



# Monmouth County Joint Land Use Study for Naval Weapons Station Earle



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Maser Consulting P.A.  
AECOM  
HR&A Advisors, Inc.  
Rutgers University Climate  
Institute



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**Matt Campo**

*Climatology Adaptation, Planning*  
*Mapping*

**ORGANIZATION CHART**

**Monmouth County Joint Land Use Study for Naval Weapons Station Earle**

# Overview of Maser Team Approach

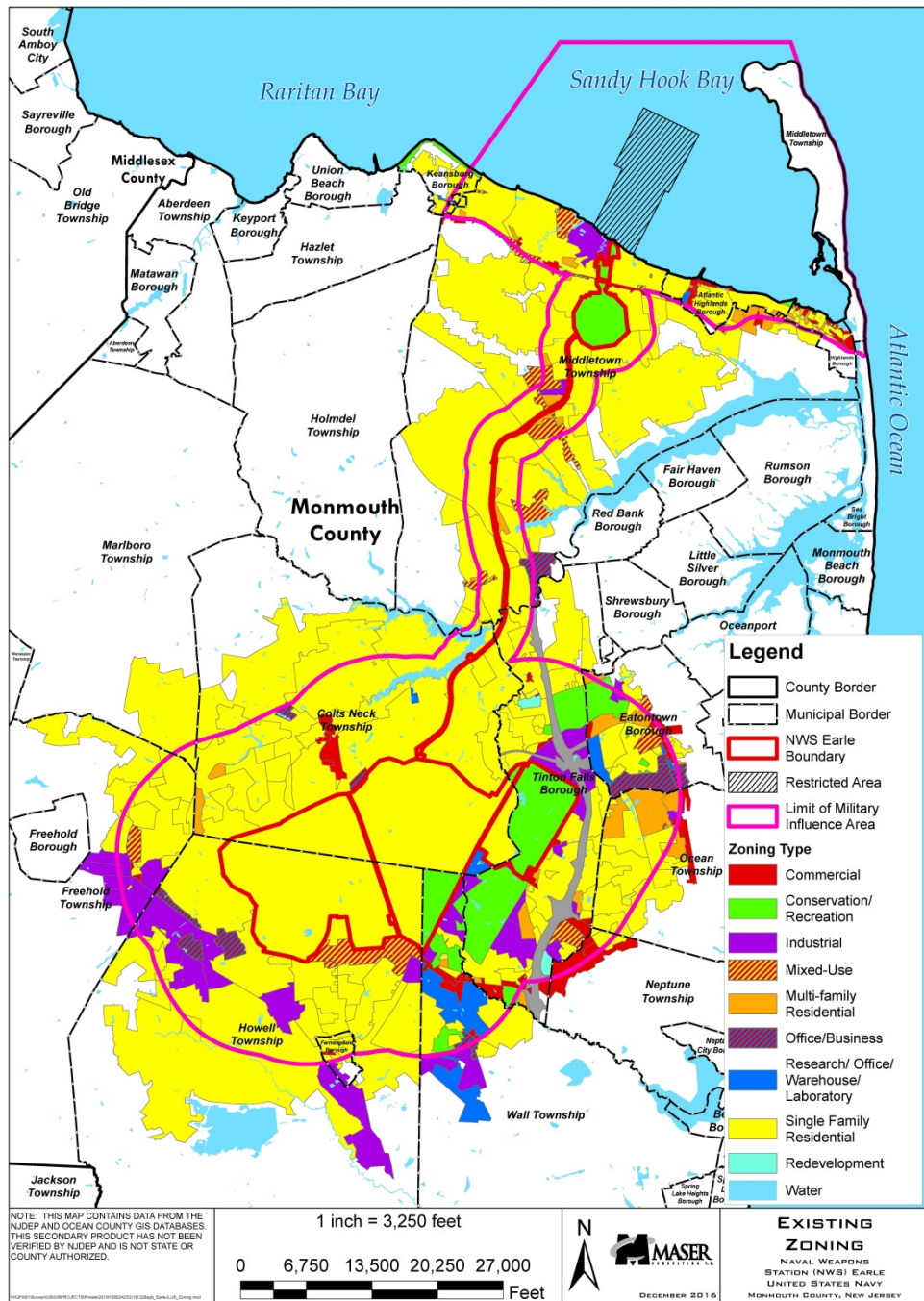
- Define the Scope with the Project Partners
- Establish Planning Team and Technical Working Groups
- Interview Key Stakeholders
- Engage the Public – Community Outreach Program
- Collect, Inventory and Map Project Data
- Adaptation Analysis
- Develop Resolution Strategies
- Recommend Specific Short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

