

# City of Hampton- Chesapeake Bay Shoreline Evaluation Report-



Factory Point Restoration (2010)  
@ Mouth of the Back River



Chesapeake Bay Shoreline Evaluation Report-  
Executive Summary

## **Presentation Outline**

- Purpose
- Background/Overview
- Conclusions
- Recommendations

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

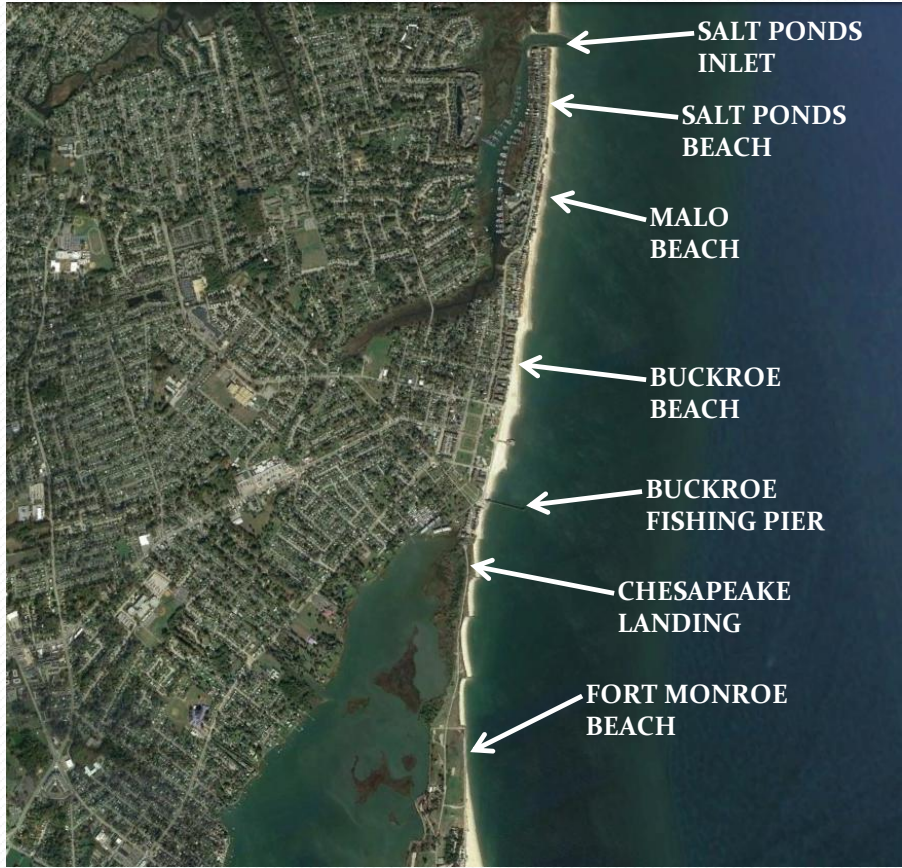
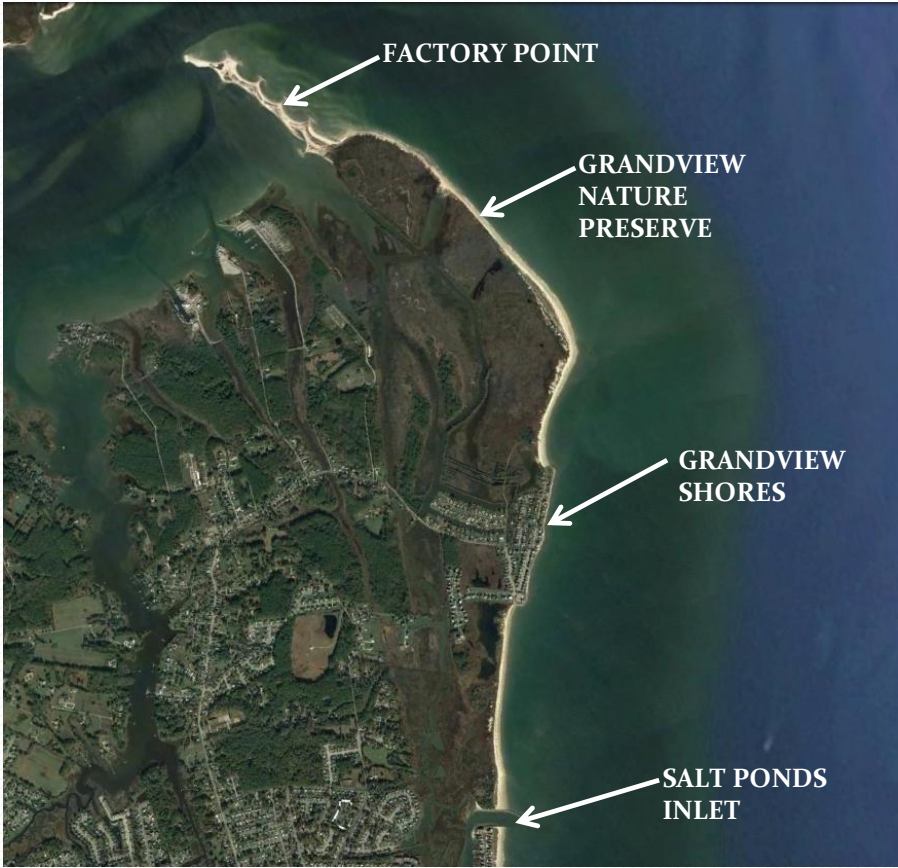
## Report Purpose

