March 21, 2013

Mr. Richard K. Sullivan, Jr.
Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900 (9th Floor)
Attention: Anne Canaday, MEPA Office
Boston, MA 02114

Mr. Paul Niedziewicki
Executive Director
Cape Cod Commission
PO Box
Barnstable, MA 02630

Re: EEA #15022: Draft Comprehensive Wastewater Management Plan for the Town of Harwich

Dear Sirs:

The Draft Comprehensive Wastewater Management Plan (DCWMP) for the Town of Harwich has been prepared by CDM-Smith. The purpose of the plan is to describe the Town’s wastewater needs and recommend a program for meeting those needs. The plan contains insufficient information about underlying build-out assumptions and the costs of treating wastewater resulting from new development. It also lacks consideration of alternative methods of achieving community growth goals in ways that could reduce wastewater treatment costs. It is vital that these issues be addressed in the DCWMP. Below is a discussion that details these issues.

Wastewater from on-site septic systems accounts for 75-85% of the nitrogen traveling from watersheds to estuaries in Harwich. Validated scientific evidence has documented the negative impact that the continued flow of excess nutrients will have on the condition of our coastal waters.Degraded water quality will have far-reaching ecological consequences that would diminish our quality of life and the vitality of our regional economy. Total Maximum Daily Loads (TMDLs) have been set for the Town by watershed. In East Harwich, TMDLs for the Pleasant Bay watershed require a 65% reduction in septic nitrogen load. This means removing nitrogen from existing development and preventing any additional nitrogen from future growth.

Given the extent of treatment needed, sewers are an important part of the treatment solution. However, sewers should be scaled to accommodate a level of growth that coincides with clearly defined community goals for growth and resource protection. All alternative measures to use land use tools to reduce the costs of sewers need to be fully considered. In making decisions about investments in sewers, communities should
understand the resulting growth effects and costs associated with wastewater treatment designed to accommodate growth.

The importance of in-depth public review of growth assumptions and associated wastewater costs is emphasized in the Cape Cod Commission’s Guidance for Local Wastewater Management Plans (December 2012). The Guidance instructs towns in the earliest stages of planning to estimate the cost of wastewater treatment for mitigating wastewater flows based on current zoning, and to estimate the cost of wastewater treatment for new growth. Later stages of planning should not begin until the town has “addressed the potential cost of future growth (including presentation at public meetings) and concluded that the setting of the [proposed growth] flows is consistent with the community’s willingness to expend capital for future growth needs.”

Based on information provided in the DCWMP, the undersigned organizations are concerned that the growth effects of wastewater and the associated treatment costs for new growth are not fully described, particularly for the region of town with the highest growth potential, East Harwich.

The DCWMP assumes that wastewater flows in the Town will grow 26% due to new development. This means that town-wide wastewater flow will increase from 860,000 gallons per day (gpd) currently to 1,080,000 gpd at build-out, an increase of 220,000 gpd (Table 13-1).

In terms of new development, an additional 500,000 square feet (sf) of commercial space and 250 dwelling units beyond build-out under existing zoning for East Harwich have been added to build-out projections in the DCWMP. According to the DCWMP, this assumption is attributed to the Town’s desire to increase growth in that area (page 13-2), although these build-out estimates do not coincide with any approved community growth plan. The DCWMP also states that this new development will generate an additional 55,000 gpd of wastewater at build-out (Page 13-2). This 55,000 gpd increase specifically associated with new development in East Harwich amounts to 25% of the total town-wide increase of 220,000 gpd in wastewater flow due to projected growth.

The wastewater cost impact of this new development in East Harwich is $20 million. This is supported by information included in the DCWMP that discusses cost reductions.

The DCWMP states that the overall cost of the plan could be reduced by $50 million provided half of projected town-wide growth does not occur, and stormwater and fertilizer controls are put in place (page 13-29). If we assume that 20% or $10 million of that savings would come from fertilizer and stormwater controls, that leaves a potential cost savings of $40 million from halving growth, which would eliminate 110,000 gpd of wastewater flow (half of 220,000 gpd attributed to growth townwide). Added new development in East Harwich accounts for 55,000 gpd of wastewater, or half of the 110,000 gpd. Eliminating that added growth above current zoning could achieve half of
the growth-related savings, or $20 million. Thus the additional 500,000 sf of commercial space and 250 new dwelling units in East Harwich, by generating 55,000 gpd of wastewater, accounts for approximately $20 million in wastewater costs.