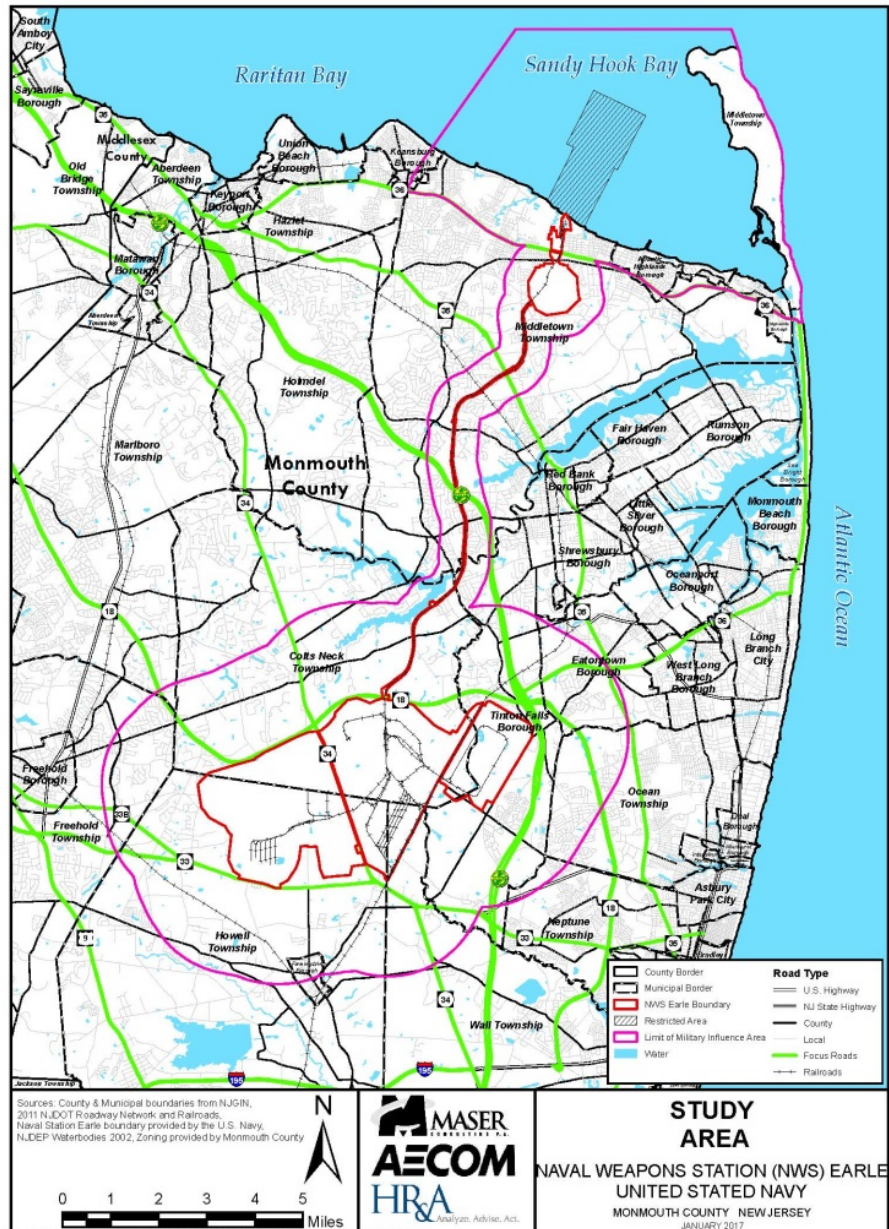
# Municipalities

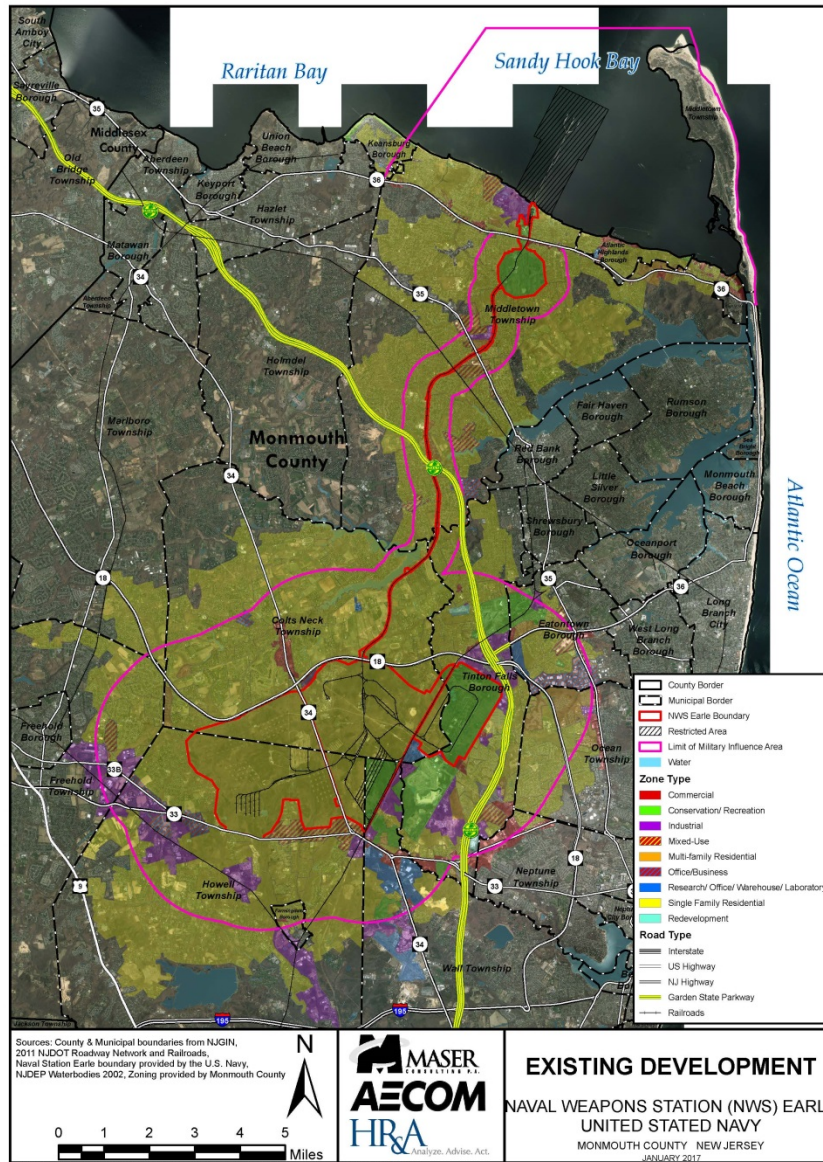
**Earle Municipalities:** Specifically the five municipalities in which parts of the installation are located: Colts Neck, Howell, Middletown, Tinton Falls, and Wall.

**Military Influence Area Municipalities:** Specifically the municipalities that have land area within the MIA. Those not listed in above are: Atlantic Highlands, Highlands, Eatontown, Farmingdale, Freehold Township, Keansburg, Neptune, and Ocean

**Watershed Municipalities:** Specifically those Monmouth County municipalities within watersheds where land use decisions could impact the mission of NWS Earle through impacts to Raritan Bay and Sandy Hook Bay:

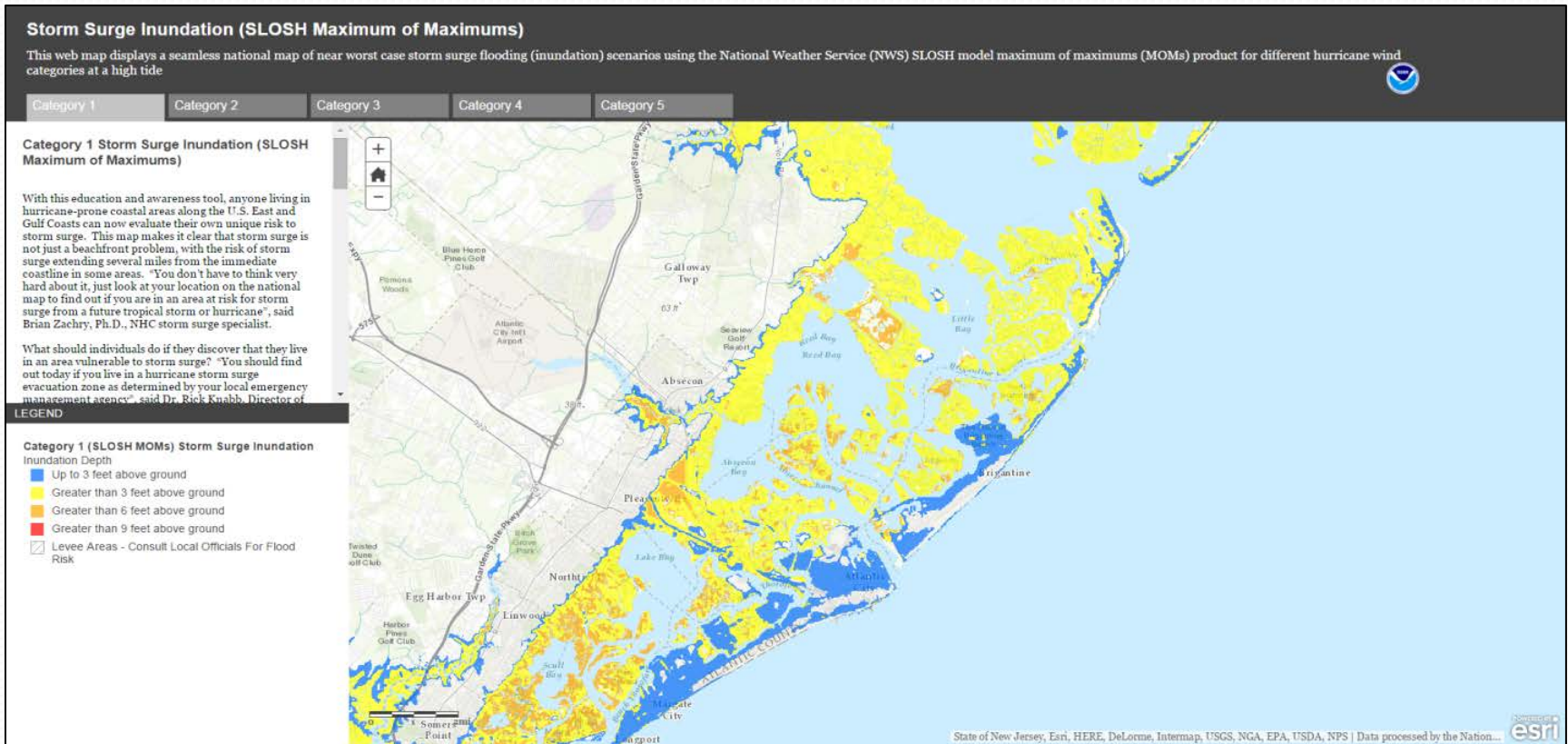






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# Climatology Adaptation Planning & Mapping



**RUTGERS**  
UNIVERSITY





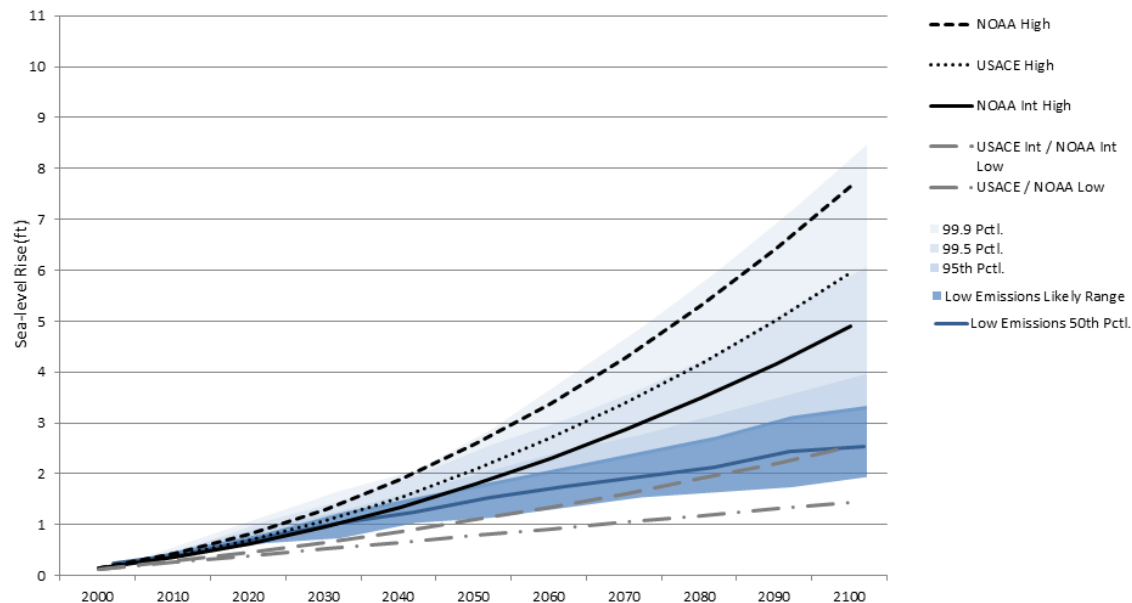
# • Sea Level Rise Assumptions for Naval Weapons Station Earle Joint Land Use Study

