



Monmouth County Joint Land Use Study for Naval Weapons Station Earle



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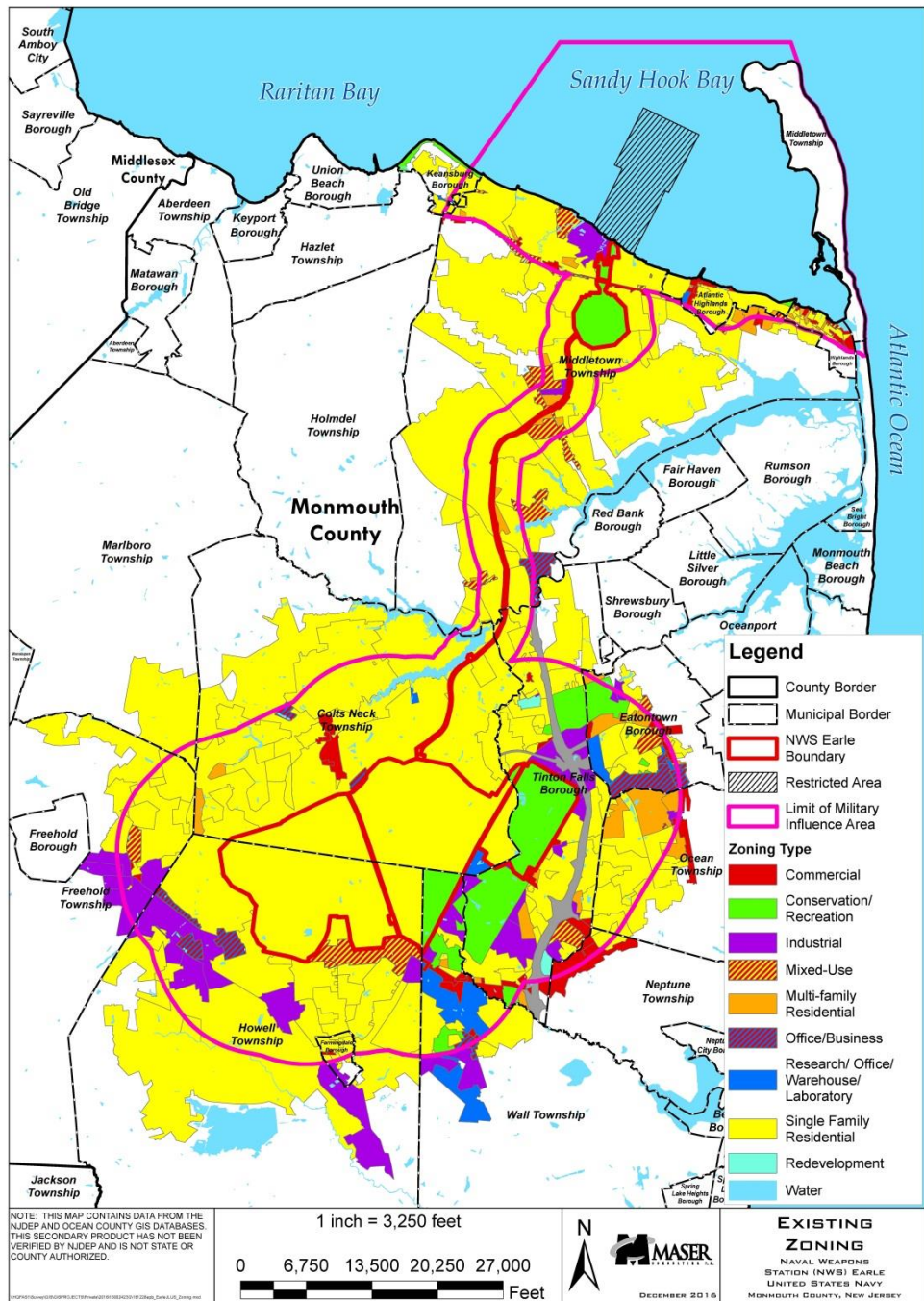
Climatology Adaptation, Planning
Mapping

