DRAFT - October 14, 1994

Raymond Corwin, Executive Director
Central Pine Barrens Joint Planning and Policy Commission
P.O. Box 587
3525 Sunrise Highway, 2nd Floor
Great River, N.Y. 11739

Re: Formal Coordination Between Peconic Estuary Program and
Central Pine Barrens Joint Planning and Policy Commission

Dear Mr. Corwin:

On behalf of the Peconic Estuary Program (PEP) Policy Committee ("Committee"), I am writing to formally open a channel of communication between the Committee and the Central Pine Barrens Joint Planning and Policy Commission ("Commission"). I am also writing to provide comments on the July 14, 1994 draft Land Use Plan, and to offer the continuing services of the PEP to ensure consistency between our programs.

The PEP is a three-year effort conducted under the auspices of the federal National Estuary Program, authorized by Section 320 of the Clean Water Act to promote management of nationally significant estuaries threatened by pollution, development, and overuse. The Peconic Estuary Program has convened a Management Conference comprised of a coalition of relevant federal, state, and local governments and agencies, interested private organizations, and several advisory committees and subcommittees. The Policy Committee is charged with setting PEP policy, overseeing the activities of all other Committees, authorizing budget requests, sanctioning the Action Plan (see attached Action Plan and Bulletin), and approving the Comprehensive Conservation and Management Plan (draft due June 1995; final product due July 1996). Members of the Policy Committee include representatives from the United States Environmental Protection Agency, the New York State Department of Environmental Conservation, Suffolk County, and Southampton Town on behalf of local government.

At the August 18, 1994 meeting of the Peconic Estuary Program (PEP) Policy Committee, the coordination between the PEP and the Long Island Pine Barrens Protection Act program was discussed. As reflected in the July 14, 1994 *Draft Land Use Plan*, the Commission has considered and incorporated much relevant information regarding the PEP through input from the Suffolk County Department of Health Services Office of Ecology,

which serves as the PEP Program Office while sitting on various advisory committees to the Pine Barrens Commission. However, the PEP Policy Committee has not yet had the opportunity to formally communicate with the Commission, provide input on the *Draft Land Use Plan*, and offer assistance in ensuring consistency between the programs. Therefore, the Policy Committee authorized me to write this letter on behalf of the PEP.

We commend the Commission on the quality and quantity of work which has been completed in such a short timeframe. The draft plan is certainly consistent with many of the fundamental findings and policies of the PEP. As the Commission proceeds with completion of the document, we request that the following comments be considered.

In these comments, all page numbers refer to pages in the July 14, 1994 *Draft Land Use Plan*, unless otherwise noted. Also, several references in the comments relate to work performed for the Brown Tide Comprehensive Assessment and Management Program ("BTCAMP," Suffolk County Department of Health Services, 1992), which was a critical cornerstone of the PEP Action Plan. All BTCAMP references and recommendations contained herein have been adopted by the PEP.

1) Peconic River Groundwater-Contributing Area

The enclosed map shows the groundwater-contributing area to the Peconic River and Flanders Bay. This boundary was delineated in BTCAMP based on work by the United States Geologic Survey. We recommend that the map be included in the final report, and that the BTCAMP boundary be used for management purposes as described in the following comments.

As with all digitized maps included as attachments to this package, the Geographic Information System coverages are available from the Suffolk County Department of Health Services.

2) Land Use Recommendation for Peconic River Groundwater-Contributing Area

The BTCAMP land use recommendation of limiting new development to a minimum of two acres per dwelling unit, or its equivalent, in unsewered areas is stated in the *Hydrologic and Water Quality Overview* (p. 58). This recommendation should also be explicitly stated on page 190, where Hydrology Committee recommendations are summarized.

The BTCAMP land use recommendation is the product of a rigorous analysis designed to protect surface water quality in the Peconic River and Flanders Bay. This analysis related dissolved oxygen in Flanders Bay to chlorophyll-a concentrations, and then correlated chlorophyll-a concentrations to surface water nitrogen levels. The resulting surface water nitrogen guideline of 0.5 mg/l for the tidal portions of the Peconic River and Flanders Bay has been endorsed by the PEP.

The guideline was used in the context of an extensive analysis of pollution inputs, impacts, and alternatives, which relied on dozens of modelling alternatives and thousands of

groundwater and surface water samples. Based on the relationships between pollution inputs and groundwater and surface water impacts, the two acre residential (or commercial/industrial equivalent) land use management measure was recommended in BTCAMP. Implementation of this measure was also recommended by the Local Government Committee in the PEP Action Plan (p. 22 and 23 of the Action Plan).