- 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



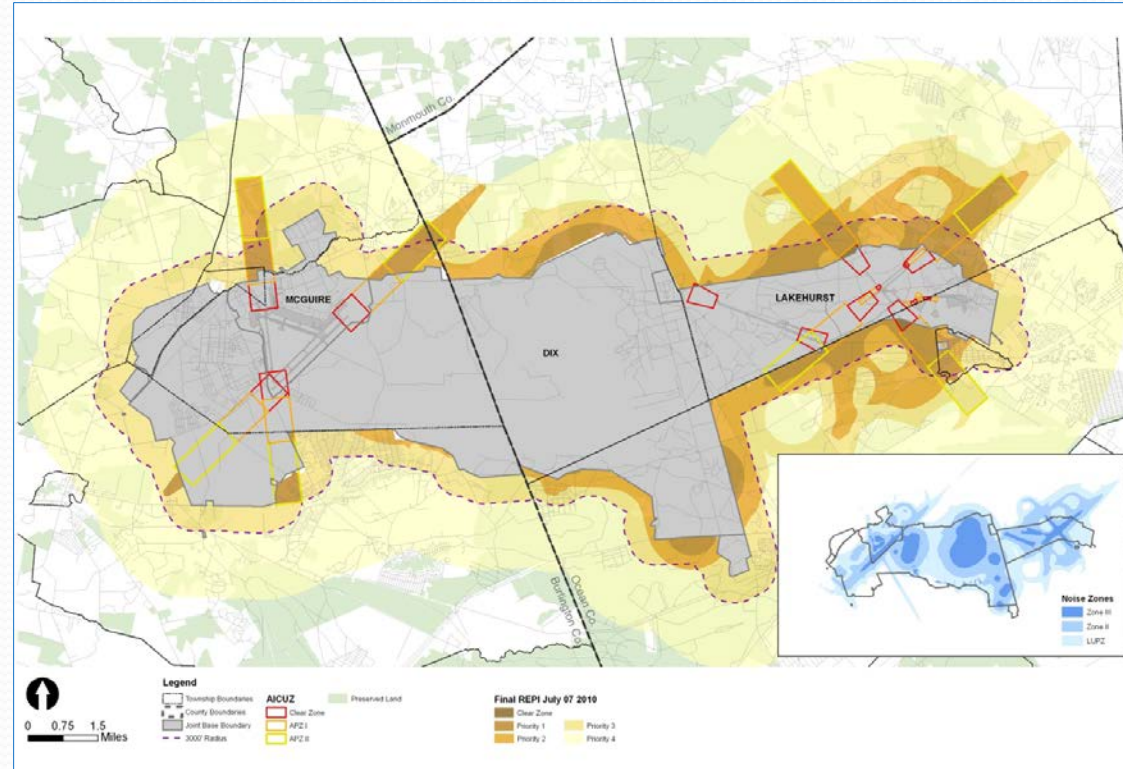
# Joint Base McGuire Dix Lakehurst EAP

## Major Issues

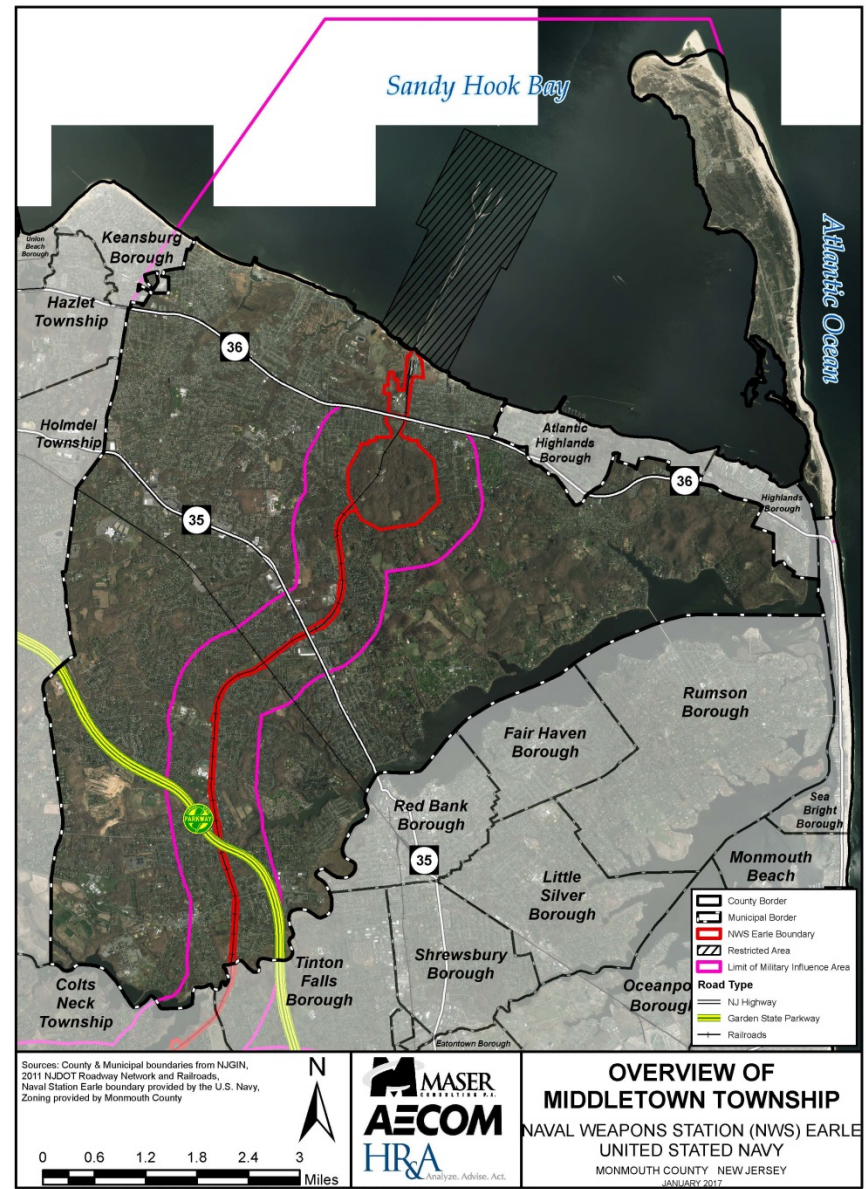
- Urban development
- Aircraft and ordnance operations noise
- Environmental issues
- Airspace issues
- Utility service sharing

