Spatial and temporal trends in summertime climate and water quality indicators in the coastal embayments of Buzzards Bay, Massachusetts

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General comments

This paper has brought forward data from an important long-term citizen effort to document specific water quality parameters in Buzzards Bay. The paper should be published subject to the author's satisfactory revisions as recommended in the review process.
The paper innovatively characterizes the several different, but complementary physical inputs to the Buzzards Bay over a long period of summer season monitoring. The paper effectively states the need for continued monitoring to further differentiate the causes and extent of the different stressors to the Buzzards Bay ecosystem.

Specific Comments

1. The monitoring effort described in the paper should be continued and extended over a longer window in the calendar year.

2. Other parameters such as the measurement of light attenuation should be included in the monitoring protocols.

3. The climatic factors (temperature and precipitation) described in the paper are important elements in the analysis of the reasons for the continued degradation of the Buzzards Bay coastal systems, but climate change-related conditions shouldn't interfere (or delay) efforts to reduce the unsustainable inputs of N into the system.

4. Unlike Buzzards Bay's neighboring regional system, Cape Cod, there is still time and much undeveloped open space in the Buzzard's Bay Watershed to implement future sustainable development policies and remediation efforts. Wise policy action using the data and concepts introduced in this paper and future monitoring efforts will be needed to prevent further water quality degradation and loss of natural systems.

List of specific comments

1. In many places in the paper the term "normalized" was used. I was confused with what that meant and how it might effect the data.

2. There didn't seem to be a definition of TN in the paper and I found the analysis referencing TN and N to be confusing.

3. Little mention of light availability was present in the analysis. Light is an important component for life in and under the water column and should be considered as an important element of future monitoring efforts.

4. In the Conclusion of the paper I found the statement that a "five-fold reduction in nitrogen load might be required to mitigate the effects of nitrogen enrichment in some embayments" confusing and in need of explanation.