

COMMANDER NAVY REGION MID-ATLANTIC

**UNDERSTANDING THE NAVY'S  
MID-ATLANTIC CLIMATE  
RESILIENCY STRATEGY**



LEADERSHIP



VISION



TEAMWORK

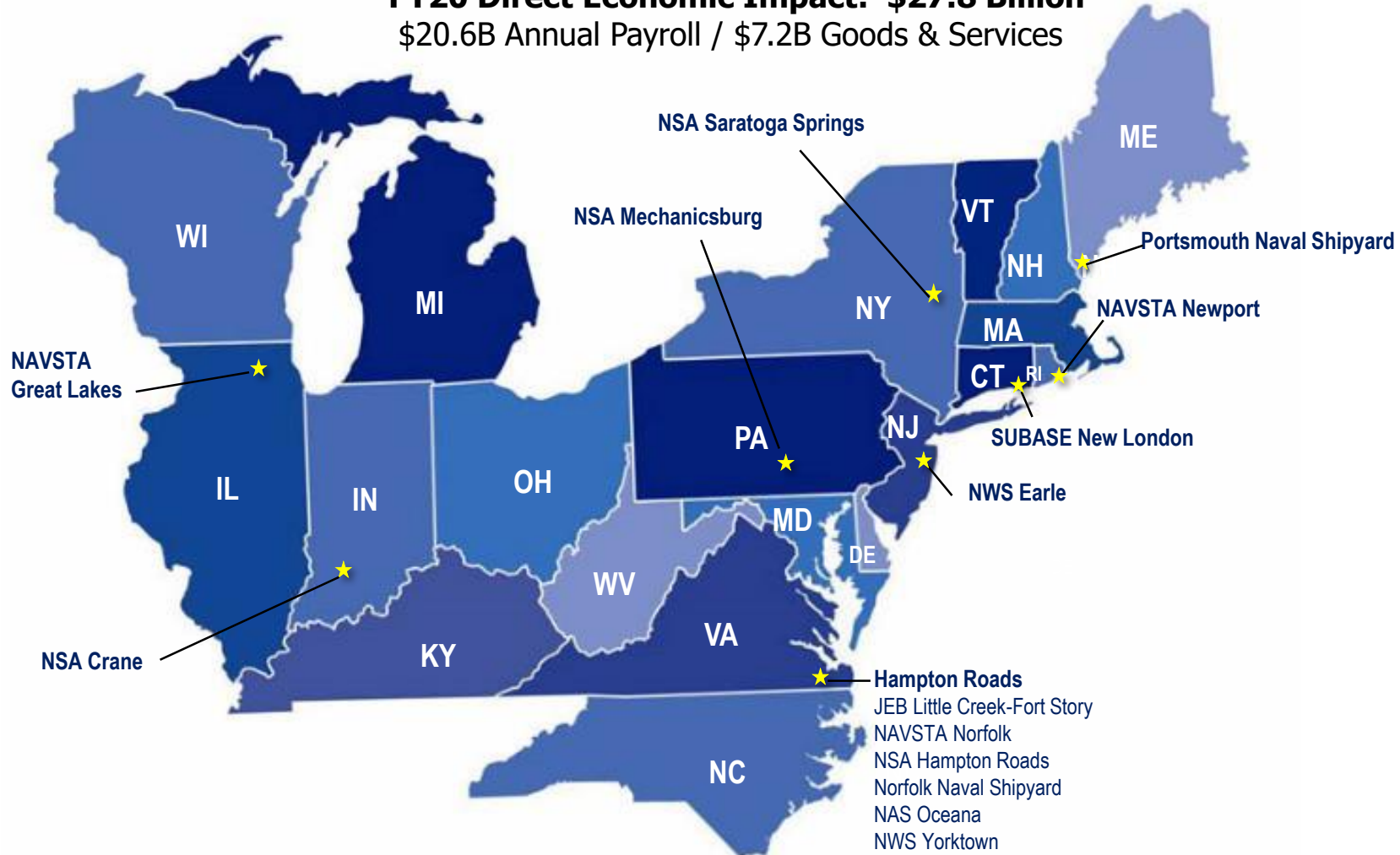


SERVICE

# CNRMA Area of Responsibility



**FY20 Direct Economic Impact: \$27.8 Billion**  
 \$20.6B Annual Payroll / \$7.2B Goods & Services



## Population (FY20)

- Active Duty: 96,835
  - Reserves/Students: 30,950
  - Family/Retirees: 293,729
  - Civilian Employees/  
Contractors: 95,552
- Total Navy Family: 517,066**

