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May 18, 2007

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS  
ON THE  
SPECIAL PROCEDURE: PHASE III –  
FINAL WASTEWATER FACILITIES PLAN/FEIR

PROJECT NAME : Area 5 Sewers/Wastewater Facilities Plan  
PROJECT MUNICIPALITY : Barnstable  
PROJECT WATERSHED : Cape Cod  
EOEA NUMBER : 6553  
PROJECT PROPONENT : Town of Barnstable  
DATE NOTICED IN MONITOR : April 11, 2007

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

I want to acknowledge the Town of Barnstable's significant efforts over many years to develop this comprehensive approach to wastewater management planning and groundwater resources management to guide the Town's efforts to address the immediate and longer term wastewater management needs. I also want to acknowledge the valuable help and guidance provided by the Cape Cod Commission (CCC), the Department of Environmental Protection (MassDEP), Coastal Zone Management (CZM), and the public throughout the MEPA Special Review process for this project. The Phase III Final Wastewater Facilities Plan/FEIR, together with the Town's Nutrient Management Program planning efforts, will bring us significantly closer to providing a sound basis for regional wastewater treatment and disposal decision-making that will benefit Cape Cod and the residents of the Town of Barnstable alike.



## PROJECT OVERVIEW

As described in the original September 1997 Environmental Notification Form (ENF), the project involved the sewerage of Area 5 of the Town of Barnstable. The Secretary's Certificate on the ENF authorized the installation of the proposed sewers while the proponent prepared an EIR to address the need for a Sewer Master Plan including options for improving the Hyannis Water Pollution Control Facility (WPCF). The Certificate also required the Town to limit connections to only those sites with documented failing on-site septic systems until the MEPA process was completed. A scope for an EIR was established in the ENF Certificate issued June 1987. A Notice of Project Change (NPC) was filed in March 1996 that proposed to expand the project to include a comprehensive Town-wide wastewater facilities plan (WWFP) designed to quantify the Town's long-term wastewater treatment and water supply protection needs, and identify alternative approaches for meeting those needs through the 2014 planning period. A Special Review Procedure was established for this project, consisting of a Phase I - Needs Report, Phase II – Screening of Alternatives (Interim Report of the Wastewater Facilities Plan), and Phase III - Draft and Final Wastewater Facilities Plan/EIR. The Secretary's Certificate on the NPC (April 1996), adopted the proponent's proposed scope for a Wastewater Facilities Plan/Environmental Impact Report (WWFP/EIR) and provided for the establishment of a Citizens Advisory Committee (CAC) to provide input into the plan's development.

A second Notice of Project Change (2<sup>nd</sup> NPC) was filed in May 2003, that proposed to proceed with portions of the Scope for the Phase III – DEIR to provide sewerage and advanced nitrogen removal for those Areas of Concern (AOCs) located in close proximity to the Hyannis WPCF. As described in the 2<sup>nd</sup> NPC, the Town proposed to wait until such time as the ongoing Massachusetts Estuaries Project (MEP) establishes appropriate nitrogen loading limits to determine appropriate treatment and discharge options for sewage flows from those AOCs located in the western and southwestern sections of Barnstable.

In February 2005, a third Notice of Project Change (3<sup>rd</sup> NPC) was filed with the MEPA Office that proposed to proceed with the construction of interim improvements to the Hyannis Water Pollution Control Facility (WPCF) that would enable the town to increase the wastewater flow capacity of the WPCF from 2.7 mgd to 4.2 mgd. Specifically, the proposed improvements to the WPCF include the addition of a third aeration tank, replacement of the existing grit removal system, and installation of a Supervisory Control and Data Acquisition (SCADA) system. The proposed facility modifications will result in approximately 6,000 sf of land alteration and approximately 8,000 sf of new impervious surface area.

