Sea Level Rise and Storm-Surge Flooding Workshop

Sea level rise and storm-surge flooding in the Middle Atlantic Region:
Science, capabilities, planning, and adaptation

Monday, October 15th 0900-1200
For questions, please contact Elizabeth Smith, Old Dominion University at exsmith@odu.edu

Sponsored by:
Old Dominion University Climate Change and Sea Level Rise Initiative

Purpose

Understand the capabilities to forecast future inundation from sea level rise and storm surge in the Middle Atlantic region and identify ways to adapt to the effects of the likely flooding.

Objectives

- Understand the status of the science and factors needed to forecast relative sea level rise in the Middle Atlantic region and identify how to improve the state of knowledge.

- Review the current capabilities to forecast flooding from sea level rise and storm surge using models and other methods and determine how these tools can be utilized effectively to provide actionable information to stakeholders in the Middle Atlantic region.

- Identify what information stakeholders need to plan for sea level rise and future storm surge flooding and determine adaptation methods and techniques.

Outcomes

- Scientific and technical issues needed to forecast relative sea level rise and storm surge flooding in the Middle Atlantic region.

- Actionable information needed by stakeholders to plan for sea level rise and storm surge flooding.

- Tools, methods, and best practices for determining the impacts of the area affected by sea level rise and future storm surge flooding.

- Framework to provide required information to stakeholders for planning and adaptation.

Background

Mean sea level is rising throughout the Middle Atlantic region: for example, about 1 foot over the past 100 years at Norfolk, VA. Many jurisdictions and other stakeholders are beginning to think about how to determine the effects of sea level rise and to develop plans for adapting to

future conditions with higher sea levels. Conditions that must be considered are the area permanently inundated by new higher mean sea level and the additional area at risk of periodic flooding by future storm surge with higher sea level.

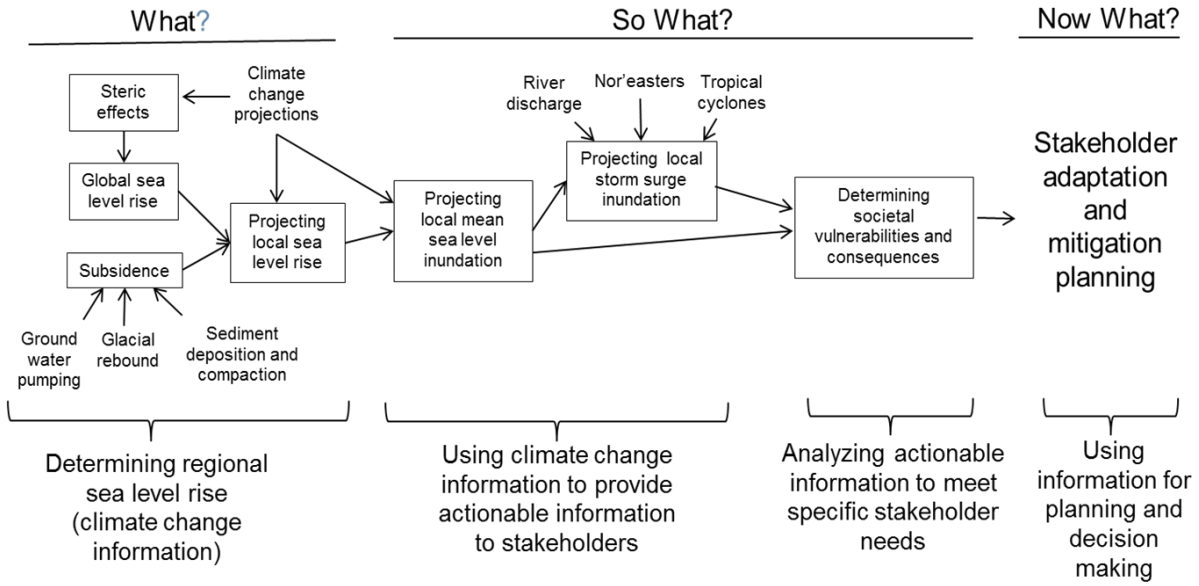
Planning for and adapting to sea level rise and future storm surge flooding is a What? So What? Now What? situation.

- **What** causes sea level rise and what will the new levels be at a specific location?

- **So what** if sea level rises – what will be inundated and what are the effects on infrastructure, resources, and people of the likely flooding.

- **Now what** do we do to plan for and adapt to the forecast inundation?

This idea is illustrated in the following figure.



Integrating scientific and technical information with societal issue analysis to adapt to sea level rise and storm surge inundation in coastal communities

The workshop will examine the factors and issues associated with forecasting likely sea level rise, determining what area is affected by sea level rise and future storm surge inundation and the impacts of this flooding, and discuss and identify how to use the information to develop plans for adapting to sea level rise.