



733d Mission Support Group



Cultural Resources Management Program
at
JBLE-Eustis



Agenda



- Fort Eustis
 - Archaeological Sites
 - Current challenges
 - Accomplishments
- Langley
 - Archaeological Sites



JBLE-Eustis Archaeological Sites



• Total archaeological sites recorded	234
• One new site in the process of being delineated	
• Number of eligible or listed sites	31
• Number of non-eligible sites	35
• Number of unevaluated sites	168
• Number of sites with Native Material	115

Current Challenges

Eroding shorelines



"People First... Aim High... Army Strong!"

Accomplishments

Delineation of new site in progress



"People First... Aim High... Army Strong!"



JBLE-Langley



- Total archaeological sites recorded 32
- Number of eligible or listed sites 8
- Number of non-eligible sites 22
- Number of unevaluated sites 0
- Number of sites with Native Material 21
- Accessible Percent of Base surveyed 100%
- *Some portions of base inaccessible*



Questions?





733d Mission Support Group



Natural Resources Management Program
at
JBLE-Eustis



Agenda



- Natural Resources on JBLE-Eustis
- Why DoD bases manage natural resources
- Invasive Species Management
- Outdoor Recreation
 - Hunting Opportunity for Tribal Members only
- Addressing Sea Level Rise
- Accomplishments
- Moving Forward



Natural Resources By the Numbers



Vertebrate Wildlife

Mammals - 41

Birds - 185

Reptiles - 23

Amphibians - 17

Fish – 33

Habitats

Commercial forests:

2,700 acres

Loblolly pine dominant tree

Reintroduction of longleaf pine = 20 acres

Urban forest: 2,000 acres

Wetlands: 3,600 acres

Early successional: 74 acres

Shoreline: 26 miles

Invertebrate Fauna

Insects - 732

Other arthropods - 55

Other inverts - 5

Plants

Trees - 41

Total - 267

Federally Listed Species:

- Northern long-eared bat (*Myotis septentrionalis*)
- Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*)

Virginia Listed Species:

- Little brown bat (*Myotis lucifugus*)
- Tricolored bat (*Perimyotis subflavus*)

Active Bald Eagle Nests: 11



Purpose of Natural Resources Management at JBLE-Eustis



Manage natural resources to meet the military mission in perpetuity in accordance with the Sikes Act (16 USC 670 et seq.) ...

Current INRMP*: Jun 2024 – Jun 2029

*likely to be updated early to adopt Air Force standard template

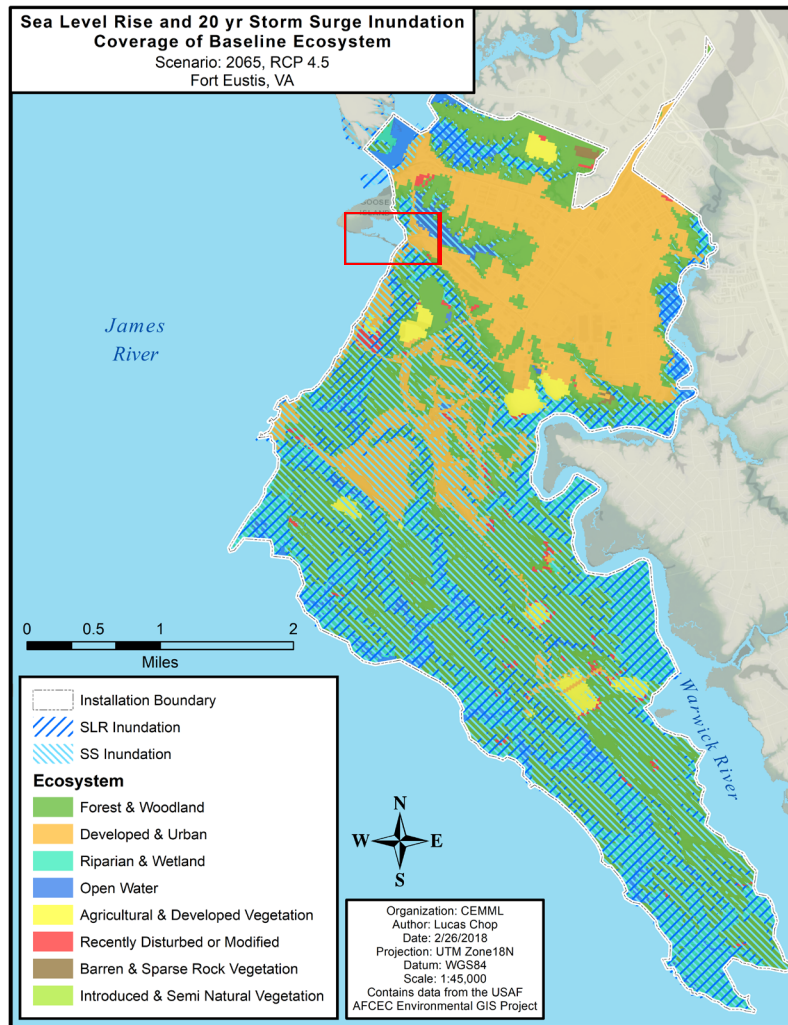
- 1 Invasive Mammal
 - Nutria
- 22 Invasive plants.
 - Major accomplishments w/ Kudzu, Tree of Heaven
 - Common reed very problematic
 - Continuous: privet, autumn olive
 - Nutria surveillance & eradication
 - Eastern coyotes
 - Resident Canada geese
- Arthropods:
 - Japanese beetle
 - Asian tiger mosquito
 - European hornet
 - Red Imported Fire Ant (RIFA)
- Watchlist:
 - Sirex woodwasp
 - Spotted lanternfly
 - Southern pine beetle