The Town of Barnstable filed a fourth Notice of Project Change (4<sup>th</sup> NPC) on October 25, 2006 and proposed a number of comprehensive sewer construction activities in advance of the proponent's completion and submittal of the Draft and Final Wastewater Facilities Plan/EIR including: 1) construction of an 18" effluent force main within the Route 132 right-of-way from the Hyannis WPCF to the proponent's proposed effluent disposal site (McManus site) located near Exit 6 off Route 6, and construction of a sewer main from the Cape Cod Community College to the Route 132 effluent force main; 2) construction of the proposed McManus effluent disposal facility; and, 3) construction of two sewer extensions to limited areas in Hyannis (North Street, Pleasant Street).

The proposed force main construction was designed with the capacity to convey 1.3 mgd of treated wastewater effluent from the Hyannis WPCF to a new remote effluent disposal site located northwest of the Hyannis WPCF at the intersection of the Route 6 Mid-Cape Highway and Route 132 in Barnstable. The proponent has worked closely with MassDEP, MHD and others to coordinate its proposed effluent force main construction with the construction of the Route 132 Reconstruction Project (EOEA #13526). A Secretary's Certificate on the Route 132 Reconstruction Project was issued in June 2005 and determined that no further MEPA review was required.

In October 2006, a fifth Notice of Project Change/Phase I Waiver Request (5<sup>th</sup> NPC), was filed with the MEPA Office that proposed sewer construction activities in advance of the Town's completion and submittal of the Phase IV - Final Wastewater Facilities Plan/FEIR including; the construction of a new Main Street pump station to satisfactorily accommodate existing and projected future wastewater flows, and the replacement of existing force main within existing Town road right-of-ways to convey wastewater flows from the Old Colony Road pump station to the Hyannis WPCF. A Secretary's Certificate on the Main Street Pump Station Project was issued in February 2007 and determined that no further MEPA review was required.

## FINAL RECOMMENDED WASTEWATER FACILITIES PLAN

The Town of Barnstable's Wastewater Facilities Plan (WWFP) proposes to extend new municipal sewers to ten wastewater areas of concern (AOCs) in Barnstable. These proposed new AOC sewer areas are located within or in close proximity to wellhead protection areas near to Lake Wequaquet, Long Pond, Red Lily Pond, Stewart's Creek, Hall's Creek, Willow Street, the Cape Cod Community College, and the Hyannis WPCF.

1. Cape Cod Community College
2. Long Beach Road area (CE1);
3. Red Lily Pond area (CE2);
4. Wequaquet Lake and Long Pond area (CE4);
5. Stewarts Creek and Greenwood Avenue areas (H1);
6. Halls Creek area (H3);
7. Bearses Way Residential neighborhood area (Bearses Way)
8. Area within Zone of Contribution (ZOC) of Barnstable Water Supply System well BW MEL1 (BW MEL1);
9. Area within Zone of Contribution (ZOC) of Barnstable Water Supply System well BWST1 (BWST1); and,
10. Area within Zone of Contribution (ZOC) of Centerville –Osterville Marston Mills (COMM) Water District for Water Supply System well CO7 (CO7).

The Long Beach Road area (CE1) is a barrier beach located in a coastal high hazard area within the velocity zone of the 100-year storm event. In response to comments received from CCC, CZM and others, the Town has committed to incorporate a system of check valves into the new sewer collection system for this area to minimize impacts in the event of a storm-related breach to the collection system.

The Final Wastewater Facilities Plan also includes a number of improvements to the Hyannis Water Pollution Control Facility's (WPCFs) buildings and piping, and effluent facility additions and sludge treatment processes, to be completed in 2007, that will enable the WPCF to increase its wastewater treatment capacity from 2.7 mgd to 4.2 mgd. The Town conducted a review of its groundwater modeling analysis subsequent to the issuance of the Secretary's Certificate on the 4<sup>th</sup> NPC, and concluded that the Hyannis WPCF site, together with the use of the 6.9 acre McManus site for groundwater discharge of up to 0.5 mgd, can accommodate up to 4.2 mgd of treated wastewater discharge to groundwater with no adverse effects on surrounding properties and groundwater resources.