## 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

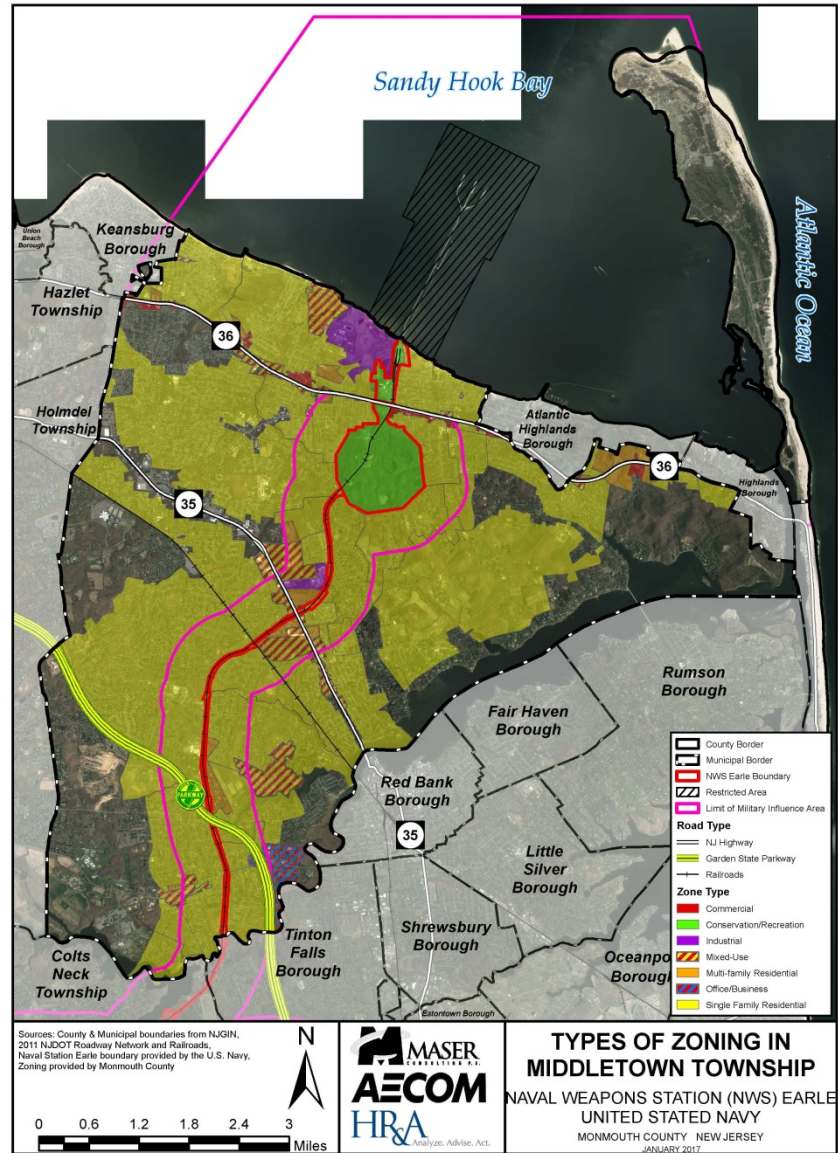


# Middletown Township Overview



# Middletown Township

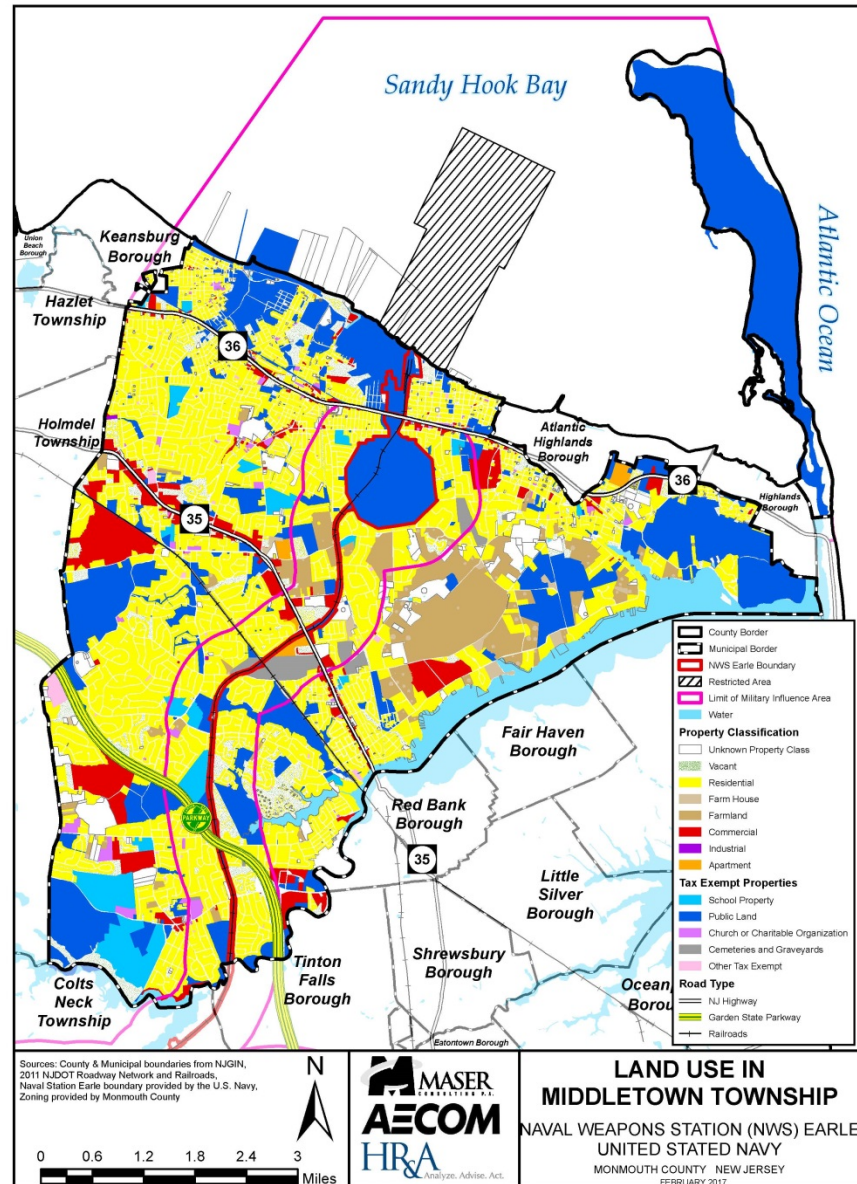
# Zoning



# Middletown Township

## Land Use

(Based upon property Class Data from tax information?)

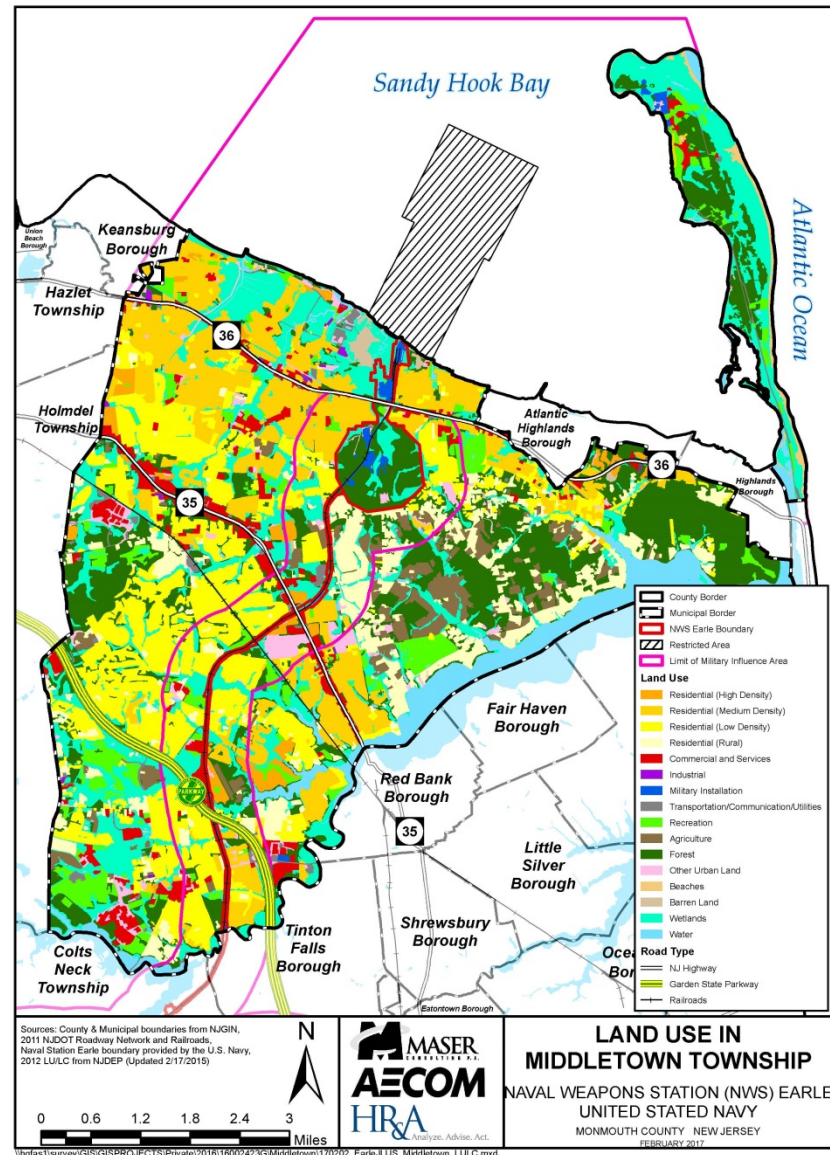


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# Middletown Township

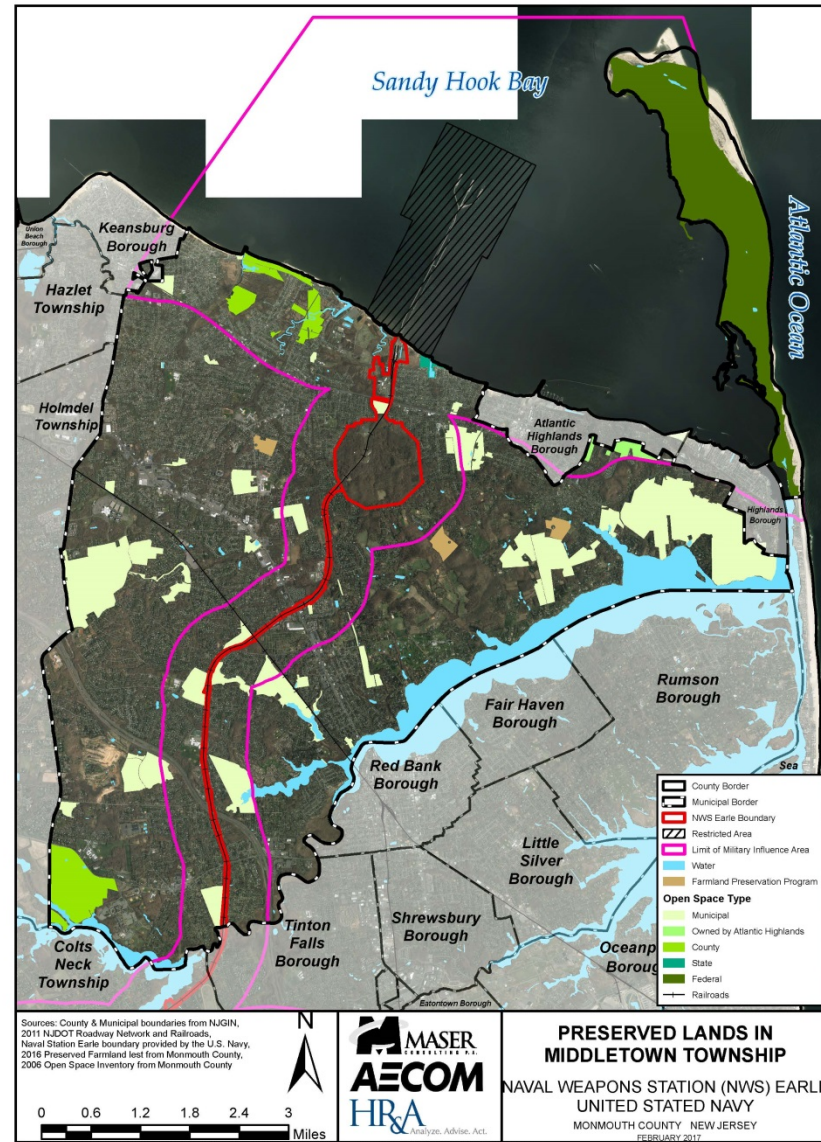
## Land Use

(2012 NJDEP Land Use Cover Data)