Since the recommendation is a significant cornerstone of the PEP surface water protection initiative, we suggest that it be explicitly stated in the "recommendations" section of the Land Use Plan. Also, we suggest that the recommendation be used as a policy, standard or review requirement for the Commission. At present, it does not appear to have that status, as the hydrologic recommendations (p. 190) do not seem to have the same weight as the ecological policies, standards and requirements presented on pages 150-161.

3) Groundwater Nitrate-Nitrogen Standard

The relationship between development density and groundwater nitrogen contamination is accurately stated on page 132. Modelling analyses (Cornell studies of Southold and Southampton Pine Barrens, 1983) and field sampling (*L.I. 208 Study, Comprehensive Water Resources Management Plan*) have indicated that, in unsewered areas, one dwelling unit per 40,000 square feet results in an average groundwater total nitrogen concentration of about 4 ppm. At one dwelling unit per 20,000 square feet, the average groundwater total nitrogen concentration is about 6 ppm. These long-standing scientific findings were a critical cornerstone of the BTCAMP recommendations for the Peconic River area.

Based on these relationships, we recommend that the Pine Barrens Commission reconsider the 6 ppm as the groundwater standard in the Interim Guidelines, and as the permanent guideline for Commission review of compatible growth area developments (as stated on page 151). This standard is more lax than the standard which exists in the Suffolk County Sanitary Code for unsewered areas in deep recharge zones (i.e., 4 mg/l at 40,000 square feet per dwelling unit). The level of 6 mg/l appears to contravene the intent of the Pine Barrens legislation's implicit mandate to provide more protection to the Pine Barrens than currently exists.

Based on the above data and analysis, we suggest that the Commission consider adopting a standard of 4 mg/l for the Pine Barrens for areas outside the Peconic River groundwater-contributing area. However, for the unsewered areas within the Peconic River groundwater-contributing area, we recommend the standard of two acres per dwelling unit, or its non-residential equivalent (i.e., 2 to 3 mg/l total nitrogen).

With respect to parcels which receive Pine Barrens credits, the allowable densities are also inconsistent with PEP policies for the Peconic River groundwater-contributing area. We recommend that the Pine Barrens Credit section (page 215, *Pine Barrens Credit Redemption*) be modified to require that development densities should not be allowed to exceed one dwelling unit per two acres, or its equivalent, when Pine Barrens credits are redeemed in unsewered

areas of the Peconic River groundwater-contributing area (see discussion below in Comment 5 for specific receiving areas in Riverhead Town).

Of course, the above discussion pertains to unsewered areas. An alternative means of attaining comparable groundwater nitrogen quality would be to provide sewage collection, at sufficient treatment levels and appropriate discharge locations, in areas where development exceeds the above land use thresholds recommended for currently unsewered areas. The PEP stands ready to provide input to the Commission, and to municipalities, regarding these issues at the appropriate time.

4) Agricultural Uses Subsequent to Granting of Pine Barrens Credits

The issue of permissible uses that may occur in non-agricultural parcels which are granted sending credits is unclear. We suggest that, in the Peconic River groundwater-contributing area, agriculture should not be allowed for non-agricultural parcels which are granted Pine Barrens credits. Based on previous investigations (Cornell, 1983), BTCAMP states that agricultural uses have resulted in pollution levels which were comparable to medium-density residential development of two units per acre. This nitrogen loading is far in excess of PEP recommendations for the Peconic River groundwater-contributing area.

5) Land Use Management in Peconic River Groundwater-Contributing Area

As the Peconic River is a critical and sensitive natural resource which is affected by several complex management programs, we have taken the liberty of preparing information for your use in revising the *Land Use Plan*. Enclosed are two maps entitled *Peconic River Management Program Boundaries* and *Peconic River Land Uses in High Priority Management Areas*.

Contents of Maps

The *Peconic River Management Program Boundaries* shows the Peconic River groundwater-contributing area, the Riverhead sewage treatment plant service area, the Pine Barrens Core Preservation Area (CPA) and Compatible Growth Area (CGA), and the Wild, Scenic and Recreational Rivers Act boundary for the Peconic River. Areas within the Riverhead Sewer District, the Wild, Scenic and Recreational Rivers Act boundary, and the Core Preservation Area are, for purposes of this discussion, deemed to be conforming with PEP land use/nitrogen pollution control recommendations, or are in the process of conforming. Land use in all other areas (i.e., areas which may not conform to PEP recommendations) are presented in the *Peconic River Land Uses in High Priority Management Areas*.