ORGANIZATION CHART

Monmouth County Joint Land Use Study for Naval Weapons Station Earle

Overview of Maser Team Approach

- Define the Scope with the Project Partners
- Establish Planning Team and Technical Working Groups
- Interview Key Stakeholders
- Engage the Public – Community Outreach Program
- Collect, Inventory and Map Project Data
- Adaptation Analysis
- Develop Resolution Strategies
- Recommend Specific Short and Long Term Actions



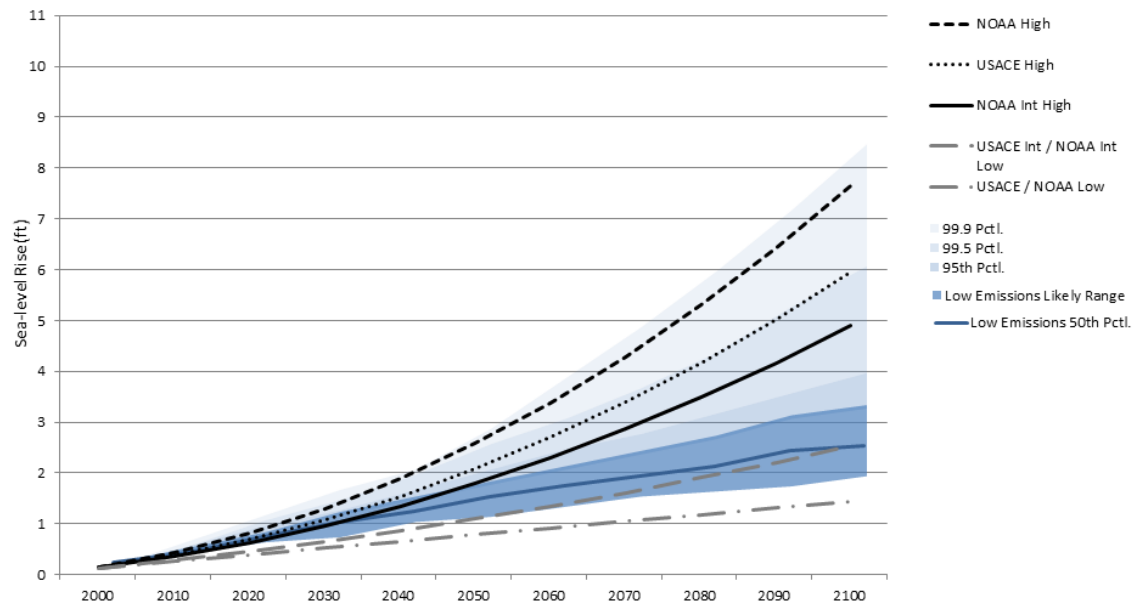
• Sea Level Rise Assumptions for Naval Weapons Station Earle Joint Land Use Study

- The sea level rise (SLR) assumptions that the Naval Weapons Station Earle Joint Land Use Study (JLUS) Project Team will use when performing the study are based on the October 2016, the New Jersey Climate Adaptation Alliance (NJCAA) published consensus findings for New Jersey SLR based on the probabilistic approach of Kopp et al. (2014). The JLUS project team reviewed the information presented in Hall et al. (2016), which is informed by the work of Kopp et al. (2014), against the outcomes of the Science and Technical Advisory Panel convened by the NJCAA. The initial review suggests that global sea level rise projections and methods for local adjustments (e.g. vertical land movement (VLM), etc.) are comparable with NJCAA methods and assumptions.
- While the JLUS project team has not yet reviewed the scenario database for specific projections associated with Naval Weapons Station Earle, the project team does not anticipate deviating from federal guidance to assess local SLR.
- **New Jersey Climate Adaptation Alliance Science and Technical Advisory Panel Overview**
- The information below is excerpted from October 2016 New Jersey Climate Adaptation Alliance publications summary purposes (Kaplan, Campo, Auermuller, & Herb, 2016; R. Kopp et al., 2016).

