses. All of these Fiscal Analyses indicate the borrowing costs and cash flow of this $15 to $20M expenditure every 2 years as provided for in the long term Capital Improvement Plan (CIP).

We have reviewed this letter with the MassDEP staff-member that raised the questions; therefore; we hope you will agree that we are committed to this program and that we have addressed the issue raised by MassDEP.

Please call me or Robert Duncanson, Ph.D. at (508) 945-5165 if you have any questions about this letter.

Sincerely yours,

William G. Hinchey
Town Manager

Robert A. Duncanson, Ph.D.
Director of Health & Environment
Program Manager CWMP

Enclosure