

Coastal Resiliency

HRPDC EXECUTIVE COMMITTEE MEETING

MAY 19, 2016

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SENIOR REGIONAL PLANNER



Program Overview

Program is managed by HRPDC staff with oversight by Coastal Resiliency Committee

Three objectives

1. Develop specific recommendations for local governments
2. **Advocate for support and action by the Commonwealth and the federal government**
3. **Serve as the primary regional contact to coordinate efforts with state/federal agencies and other institutions**

Partnerships with Federal Agencies

Demonstrated Success

- Resiliency Planning (with NOAA/CZM)
- LIDAR (with VGIN, DOD, and USGS)
- Stream and tide gauges (with localities and USGS)



Currently partnering with U.S. Geological Survey and National Geodetic Survey for subsidence monitoring



Virginia Coastal Zone
MANAGEMENT PROGRAM

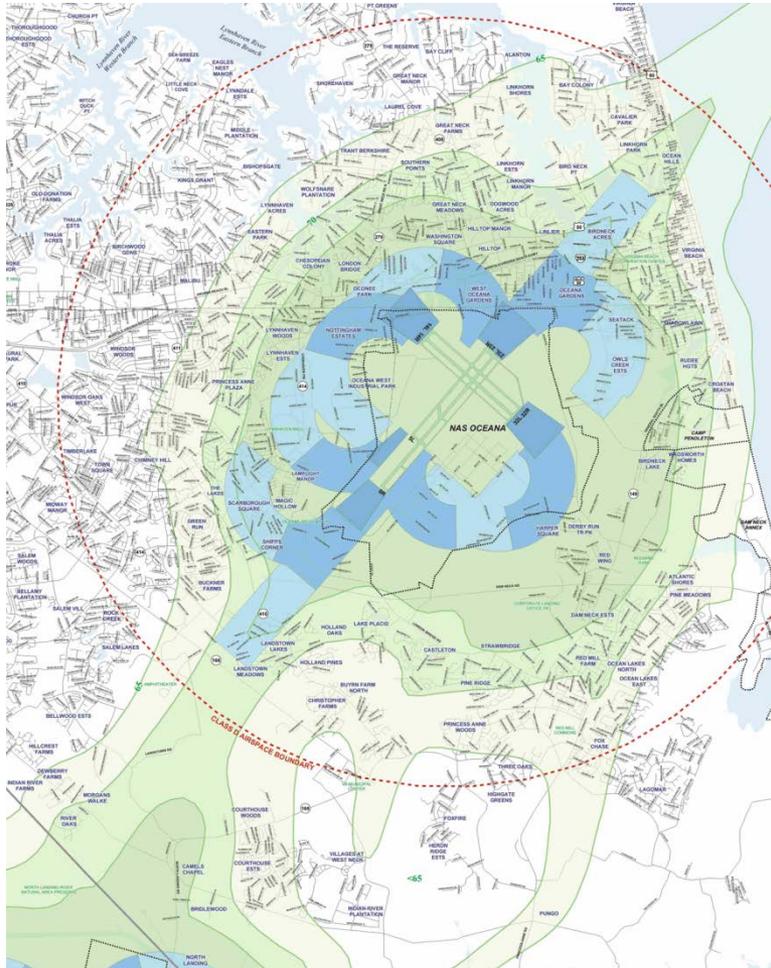


U.S. Navy

Joint Land Use Studies are:

- Community planning efforts
- Funded by DOD's Office of Economic Adjustment (with 10% non-federal match)
- Nominated by local military facilities