It is also possible that projected wastewater flow resulting from an additional 500,000 sf of commercial growth in East Harwich could be significantly higher than the 55,000 gpd projected in the DCWMP. To estimate wastewater flow from new commercial development in the Pleasant Bay watershed, the DCWMP uses a factor of 35 gpd per 1000 sf of commercial development (Table 7-7). However, the DCWMP uses a water use factor of 236 gpd per 1,000 sf of commercial development for every other watershed in Harwich (Table 7-7). A survey of commercial water use factors in Massachusetts Estuaries Project Technical Reports for commercial districts in other watersheds on Cape Cod shows factors in the range of 80-120 gpd per 1,000 sf. Thus, the amount of wastewater flow from new commercial development in the Pleasant Bay watershed could be two to six times what is currently estimated. There is no explanation given as to why water use and wastewater flow for commercial activity in East Harwich is so low compared to other watersheds in town, or to commercial areas in other watersheds on Cape Cod.

It is also important to note that the 55,000 gpd increase in wastewater flow in East Harwich is in addition to the 30,000 gpd that the DCWMP assumes would be generated at build-out under current zoning in the Pleasant Bay watershed. Thus the total wastewater flow at the higher density build-out scenario is 85,000 gpd. An estimate of wastewater flow under various development scenarios conducted by Wright-Pierce for APCC (February 2012) calculates wastewater flow at build-out under current zoning as 82,000 gpd, just 3,000 gpd less than the DCWMP high growth scenario. Thus the projections in the DCWMP could seriously underestimate wastewater flow and resulting costs from added development in East Harwich. If the estimated wastewater flow from added growth in East Harwich is higher than 55,000 gpd, then the cost of treating that added growth could be dramatically higher than $20 million.

We are also concerned that land use management alternatives that could help to achieve growth goals and save wastewater costs have not been fully evaluated. The Commission’s Guidance document recommends that, once a town has estimated wastewater treatment costs associated with growth, it should then “review its build-out analysis to consider possible growth restrictions in areas identified for sewering but not currently identified for future growth.” The importance of growth controls in East Harwich as a way to reduce wastewater treatment costs is acknowledged in the DCWMP. On page 13-36 of the DCWMP it is noted that the Pleasant Bay watershed is one of two areas in town where land use controls could be effective in bringing down treatment costs. Yet there is no evidence in the DCWMP that growth management tools have been evaluated as a way of achieving millions of dollars in potential cost savings.

In light of the information contained in the DCWMP, we are concerned that the impact of proposed growth in development on wastewater flows and resulting wastewater collection, treatment and disposal costs in East Harwich have not been adequately
represented. This information is essential for Harwich residents to have a full understanding of the wastewater-related costs associated with different decisions about growth, and the options available for accommodating growth in concert with land use management that could help to mitigate wastewater flows and reduce wastewater-related costs.

Therefore, we are requesting that the Town of Harwich and its consultants be asked to provide the following analyses:

1. A sensitivity analysis that projects wastewater flows from commercial growth in East Harwich based on a factor of water use that is consistent with other watersheds in Harwich, and other watersheds on Cape Cod.

2. A sensitivity analysis that projects wastewater flows and nitrogen loads from commercial and residential growth in East Harwich based on different growth assumptions including:
   • Growth at the level of build-out in the village center and remainder of the watershed under current zoning;
   • Growth in the village center that is beyond build-out at current zoning without offsets to that growth. Examples would be the addition of 500,000 sf and 250 units shown in the DCWMP, and a higher level of increase to reflect current zoning proposals put forward by the Planning Board (dated 12/14/12).
   • Growth in the village center that is beyond build-out at current zoning with offsets to balance that growth. Examples would be the plan put forward by the East Harwich Collaborative (dated 9/15/11).
   • Growth under land use controls that reduce the amount of future commercial and residential growth below existing zoning for East Harwich.

3. Wastewater costs for each growth scenario noted above should be provided, including collection, treatment, effluent disposal costs and on-going operations and maintenance costs associated with that treatment. Assumptions underlying costs projections should be clearly stated.

4. Comparable analysis should be prepared for all areas of Harwich where future growth beyond build-out under current zoning is projected.

Thank you for your consideration of these comments.

Respectfully,
Harwich Conservation Trust
Robert Smith, Esq
President

Association to Preserve Cape Cod

Ed DeWitt
President

Friends of Pleasant Bay

Jay Tichenor
President

East Harwich Community Association

Briget Rutten
President
Cc: Harwich Board of Selectmen
Harwich Water Quality Task Force
Harwich Wastewater Implementation Committee
Pleasant Bay Alliance
Harwich Real Estate and Open Space Committee
Harwich Conservation Commission
Harwich Board of Health
Massachusetts Department of Environmental Protection
Town of Chatham, c/o Dr. Robert Duncanson
State Senator Daniel Wolf
Representative Sarah Peake