Outdoor Recreation

- Hunting & fishing program managed via iSportsman app
 - Opportunity for tribal member only management hunt if all other hunting requirements (weapons registration/hunting permits) are purchased
- Boating
- Camping
- Fort Eustis Nature Trail
- Accessible Bird Watching sites





One possible scenario for inundation of JBLE-Eustis by 2065 due to sea level rise.



Challenges:

- Rapid rate of change
- Funding
- New technology development – thin layer placement

Strengths

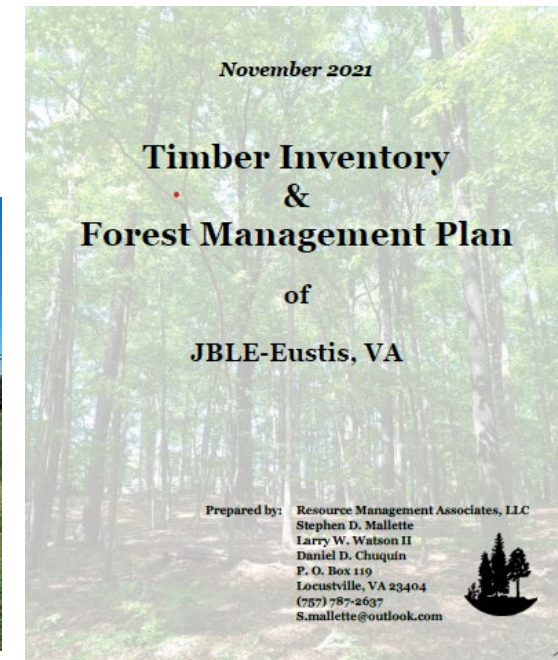
- Grant Opportunities
- Non-DoD Partners



Accomplishments



- Wild turkey reintroduced (1999 - Success!)
- Manageable hunting & fishing program
- Conservation Law Enforcement under 733 CES
- Some invasive plants eradicated or under definitive control
- Published data
- Ixodid tick/pathogen data
- Reforestation projects
- Conversion of fallow/unused areas into early successional
- Forest Inventory





Moving Forward



- Research driven land management for endangered bat, insect and other species
 - Increased cooperation with other agencies & non-DoD experts
 - USFWS Eastern Black Rail & Secretive Marsh bird survey – field work begins in Spring 2025
 - USFWS prepared bat management plan
 - Candidate Conservation Agreement with USFWS to protect pollinators ahead of listing
- Conversion of mature pine stands to early successional habitat.
- Rethink Common Reed (*Phragmites australis*) management
- We take help wherever we can get it that drives forward good stewardship of land
 - Monarch Joint Venture, Quails/Pheasants Forever, Roundstone Native Seed, City of Newport News Waterworks & Parks and Rec.,
- Monitor status of candidate species.
 - Spotted Turtle (*Clemmys guttata*) – 2025 field work/research of behavior hazards & population size on JBLE-Eustis
 - Northern Red-bellied Cooter (*Pseudemys rubriventris*)
 - Salt Marsh Sparrow
 - Shoreline Restoration Design & Implementation – adapting to sea level rise



"People First... Aim High... Army Strong!"



