

**Notes from the Public Meeting to discuss Water Quality  
17 October, 2005  
Nantucket High School  
4–5 pm.**

Approximately 25 people attended at least part of the meeting

The purpose of this public meeting on the update of the 1993 Nantucket and Madaket Harbors Action plan was to discuss issues related to water quality in and around the two harbors.

**Presenters:**

David Fronzuto, Nantucket Marine Superintendent.  
Jack Wiggin, University of Massachusetts, Urban Harbors Institute

**Other members of the planning team in attendance:**

Steve Bliven, Sarah Oktay, John Duff, and Lisa Bowen of the Urban Harbors Institute, University of Massachusetts Boston; Rich Delaney of the Horsley, Witten Group.

- Dave Fronzuto provided a brief introduction of the harbor plan update process and the planning team. He strongly suggested that interested parties visit the associated web site [www.nantucketharborplan.com](http://www.nantucketharborplan.com) for additional information.

**Jack Wiggin, Director of the Urban Harbors Institute and Project Manager:**

- Stressed the importance of the topics being addressed during all of the public meetings,
- Reviewed the Goals and Objectives related to water quality provided in the 1993 Harbor Plan, noting that there were four general sub-topics:
  - ~ Monitoring
  - ~ Public Education
  - ~ Boating-based pollution
  - ~ Non-point source pollution
- Introduced the specific Action Items from the plan, seeking comment on whether they had been successfully completed, continued to be important, or whether there were new topics to be addressed within the updated harbor plan. Please see the separate Powerpoint file for a copy of the presentation.

The following is a summary of the comments, questions, and issues raised during the meeting.

**Monitoring**

- The 1993 plan addressed nutrients and coliform pollution but did not address toxic contamination from boats. The updated planning process should determine whether this is an issue to be addressed and, if so, should produce action items to resolve any problems. See section below for additional discussion of the potential pollution contribution from boats to the harbor.
- One person mentioned that the study area around Madaket Harbor should be expanded to include Long Pond and the landfill as these both contribute pollution

to the harbor. This expanded area should be addressed at least as part of the water quality element. Dave Fronzuto noted that Long Pond is being sampled as part of the ongoing Estuary Project. However, most of Long Pond is outside of the area surrounding Madaket Harbor that will be addressed in the new Action Plan.

- The updated plan should determine whether water quality in the harbors has improved since the 1993 plan and whether the action items in that plan have helped. (Dave Fronzuto noted that the water quality data from past years are in the process of being analyzed by the Estuary Project.) There is a need to assess all of the action items to see if they are being effectively met.
- The relative contributions of nitrogen and phosphorous to the Harbor was raised as an important question to answer. Urban Harbors noted that Brian Howes' work on the Massachusetts Estuaries Project (MEP) project will answer this question. In addition, Nantucket's Marine and Coastal Resource Center posts their water quality reports online. Based on these reports, in Nantucket Harbor, nitrate concentrations are not increasing, but there is more nitrogen in the Harbor than there should be (2002 NMCRC report). Phosphorous concentrations, on the other hand, do appear to be increasing and repeatedly exceeding safe water quality standards.
- A Nantucket resident noted that there appears to be a lot of nutrient data collected from the harbor waters. Yet, it still seems that nobody is clear about recent trends in water quality. The town has been putting a lot of effort into improving nutrient concentrations already, but the residents feel that there is no consensus on whether their efforts are making a difference or not. A suggestion was made by the meeting participants to redirect effort towards analysis of our data. In other words, there has been considerable time spend collecting data, but there hasn't been time to analyze the data and plan a response to significant issues. The Updated Plan should provide this sort of analysis and recommendations to maintain or improve water quality as necessary.
- The concept of an aquaculture center/shellfish propagation facility needs to be based on having high quality water available in the harbor and protecting the marine habitat. Mr. Willauer commented that the report should give specific recommendations as to suitable locations for a scallop propagation facility. (Both Dave Fronzuto and Sarah Oktay mentioned that the current Brandt Point location is probably best due to water exchange, water depth, and proximity to facilities.)
- The scallop areas off Coatue and Tuckernuck are not significantly polluted; consequently they could provide a base line for comparison with water quality in the harbors. Dave Fronzuto said that both Brian Howes and the state currently use those areas as controls.
- In testing shellfish for contaminants are the entire bodies sampled or just the muscle? (S. O. Answer: entire bodies are typically sampled, especially when evaluating bivalve pollution burdens because many pollutants are sequestered in fatty tissues). A good example of this phenomenon was evident during the red tide influx; scallops were safe to eat because we only eat the adductor muscle, oysters and blue mussels were not because the entire animal is consumed.
- The nature of a "designated shellfish area" in various regulatory programs is unclear. A FAQ explaining this should be developed for the web site and be included in the updated harbor plan. The plan should show the designated

shellfish areas at the time of publication and information on how to locate such information in the future.

- It was noted that, at one point, funds (Citizen Participation Grant) had been available for a citizen monitoring program but that no one seemed interested in starting it and overseeing the project. The Massachusetts Department of Coastal Zone Management had also previously offered grants for citizen groups to do monthly water sampling. It was suggested that these avenues for funding be reinvestigated.
- It was questioned as to how long it takes nutrients to reach the harbor. Members of the UHI team noted that there were a great number of variables. Most nutrients originated on land reach the harbor through groundwater discharge. A general figure for the rate of movement of ground water in an area like Nantucket is about one foot per day. Assuming no uptake or other factors, the rate of movement of nutrients is expected to be about the same. However, nutrients can be taken up by plants or bacteria along the way, thereby lessening the amount eventually reaching the harbor. The UMass Field Station recently held a workshop on fertilizers which provided techniques to lessen or remove nitrogen inputs.
- Will fertilizers and their impact on the harbor be addressed in the Harbor Management Plan Update? Jack Wiggin responded that it should be mentioned as a source on pollution, but that the Plan will refer to other efforts to resolve the matter.