# Middletown Township

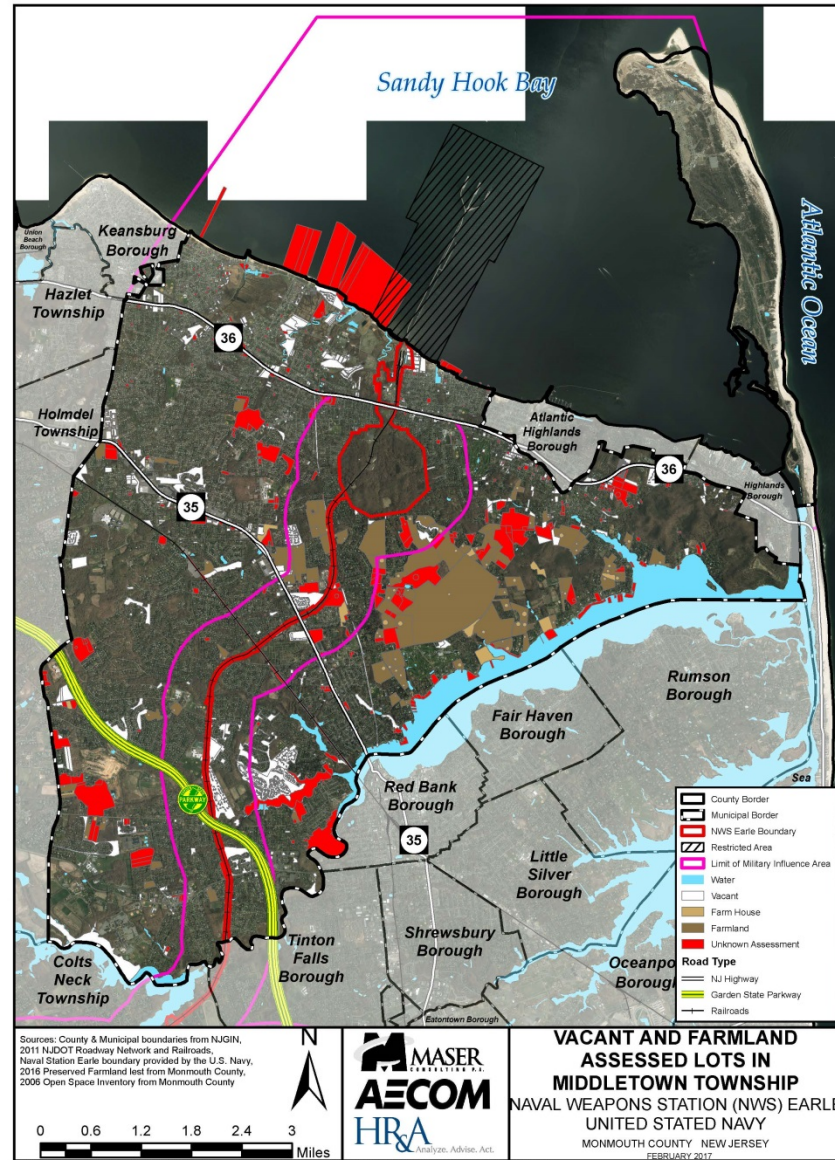
# Preserved Lands





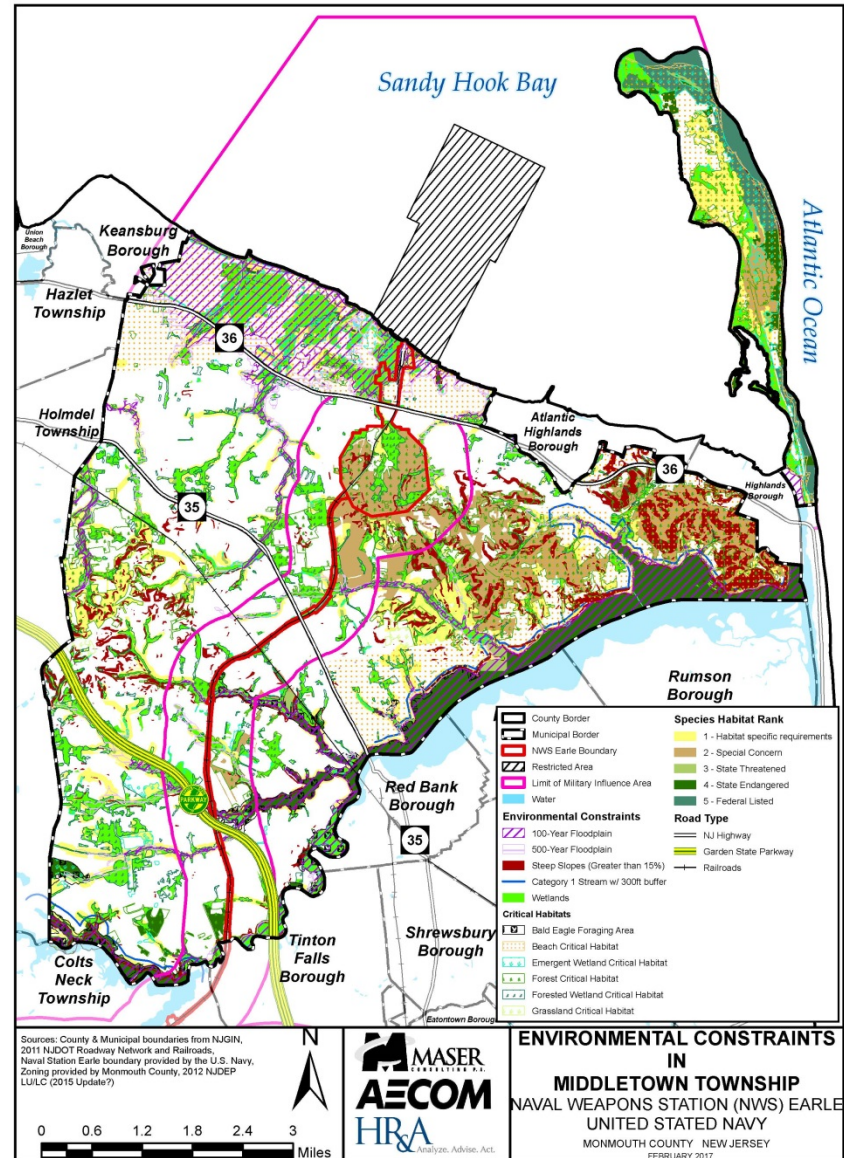
# Middletown Township

# Vacant and Farmland Assessment

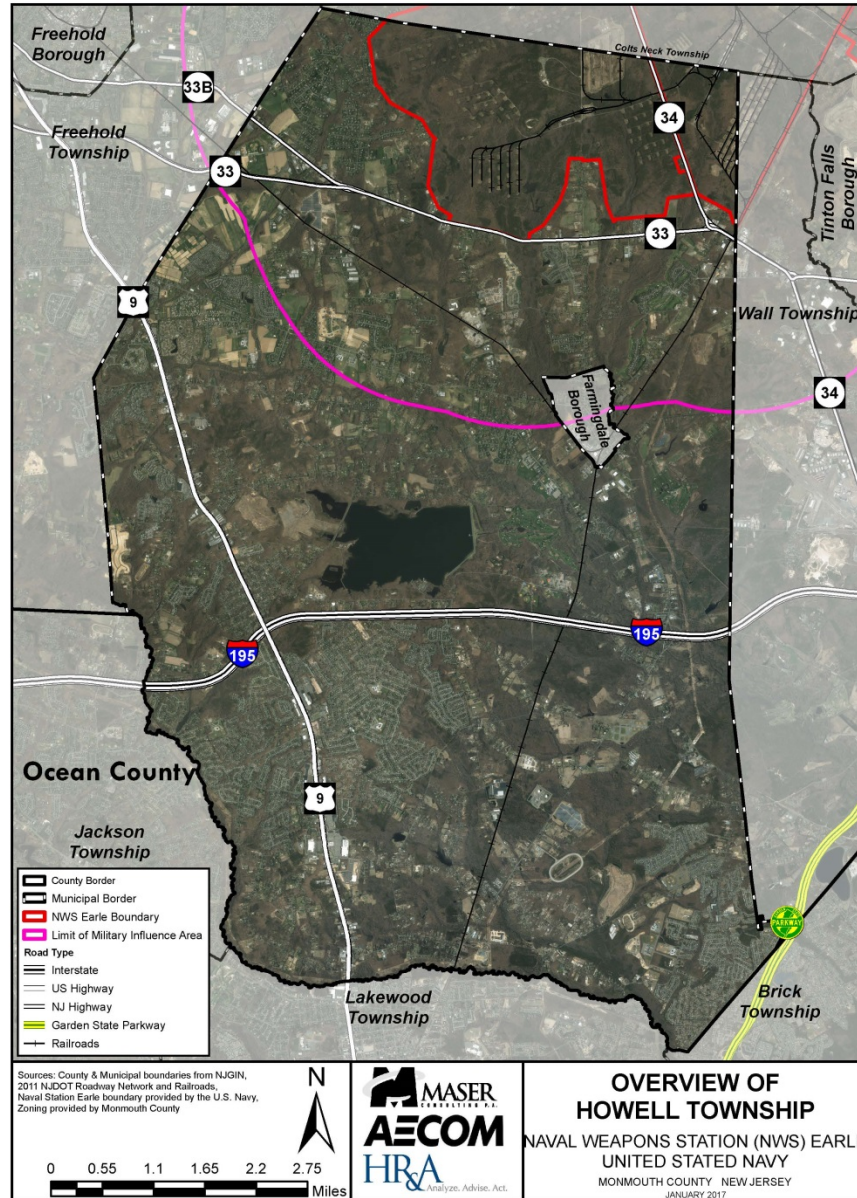


# Middletown Township

# Environmental Constraints



# Howell Township Overview

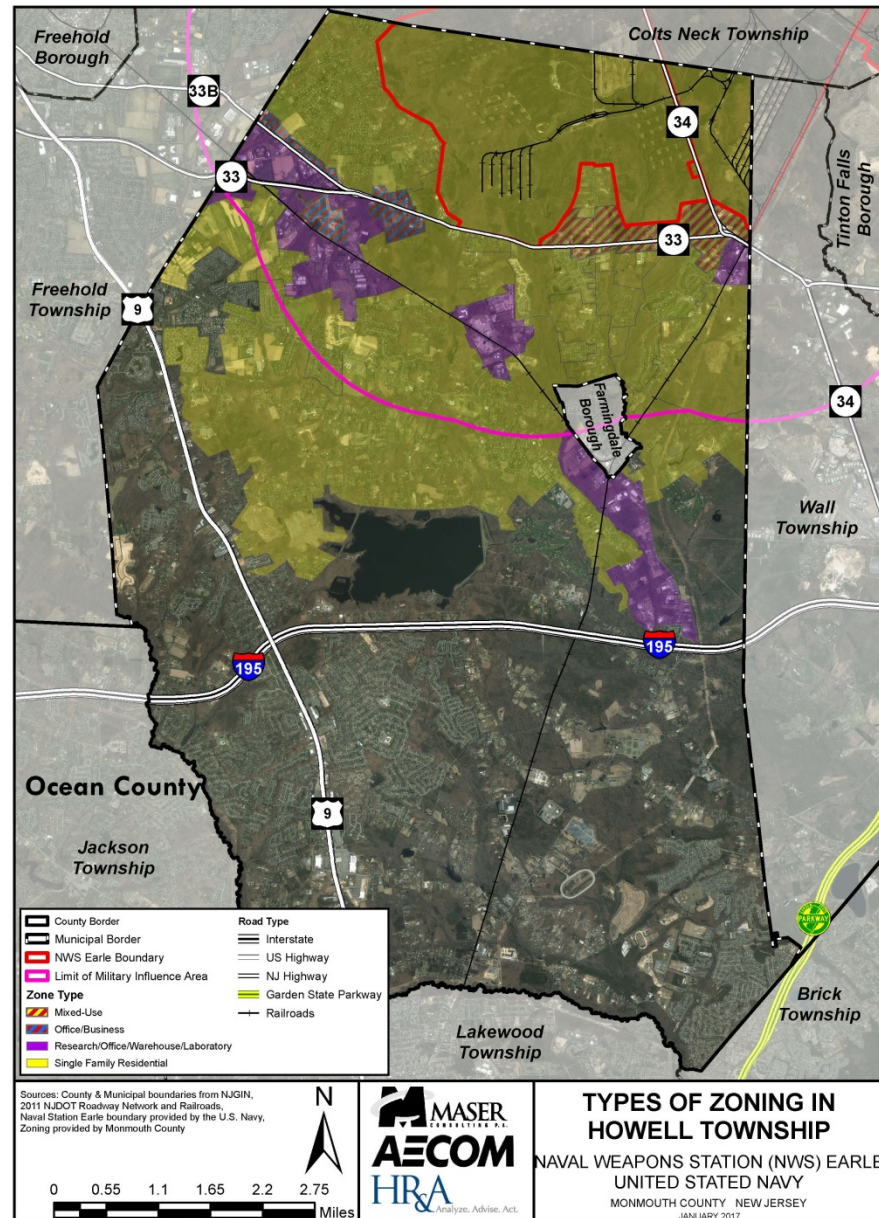