## Key Information

- 14 Installations/ 161 Special Use Areas / 48 NOSCs**
- Facilities Structures
    - 131 Piers
    - 7 Runways
    - 9 Drydocks
  - Homeported Ships/Squadron:
    - 6 Carriers
    - 58 Surface Ships
    - 25 Submarines
    - 10 USCG/NOAA ships
    - 37 Aircraft Squadrons



# Installation Resiliency Bottom Line



**“Ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions.”**

(NAVFAC Installation Planning Handbook)



# Climate Policy Drivers



ADMINISTRATION

JANUARY 12, 2021

## Executive Order on Tackling the Climate Crisis at Home and Abroad

OFFICE OF THE SECRETARY OF DEFENSE | PRESIDENTIAL ACTIONS

The United States and the world face a profound climate crisis. We have a narrow window to pursue action at home and abroad in order to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents. Our actions must go hand in hand with United States international leadership, aimed at significantly enhancing global action. Together, we must listen to science and meet the moment.

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

### PART 1 – PUTTING THE CLIMATE CRISIS AT THE CENTER OF UNITED STATES FOREIGN POLICY AND NATIONAL SECURITY

Section 901. Policy. United States international engagement to address climate change – which has become a climate crisis – is more necessary and urgent than ever. The scientific community has made clear that the scale and speed of necessary action is greater than previously believed. There is little time left to avoid setting the world on a dangerous, potentially catastrophic, climate trajectory. Responding to the climate crisis will require both significant short-term global reductions in greenhouse gas emissions and net-zero global emissions by mid-century or before.

It is the policy of my Administration that climate considerations shall be an

## Department of Defense Climate Adaptation Plan

September 1, 2021

A collage of images showing military personnel in uniform, a large ice floe in the ocean, a military aircraft on a runway, and a person in a field.

To National Climate Task Force and Federal Chief Sustainability Officer

The official seal of the Department of Defense.The seals of the United States Marine Corps, the Department of the Navy, and the United States Navy are displayed at the top.A collage of images showing a ship's mast, a coastal fortification, a sunset over a field, and a person in a field.

## CLIMATE ACTION 2030

Department of the Navy



# CNRMA Strategic Plan – Climate Resiliency



LOE 1: Resilient Built and Natural Installation Infrastructure (on-base)

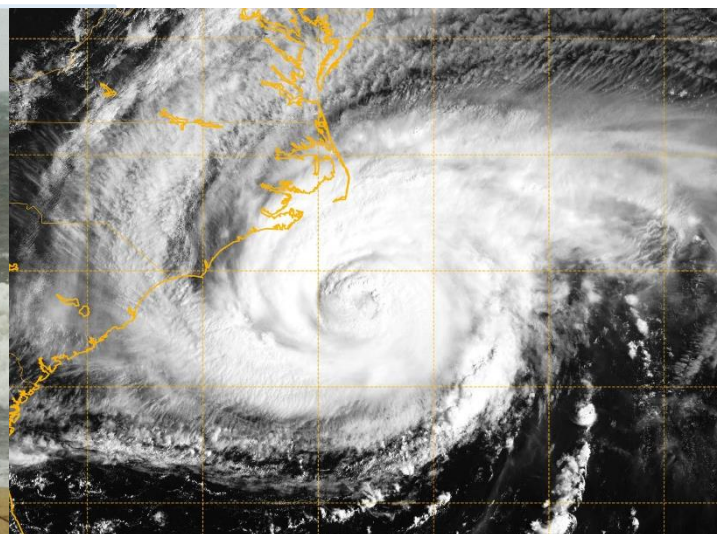
LOE 2: Enhance Adaptation and Resilience Through Collaboration (off-base)

## END STATE

Strategies developed to identify and reduce risks to the mission supporting infrastructure from climate hazards such as increased flooding from sea level rise.