U.S. Navy – Joint Land Use Studies



Hampton Roads Joint Land Use Study

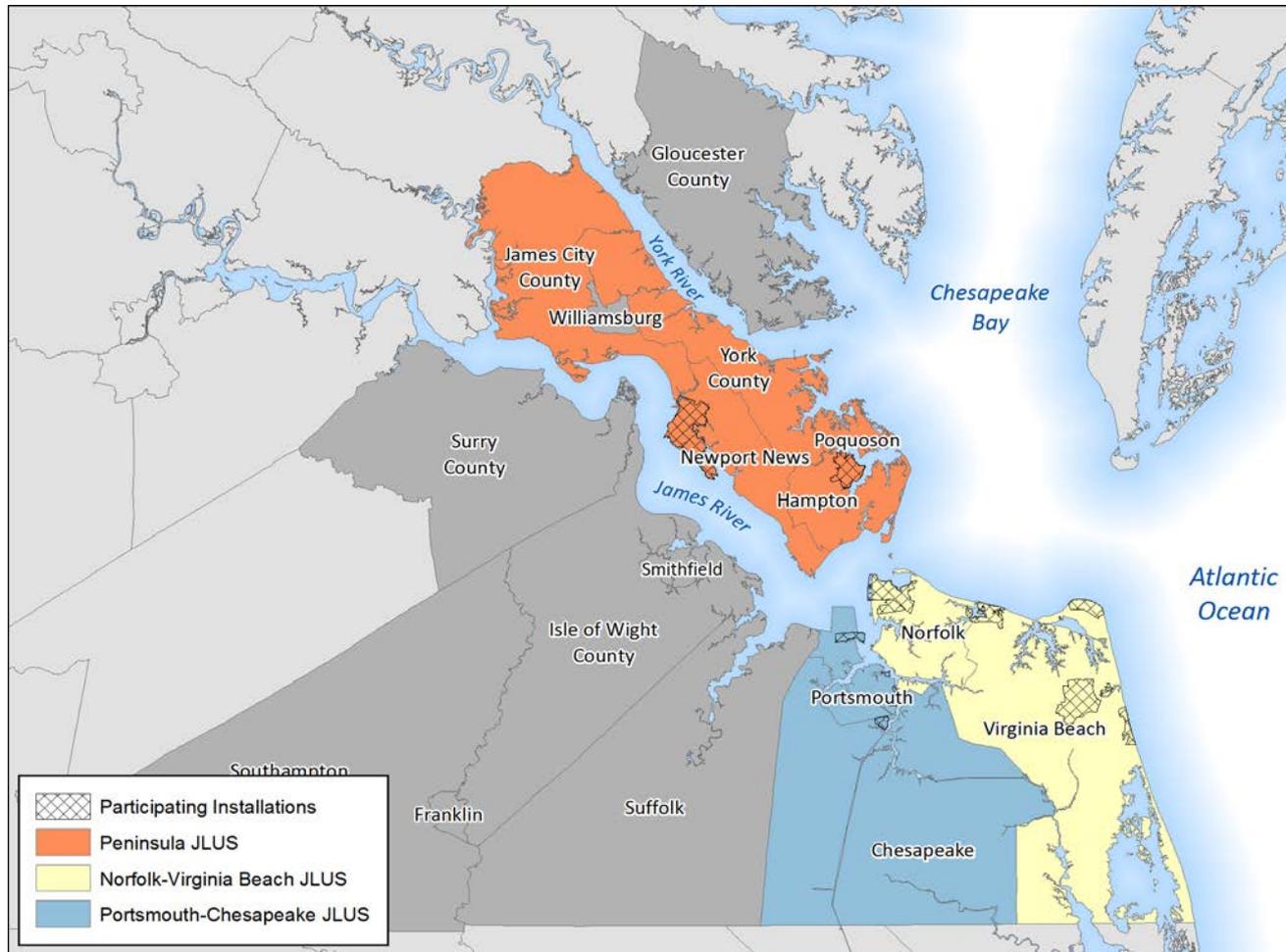
The JLUS process helps communities identify and address concerns of military installations

- NAS Oceana and Fentress
- Langley AFB

Climate Adaptation can now be considered

- Can officially address flooding and sea level rise for the first time

U.S. Navy – Joint Land Use Studies



Localities Participating in Proposed Studies in Hampton Roads



U.S. Navy – Joint Land Use Studies

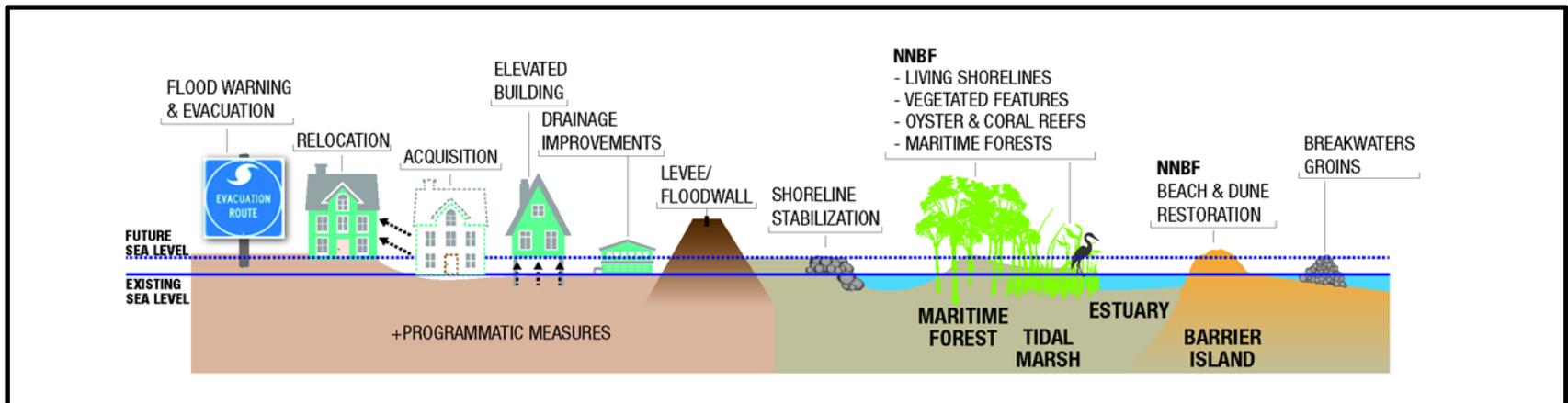
Final proposals completed May-June 2016

HRPDC will issue RFP for consultants once applications are approved

Anticipated 2-year timeline for completing studies

U.S. Army Corps of Engineers

Feasibility studies are the first step on the pathway to significant federal funding for flood mitigation projects