Sources: County & Municipal boundaries from NJGIN, 2011 NJDOT Roadway Network and Railroads, Naval Station Earle boundary provided by the U.S. Navy, Zoning provided by Monmouth County

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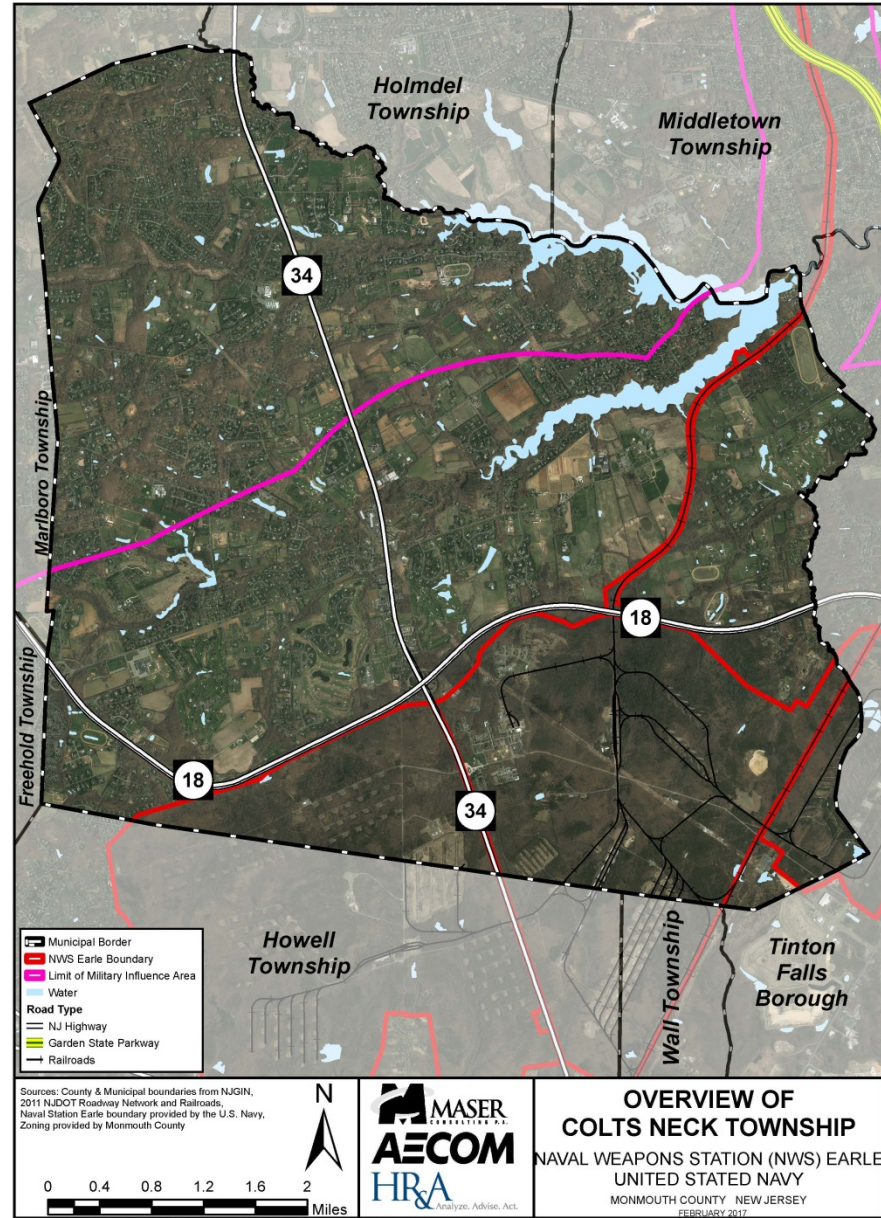
# Howell Township