LEADERSHIP



VISION



TEAMWORK

SERVICE

# Climate Resiliency Efforts



## Inside the fence line:

- Incorporating resiliency into:
  - Design standards for new construction
  - New construction and repair projects in consideration of operational requirements and design life
  - Installation Development Plans (IDP)

## Outside the fence line:

- Engaging with the surrounding communities through Joint Land Use Studies (JLUS) and other forums
- Leveraging Federal funding via the following DOD programs:
  - Office of Local Defense Community Cooperation (OLDCC) JLUS implementation/resiliency grants
  - Readiness and Environmental Protection Integration (REPI) funding
  - Defense Community Infrastructure Program (DCIP) grants



# Design Standards



UFC 3-201-01  
1 April 2018  
Change 1, 19 March 2019

## UNIFIED FACILITIES CRITERIA (UFC)

### CIVIL ENGINEERING



APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

Civil Engineering Unified Facilities Criteria (UFC) updated in March 2019 and Sep 2020 to incorporate requirements of FY19 and FY20 NDAA:

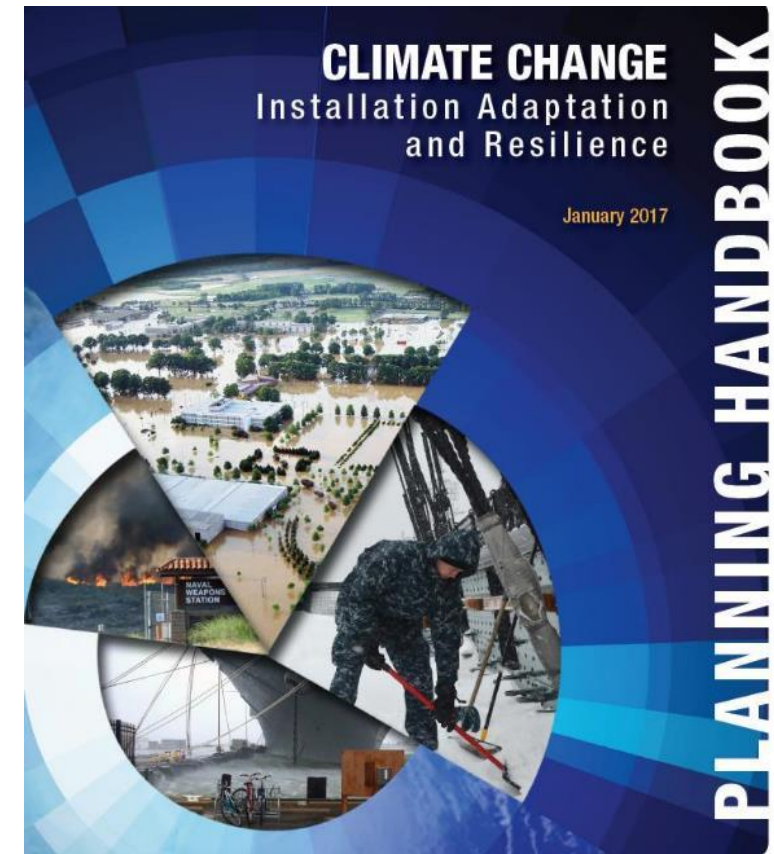
- Comparison of 100-year regulatory flood plan and DoD Regional Sea Level Database
- Use of the more stringent requirement to establish a minimum design flood elevations (DFE)
- Requirement for Flood Mitigation Documentation (1391 development)
- Flood hazard information as a requirement for Preliminary Site Analysis
- Requires mission critical roads and roads used for evacuation to design for flood mitigation