Natural Resources at JBLE-Langley

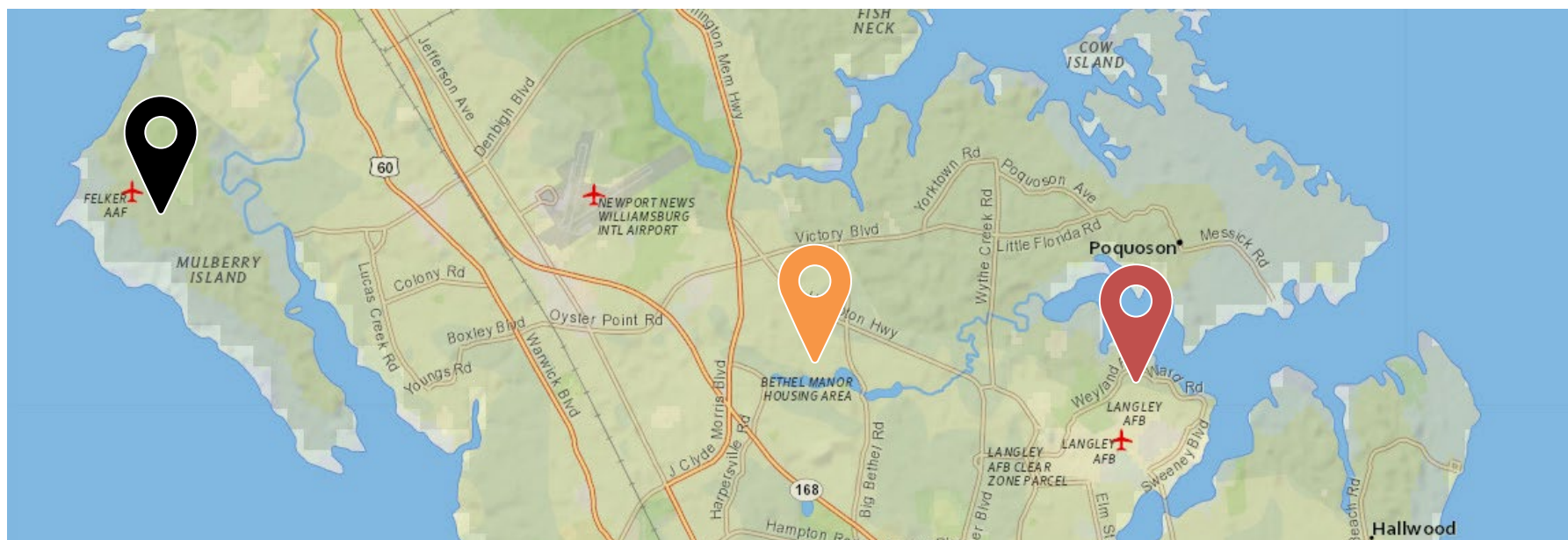
Cecilia Boyd
Natural Resources Program Manager
Environmental Element
633 Civil Engineering Squadron
JBLE-Langley, VA 23665
757-764-1090
Cecilia.Boyd@us.af.mil



JBLE-Langley Overview



- Main Installation: 2,883 Acres
- Bethel Housing and Reservoir: ~500 Acres





JBLE-Langley Background



• Langley Fields

- Majority of Main Base within the 100-year floodplain
- Langley Fields founded in 1916. Area was mostly farmland. Uncultivated areas predominantly pine forest(Kuranda et al., 2004).
- Most of the natural vegetation in and around the Main Base and BBR has been lost or modified since urbanization and installation establishment (JBLE-Langley, 2014b; Hobson, 1996).