	Central Estimate	'Likely' Range	1-in-20 Chance	1-in-200 Chance	1-in-1000 Chance
Year	50% probability SLR meets or exceeds...	67% probability SLR is between...	5% probability SLR meets or exceeds...	0.5% probability SLR meets or exceeds...	0.1% probability SLR meets or exceeds...
2030	0.8 ft	0.6 – 1.0 ft	1.1 ft	1.3 ft	1.5 ft
2050	1.4 ft	1.0 – 1.8 ft	2.0 ft	2.4 ft	2.8 ft
2100 Low emissions	2.3 ft	1.7 – 3.1 ft	3.8 ft	5.9 ft	8.3 ft
2100 High emissions	3.4 ft	2.4 – 4.5 ft	5.3 ft	7.2 ft	10 ft

- Based on the Science and Technical Advisory Panel (STAP)
- It is likely that coastal areas of New Jersey will experience sea-level rise between 1.0 and 1.8 feet prior to 2050, regardless of future greenhouse gas emissions. Under a worst-case scenario, these communities could see as much as 2.8 feet of sea-level rise by 2050 (See Table 1).
- Sea-level rise after 2050 increasingly depend upon the evolution of future global greenhouse gas emissions Under the **high-emissions scenario**, it is likely that coastal areas of New Jersey will experience between 2.4 and 4.5 feet of sea-level rise by 2100.
- Under the **low-emissions scenario**, it is likely that coastal areas of New Jersey will experience between 1.7 and 3.1 feet of sea-level rise by 2100.
- A **worst case** (1-in-1000 chance) of sea-level rise of 10 feet of sea-level rise in coastal areas of New Jersey is physically possible (See Table 1).
- Across scenarios, the likely range of sea-level rise in 2100 spans from 1.7 feet to 4.5 feet. However, regardless of scenario, there is at least a 1-in-20 chance of sea-level rise exceeding 1.7 feet before 2050 (See Table 1).

Figure 1b: Low Emissions [RCP 2.6] SLR Projections for New Jersey (Atlantic City) Compared to Federal SLR Projections