- 1) To review and document the history of Hampton's Chesapeake Bay shoreline since the 1960's- storms and improvements
- 2) To evaluate the impact of those natural and manmade changes on the public and private shorelines from Factory Point to Fort Monroe
- 3) To address concerns from some property owners that the City's actions may have negatively impacted private shorelines

This evaluation was conducted by AECOM, Waterway Surveys and the Virginia Institute of Marine Science (VIMS)

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Background/Overview





# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## **Background/Overview**

1. Since the 1960's Hampton's Chesapeake Bay shoreline has experienced a number of hurricanes, nor'easters and/or major tidal events that have damaged the shoreline, causing loss of sand on the beaches and/or property damage.
2. In 1986, City Council adopted a Beachfront Master Plan, which detailed the City's vision for improving the shoreline and enhancing the public use.
3. Since 1990, there have been 6 beach nourishment projects at Buckroe and Salt Ponds beaches, and at Factory Point, placing a total of approximately 900,000 cubic yards of sand on the beaches, using local and federal funds.

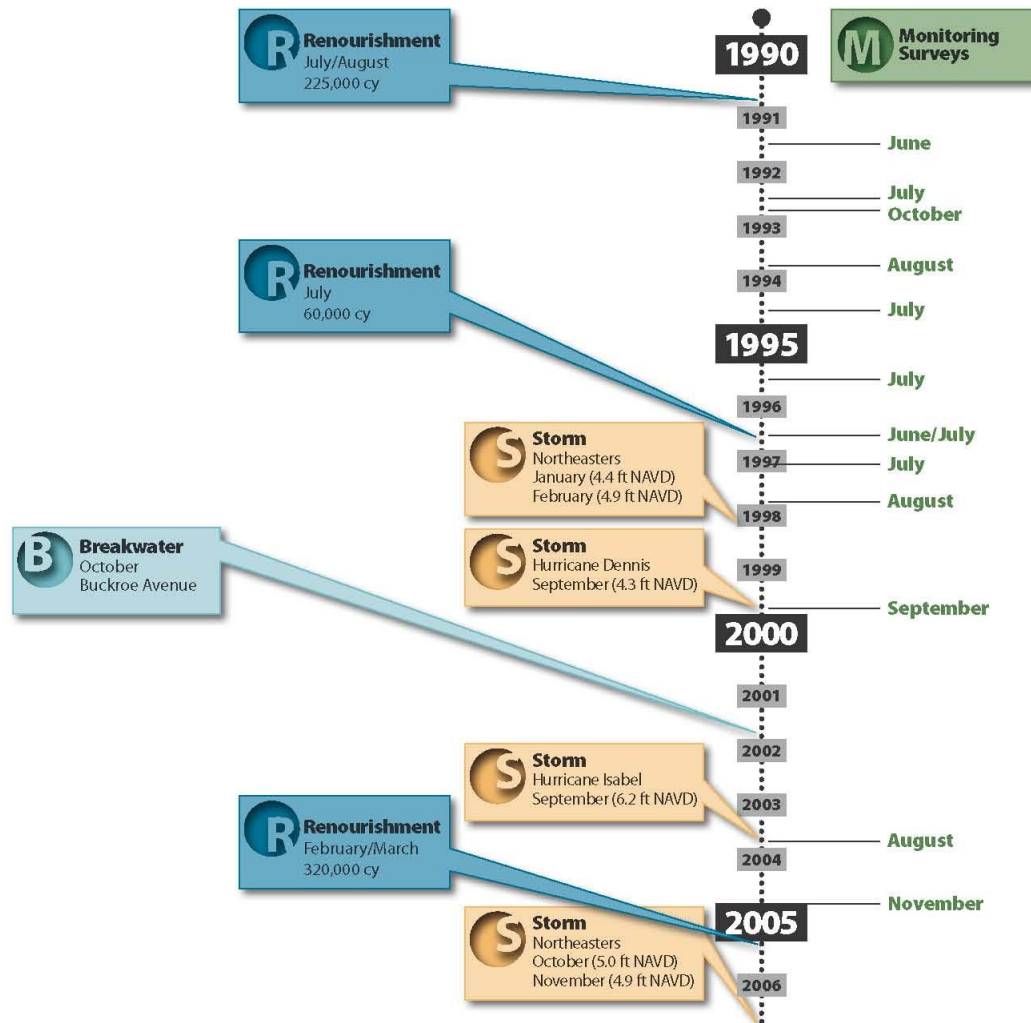
# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## **Background/Overview (Cont.)**