2

1917

Hampton History Museum



1920s



1

2

3

2020s



1

2

3

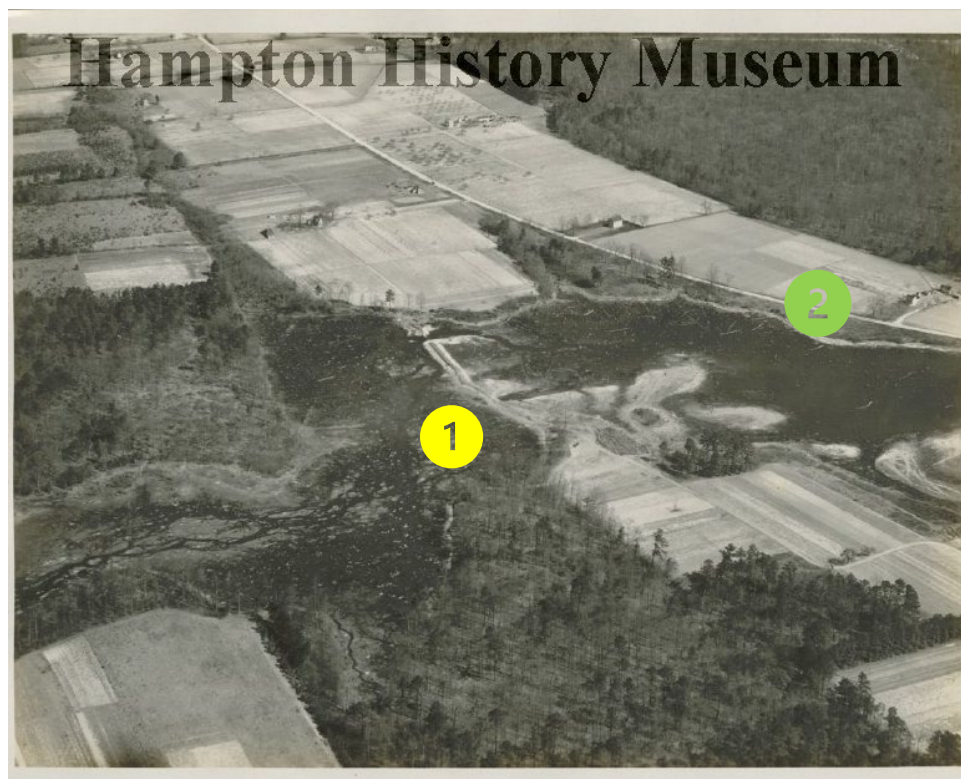


JBLE-Langley Background



• Bethel Reservoir

- Big Bethel Reservoir was formed in 1907 to provide drinking water by damming Brick Kiln Creek.
- By 1921, the reservoir was providing drinking water to Ft. Monroe and Langley Fields. A second dam was built in 1941 to increase capacity.
- Big Bethel Water Treatment Plant was closed in 2003.



