

**TAMPA BAY NITROGEN MANAGEMENT CONSORTIUM  
BACKGROUND AND SUMMARY IN SUPPORT OF DECLARATION**

SUSTAINING THE RECOVERY OF THE TAMPA BAY ESTUARY

From the uppermost reaches of Old Tampa Bay and Hillsborough Bay to the mouth of the bay at Egmont Key, the Tampa Bay estuary is made up of a variety of habitats where fish and other wildlife find shelter and food. They range from lush underwater beds of seagrasses, to tidal marshes and mangrove swamps. Abundant and healthy habitats are critical to the health of the bay. Without them, Tampa Bay would lack the diversity of fish, birds and other wildlife that contribute to the natural wonder of the region and is essential to its economic vitality.

Submerged seagrass is among the most important habitats because it serves as shelter, nursery, and food source for a diverse variety of species and stabilizes the bay bottom. Restoration of seagrass habitat is a priority environmental goal of local government and agency partners of the Tampa Bay Estuary Program. The key to restoring seagrass is improving and then maintaining adequate water clarity that allows light to penetrate into the shallow waters of the bay where seagrasses grow. And the key to maintaining water clarity is preventing excessive nitrogen – a nutrient necessary for plant growth – from entering the bay and stimulating the growth of microscopic algae that cloud the water and prevent light from reaching the seagrasses.

Water clarity in Tampa Bay declined markedly in the 1950s, 60s, and 70s as rapid population growth led to increased discharges of partially treated sewage with large amounts of nitrogen. Algae blooms and fish kills were common and almost 50% of seagrass in the bay died off as a result of insufficient light. Unregulated dredge and fill operations contributed to the problem by further clouding the water.

The year 1979 marked a turning point in the condition of the bay when the City of Tampa upgraded the Howard F. Curren Plant at Hookers Point to advanced wastewater treatment, which increased nutrient removal and sharply reduced the amount of nitrogen being discharged into the bay. Across the bay, the City of St. Petersburg pioneered the country's first large-scale reclaimed wastewater program, reclaiming water for irrigation of lawns and golf courses rather than discharging it into the bay.

The quality of bay waters responded quickly to the sharp reduction in nitrogen loading. Concentrations of chlorophyll – an indicator of the amount of algae suspended in the water – dropped dramatically in all major segments of the bay between 1982 and 1984. In Hillsborough Bay alone, the average chlorophyll concentrations fell from 37 units of chlorophyll in 1982 to 13 units in 1984. Seagrasses responded more slowly to the improving water clarity, but expanded to 25,200 acres by 1990 from a low point of 21,600 acres in 1982. Seagrass recovery has continued, and seagrasses in 2008 covered 29,650 acres baywide.

## Final NMC Approved Tampa Bay Nitrogen Management Consortium Declaration 9/11/09

The Tampa Bay National Estuary Program (NEP) was established in 1991 to help local governments, agencies, and other stakeholders in the Tampa Bay area develop a plan to sustain the recovery of Tampa Bay. The NEP partners adopted a Comprehensive Conservation and Management Plan in December 1996 that included measurable goals for restoring seagrasses and related targets for reducing nitrogen discharges to the bay. The parties unanimously adopted a “hold the line” target on nitrogen discharges that capped the load at a level that would ensure adequate water clarity and light to sustain seagrass recovery. Local government and agency partners in the NEP reinforced their commitment to achieving the goals through an Interlocal Agreement adopted in 1998.

In August 1996, the NEP’s governmental partners joined with key industries in the Tampa Bay region to create a unique ad-hoc public/private partnership known as the Tampa Bay Nitrogen Management Consortium for the express purpose of developing a Consortium Action Plan to meet the “hold the line” target. The original Action Plan consisted of more than 100 projects that collectively reduced or precluded nitrogen discharges to the bay by an estimated 134 tons/year between 1995 and 1999. The Action Plan, entitled *Partnership for Progress*, was the core of a larger nitrogen management strategy that included: the baywide seagrass restoration/preservation goal; chlorophyll and nitrogen reduction targets for each major bay segment; apportionment of responsibility for meeting the nitrogen reduction targets; and a process to track whether the targets were being met.