As part of the Wastewater Facilities Plan, the Town of Barnstable developed an Adaptive Management Plan (AMP) to monitor the potential impacts to downgradient groundwater levels, water quality and private properties from the Hyannis WPCF's increased groundwater discharges. The Town has committed to create a Technical Advisory Group (TAG) comprised of representatives from the Barnstable Department of Public works (DPW), MassDEP, CCC, the School of Marine Science and Technology (SMSAT), and the United States Geologic Survey (USGS), to provide assistance to the Town to refine the scope of the AMP's groundwater monitoring plan and schedule. The TAG will evaluate existing monthly groundwater water level readings and water quality data, collected since the early 1990's from existing wells located downgradient of the WPCF and in the area associated with the regional groundwater divide between Vineyard/Nantucket Sound and Cape Cod Bay, and make recommendations regarding groundwater monitoring well locations and monitoring frequency.

The AMP will employ threshold groundwater elevations that will be used to trigger immediate corrective action alternatives to mitigate the high groundwater elevations resulting from the facility's increased groundwater recharge. As described in the FEIR, possible corrective action alternatives will include:

- relocation of discharges within the Hyannis WPCF site,
- dewatering and recharge at an appropriate location,
- relocation of 0.5 mgd of treated wastewater to the McManus wastewater discharge site,
- implementation of additional remote wastewater discharge locations,
- purchase of impacted property(s), and,
- institution of a sewer connection moratorium.

#### McManus Site

The Town has proposed to convey approximately 0.5 mgd of treated wastewater effluent from the Hyannis WPCF to a 6.9-acre portion of the 44-acre McManus site, located at the intersection of the Route 6 Mid-Cape Highway and Route 132, for subsurface disposal. The McManus effluent discharge site is located within a marine recharge area to Barnstable Harbor, the Wellhead Protection Area for Barnstable Fire District Wells (BFD) #3 and #4, and the recharge area for Lake Wequaquet, Shallow Pond and Hinckley Pond.

The McManus site was acquired in March 2002 for the purposes described in the Cape Cod Land Bank Acquisitions Program documentation, including the protection of public drinking water supplies, open space, and conservation land, the creation of walking trails and bicycling trails, and the creation of recreational areas. As part of the MEPA review of the 4<sup>th</sup> NPC submittal, the Town provided additional information to the MEPA Office indicating that prior to the purchase of the 44-acre McManus parcel in March 2002, the Town of Barnstable also acquired a use easement associated with a 6.9-acre portion of the McManus site for use as a groundwater discharge facility (“6.9-acre groundwater discharge easement area”). According to the proponent, this groundwater discharge easement area could accommodate the construction of a groundwater discharge facility to accept 0.5 mgd of treated wastewater effluent from the Hyannis WPCF. Based on a review of the information provided in the NPC4 submittal and additional information provided by the proponent pertaining to the 6.9-acre easement area, the Secretary’s Certificate on the 4<sup>th</sup> NPC (January 20, 2006) found that the Town’s proposed use of the 6.9-acre easement area for the disposal of treated wastewater effluent appeared to be consistent with the intended uses and activities described by the use easement documentation.

As described in the FEIR, the proposed groundwater discharge facility to be located within the 6.9-acre McManus easement area will be designed to be expandable to accommodate potential future increases in effluent discharges or groundwater from the Hyannis WPCF. The Town will need to submit a Notice of Project Change (NPC) to the MEPA Office for any future proposal to expand the 6.9-acre groundwater discharge easement area to include the use of any portion of the remainder 37.1-acre McManus site for wastewater effluent disposal. The NPC submittal will need to provide additional information to demonstrate the consistency of the proponent’s proposed use of additional McManus site area for groundwater discharge with the intended Article 97 purposes and interests in land outlined in the Cape Cod Land Bank Acquisitions Program (Chapter 293 Act of 1998, and Chapter 127 Act of 1999). The Town of Barnstable will need to work closely with CCC, MassDEP and others to identify and complete any additional groundwater modeling and/or nutrient loading analysis that may be needed to determine the feasibility of increasing the proponent’s McManus effluent discharge proposal beyond 0.5 mgd. Article 97 of the Massachusetts Constitution bespeaks the high value placed upon the preservation of existing open space lands, including lands subject to Conservation Restrictions. The goal of this policy is to ensure no net loss of Article 97 lands and interests in lands under the ownership and control of the Commonwealth and its political subdivisions. To further the Commonwealth’s open space goals, the EOEA Article 97 Land Disposition Policy requires a demonstration that a proponent has explored alternatives to avoid and/or minimize the Article 97 disposition. The Town will need to propose adequate mitigation for any proposed use of Article 97 lands, and interests in lands, that are not in compliance with the intended Article 97 purposes and interests in land outlined in the Cape Cod Land Bank Acquisition Program.