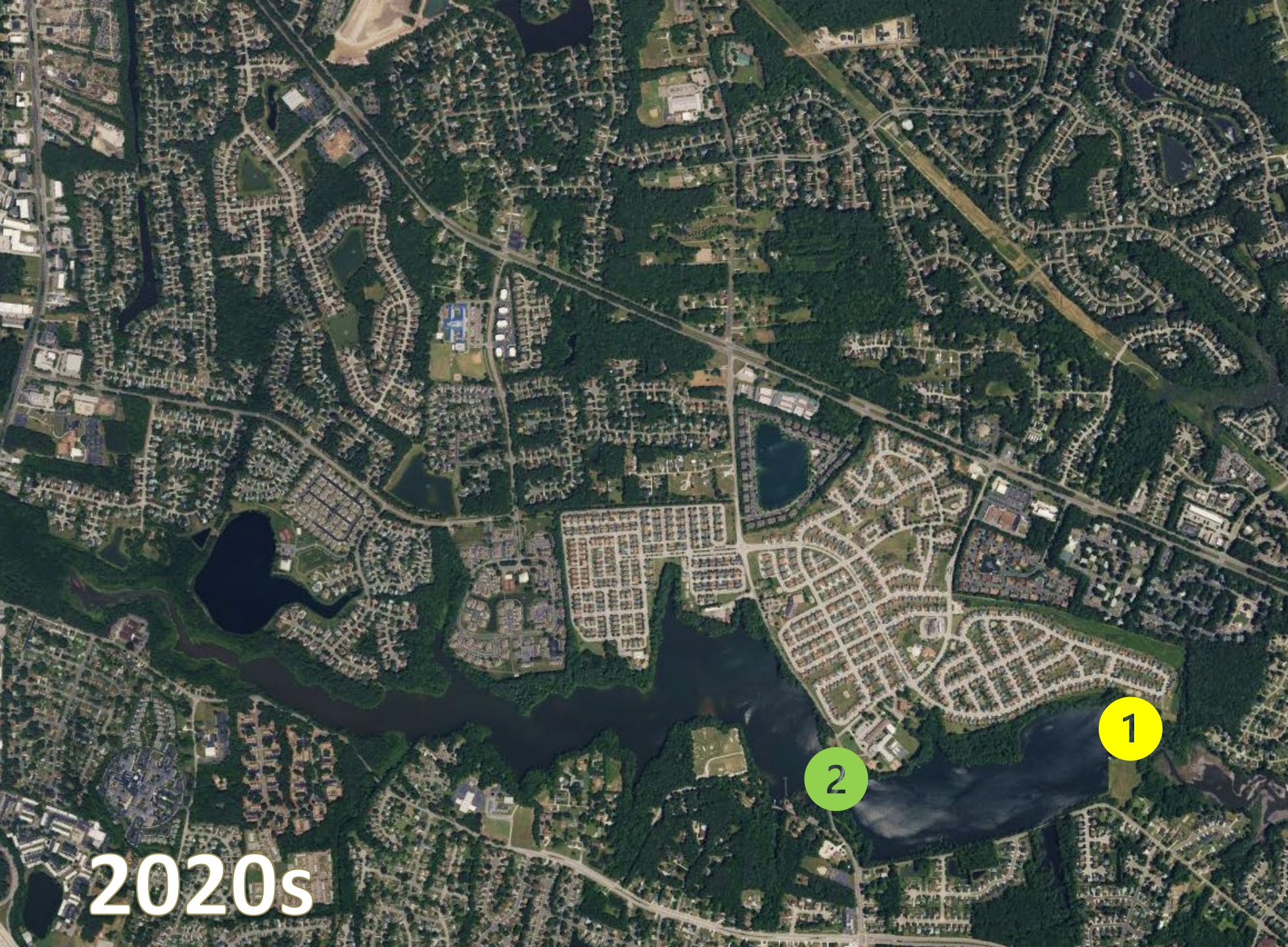
FEB-1931

3

Hampton History Museum



1931



2020s

2

1



Natural Resource Management



4. POLICY. It is DoD policy that:

a. The principal purpose of DoD lands, waters, airspace, and coastal resources is to support mission-related activities. All DoD natural resources conservation program activities shall work to guarantee DoD continued access to its land, air, and water resources for realistic military training and testing and to sustain the long-term ecological integrity of the resource base and the ecosystem services it provides, in accordance with section 670a-670o of title 16, United States Code (U.S.C.) (also known as and hereafter referred to as the "Sikes Act" (Reference (h))).

(1) DoD shall manage its natural resources to facilitate testing and training, mission readiness, and range sustainability in a long-term, comprehensive, coordinated, and cost-

(2) DoD shall demonstrate stewardship of natural resources in its trust by protecting and enhancing those resources for mission support, biodiversity conservation, and maintenance of ecosystem services.

(3) DoD shall manage DoD lands, waters, airspace, and coastal resources or natural resources for multiple uses when appropriate, including sustainable yield of all renewable resources, scientific research, education, and recreation.

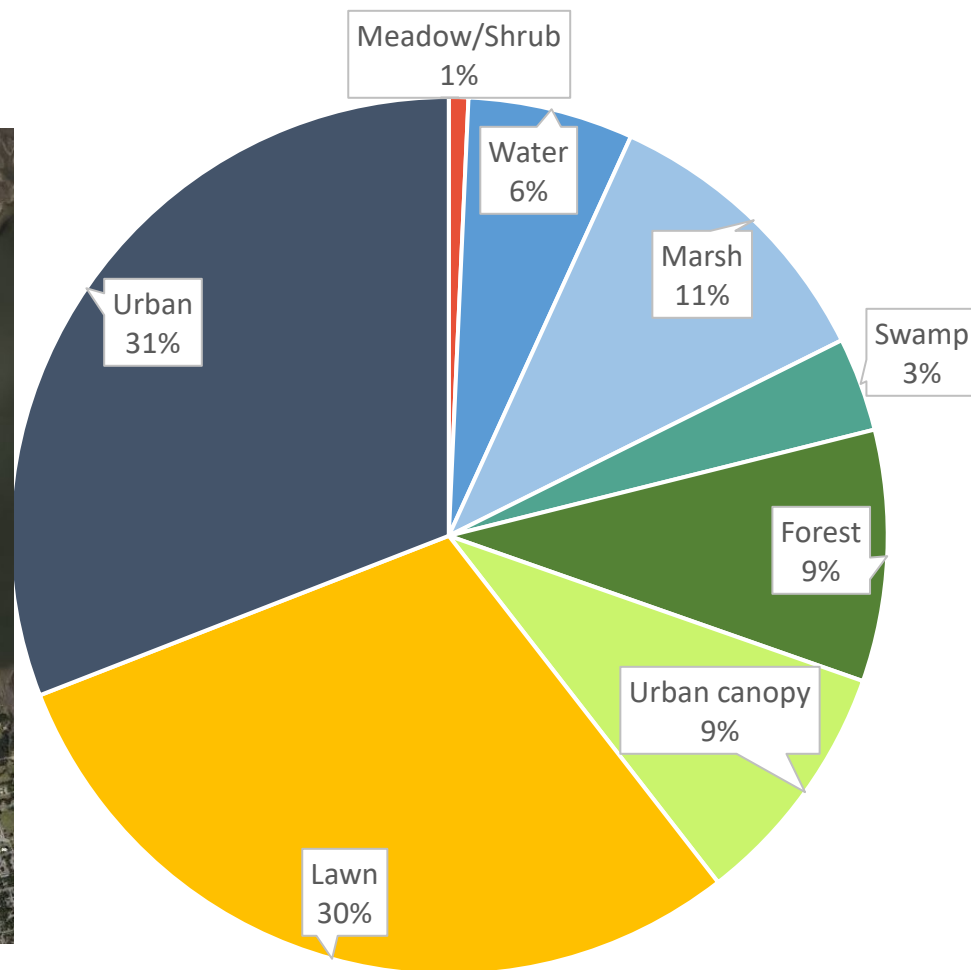
(4) All DoD natural resources conservation programs shall be integrated with mission activities, installation planning and programming, and other activities as appropriate.