U.S. Army Corps of Engineers

USACE – Feasibility Studies

Study model: 3x3x3

- **3** Year study duration
- **\$3** million maximum cost per study
- **3** Corps command levels

Study Prerequisites

1. Authorization by Congress
2. Selection for Corps Funding
3. Commitment of Matching Funds

USACE – Feasibility Studies

Natural and Nature-Based Infrastructure at a Glance

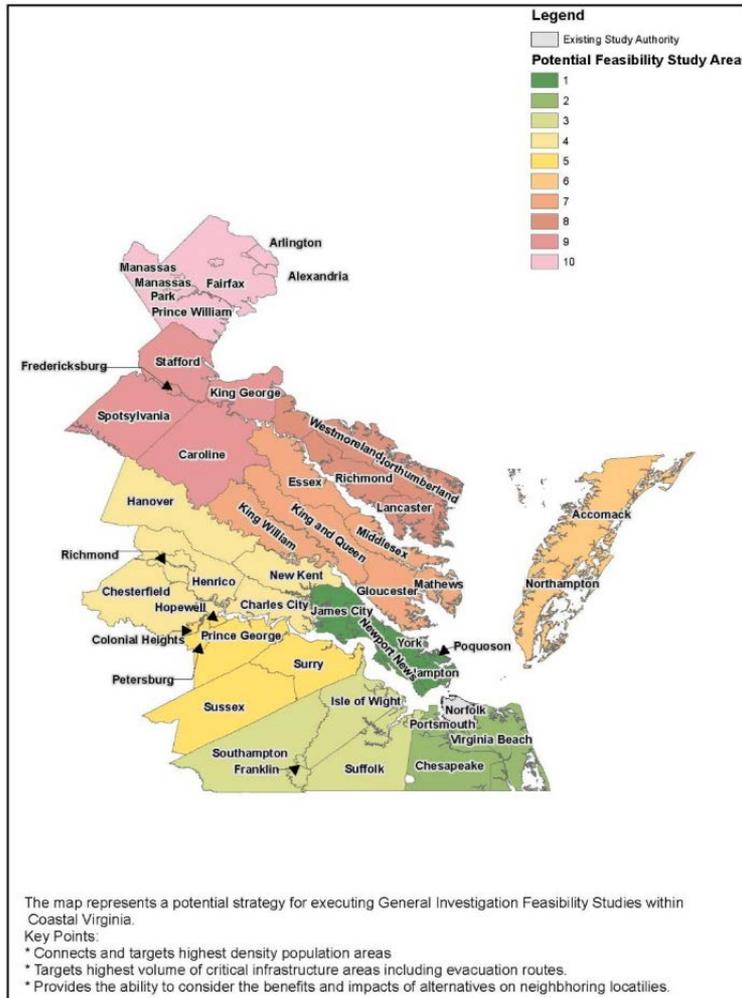
GENERAL COASTAL RISK REDUCTION PERFORMANCE FACTORS:
STORM INTENSITY, TRACK, AND FORWARD SPEED, AND SURROUNDING LOCAL BATHYMETRY AND TOPOGRAPHY

				
<p>Dunes and Beaches</p> <p>Benefits/Processes Break offshore waves Attenuate wave energy Slow inland water transfer</p> <p>Performance Factors Berm height and width Beach Slope Sediment grain size and supply Dune height, crest, width Presence of vegetation</p>	<p>Vegetated Features: Salt Marshes, Wetlands, Submerged Aquatic Vegetation (SAV)</p> <p>Benefits/Processes Break offshore waves Attenuate wave energy Slow inland water transfer Increase infiltration</p> <p>Performance Factors Marsh, wetland, or SAV elevation and continuity Vegetation type and density</p>	<p>Oyster and Coral Reefs</p> <p>Benefits/Processes Break offshore waves Attenuate wave energy Slow inland water transfer</p> <p>Performance Factors Reef width, elevation and roughness</p>	<p>Barrier Islands</p> <p>Benefits/Processes Wave attenuation and/or dissipation Sediment stabilization</p> <p>Performance Factors Island elevation, length, and width Land cover Breach susceptibility Proximity to mainland shore</p>	<p>Maritime Forests/Shrub Communities</p> <p>Benefits/Processes Wave attenuation and/or dissipation Shoreline erosion stabilization Soil retention</p> <p>Performance Factors Vegetation height and density Forest dimension Sediment composition Platform elevation</p>

U.S. Army Corps of Engineers



USACE – Feasibility Studies



Multi-jurisdictional studies have several benefits

- More communities studied
- Less redundancy
- Opportunities for solutions across boundaries

Localities need to work with state to prioritize study areas

U.S. Army Corps of Engineers



USACE – Feasibility Studies

Staff recommendation:

- Seek authorization for Corps to conduct multi-jurisdictional feasibility studies is first step in getting projects approved and funded
 - Authorization must be made through a Water Resources Development Act or another act of Congress
- Work with state to identify source for matching funds

Action Requested

The Commission should authorize the Chair to submit a letter to the Hampton Roads Congressional Delegation requesting authorization for multi-jurisdictional feasibility studies in coastal Virginia.