

**Natural Resources Advisory Board
Minutes
December 19, 2005
Town Hall Hearing Room**

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TOWN CLERK

Present: John Riehl, chair, Lezli Rowell, clerk, Bill Knittle.

The Chair called the meeting to order at 7:07 p.m. John shared an article in the Boston Globe regarding the sand overwash and gear losses in the recent Freak Storm affecting aquaculture areas. He noted that it has been a tough year for the industry, and queried the board about mentioning these hardships in the HMP. Lezli agreed, noting that there are attitudes that need to be countered with the public education components of the Plan that aquaculture is an 'easy living' or that it is an exploitation of resources. The industry faces great risks and no guarantees. John felt that the Plan could go so far as to support the Town underwriting insurance policies against losses for aquaculturists. Bill agreed that the industry brings enormous benefit to the town and is worth subsidizing. Lezli agreed but felt that position may be a tough sell when the town's employees have lobbied for better benefits. She felt that the Town could at least offer the prospect of collective purchasing power.

John distributed the November 28, 2005 letter from the "State of the Harbor" Conference Planning Committee following up on the 11.5.05 conference, and the summary of "Questions Asked by Conference Participants" (attached).

John noted receipt of the requested audit of the oil spill response following the summer event which caused shellfish closures from the Harbormanster. He will make copies to distribute to members and reserve time on the January agenda to discuss it.

John noted the 12.5.05 correspondence from Hillary Greenberg, Conservation Agent, regarding plans to restore Blackfish Creek by enlarging the culvert under Rt. 6. In conjunction, the crossing has been identified as critical to evacuation plans and works to improve infrastructures should be taken together. Additionally, John noted that there are plans to resurface the Wellfleet link of the bike trail next Fall; he felt it would be a shame to make improvements that would then have to be dug up for the culvert work. Lezli moved to authorize John to write to Rix Peterson, on the NRAB's behalf, to recommend that the Town seek grants or funds to undertake the culvert, road and bike trail improvements together. Bill seconded; motion unanimous.

7:20 Glenn Shields arrived.

Review of the Draft Harbor Management Plan

John queried the board whether it preferred to work through the text chapter by chapter, address any specific points – or call for a vote on the plan as finished? Lezli suggested that the bulk of the content has been accepted by consensus through the work-shopping process and felt that this meeting was to nail down final language in the recommendations. The board agreed to review the listing of recommendations.

John noted that he will meet with John Portnoy and Krystal Lee of the CCNS, and Hillary and to draft “strategy approach for the restoration of Mayo Creek”. He noted that there has been no water quality testing or identification of floodplain properties, impacts to private wells and septic systems, and that there is extensive phragmite invasion. Tim Smith, Coastal Zone Management’s salt marsh restoration specialist, will join in the process. John noted that the two properties potentially impacted are the Trailer Park (Schuster’s) and the Bookstore Restaurant, in areas of low elevation. Lezli noted that salt-water intrusion to the private wells is a big issue, compared to the HRSMRP with limited developed land, but felt that with Municipal Public Water Supply becoming available there might be solutions in offering hook-ups.

John questioned whether the board was comfortable with the language in the recommendations concerning coastal armoring; Lezli replied affirmatively.

John noted that the recommendation to strengthen the role of the Shellfish Constable was supported by the Shellfish Advisory Committee.

John noted that he had just received a call from the Chair of the Marina Advisory Committee, Bob Gross, seeking a meeting to recommend comments and corrections to the Marina and Dredging chapters. John felt this response may be to the older version which was posted on the Town website for the summer public hearings and comment period, but would meet with Gross to receive his input. Lezli affirmed that the Chair had worked extensively with the Harbormanster’s department through several drafts of the chapters. John said he would allow which corrections that do not substantially change the content agreed upon by the board.

Lezli provided the chair with a few notes for minor corrections in the recommendations listing, which John accepted. Lezli thanked the Chair for his diligent work through the past four years, and in getting the various chapters through the editing phase and assembled into a final draft, and moved to accept the **12.19.05 Harbor Management Plan as the final document**. Bill seconded.
Motion unanimous!

John queried the board as to how to best communicate the HMP. It was felt that a combination of distributing hardcopies (one for Town Clerk, Library, BOS, etc.)

with posting to the Town website and e-mail blasts containing links to the document, along with availability of disk versions would be effective. Select chapters could be given out hardcopy to various board and committee chairs along with the information to reach the web posting for full text. John asked whether the final plan needs to go to Town Meeting; Lezli felt that the NRAB deliberated under its charge to produce the Plan and the board's presentation to the Board of Selectmen is sufficient, short of any interest to export the Plan or parts of the HMP to another agency. She felt that if the Plan, or parts of the Plan, were to be submitted for State-certification [or used in the Local Comprehensive Plan to be submitted to the CCC] that would trigger the local bylaw for a 2/3 majority Town Meeting approval. John will seek agenda time with the BOS in January.

