Enhancing Coastal Resilience on Virginia's Eastern Shore Community Leader Workshop

Breakout Session #3: Barrier Island-Inlet Modeling System

Session goal: To identify and explore combinations of management actions on Wallops, Chincoteague, and Assateague Islands that are most likely and of greatest concern, and therefore most useful and relevant to address in Barrier Island-Inlet Modeling System and incorporated into the *Coastal Resilience* Tool.

Discussion questions:

1. What potential future management actions are missing from the list (below) and what should be added?
2. What potential future management actions appeal to you, concern you, or interest you the most and why?
3. Which management actions are the most important to model?

Potential Management Actions on Wallops, Chincoteague and Assateague Islands

Below is a list of potential future management actions to mitigate shoreline erosion and inundation that may be taken by US Fish and Wildlife Service, the Town of Chincoteague, or NASA-Wallops Flight Facility in response to future sea-level rise and storms in the future. The criteria for considering management actions to be modeled are as follows:

- Is the management action likely to be considered in the future?
- Is the management action feasible given regulatory constraints and authorities?
- If we model the action, will the information be used by decision-makers to inform future adaptation/coastal resilience decisions?

U.S. Fish and Wildlife Service Chincoteague National Wildlife Refuge

Summary of potential future management actions that might be considered on southern half of Assateague Island:

a) Sand fencing along dune line of Assateague Island beaches between Swan Cove Trail and the old Coast Guard Station on Toms Cove Hook.

b) Sand fencing and dune recontouring between Swan Cove Trail and the old Coast Guard Station on Toms Cove Hook.

c) Beach replenishment between Swan Cove Trail and the old Coast Guard Station on Toms Cove Hook.

d) Permanent inlet breaches that occur along Assateague Island caused by storms that are maintained and allowed to persist versus filling in and repairing.

e) No action.

NASA-Wallops Flight Facility

Summary of management actions considered in the 2010 Shoreline Restoration and Infrastructure Protection Program (SRIPP) Final Programmatic Environmental Impact Statement (PEIS):

a) Preferred alternative (that is the current, permitted management action): Continue to protect Wallops Island by full beach fill and extension and maintenance of 4,600-ft seawall.

b) Second alternative management action: Protect Wallops Island by full beach fill, seawall extension, and terminal groin (430-ft long by 50-ft wide) constructed on south end of the island's shoreline.

c) Third alternative management action: Protect Wallops Island by full beach fill, seawall extension, and offshore breakwater (300-ft long and 110-ft wide roughly 750-ft offshore).

d) No action alternative.

Town of Chincoteague

Summary of management actions that are being explored by the Town of Chincoteague:

a) Maintaining and expanding hardened shorelines (i.e. bulkheads, revetments) along working waterfronts and commercial property on the island.

b) Dredging of Chincoteague Inlet and redistribution of dredge spoils for marsh restoration along major infrastructure such as Chincoteague Causeway.

c) Replacement of Chincoteague Causeway with a bridge.

d) Placement of flood gates along tributaries and drainages around island to mitigate storm surge flooding to interior.