

Session 4: Beach Management, Dunes and Seaweed

Room 229

Part 1

Title: Collaborating for coastal resilience in Seabrook, NH

Presenter: Emily Bialowas

Seabrook NH:

- 1 of 6 oceanfront towns in NH
- Facing storm surge and sea level rise
- Have 4 dune systems that defend against storms (this is a very unique resource unusual to NH seacoast)
- Important: Dunes are owned by the TOWN (not private/ state)- this causes conflicts with overlapping jurisdiction on who is in charge of what area of beach front (High to low tide water line of the beach front is owned by state, for example)

Conflict on dune grass:

- Residence and beach visitors feel the dune grass is overgrown and too high VS. scientists view the dunes as a unique feature, and the only intact ones in NH

Historic Conflict:

- Several years ago the harbor was dredged and sands were put on top of the dunes
- This created nesting areas for piping plovers
- Home owners were unhappy that they did not know the dredging would take place, but researchers were able to resolve the situation by telling them some positives about piping plovers
- Residence now view piping plovers positively

Conclusion:

- Based on the success story historically with the piping plover, there needs to be more outreach on the importance of the dune grass
- Plan of action needs to be: Form advisory board, create town plan, and determine if dune dredging will occur again

Q and A questions:

1. Is it the towns who decide if they want to dredge? A: It is federal, but the towns can refuse
2. Do people stay off the dunes? A: There are signs but people still use them

Part 2

Title: State of Maine's Beaches in 2017

Presenter: Peter Slovinsky

Beach Profiling:

- 10 beaches in 8 communities, with a total of 29 profile sites
- Beach profiles are done in both summer and winter

- Profiling allows for understanding beach erosion in the summer/winter each year with a A to F scoring grade
- Very high sea level rise in 2010 along with a neap tide storm has caused significant low scoring of high erosion of Maine Beaches

Summary:

- 71% of the beaches profiled are stable/ accreting
- 29% are somewhat erosive/ erosive
- You can go online to the beach profiling website to get information on each beach
- Also there is a Maine Beach Mapping Program available online
- For fall 2017: there will be a new addition to the program, as profiling will be done on the vegetation line AND the (standard procedural) MHHW (1.4m) line, to look at areas that beach visitors use and how beach nourishment could affect that area as well.

Question and Answer:

1. Have they tried to create a model from the data since 1999 when it started to make projections?
A: There are possible errors and the data would need to be QA/QC checked

Part 3

Title: Digging in: Understanding the complexities of addressing excessive seaweed accumulation on Maine's coastal beaches
Presenter: Keri Kaczor

Background:

- Excessive seaweed (mostly wrack weed) in some areas have cause elevated bacterial levels, because as the seaweed lays on the beach, it was warming and decomposing creating high bacterial levels. When the tide comes in it resuspends the algae, and gets the bacteria into the water column.
- Seen in 2014/15
- Some likely causes were: -The location of the beach, and how the beach is geologically facing from tides

Why the seaweed was appearing in high concentrations:

- Warming Gulf of ME waters
- Introduced species (seaweeds were a mix of native and introduced)
- Excessive nutrients (pollution)

Excessive seaweed bad:

- Seaweed is beneficial to ecosystems: Give stability, nutrients and shelter
- In high amounts, seaweed can also: Give exceedance of bacterial levels, have bad aesthetics/ smell on tourists beaches, be a safety/ visibility issue for lifeguards and swimmers

How dangerous is this to public health?

- Eventually the bacteria in the water column gets eaten, so it is only a temporary issue
- It is unknown if high bacteria levels are also due to fecal matter or seaweed as well

Management:

- Preliminary findings have found that grooming can increase bacterial levels
- Rule: Seaweed in beach can be moved but NOT removed from a beach
- New Bill LD739: Will allow for seaweed to be removed from beach for safety reasons. The strategy is to dry the seaweed off site and then put it back into the system
- York Parks and Rec: using a fork to dig up sand on beaches to remove beach debris and give air to the wet sand, this exposes the sands to UV radiation and can kill off excess bacteria

Question and Answers:

1. If there is algae on the beach when the York Parks is digging, where does the seaweed go?
A: They can not remove it from the system, I don't know exactly where they place it
2. Are there any other communities using fork raking in Maine because of York's success? A:
Just York, it is very costly to run. Michigan and other beaches elsewhere have had success with it though.