

BARNSTABLE HARBOR UPDATE MEETING

A Meeting was held to update the public on Barnstable Harbor issues on October 27, 2014 in the Innovation Room, Cape Cod Commission.

Staff: Daniel Santos, Department of Public Works; John Juros; Roger Parsons; Christine Player, consultant C.L.E. Engineering.

Members of the Public (who signed in) : David Munsell, Joan Ellis, Jim Ellis, Jack Hill, Henry Blair, Herb Mathewson, Jay Smith, Avery Revere, Peter Eleftherakis, George Blanchard, Paul Venditti, Mark Begley, Al Barbour, Larry Smith, Margaret Smith.

Others: Ann Canedy, Town Councilor

STATUS OF MILLWAY BRIDGE: The Mill Way Bridge is town owned and State inspected. It was rebuilt in 1996 and is 18 years old. Life span of bridges re 30-40 years with proper maintenance. The usual inspection cycle is every three years-this bridge is inspected every 2 years. It was last inspected in September 2014.

- No imminent structural or safety hazards were identified. The bridge rated "above satisfactory" in all rating categories save one category. The bridge is in good overall condition.
- Maintenance items were identified which should and will be addressed during regular budget cycle. Those include encroaching foliage (blocking signage), incorrectly placed signage (weight posting), some roadway erosion, loose cables, missing insulation, cracking, guardrails, re-pointing, mortaring.
- Some movement has been detected evidenced by slight differences in rail alignment. The latest report does not identify why there is movement- Normal? Bridges do move and some movement is predictable. Is the movement here more or less than expected? Roger Parsons, Roads Engineer, is seeking clarification from the State.
- The Town/State has monitored the bridge for movement since 2008-includes detailed measurements. Very minor but consistent movement has been detected. in one area there is a 1 1/2 inch gap between joints. Is this normal, thermal movement? Roger Parsons will clarify from the State.
- There are utilities connected along the bridge and are looked at as part of the inspection. Sewer, gas and water connections.

THE STATUS OF BLISH POINT CONTAINMENT REMEDIATION/SAND MANAGEMENT PLAN

- The failure of some parts of the embankment is obvious. The area is losing sand which is moving into the Inner Harbor.
- \$215,000 was appropriated by the Town Council for FY2015 (began in July 2014) to develop a short and long term solution to erosion and stabilization of Blish Point.

- Additional funds were received through a "Green Grant" for stabilization-a short term solution (5-7 years) to buy time in order to fashion long term solution which the State will approve. Grant money has to be expended by June 2015.
- Christine Player, C.L.E Engineering, is the consultant on the project.
- State does not readily approve hardscape solutions like jetties, armoring, sea walls. The reason is the unintended consequence of feeding one area (accretion) and starving one area (erosion). While this is what we may think we would want for Blish Point/Inner Harbor, this solution may have detrimental effects elsewhere in the Harbor system.
- Part of the Town's Blish Point project includes study of short term and long term historical changes, sand movement patterns, accretion and erosion.
- Short term solution will likely include installation of geotextile "sand bags". It is an intentionally biodegradable system. The goal is to stabilize the containment area created during previous dredges while consulting with various State agencies (Coastal Zone Management, Office of Fish & Boating Access, Department of Environmental Protection) for long term solution.
- The sandbag system will be constructed on site. Will consist of 3x3 coconut fiber bags filled with compatible sand, 6 feet below the exposed grade (to prevent undermining) . As much as is compatible and possible, the sand will be obtained from unwanted deposited sand in the Harbor. Some sand may have to be imported. Understanding that we do not want to add sand to an area already choked with sand, imported sand will be as minimal as possible.
- The sand source used to construct the sand bag system will come from the excavation required to install bags as well as supplemental off-site source as purchased by the contractor. Sand brought in from the off -site source will need to be similar /compatible to existing beach sediments.
- The fiber bags will be stacked and sewn together, covered in sand and planted over with vegetation whose root systems will hold the sand in place.
- The bags will be placed further into the containment area (i.e moving landward) along the western corner since this area has been historically prone to erosion. A sand cover will be installed within the original basin footprint to protect the bags from sunlight/exposure. The dune will not increase in height. Work is being done on the footprint.
- Ongoing maintenance will be required.
- Bags will line the Point from southwesterly tip east to the end of the containment area. The sand cover placed over the bags will be graded at a 1.5H:1V lope which is consistent with the original basin design.
- The Town is currently undertaking sand sampling to assess compatibility with existing beach sand at Mill Way Beach.
- Time Line: The Town will apply for a Conservation Commission Permit. The Department of Environmental Protection has been involved in the planning and have signaled approval. Late winter construction anticipated.
- Construction site will be on the beach or in the parking lot. Minimum disruption anticipated.
- Long term solution: All scenarios are on the table. Potentially the containment area could be abandoned.

STATUS OF DREDGE PROJECT

- The Town Council appropriated funds for FY2015 for a Comprehensive Permit and Dredge Plan. The Plan will identify fresh and salt water town wide dredge projects and prioritize those projects.
- Projects will then be developed based on these findings and inserted incrementally into the annual budget process.
- It is highly likely that Barnstable Harbor will be identified as a high priority. DPW will be submitting the project for appropriation in the FY2016 budget (to be considered for approval in May/June and available for funding July 2015)
- The question was raised - what if the Harbor silts over before dredging is possible? DPW is moving forward to put "placeholder" in the budget to ensure availability of funding for Barnstable Harbor dredge.
- Another question was raised- can there be a public/private partnership? Question that needs to be answered is whether use of County dredge (public resource) would prohibit or limit use of dredge for private projects. (Ann Canedy will explore).
- Army Corps of Engineer resources and equipment cannot be used in this Harbor (not federally designated)
- Time Line: Winter 2015-2016 outer harbor dredge.

STATUS OF BULKHEAD

- Structural weaknesses were detected about a year ago. The design engineering firm (formerly Vine Associates- now GZA) has taken full responsibility for failure.
- Town has been working closely with GZA to determine root of problem and solve.
- It was immediately noted that bolts were missing. Through excavation, borings and other tests, it was discovered that the washers holding the rods had been flattened and were coming through the beam. The design called for 3/4" washers. However, 3/8" washers were installed.
- There is significant external water pressure in this area. The bulkhead is bowing seaward. There is significant failure all along the east bulkhead. There is no guarantee that there won't be a catastrophic failure - this is being immediately addressed.
- The Town measures and monitors the bulkhead daily.
- The Town hired a third party consultant who has concurred in both the reason for the failure and the proposed solution.
- Soil will be removed behind the bulkhead immediately to relieve the pressure. Construction will occur over 3 months this winter. The entire bulkhead (south and east) will be repaired and reinforced. Stronger bolts and 1 inch washers will be applied.
- All costs are being born by the responsible party (GZA).
- Time Line: Ongoing monitoring. Repair this winter.

Many thanks to the dedicated staff of the Town of Barnstable and to the many residents and interested stakeholders who express ongoing concern regarding Barnstable Harbor issues.

Ann Canedy, 10/28/14