b. All DoD facilities and installations shall plan, program, and budget to achieve, monitor, and maintain compliance with all applicable Federal natural resources statutory and regulatory requirements, E.O.s, and Presidential memorandums.

c. DoD shall follow an ecosystem-based management approach to natural resources-related practices and decisions, using scientifically sound conservation procedures, techniques, and data.

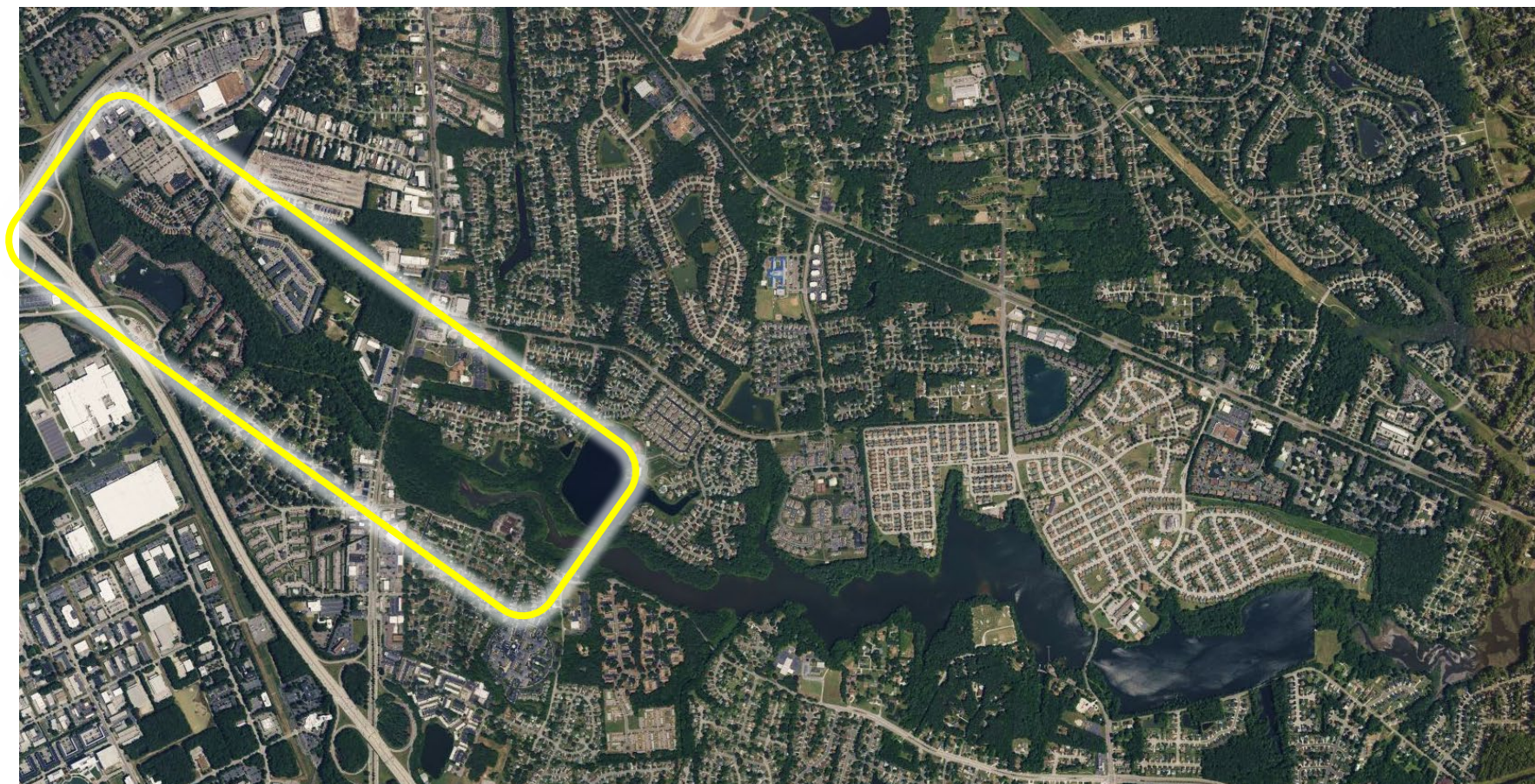


Natural Resources Habitat





Natural Resources Habitat