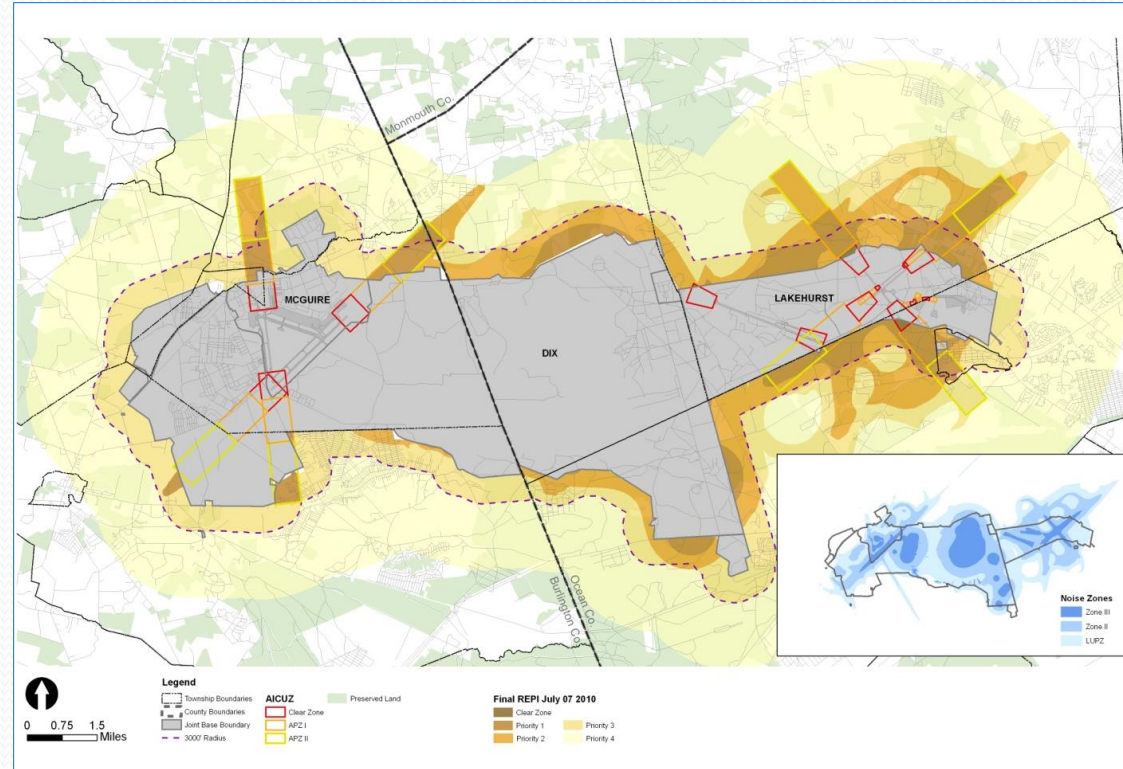
Joint Base McGuire Dix Lakehurst EAP

Major Issues

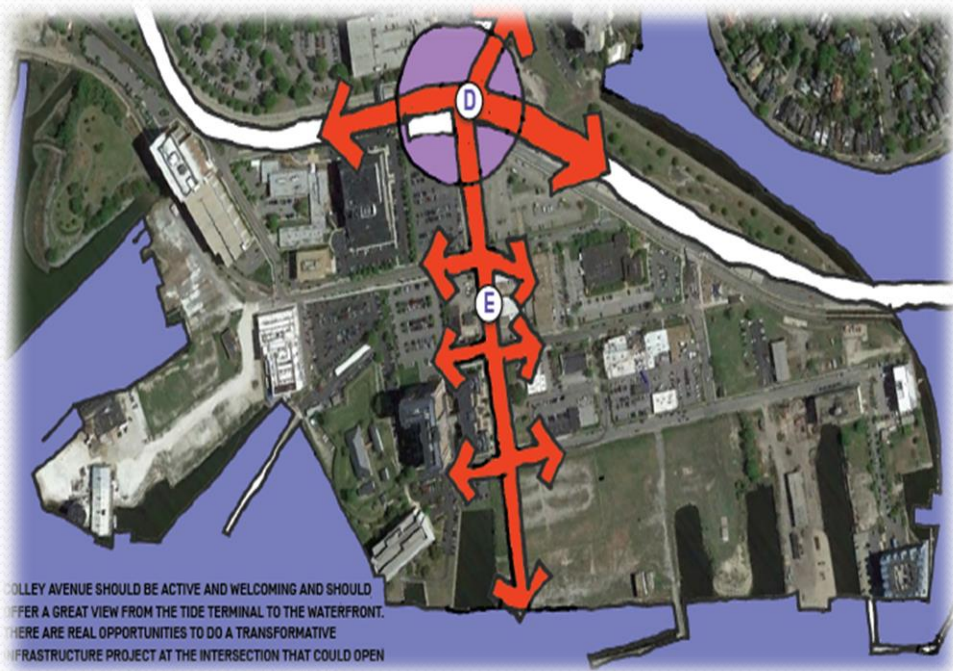
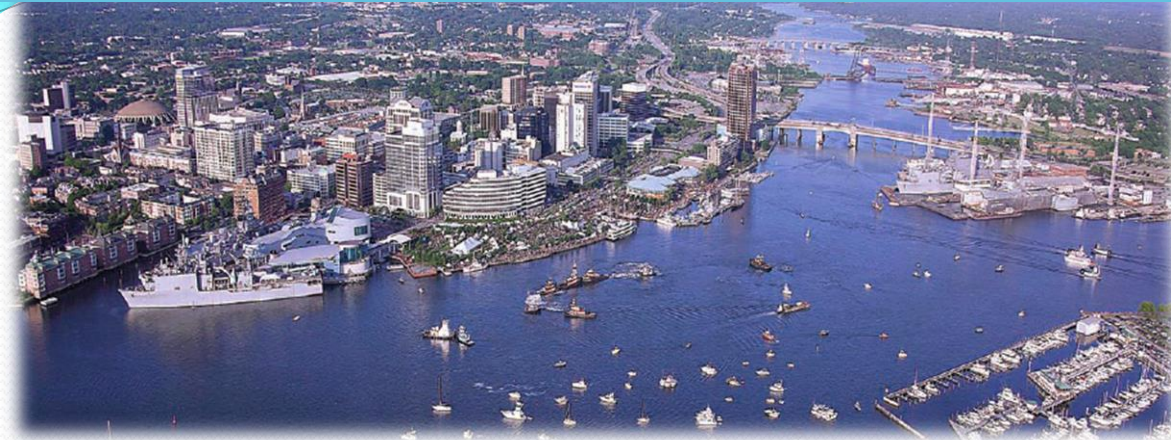
- Urban development
- Aircraft and ordnance operations noise
- Environmental issues
- Airspace issues
- Utility service sharing