#### *Additional Effluent Reuse and Discharge Sites & Nutrient Management Program*

The Town of Barnstable’s Wastewater Facilities Plan also includes the identification of additional alternative remote sites that are potentially suitable for the disposal of treated wastewater effluent from its Hyannis WPCF. These sites will continue to be evaluated by the Town as potential future wastewater effluent recharge sites.

1. Cape Cod Community College (Site D);
2. Barnstable Airport Site (Site C);

3. Lorusso Site (Site E);
4. Cape Cod Hospital Abandoned Cranberry Bog Site (Site W1);
5. Makepeace Abandoned Cranberry Bog Site (Site W2);
6. Existing Hyannis WPCF Site (Site A)
7. Full McManus Site (Site B);
8. Country Farm Site;
9. Groundwater pumping from downgradient of Hyannis WPCF to remote location;  
and,
10. Tree Plantations downgradient of Hyannis WPCF.

In their comments, the CCC has suggested that the Town re-evaluate its prioritization of potential alternative effluent disposal sites to take into account the environmental constraints associated with the Barnstable Airport Site (Site C), and the Lorusso Site (Site E). Given the project's potential impacts to groundwater resources, drinking water supplies and Article 97 lands, I strongly encourage the Town of Barnstable to continue to explore opportunities to incorporate a mix of effluent disposal and reuse alternatives involving the McManus site at 0.5 mgd, together with use of one or more additional effluent disposal sites to accommodate the Town of Barnstable's future wastewater flows.

#### Sewering and Growth Management

Executive Order #385 requires that state and local agencies engage in protective and coordinated planning oriented towards resource protection and sustainable economic development. For reasons of both environmental protection and fiscal prudence, investments in public infrastructure should be carefully targeted toward those areas for which clear existing needs have been established and for areas where denser development is appropriate, thereby relieving development pressures on open space, agricultural lands, and other valuable natural resources. According to the information provided in the FEIR document, the Town has proposed to update its current Local Comprehensive Plan (LCP) to include a "sewer neutral" policy and to adopt appropriate regulations (similar to the Town of Chatham's Regulation of Sewer Flow, Article II, May 9, 2005) for controlling new future development requesting municipal sewer service and located in areas inside of the AOC's and the proposed new sewer areas. I encourage the proponent to consult with MassDEP and CCC in also developing growth-neutral policies and a strategy to prohibit and/or discourage future new development requesting municipal sewer service and located in areas outside the AOC's and the proposed new sewer areas.

#### Costs to Homeowners

The Town's WWFP will be constructed over several years and will cost an estimated \$203,000,000.00. As described in the FEIR, the average household costs (capital and O&M) for the proposed WWFP will be \$28,800.00.

I find that the FEIR provides sufficient information to understand the environmental impacts of the project and potentially feasible alternatives to the project, that the project has avoided and mitigated environmental impacts to the greatest feasible extent, and that the state permitting agencies have adequate information on which to execute their Section 61 obligations. The proponent can resolve any remaining issues during the permitting process.

May 18, 2007

DATE



Ian A. Bowles, Secretary

Comments received:

05/11/07	Massachusetts Coastal Zone Management (CZM)
05/11/07	Massachusetts Department of Environmental Protection – SERO
05/09/07	Edward W. Marshall, Jr.
05/10/07	Hyannis Water Board
05/10/07	Gail T. Maguire
05/10/07	Pesce Engineering & Associates, Inc.
05/11/07	Natural Heritage and Endangered Species Program (NHESP)
05/11/07	Cape Cod Commission (CCC)

FEIR/Phase III - Final WWFP #6553

IAB/NCZ/ncz