CHARLOTTE HARBOR NATIONAL ESTUARY PROGRAM
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June 19, 2003

Mr. Jan Mandrup-Poulsen
Total Maximum Daily Load Program
Division of Water Resource Management
Department of Environmental Protection
2600 Blair Stone Rd., MS 3555
Tallahassee, FL 32399-2400

RE: "Verified List" of Impairments for Charlotte Harbor and Lemon Bay

Dear. Mr. Mandrup-Poulsen:

Please consider this letter an indication of the Charlotte Harbor National Estuary Program's (Charlotte Harbor NEP) support for the Florida Department of Environmental Protection's efforts to develop Total Maximum Daily Loads (TMDLS) for the impaired waters within our study area. The Charlotte Harbor NEP is a partnership program, created by Section 320 of the Clean Water Act, to protect and preserve the Charlotte Harbor estuary, recognized as an estuary of national significance and one of the most productive estuaries in the State. Since 1996, the Charlotte Harbor NEP has developed and completed a Comprehensive Conservation and Management Plan (CCMP) for the estuary and its watershed. This plan was developed utilizing four committees of citizens, scientists, resource managers, industry representatives and policy makers. Our partnership includes, among others, Lee, Sarasota and Charlotte Counties; the U.S. Environmental Protection Agency; U.S. Army Corps of Engineers; U.S. Fish and Wildlife Service; the Florida Fish and Wildlife Conservation Commission; the Florida Department of Environmental Protection and both the South and the Southwest Florida Water Management Districts. A part of the implementation of this CCMP is determining the consistency of proposed actions in the Charlotte Harbor watershed with the CCMP.

The development of TMDLs within our watershed implements many of our CCMP goals:

- **WQ-1:** Identify those waterbodies that do not meet their designated water quality standards…;
- **WQ-2:** Develop TMDLs, except for mercury, for high priority 303(d) listed water segments by 2004 and for all remaining 303(d) waters in the Charlotte Harbor NEP study area by 2009;
- **WQ-3:** Identify specific actions and develop timetables for achieving all non-mercury TMDLs by the year 2011, and identify specific actions and develop timetables for achieving mercury TMDLs by 2013; and
- **WQ-6:** Meet or exceed designated water quality standards throughout basins of the Charlotte Harbor NEP study area by the year 2015 with possible exceptions for natural and/or site-specific conditions.

The inclusion of those waters that do not meet shellfish harvesting standards for TMDL development, such as WBID 8999, shown on the draft "Verified List" on June 2, 2003 as impaired for bacteria, will help us implement an additional goal:

> **WQ-4:** Achieve water quality that will meet shellfish harvesting standards throughout the Class II waters of the Charlotte Harbor NEP study area by the year 2015.

In addition, we strongly encourage the Department to review and incorporate the Southwest Florida Water Management District's work to develop a Pollutant Load Reduction Goal (PLRG) for Charlotte Harbor into the TMDL process for WBIDs 2065A and 2065 B. In support of our CCMP and the District's Surface Water Management and Improvement (SWIM) Plan, the District has developed a PLRG for Charlotte Harbor that entails removing nitrogen from the water exiting Lake Hancock in the upper Peace River to reduce or at a minimum maintain current nitrogen inputs into Charlotte Harbor. The goal was developed to alleviate anthropogenic impacts on hypoxic events in the northern Charlotte Harbor region. Hypoxia, or episodes of dissolved oxygen below 2 mg/L, occurs almost annually when the waters of northern Charlotte Harbor become stratified. When inflows from the Peace and Myakka Rivers reach over 3.5 million $m^3$/day during the summer wet season (CDM, 1998), the water column in the harbor stratifies, with the less-dense freshwater flowing on top of the heavier more saline waters. This creates a cap that reduces the movement of oxygen into the deeper waters. Nutrients and bacteria in the water column and sediments combine to create a demand for oxygen that lowers the available oxygen in the water column. While hypoxia may be a natural phenomenon in Charlotte Harbor, increases in nutrient loading from anthropogenic impacts may be increasing the frequency, duration and/or severity of the harbor's hypoxia events. The District's research has demonstrated such increases since the 1950s (Turner et al, 2001). With support of the NEP, the District is now working to reduce the nitrogen loads from the headwaters of the Peace River with a series of wetlands, media filtration and/or settling ponds. The District and the NEP hope these projects will at a minimum offset expected increases in nitrogen to the harbor due to development over the next decade. Enclosed, please find two reports describing the District's research on hypoxia in Charlotte Harbor and official NEP correspondence documenting NEP support for the District's PLRG.

We greatly appreciate your help in this matter. Please feel free to contact me at the program office at (239) 995-1777 ext 241 if you need further information or if I can be of assistance.

Sincerely,

Catherine Corbett

Catherine A. Corbett
Senior Scientist

CC: Pat Fricano, Florida Department of Environmental Protection
Richard Cantrell, Florida Department of Environmental Protection South District
Mark Hammond, Southwest Florida Water Management District, SWIM Section
David Tomasko, Southwest Florida Water Management District, SWIM Section
Kim Pierce, U.S. Environmental Protection Agency-Region 4
Robert Howard, U.S. Environmental Protection Agency-Region 4

Enclosures (3):

CDM, 1998. *The Study of Seasonal and Spatial Patterns of Hypoxia in Upper Charlotte Harbor*, Prepared by Camp Dresser & McKee Inc for Southwest Florida Water Management District, available from SWFWMD, Tampa, FL.

Turner, R.E, N.N Rabalais, N. A Atilla, C. Normandeau, B. Fry, J.M. Lee, C.S. Milan, T.A. Oswald and E.M. Swenson, 2001. *Paleo-Reconstruciton of Water Qaulity in the Charlotte Harbor Estuary (Florida)*, Final Report to the Southwest Florida Water Management District, available from SWFWMD, Tampa, FL.

Beever, Lisa to Southwest Florida Water Management District, April 15, 2002. Official Correspondence. Charlotte Harbor National Estuary Program, North Fort Myers, Florida.