## Zoning



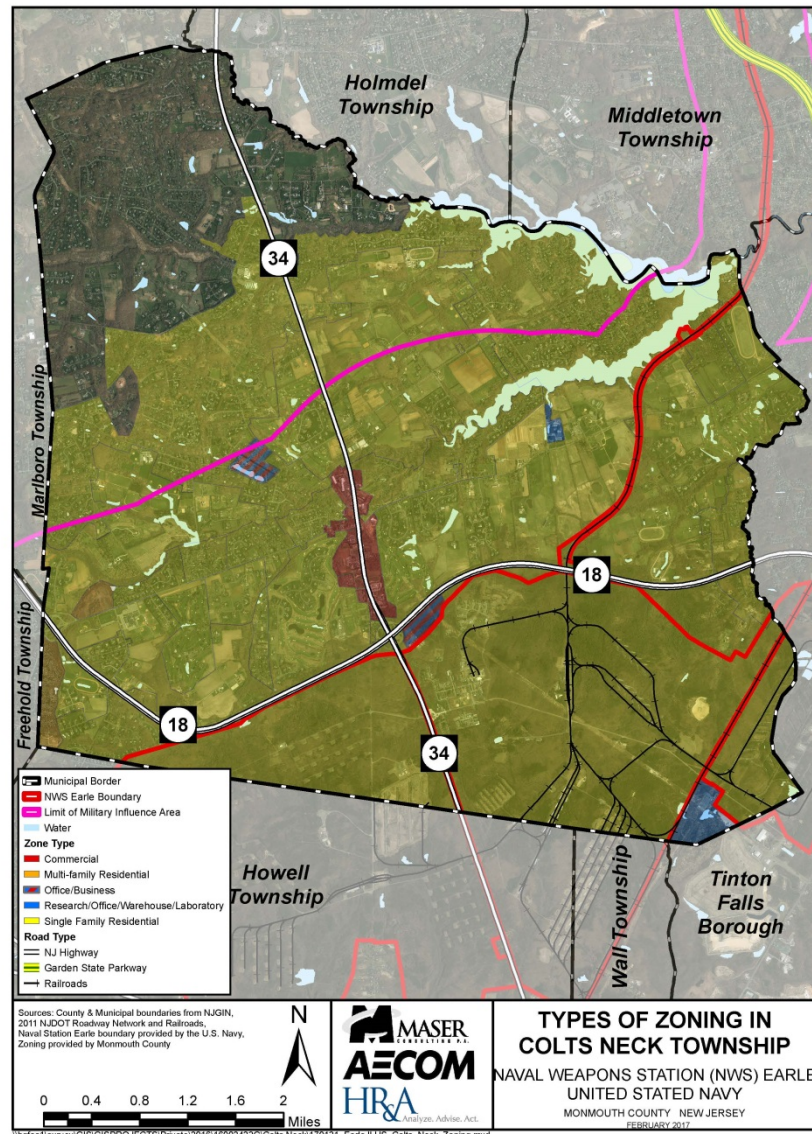
# Colts Neck Township

## Overview



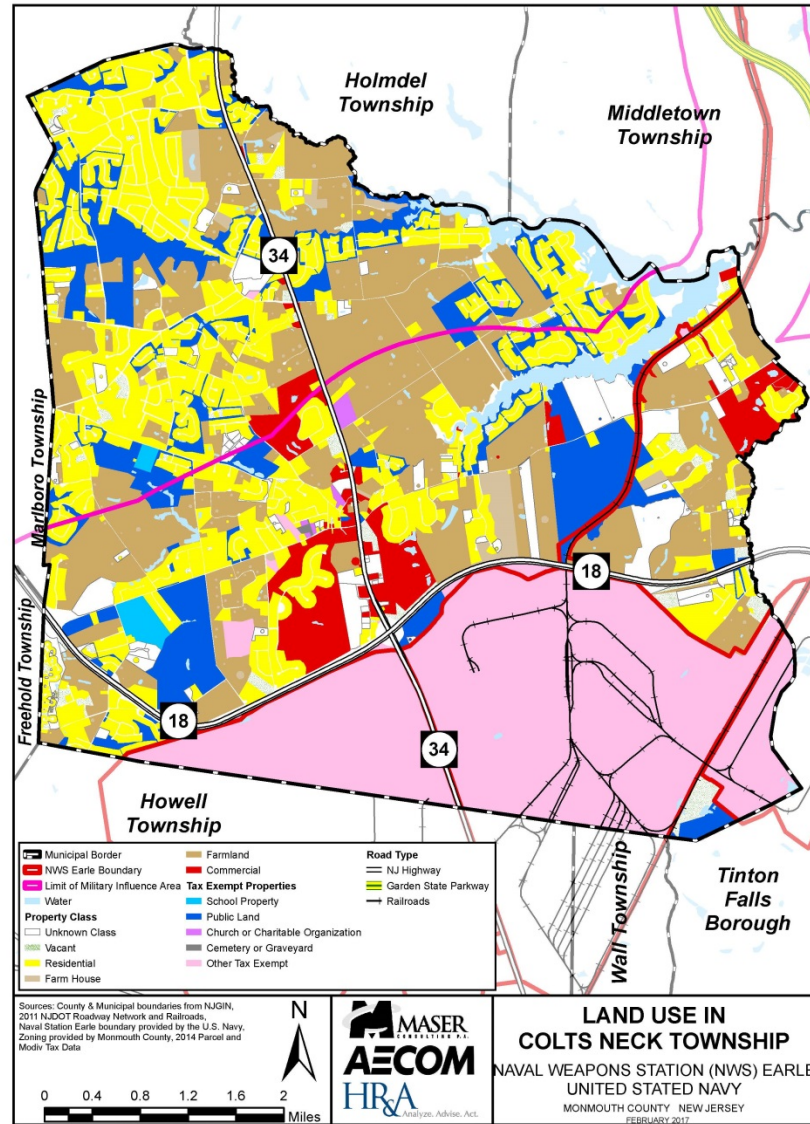
# Colts Neck Township

## Zoning



# Colts Neck Township

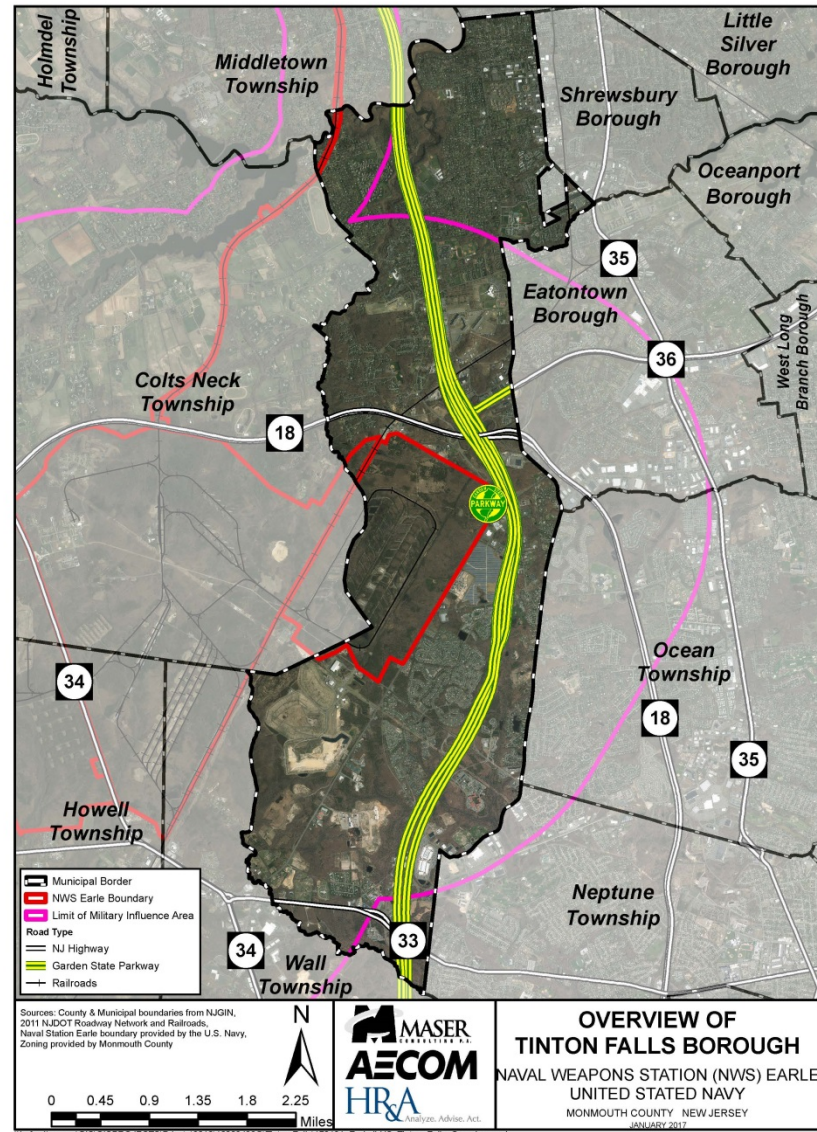
## Land Use



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# Tinton Falls Township

## Overview

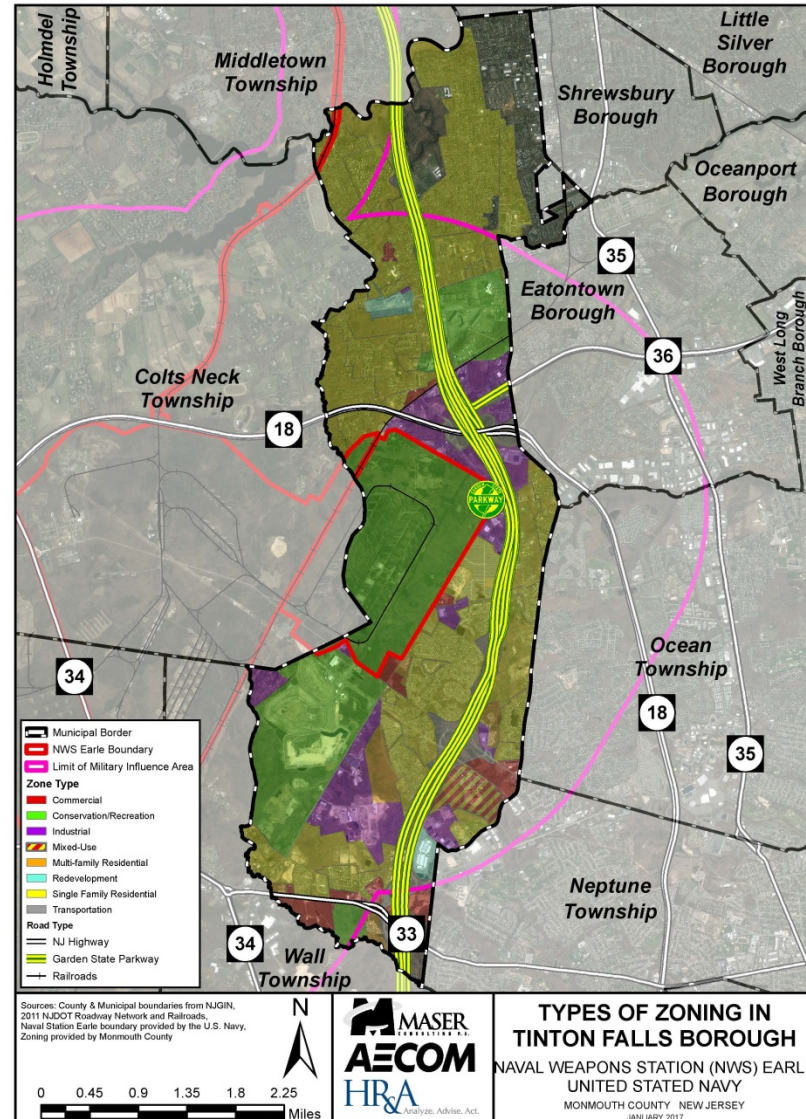


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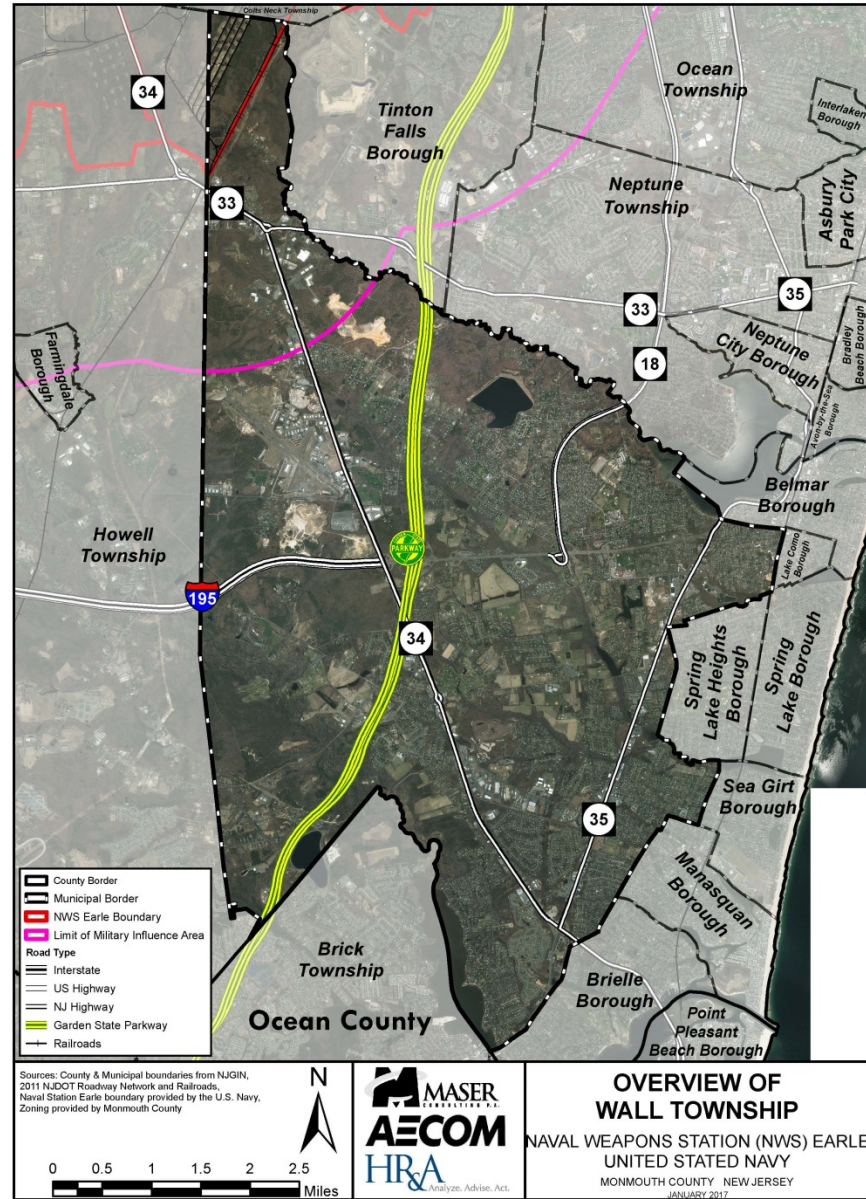


# Tinton Falls Township

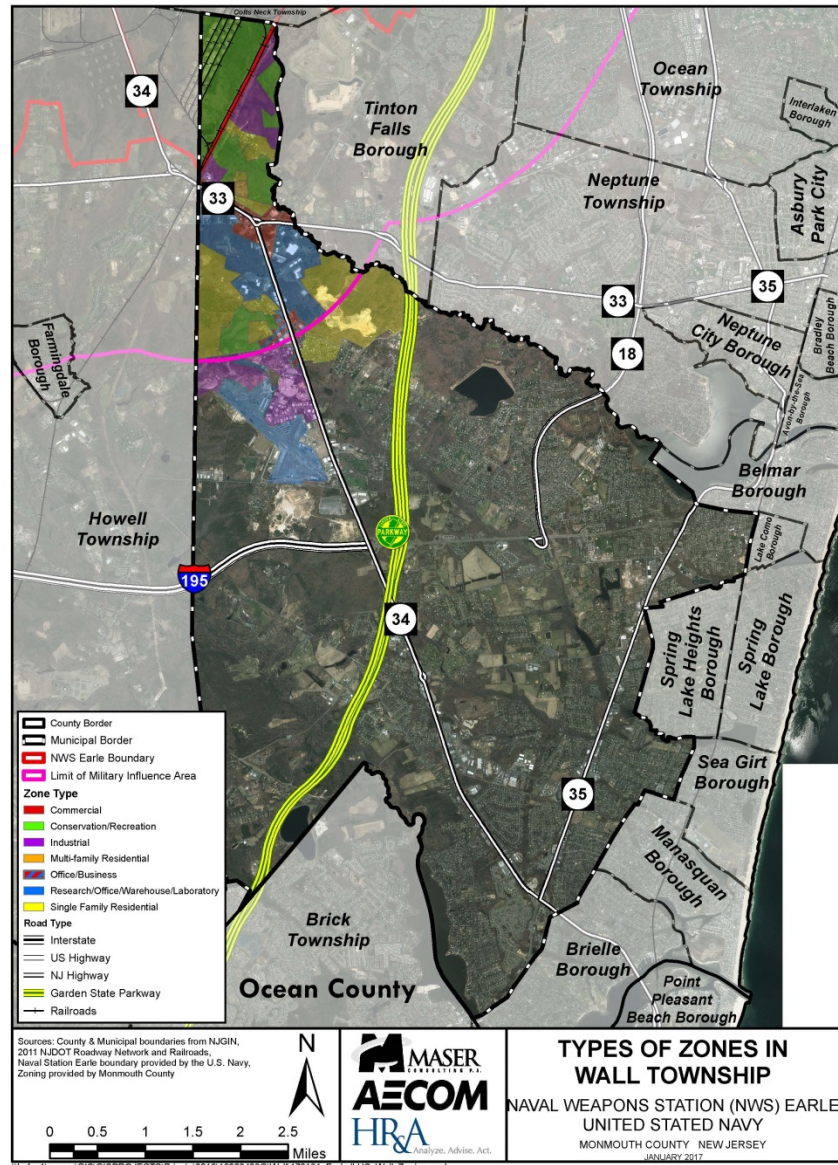
## Zoning



# Wall Township Overview



# Wall Township Zoning



As a Municipality with part of your land area within the Military Influence Area of the Earle Navy Complex, the Planners and the County Planning Department are asking you to provide us with any information that you may think is relevant. We would like you to consider the following list of questions and plan a response. The response can be written, but we will be following up with each municipality if there are specific ideas, concerns or information, that you would like to enumerate.

### Basic Information:

- How is the Naval Weapons Station perceived by residents, businesses, and/or stakeholders in your community?
- Does your community have any direct involvement with Naval Weapons Station Earle?
- If so can you provide some explanation of the interaction?
- Does your community have any **indirect** involvement with Naval Weapons Station Earle? Do residents who live in your town work on the base? Do residents use the base for any reason? If so can you provide some explanation of the interaction?
- Do your Planning documents, such as your Master Plan, make reference to Earle?

The second aspect of the JLUS Earle planning process is to develop ideas for the future of the Base and the surrounding region.

- Has your community in the recent past or is your community in the process of doing Economic Development Planning?
- What economic and social issues are most pressing in your community (e.g., access to jobs, preservation of open space/agriculture, corridor/downtown revitalization, affordable housing)?
- Briefly what is your vision of your community moving into the future? If you are mostly developed or mostly open space, it would be ok to respond to remain stable.
- If you have vacant lands in your community, in particular in or close to the Military Influence Area how does your community envision them being developed in the future, or has Earle been a consideration in the planning process?
- Does your future vision for the community consider addressing or mitigating the impacts of climate-change related events, such as frequent/more severe weather events, sea level rise, etc.?
- Does your municipality have the current capacity to engage in advanced planning activities, including economic development and resiliency planning? If capacity is limited, what resources are most needed in your municipality to actively engage in these kinds of planning efforts?



*Thank You*