John noted the request from the LCPc to indicate which issues from the HMP could be supported with specific regulations. John and Lezli discussed the distinctions between advisory boards and regulatory bodies, as well as the differences between zoning mechanisms and health regulations. She felt it best for the NRAB to proceed with the plan as a useful tool to make issues known and facilitate other groups, and leave the drafting of regulatory language to those boards specialized to do so.

The board discussed the HMP as a "Living Document". Rather than ten year episodic reviews, the board can look at the issues annually and put out addendums to follow the Plan, such as when the Massachusetts Estuaries Project summary report becomes available.

John reviewed the maps to be included in the text: Salt Marsh Protection Areas, ACEC, Watersheds. Lezli recommended various graphics which have been presented in the past few "State of the Harbor" conferences.

Bill moved approval of the 11.12.05 minutes as presented; John seconded, approved unanimously.

John set the next meeting for January 16, 2006 at 8:00 in the Town Hall Hearing Room.

The meeting convened at 8:35 p.m.

Respectfully submitted,



Lezli Rowell
Committee clerk

Questions Asked by Conference Participants at the 3rd annual State of Wellfleet Harbor Conference on Saturday November 5, 2005

Henry Lind: Harmful Algal Blooms (Red Tide) and How They Affect the Shellfishing Industry

- Will Cape waters continue to have outbreaks if the 2005 event left cyst fields in Cape Cod Bay?
- What is the longevity of cysts on the bottom soils waiting for the right conditions to bloom? Years?
- Is the red tide movement down the East Coast being exacerbated (or will it be exacerbated) by climate change?
- Would global warming have effect on red tide?
- As oceans warm will the organism move more northward?
- How much effect does human activity – coastal development, outfall pipe, even global warming have on red tide?
- How did the red tide affect the birds this spring?
- What are the long term effects on birds of increased red tide events?
- What about impact on tourism? Consumers? Women also harvest!
- Since herring, mackerel and sandlance are surface algae feeders do you think they play a role in regulating red tide organism population?
- Could there be a correlation between less baitfish and more red tide organism?
- Is the red tide always present in shellfish?
- What can be done to limit, control or eradicate red tide?

Roxanna Smolowitz: QPX (Quahaug Parasite Unknown) in Wellfleet Harbor

- Is QPX increasing due to increase in Nitrogen loading and rise in detritus?
- Is the organism a naturally occurring one that only causes infection as an unfortunate consequence of contact with clams? Or does it need to infect clams to complete its life cycle?
- How will the new PCR tests help shellfish managers with QPX infected harbors?
- IS QPX dangerous if clams are eaten?
- What is the origin of QPX? (ie where did it come from – invasive from other oceans?)
- Is it a new disease? If not why is it proliferating now?
- If QPX is detected on the shell of the clam but not inside of the clam could the seed be rinsed off with fresh water?
- Could you explain again relationship of temp to QPX in F not Celsius?
- Can you better define marine aggregate – what exactly are they?
- Can you please explain the difference or significance of the “positive” and “negative” sites in the Harbor?
- Is QPX always present and if so at what level?
- What species of shellfish is QPX found in?
- Is there ever any human (adverse) reaction to eating QPX?
- Should we close areas with QPX?

John Portnoy: Fecal Coliform, Shellfishing, and Tidal Restoration in Wellfleet's Herring River

- What quantity and distribution of wildlife species contribute to the fecal coliform concentrations? In other words has a wildlife inventory been completed?
- Is fecal coliform a pathogen? If not why is it a problem in Herring River?
- What is the source of fecal coliform in road run off? One would expect to see oil and by products in the road runoff but where do fecal coliform come from? Are they disease producing organisms?
- What effect if any does the road over the dike contribute to water quality at the dike?