In November 2002, the Florida Department of Environmental Protection (FDEP) concluded that the Tampa Bay Nitrogen Management Consortium’s nitrogen management strategy provided reasonable assurance that the state water quality criteria for nutrients would be met. The U.S. Environmental Protection Agency (EPA) in the meantime continues to recognize a 1998 action by FDEP that proposed a total maximum load (“federally-recognized TMDL”) of nitrogen that could be discharged to the bay annually and still meet state water quality standards related to nutrients. Both FDEP’s reasonable assurance determination and the total maximum nitrogen loading recognized by EPA are based on statistical modeling and data analyses done by the Tampa Bay Estuary Program and its partners.

In 2007, additional local governments, industries and agencies located within the Tampa Bay watershed were invited to become participants in the Consortium, to help develop and implement a collaborative watershed approach to nitrogen management for Tampa Bay and to meet regulatory requirements of FDEP and EPA. A total of 49 entities now actively participate in the Consortium. Additional background on the history of the Tampa Bay nitrogen management strategy can be found in Exhibit “A”.

The remarkable recovery of the Tampa Bay ecosystem after decades of decline is unprecedented among urban estuaries worldwide. The rebound in water quality and ecological health of the bay is even more remarkable in light of the strong population growth during the recovery period. FDEP, EPA, and the Consortium want to continue the success of the collaborative nitrogen management strategy spearheaded by the Consortium. At the same time the regulated members

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of the Consortium recognize the duties of FDEP and EPA to administer the environmental regulations for which they are responsible and that FDEP and EPA have indicated they may not issue discharge permits without limitations that ensure compliance with the total maximum nitrogen load recognized by EPA.

In 1998, USEPA approved a Total Maximum Daily Load (TMDL) for nitrogen for Tampa Bay as is required by Section 303(d) of the federal Clean Water Act. In 2007, USEPA and FDEP advised the Nitrogen Management Consortium that existing and future surface water discharge permit limits for entities discharging to Tampa Bay must not cumulatively exceed the federally-recognized TMDL for nitrogen loading, and that no new or renewed permits would be approved until facility-specific allocations consistent with the TMDL were developed. In December 2007, the Nitrogen Management Consortium proactively committed to develop an equitable process and define suggested allocations to all sources through the 2009 Tampa Bay Reasonable Assurance Addendum.

To help ensure continued recovery of vital seagrass habitat and the successful nitrogen management strategy that makes it possible, local governments, agencies, and industry participants of the Nitrogen Management Consortium worked together over 18 months to provide FDEP with an updated reasonable assurance document, ensuring that state water quality criteria for nutrients will continue to be met in the bay. The participants developed a set of nitrogen wasteload allocations that attempts to equitably distribute the burden of nitrogen management across all sectors and sources of nitrogen loading within the basin, as well as the total maximum loading of nitrogen to each major bay segment.

**DECLARATION OF THE TAMPA BAY NITROGEN MANAGEMENT CONSORTIUM**

PARTICIPANTS IN THE TAMPA BAY NITROGEN MANAGEMENT CONSORTIUM  
DECLARE THEIR INTENT TO IMPLEMENT THE 2009 TAMPA BAY REASONABLE  
ASSURANCE ADDENDUM AS FOLLOWS TO ENSURE CONTINUING RECOVERY OF  
THE TAMPA BAY ESTUARY:

The undersigned Consortium participant hereby accepts the 2009 Tampa Bay Reasonable Assurance Addendum and agrees with the undersigned Consortium participant's nitrogen load allocations established by the Consortium for the 2008-2012 Reasonable Assurance period (as described in Exhibit "A").

This Declaration shall take effect as to the undersigned Consortium participant executing this document upon its date of execution.

Example signature page

The [Consortium participant entity] hereby approves the TAMPA BAY NITROGEN MANAGEMENT CONSORTIUM Declaration and attachments.

Attested this date \_\_\_\_\_

Authorized by \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Witnessed by \_\_\_\_\_

Seal (if appropriate)

EXHIBIT "A"

[Final 2009 Reasonable Assurance Addendum: Allocation & Assessment Report]