The high priority management areas within the Peconic River groundwater-contributing area are broken down into two categories. The first category deals with the Compatible Growth Area, and the other category deals with areas which are not designated as Core or Compatible Growth Areas.

Peconic River Compatible Growth Areas

The Compatible Growth Area in the high priority management areas in the Peconic River groundwater-contributing area is of significance for two reasons. First, the environmental sensitivity of the parcels should be considered as a factor in designating Critical Resource Areas (CRA's). Second, the high priority Compatible Growth Areas should, at a minimum, not be designated as receiving areas for Pine Barrens credits, unless the resulting density will conform to PEP policy as stated in Comment 3.

As far as the designation of Critical Resource Areas is concerned, there are two significant regions to consider: a large area which includes a portion of the eastern part of the Calverton Naval Weapons Industrial Reserve Plant (i.e., Grumman) and some vacant and agricultural lands to the east of Grumman, and a smaller area which includes some developed and some vacant lands south of Route 24 and east of CR 51. It appears that very little of this high priority Compatible Growth Area within the Peconic River watershed has been designated as a CRA. Perhaps this is due to the fact that the Ecology Committee has designated CRA's based on a wide variety of factors (pages 150-161 and Appendices 4.11 and 5.1), while the Hydrology Committee does not appear to have made any recommendations to designate specific CRA's based on hydrology and impacts on surface waters (pages 190-192). We suggest that the Hydrology Committee be charged with making recommendations and developing separate policies, standards, and criteria for hydrological Critical Resource Areas.

Regarding the Pine Barrens Credit receiving zone issue, there is one possible area of non-conformance with PEP policy. Appendix 5.2 indicates that one area within the Compatible Growth Area in the Peconic River groundwater-contributing area is designated as a Pine Barrens credit receiving zone. This area is in Southampton Town, between Quogue Road and Route 24, and is bounded primarily by medium and high density residential development. We recommend that this area conform to PEP land use/pollution loading recommendation stated above in Comment 3.

Peconic River - Other High Priority Management Areas

Three major areas exist within the Peconic River groundwater-contributing area that are high priorities for management, but which are not within the Core or Compatible Growth Areas. These areas include two portions of Riverhead Town to the east and west of the sewer district, which contain significant areas of vacant and agricultural lands, and a small portion of Southampton Town adjacent to the Peconic River north of Route 24.

These areas should be of significance to the Pine Barrens Commission due to their potential to receive Pine Barrens credits. The Policy Committee recommends that no area in these regions be designated as a receiving zone, or be allowed to receive Pine Barrens credits, unless the resulting poll n loading conforms to the PEP policy recommendation described above in Comment 3.

Currently, the Land Use Plan may not be in conformance with PEP policy. It appears

that a substantial area in the Riverhead Town receiving zone is within the Peconic River high priority management area. As this area appears to be currently unsewered, the proposed Pine Barrens credit receiving zone scenario could allow development densities and pollution loadings far in excess of those recommended by the PEP. We recommend that the Pine Barrens credit redemption qualification for the Peconic River recommended in Comment 3 be adopted, or that the Riverhead Town receiving zone boundaries be modified to ensure consistency with PEP policy.

6) Factors for Acquisition

We recommend that, in the factors to be considered in acquisitions (page 229), "outstanding resource surface waters" or "threatened surface waters of significant concern" be added to the factor which includes "significant natural resources, including rare or endangered species or natural communities."

7) Developments of Regional Significance

The above comments illustrate the environmental significance of the Peconic River groundwater-contributing area in relation to Peconic River and Flanders Bay water quality. In light of this significance, we recommend that the criteria for Developments of Regional Significance (p. 233) should include areas within the Peconic River groundwater-contributing area.

I hope that this information is helpful to you. Once again, please do not hesitate to call upon the PEP for continuing input on management which relates to the PEP study area. If you have any questions or comments, please do not hesitate to contact me at (212) 264-2513. Also, technical questions may be directed at Vito Minei, PEP Program Manager, at (516) 852-2077.

Sincerely yours,

Richard L. Caspe
Director, USEPA Water
Management Division
PEP Policy Committee Chair

cc: PEP Policy Committee
PEP Management Committee
V. Minei, Program Manager