State-of-the-Beaches Webinar

Tuesday, October 5, 2021
11:30am-1:00pm

Chat Question + Answer

Maine State-of-the-Beaches
Dr. Stephen Dickson and Peter Slovinsky from the ME Geological Survey

- How often are beach nourishment practices implemented? What are some of the factors that influence the frequency?
    - Peter Slovinsky: Wells is nourished, on average, about every 5-10 years. The Corps has implemented nearshore placement the last 2 times that the Wells Harbor entrance has been dredged, with a much larger nourishment completed in 2005 when a larger area of the Harbor was dredged.
- Is part of the purpose of this research to determine if beach nourishment is worth doing and cost effective?
    - Peter Slovinsky: Yes. With Wells, we wanted to really see how the nearshore placement, which hadn't really been done before, performed as opposed to pumping sand directly up onto the beach, which costs much more.
- Are there any arguments made or negative impacts of near shore beach nourishment?
    - Peter Slovinsky: Negative impacts of nearshore placement are typically mitigated by seasonal timing restrictions (to limit issues with sturgeon and also dumping of sand on lobster traversing habitat).
- How much does nourishment cost?
    - Peter Slovinsky: I don't have exact numbers of cost, but nearshore placement is much cheaper than nourishment of the beach because it is not pumped up onto the beach.
- As it determined which beaches will be nourished?
    - Peter Slovinsky: Most nourishment is done as part of dredging of federal harbors and is considered "beneficial reuse" of dredged materials.
- Why don't they dredge Webhannet river for sand for the beach?
    - Peter Slovinsky: They do. The navigational channel is maintained by the US Army Corps. For smaller dredges, they typically remove sand at the outer part of the inlet. They have dredged farther up the river in the past when doing a much larger project.
- Do you measure the currents in the nearshore environment prior to nearshore placement? Just curious if longshore currents could move much of the sand along the shore and not onshore.
    - Peter Slovinsky: We don't but generally have a good sense of local current patterns prior to suggesting (if asked by the Corps) where placement would occur.

- Has anyone determined the optimal grain size or grain size distribution for nourishment of various beach segments?
    - Peter Slovinsky: Beach nourishment/nearshore placement needs to match the current textural and color of existing beach sand as much as practicable. That said, the sand at some beaches is changing over time (because it has become more erosive). There have been some studies on existing grain sizes up and down the coast, but no detailed studies on optimal size given changes to beaches over time.

- ME DEP published "Maine Beaches for the Future, an Proposal for Integrated Beach Management (2009?) It has a chapter on beach nourishment and a prioritized list with order of magnitude costs. Was updated in recent legislative report -- Pete, can post a link?
    - Peter Slovinsky: Here is the 2017 Protecting Maine's Beaches for the Future Update. https://www.maine.gov/dep/publications/reports/index.html then navigate down to 2017 and click on the title Protecting Maine's Beaches for the Future: 2017 Update.

- Additional questions from the chat which may be answered in the Q/A session:
    - If placement was stopped, would erosion trend revert backwards?
    - Does it impact salt marsh accretion/health when materials are taken out of rivers and harbors?

New Hampshire State-of-the-Beaches
Dr. Larry Ward (UNH and the Center for Coastal and Ocean Mapping) and Dr. Alyson Eberhardt (NH Sea Grant and UNH Extension)

- Resources for NH Beach Profiling: https://seagrant.unh.edu/beach-profiling including data products as well as raw data are found under “Project Impacts”

- Do you think beach nourishment can outpace sea level rise?
    - Larry Ward: No, beach nourishment is meant to alleviate an existing erosion problem that will help the beach and the landward infrastructure for a limited period of time. The beach will have to be nourished periodically and adjustments made as needed.

- Both ME and NH presentations have focused on beach nourishment and nearshore placement. Are there other measures where wave action/erosion is reduced with the placement of offshore reefs or structures?
    - Larry Ward: No, not in New Hampshire to my knowledge.

- I loved learning about the coastal research volunteers program! What is your retention rate for your volunteers? How do you primarily communicate with this crew and how do they upload data?
    - Alyson Eberhardt: More information about the Coastal Research Volunteer program can be found at our website https://seagrant.unh.edu/crv Upcoming CRV opportunities and project results are communicated via a monthly email newsletter. You can sign up to receive the newsletter here: https://unhoutreach.tfaforms.net/217753
    - Retention for the beach profiling program is incredibly high! We have had shockingly low volunteer turnover in the 5 years of the program, particularly given the large commitment required.
    - We primarily communicate with our volunteers via email. Volunteers take pictures of data sheets and upload them, as well as enter the data into a google spreadsheet.

- You mentioned that Hampton recovered very quickly from the 2018 storms. Why would that happen in Hampton and not in other places?
    - Larry Ward: It is not clear why Hampton Beach recovered more quickly than many of the other New Hampshire beaches. Part of the reason is likely that a lot of the sand that was overwashed into the streets was placed back onto the beach (I believe). But more importantly it appears Hampton has a larger sediment source.