Major Recommendations

- Zoning changes
- Conservation easements
- Military representation on planning boards
- Flight operations monitoring
- Formalized method to address complaints
- Real estate disclosures
- Coordination with Pinelands Commission
- Regional Partnership program



100 Resilient Cities: Norfolk, VA



- Assisted Norfolk's Chief Resilience Officer complete a comprehensive analysis of the City's current context; conduct a financial and development analysis for a coastal area of the city; and support the development of the City's resilience strategy.
- Developed a comprehensive resilience strategy that included high-priority, implementable initiatives to build physical, economic, and social resilience.

COLLEY AVENUE SHOULD BE ACTIVE AND WELCOMING AND SHOULD OFFER A GREAT VIEW FROM THE TIDE TERMINAL TO THE WATERFRONT. THERE ARE REAL OPPORTUNITIES TO DO A TRANSFORMATIVE INFRASTRUCTURE PROJECT AT THE INTERSECTION THAT COULD OPEN

#4 – Aeromarine Redevelopment Area

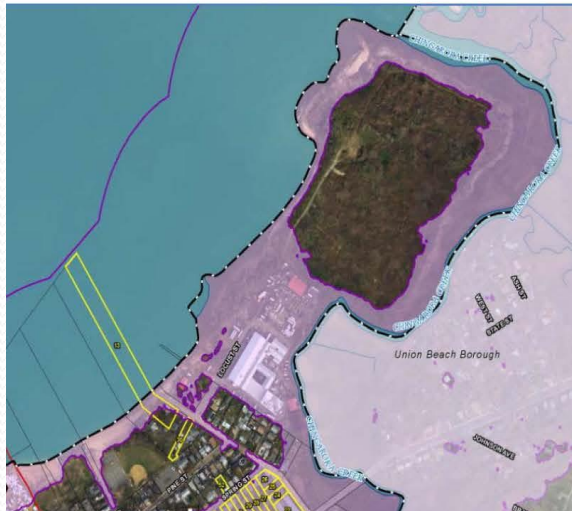


Aeromarine Area Redevelopment Plan (2005)

The originally adopted Redevelopment Plan for the Aeromarine site at the north end of the Borough anticipated residential and recreational uses based on the marketability of the waterfront

Aeromarine Area Redevelopment Plan Solar Overlay Amendment (2010)

The 2010 Amendment allows for the development of a ground-based solar panel energy facility on the landfill portion of the site.



During the surge from Superstorm Sandy, the site essentially became an island, with the elevated landfill portion being the only portions that were not flooded.