Recent Species Surveys



- Completed T&E Bat Survey: Sep 23- Apr 24
 - Northern Long-Eared Bats (migrants)
 - Tricolored Bats
 - 13 spp detected acoustically
 - 4 spp detected mist netting
- Completed eDNA survey for Shad at Spillway: Apr 24
 - No species of concern at lower spillway
 - Migration barrier for Gizzard Shad
- Upcoming Marsh Bird Survey: Apr-Jul 25
 - Black Rail (Not expected)
 - Saltmarsh Sparrow (confirmed present)





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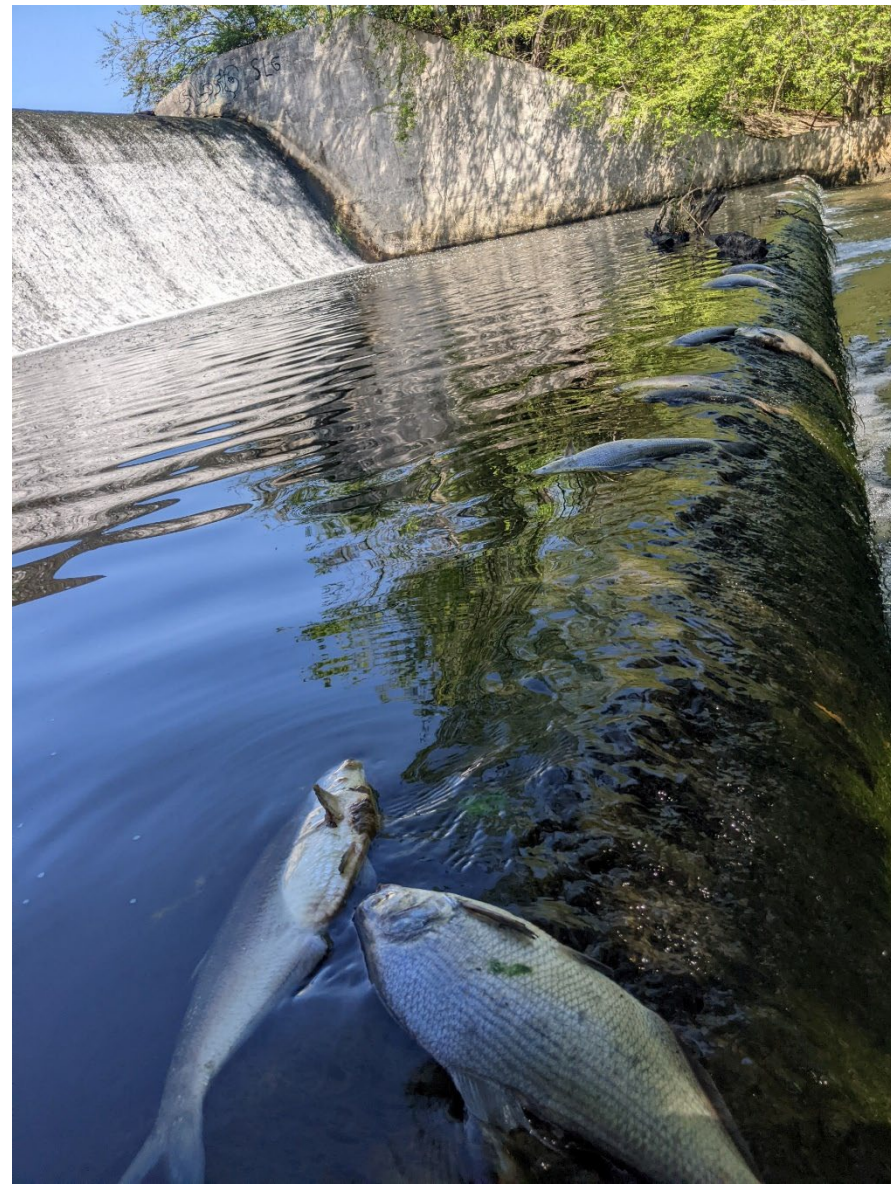