# Coastal Resilience Planning Study

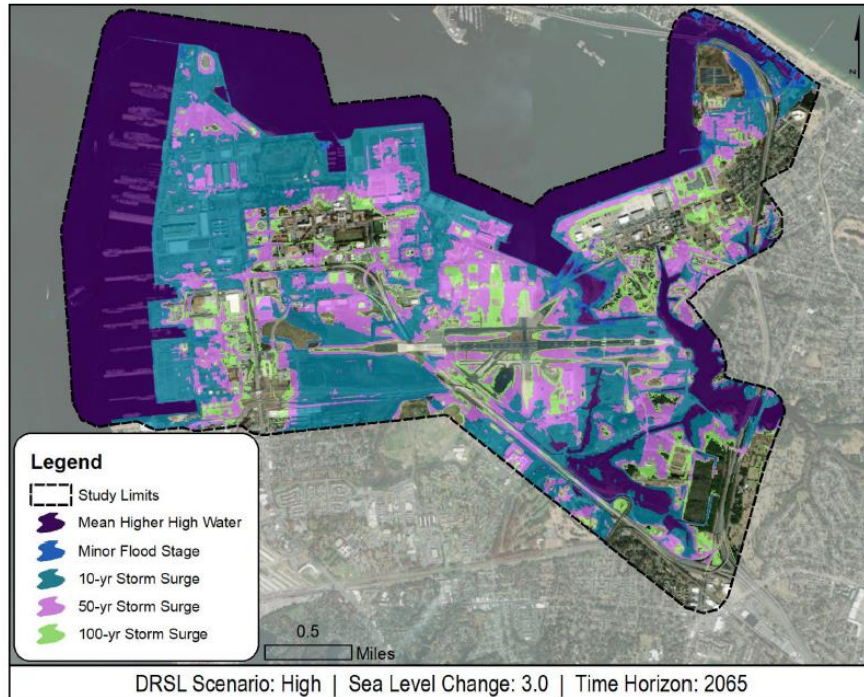


- Installation Adaptation and Resilience Handbook developed in 2017 by NAVFAC
- Provides an analytical framework and methodology to help planners identify and access adaptation action alternatives to manage potential impacts to current and planned infrastructure.
- Working with the Navy Installation Command on methodology for prioritizing IDP updates to incorporate resiliency planning
- Existing resource constraints impact efforts to update IDPs.
- Two upcoming planning efforts will incorporate climate resiliency:
  - Naval Station Norfolk Climate Study
  - Virginia Beach Coastal Storm Risk Management Study





# Naval Station Norfolk Climate-Informed Flood Risk Assessment



This assessment is providing an understanding of future flood hazards, potential impacts, and courses of action to inform the long-term sustainability of Naval Station Norfolk.

- Assesses changing coastal and rainfall flood hazards (i.e. sea level change, storm surge, wave action and stormwater) through mapping and qualitative analyses.
- Provides an understanding of how the future flood conditions may impact the installation infrastructure and operations.
- Identifies potential cost-effective short- and long-term courses of action that address priority risks to the facility and maintain operations and mission.
- Builds on prior efforts of the City of Norfolk with USACE.
- Includes a feasibility assessment to replicate studies across other installations within the Mid-Atlantic Region.
- Assessment completion expected FY23.