4. In 1999, Hampton completed a Beachfront Storm Protection & Management Plan in order to begin implementing a long term phased approach for managing its Chesapeake Bay shoreline.
5. In addition to beach nourishment projects there have also been other public improvements along the shoreline, including a jetty extension, a geotube, offshore rock breakwaters, and other shoreline protection projects.
6. Buckroe Beach has been surveyed 23 times since 1990 to monitor the shoreline profiles and to collect data on the impacts of various storms and improvements, all of which was used in the Shoreline Evaluation Report.

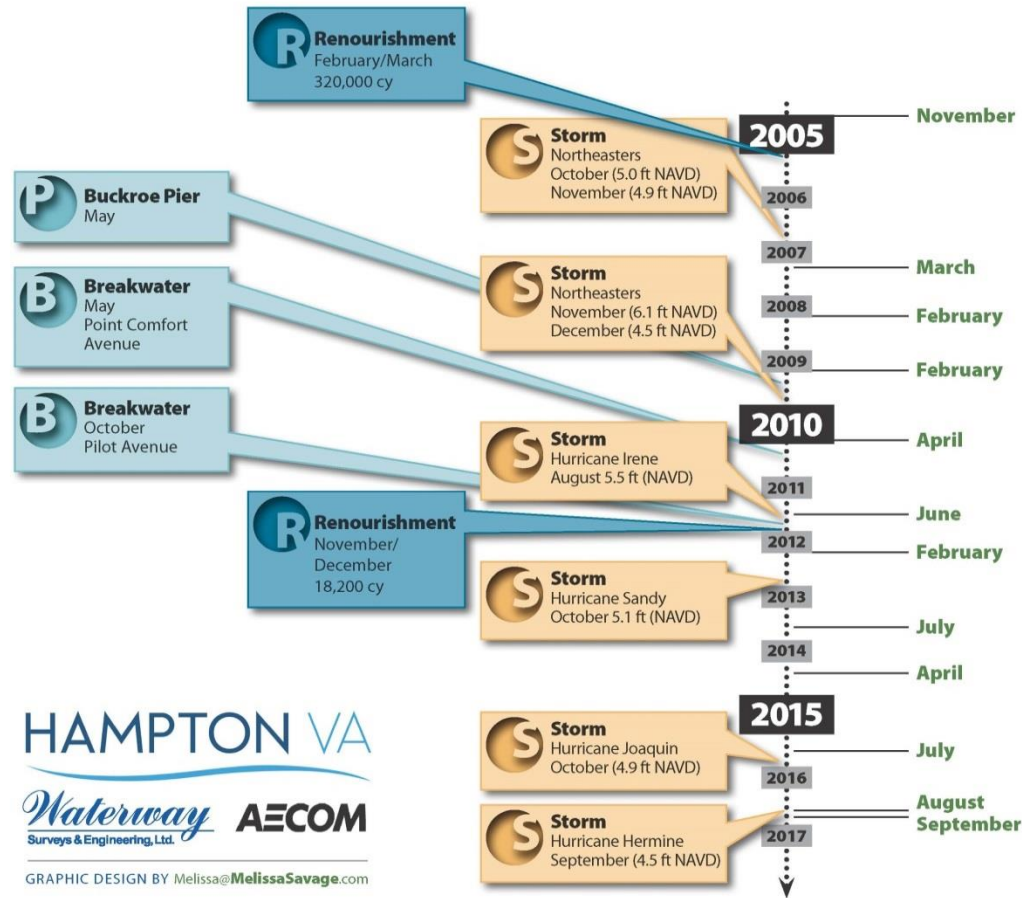
# Major Events History

## BUCKROE BEACH – Shoreline Evaluation



# Major Events History

## BUCKROE BEACH – Shoreline Evaluation



HAMPTON VA

Waterway Surveys & Engineering, Ltd. AECOM

GRAPHIC DESIGN BY Melissa@MelissaSavage.com



# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Previous Shoreline Improvements



## Beach Nourishment Project/Salt Ponds

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Previous Shoreline Improvements



## Beach Nourishment Project/Buckroe

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## Previous Shoreline Improvements



### **Buckroe Wood Groins**

*Constructed in late 1960's as a result of Ash Wednesday  
storm of 1962*



# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Previous Shoreline Improvements



### Offshore Rock Breakwater

*Data indicates net long-term benefit to beaches north & south*

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Previous Shoreline Improvements



**Offshore Rock Breakwater**



# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Previous Shoreline Improvements



**Shoreline Stabilization (Geotube)**  
*Combination of geo-tube and beach nourishment*

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Restoration of Factory Point



**FACTORY POINT (2009)**





**FACTORY POINT  
(December 21, 2009)**





**FACTORY POINT  
(February 19, 2010)**



**FACTORY POINT  
(March 5, 2010)**





**FACTORY POINT  
(April 15, 2010)**



**FACTORY POINT  
(April 30, 2010)**





**FACTORY POINT  
(November 10, 2015  
Google Earth)**