## Public Information

- Are the materials developed as part of the Public Education Action Items from the 1993 Plan available? Dave Fronzuto replied that they are and copies will be put in the library section relating to the Harbor Plan Update. Richard Ray mentioned that the Health Office also has considerable material and he would see about putting that information on-line. He also suggested that people email him with specific questions. It was requested that part of the Harbor Plan update should be to review existing materials and see if any should be modified.
- Communication of the sources and implications of water quality issues is important to developing solutions. UHI should provide advice on the best means to communicate these issues to the public. John Duff of UMass offered stenciling of storm drains with a message like "Drains to Harbor" has been effective in many areas. Rich Delaney of The Horsley Witten Group noted that similar issues exist on Cape Cod and that [www.capekeepers.org](http://www.capekeepers.org) provides a source of information, particularly for non-point sources.
- Avenues for communication should include the Chamber of Commerce, landscapers and nurseries, and new and current homeowners
- Why are water quality efforts in the Harbors not addressing phosphorous. Sarah Oktay noted that the limiting nutrient in salt water is generally nitrogen, not phosphorous, *i.e.*, increasing phosphorous in salt water does not generally lead to greater growth in algae, whereas increases in nitrogen levels do accelerate algae growth. It is generally the opposite in fresh water (Phosphorus is the primary limiting nutrient. (Addendum: For more info go to

[http://seagrant.gso.uri.edu/G\\_Bay/HabitatEco/Ecosystem/nutrients.html](http://seagrant.gso.uri.edu/G_Bay/HabitatEco/Ecosystem/nutrients.html) or  
<http://www.lenntech.com/water-ecology-FAQ.htm>)

- It was suggested that the growth of the internet as a source of information perhaps requires a town staff person who would be dedicated to keeping town-related sites up to date.
- The June 2003 watershed water quality report provides a ranking of inputs and impacts from various pollutants. This was produced through the NP&EDC. One participant specifically mentioned that it was critical to get the final version (June 2003).
- John Duff (UHI) also emphasized that we shouldn't ignore one of our best avenues for giving the public information.....Nantucket's newspapers.

### **Boat Pollution**

- Contamination from boats: Toxic contamination from power boats was one concern expressed by community participants at the meeting. In addition, the use of boat care products that are not environmentally friendly was noted as a potentially significant problem for water quality in the harbors. Boat owners could be better educated about environmentally conscious boat care and local vendors could be better educated about products that will not degrade water quality. However, many of the products, for example, that are better for water quality are worse for cleaning than the polluting products.
- It was suggested that mooring owners do not get the same level of information about pump-outs and water quality impacts from boating that transient boaters do. A means should be developed of getting information out to local owners in case there are problems. Perhaps including information sheets in the yearly bills?
- Outboard motors have been implicated in the release of pollutants. Newer models, particularly four-stroke motors, release far fewer pollutants. Perhaps they should be required in the Harbors.
- Do the local retailers provide non-polluting cleaning agents and advice on how to use them? Dave Fronzuto replied that they do but there is no control on what is purchased from off-island or internet sales. It was suggested that the Harbor Management Plan Update include tougher language pertaining to cleaning agents. Dave said that the local chandleries and West Marine were good about providing information on safer cleaning products.
- It was suggested that one way to get information out to boaters is through the boat inspection program. This would involve working with the Coast Guard and the auxiliary.

### **Non-point Source Pollution**

- The 1993 plan called for the designation of critical habitat areas (areas set aside as critical habitat that should not be developed). This has been done through updates to the Conservation Commission regulations. Part of the UHI review, will be to look at these regulations.

- It was suggested that it might be effective to have point of sale information available on the use and possible off-site impacts of fertilizers.
- Sarah Oktay mentioned that passing local bylaws is one approach that could be used to control water quality pollution, like excess nutrients, that originates from lawn care and maintenance. The town of Falmouth, MA has a nutrient loading bylaw, which limits lawn area and lawn care in the town. Rich Delaney mentioned that zoning bylaws could also reduce the scale of impervious surfaces which funnel stormwater input into water bodies.
- GIS (Geographic Information System) analysis: One resident suggested that GIS analysis of leaking septic system locations would be interesting.
- There was a discussion of the existential question “Why are there lawns?” from various philosophical perspectives. Some participants felt that the aesthetic is shifting toward more native plants and naturalistic landscaping; while others felt the “super green lawns” would not be going away soon.

#### **Harbor Plan Implementation questions and comments:**

- Effect of the new plan: Questions about the plan’s ultimate effect were posed by Nantucket residents: What is the report going to tell us? What should we do with the report once it is complete? What effect will our efforts have on the Harbor?
- Participants noted the need for a Waterfront Development Plan for Madaket.
- The plan should analyze the feasibility and need for instituting a zoning bylaw for a “Waterfront Overlay District” to protect water quality

#### **Miscellaneous:**

- There is a need for access to the harbor, not only for pedestrians and boating, but also to allow for water sampling

#### **Action Items:**

Sarah O. will get a copy of the June 2003 version of the Nantucket Planning and Economic Development report. The 2003 report is significantly different than the 2001 version and should, therefore, replace the 2001 version at the Nantucket library.