

October 8, 1999

Dear Municipal Official:

In 1990, the Buzzards Bay Project, a participant in the U.S. Environmental Protection Agency's National Estuary Program, developed a Total Maximum Annual Loads (TMALs) strategy to manage anthropogenic nitrogen inputs to coastal embayments in Buzzards Bay. This strategy was contained in the 1991 Buzzards Bay Comprehensive Conservation and Management Plan approved by the Commonwealth of Massachusetts and the US EPA.

The Buzzards Bay Project has recently completed a detailed review of seven years of data collected through the Buzzards Bay Citizen's Water Quality Monitoring Program and has evaluated information on eelgrass distribution in Buzzards Bay. This technical review is contained in a draft final report available at [www.buzzardsbay.org](http://www.buzzardsbay.org). One copy of the report has also been sent to each town in the Buzzards Bay watershed (to the Board of Selectmen or Mayor). Based on our review, we have concluded that while the overall nitrogen management approach that we outlined in 1991 is sound, the recommended annual loading limits for nitrogen may be too high to protect all coastal embayments. Consequently the Buzzards Bay Project is proposing to revise its nitrogen management recommendations, reducing recommended limits by up to one-half for certain types of bays and estuaries. The new limits are included on the attached fact sheet.

The Buzzards Bay Project National Estuary Program is a technical assistance and planning agency, not a regulatory agency, therefore these proposed changes will not directly affect your municipality. These changes will, however, affect the technical assistance and reviews provided by the Buzzards Bay Project to local, county, state, and federal regulatory agencies on diverse issues ranging from recommended limits for sewage treatment facilities to proposed changes to town zoning or other town bylaws establishing nitrogen limits for new development.

The Buzzards Bay Project is seeking a technical and scientific review of this report and is inviting comments on the proposed limits until November 23, 1999.

Please keep in mind that these annual loading limits for nitrogen are for guidance and planning purposes. Ultimately decisions by environmental regulators on nitrogen standards will be made based upon the best available scientific information at hand, together with an assessment of the costs and benefits of the proposed changes, as well as other factors, each on a case-by-case basis. This is true for Planning Boards considering new subdivision regulations, Town Meeting members considering new bylaws, or state and federal regulators considering nitrogen limits for sewage treatment facilities.

The use of these recommended limits are appropriate only when BBP loading assumptions for septic

systems, agriculture, stormwater, and other nitrogen sources are used. If other loading rates for nitrogen sources are used, then other nitrogen standards are required. Because the BBP's nitrogen loading limits take into account the depth, flushing time, and volumes of bays, they are bay specific. These limits also incorporate an existing state water quality classification system to allow for additional environmental degradation in selected harbors with heavy development use or existing impacts. Despite this specificity, our approach is still a general model. Ultimately sophisticated computer models will be developed that will take into account a more wide range of features of bays. Until these models have been developed and refined, we believe these limits and our management approach establishes an objective set of performance standards on which permitting decisions or new bylaws and regulations can be based.

In the end, because many coastal embayments are primarily affected by the cumulative impacts of development and "non-point sources" rather than a single large point source of pollution, and because municipal government has the greatest authority and capacity for dealing with these sources, it is the actions of individual municipal boards and committees that will decide the fate of coastal water quality. Sound and legally defensible decisions can only be made by these boards when town bylaws and regulations are in place that objectively define nitrogen loading performance standards and goals. These strategies require a watershed approach and complimentary standards by each board.

We hope you find this information useful. Should your board or department need technical assistance on an issue relating to nitrogen loading to groundwater or coastal waters, please do not hesitate to contact me or the staff of the Buzzards Bay Project.

Sincerely,

Joseph E. Costa, Ph.D.  
Executive Director