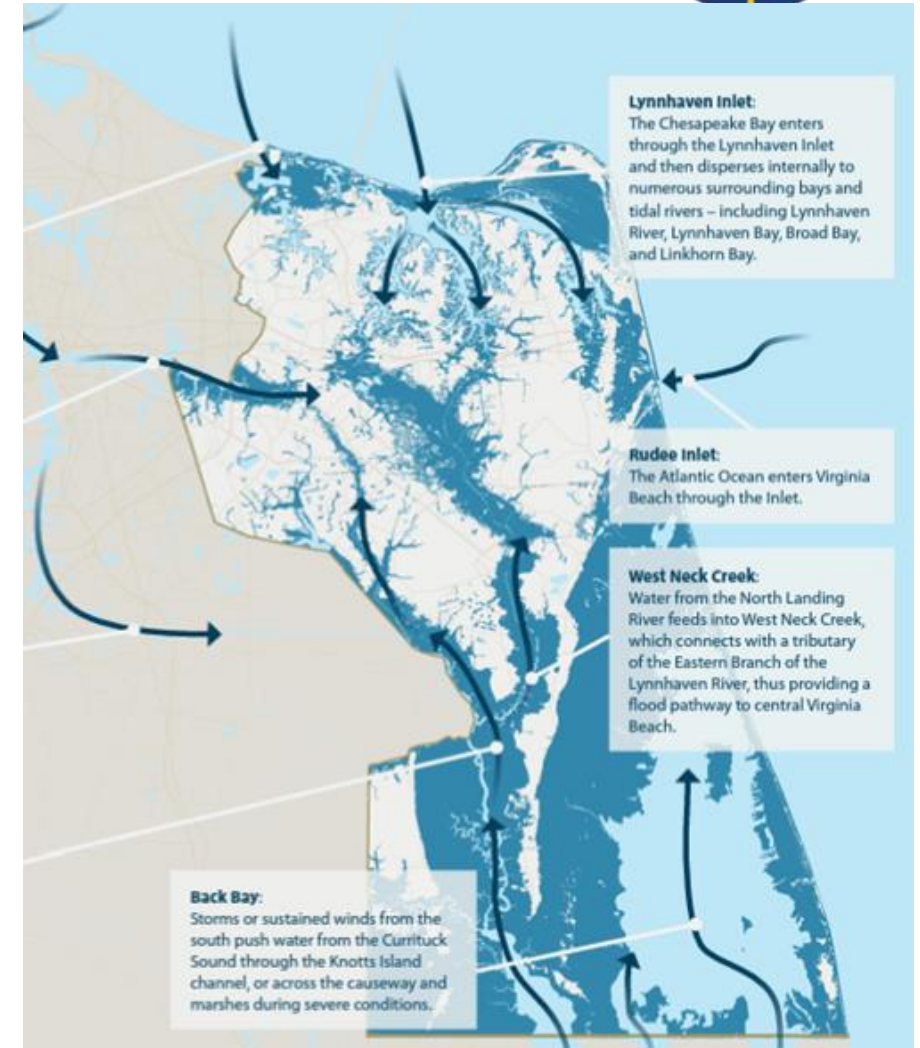


# VB Coastal Storm Risk Management Study



The Virginia Beach Coastal Storm Risk Management Study is an investigation that will address the risk caused by storm surge flooding, waves, and erosion and then formulate plans to manage the impacts coastal storms have in the city. The study will:

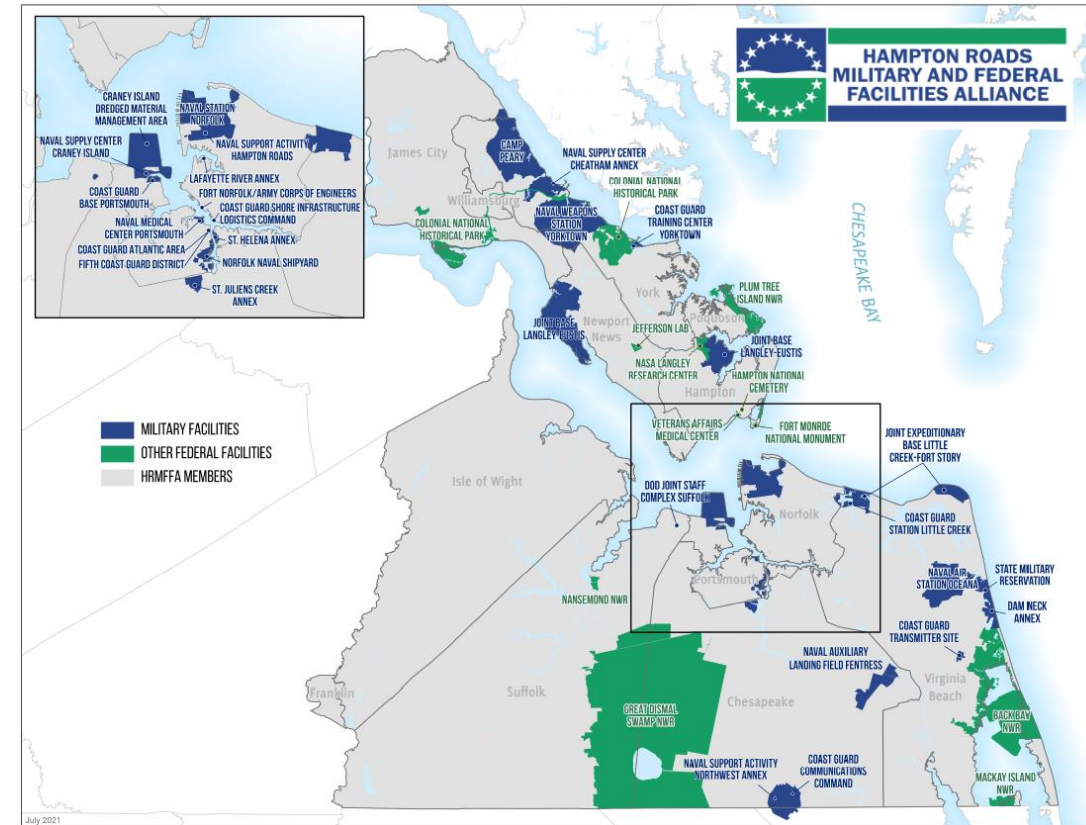
- develop recommendations that combine various strategies to address coastal flood risk and improve resilience in Virginia Beach and the Navy's facilities within the City (JEBLCFS, NAS Oceana, Dam Neck Annex).
- build on previous studies and projects that have been completed to date and will consider all types of strategies, including nature based features, structural, and nonstructural measures.
- take approximately three years to complete with cost sharing from USACE, VA Beach, and the Navy.