Potential Use	Like ("L"); Neutral ("N"); Dislike ("D")
Residential	
Solar Farm	
Park (Passive)	
Recreational (Active) /Marina	
Other	



Climatology Adaptation Planning & Mapping

Storm Surge Inundation (SLOSH Maximum of Maximums)

This web map displays a seamless national map of near worst case storm surge flooding (inundation) scenarios using the National Weather Service (NWS) SLOSH model maximum of maximums (MOMs) product for different hurricane wind categories at a high tide



- Category 1
- Category 2
- Category 3
- Category 4
- Category 5

Category 1 Storm Surge Inundation (SLOSH Maximum of Maximums)

With this education and awareness tool, anyone living in hurricane-prone coastal areas along the U.S. East and Gulf Coasts can now evaluate their own unique risk to storm surge. This map makes it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending several miles from the immediate coastline in some areas. "You don't have to think very hard about it, just look at your location on the national map to find out if you are in an area at risk for storm surge from a future tropical storm or hurricane", said Brian Zachry, Ph.D., NHC storm surge specialist.

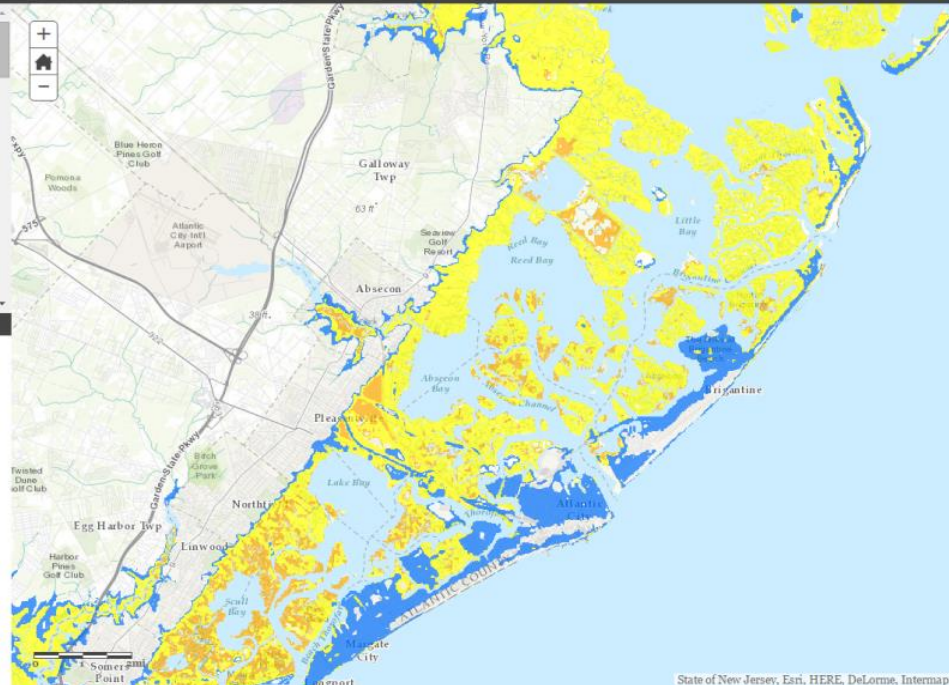
What should individuals do if they discover that they live in an area vulnerable to storm surge? "You should find out today if you live in a hurricane storm surge evacuation zone as determined by your local emergency management agency", said Dr. Rick Knabb, Director of

LEGEND

Category 1 (SLOSH MOMs) Storm Surge Inundation

Inundation Depth

- Up to 3 feet above ground
- Greater than 3 feet above ground
- Greater than 6 feet above ground
- Greater than 9 feet above ground
- Levee Areas - Consult Local Officials For Flood Risk



State of New Jersey, Esri, HERE, DeLorme, Intermap, USGS, NGA, EPA, USDA, NPS | Data processed by the Nation... esri



RUTGERS
UNIVERSITY



National Estuarine Research Reserve



Thank You