- Herring River is a big project – how do you think this project will be different or similar to Hatches Harbor and East Harbor?
- What about mosquitos?
- Does ocean water ever contain high levels of coliform?
- How does the golf course interfere with the Herring River?
- What are the risks or negative factors if Herring River dike is opened to “wide culvert”

Jim O’Connell: Shoreline Change and the Effects of Human Activities on the Wellfleet Harbor

- Where is the Wellfleet Harbor study published?
- Regarding the compromise of sand on revetments. Do the owners have to keep adding more sand over the revetment as the sand gets moved? Are they commanded to replenish?
- What impact if any has the disappearance of Billingsgate Island had on the stability of Wellfleet shorelines?
- What would the components be for calculating renourishment volume for existing armored revetments?
- Where does “renourishment” sand come from?
- Shrinking shorelines exist all over the world – what solutions have been tried here and elsewhere and what works?
- Are rock walls in Wellfleet causing accelerated erosion rates in Eastham?
- Is there a regulatory phase out of the right to protect pre-1978 structures with coastal armoring structures?
- How do you line up old shoreline maps with the modern aerals? What are the reference points?
- Jeremy point was a barrier beach. Its recent disappearance has opened Wellfleet Harbor to southwest wind driven wave action. How will this affect Harbor Shoreline?
- Is it ever appropriate to emove arevetment? If so, when?
- Can beach re nourishment totally replace hard stabilization?

Stephen Smith: Highlights and Lowlights from Salt Marshes in Lower Cape Cod: Tidal Restoration vs. Saltmarsh Dieback

- Hatches Harbor – is there any evidence that inter layering of permeable sand lens in the marsh retards phragmites dieback?

Bob Prescott: Winter Sea Ducks and the Important Bird Area Program in Wellfleet Harbor

- Has recent climate change impacted seasonal bird populations(migrants, residents, accidentals) in any measurable way?
- I used to see lots of terns on Indian Neck beach teaching their offspring how to fish. But no longer. At the same time I have seen an increase in numbers of piping plovers and sanderlings. Why would this happen?
- Where do loons go after the harbor freezes over?

Hilary Neckles: Eelgrass – Ecology, Habitat Value, and Threats

- I have read that the ocean is becoming more acidic. Will this effect eelgrass?
- Is it possible to differentiate between eelgrass loss caused by an increase in turbidity and loss by disease? If so how?
- How can eelgrass be restored?What are the restoration costs?
- Are restoration projects helping? Explain
- Why do we allow dragging? For sea clams, for study, what else?

Brian Howes: Progress Report on the Mass Estuaries Project in Wellfleet Harbor

- What percent of the water in Wellfleet that leaves on an ebb tide comes back on flood – how efficient is the flushing?

- What connections do you see between pumping groundwater resources and the level of nitrogen loading in surrounding estuaries? Are there some constraints on such pumping dependent on such a relationship?
- How important are shellfish beds for reducing nitrogen loading?
- Does the current draft revisions to Title 5 in the public hearing stage relate to regulating the MA DEP Estuaries Project?
- Does nitrogen loading diminish with horizontal migration?
- What information is there on drummer cove ie. Why did the stats reduce from 7.1 to 4.6? Did I understand that there was a particular focus and or problem here?
- What is the source of sediment in Duck and Blackfish Creek? Tidal restrictions?
- Some citizens feel that by the time the water quality data and models are generated by the Estuaries Project it will be "too late" to do anything about nitrogen loading – for example watershed development? How would you convince them otherwise?
- In determining the nutrient load from specific lots are you using the legally permitted amount for that lot or the maximum possible use and the impact of seasonal fluctuations of loading (e.g. cottage permitted for two bedrooms can have 8 people staying in it after the septic system has been used for 7 months and is not up to speed.

Other:

- What can be done to increase tidal flow into and out of upper duck creek? Cut through the marina parking area? Remove remnants of old railroad bridge?
- For all panelists: What kind of land use regulations if any and/or environmental regs would contribute to a solution?

Questions Asked and Discussed During the Duck Creek/Inner Harbor Field Trip on Sunday November 6, 2005 with Dr. Graham Giese

- What is the effect of the railroad embankment?
- Are there more or less marsh grasses in Duck Creek?
- What are the dissolved oxygen levels?
- Will constructing channels through the marina improve water quality or siltation?
- What has changed in the Harbor regarding navigation?
- Is Chipman's Cove filling in? At what rate?
- Will what we learn at Herring River help us with the Inner Harbor?
- How do we set our goals and make changes happen?
- Should we restrict or increase human use around the harbor?
- Why would we remove the embankment – because flow is restricted at this point and it creates velocities that pick up sediment and move it into the Harbor.
- If the embankment is removed, how much of it?
- Would tide heights around Duck Creek changed if you remove the railroad embankment?
- Would removing the dike expose downtown to more flooding?
- Why are there bare areas of marsh grass in Duck Creek?
- How was the pool of water in the marsh at Cannon Hill by the walking path and Pine Point road created?