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## **Benefits of Factory Point Restoration**

Because of the City's actions in restoring and stabilizing the Factory Point peninsula, the shoreline is "accreting" (adding sand), which has provided:

- 1) Expanded habitat for plants and animals.
- 2) Increased recreational benefits.
- 3) Better barrier for the Back River area against coastal storms.

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Conclusions

- 1) Hampton's Chesapeake Bay shoreline is a dynamic system with sand continually moving in and out between the Bay and the shoreline and along the shoreline (generally moving from north to south)
- 2) Storms accelerate the movement/loss of sand, while beach nourishment projects replace that sand.
- 3) Capital projects help reduce the rate of sand loss from storms and "capture new sand"



# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## **Conclusions (Cont.)**

- 4) Without proactive shoreline management, the entire shoreline would have eroded much farther inland due to storm activity (as evidenced by the eroded shoreline along Grandview Nature Preserve)
- 5) Private shorelines (Malo Beach and Chesapeake Landing) have benefitted from previous public beach nourishment projects due to the predominantly southward sand movement
- 6) Prior to nourishment the Hampton shoreline and beaches from south of Salt Ponds to Ft. Monroe were eroding at the rates of -1.5 to -2.0 feet/year

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## Recommendations

- 1) Continue implementation of the Beachfront Master Plan:
  - More off shore rock breakwaters- Salt Ponds beach, etc.
  - Periodic beach nourishments
- 2) Coordinate with Fort Monroe Authority on joint beach projects that would benefit the public beaches
- 3) Continue coordination with the US Army Corps of Engineers of funding for future beach nourishments and other shoreline projects

Copies of the Hampton Chesapeake Bay Shoreline Evaluation Report are available from the Dept. of Public Works and will also be placed on the City's website

# Chesapeake Bay Shoreline Evaluation Report- Executive Summary

## “Miracle” at Factory Point?



**Questions or Comments?**