# Community Engagement: Hampton Roads



- Engaged in community-based initiatives across the Hampton Roads Region, including projects with academia, planning districts, and city, regional, and federal partners.
- These partnerships have resulted in enhanced awareness, communication, and cooperation.
- Joint Land Use Study (JLUS): Participated in two Hampton Roads JLUS projects that seek to address potential installation operational and access impacts due to sea level rise within our neighboring communities.
- JLUS efforts are community-driven and serves to protect and preserve military readiness while supporting economic development
- CNRMA staff represented the Navy on the Virginia Coastal Resilience Master Planning Technical Advisory Committee





- Installation Resilience activities are designed to support the organizing, planning, and implementation actions necessary to foster, protect, and enhance the sustainability of our military installations.
- Local civilian jurisdictions partner with their local installations as “one community” to identify man-made or natural threats across the community that are likely to impair the continued operational utility of local military installations, and then plan and carry out responses to enhance infrastructure and other resilience measures and projects involving the protection, restoration, and maintenance of natural features.
- Grant administrated by the Office of Local Defense Community Cooperation (OLDCC) and funding given directly to local/state agency. Grant funding is non-competitive and no set deadline for submission of a nomination
- Initiated through Military Department or community nomination
- Cooperative, community-driven effort with local military participation
- 90% Federal / 10% Community Match (10% can be City staff participation in the study)



# Defense Community Infrastructure Program (DCIP)



- FY19 NDAA created DCIP which allows DOD to invest directly in community infrastructure if it supports the military value, resilience or quality of life at a military installation.
- Grant administrated by the Office of Local Defense Community Cooperation (OLDCC) and funding given directly to local/state agency – 70% Federal / 30% Local Match
- Installation role = Outreach to local/state staff via CPLO and application ICO support letter (critical element for OLDCC scoring)
- Limited funding – FY20 (\$50M), FY21 (\$60M), FY22 (\$90M), FY23 (\$100M)
- CNRMA Installation local government partners have had 4 projects funded at \$8.3 M total and leveraging \$11 M in non-DOD funding - projects in support of Radio Island, NMC Portsmouth, Philadelphia Navy Yard, and Naval Weapon Station Yorktown
- **FY23 resiliency application example = City of Norfolk – Hampton Blvd. Stormwater/flooding Improvements – joint CO support letter: NSN/NSA HR**



# Readiness and Environmental Protection Integration (REPI)



- REPI purpose = limiting any development or use of private property that would be incompatible with the mission of the installation, preserving habitat on the property, or maintaining or improving military installation resilience
- Implementation for compatibility/acquisition = Real estate-based process to acquire restrictive easements from willing sellers with a eligible partner. Multi-year agreement signed with partner that outlines cost share (50:50)
- Limited program funding - FY19 (\$77M), FY20 (\$95M), FY21 (\$83M), FY22 (\$131M)
- 6 REPI agreements in CNRMA for acquisition: VA MYAs - NAS Oceana, NSA HR – Northwest Annex, NWS Yorktown.
- **2 REPI resiliency initiatives – NWS Yorktown, NWS Earle**
- \$ can be requested via military services or partners via annual REPI challenge funding opportunity
- REPI Resilience Project Funding Guide on the REPI.mil website



# Key Take Aways



- We must prepare for all threats, including climate.
- We remain focused on all potential threats that impact mission readiness, personnel health, and installation resilience.
- How the military adapts facilities to address changes in climate is very mission – and site – specific.
- In places like Norfolk, the combination of recurrent flooding and land subsidence is causing increased tidal and storm flooding.
- The Department of the Navy must be able to adapt current and future operations to address the impacts of a wide variety of threats and conditions, to include those from weather, climate and natural events.

**We are planning for the future...and we are planning with our community partners.**