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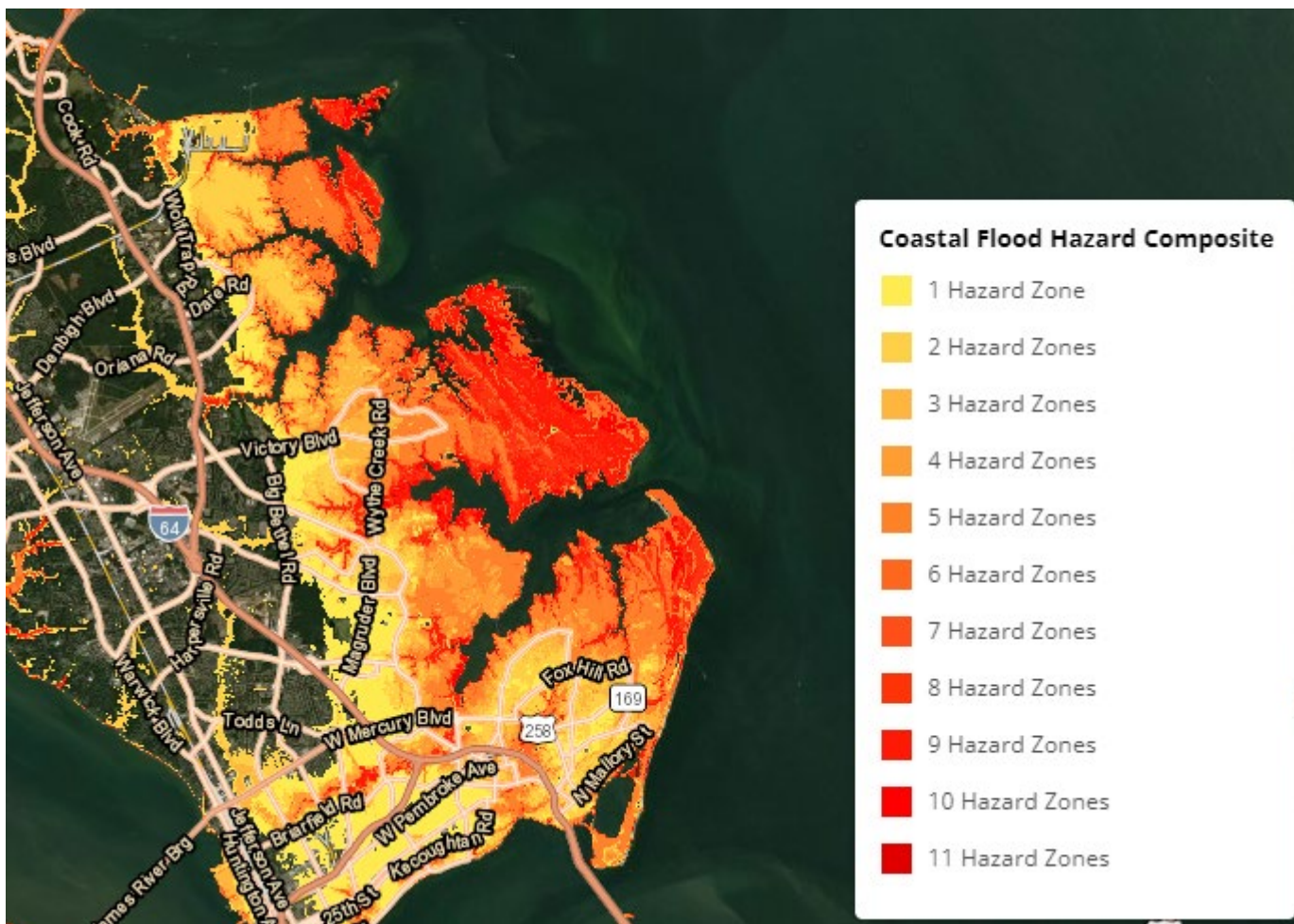


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Flood Resiliency



	1933 Unk.	1999 Floyd	2003 Isabel	2009 Nor'easter	2011 Irene	2012 Sandy	2015 Joaquin	2016 Hermine	2016 Matthew
Level Above Sea Level (Ft)	8.9	6.3	7.9	7.6	7.5	6.9	6.5	6.12	5.78
Wind (MPH)	82	55	62	75	85	90	46	65	61
Damage (\$)	No Data	No Data	\$146M	\$44M	\$1.5M	\$40K	\$6.5M	\$9K	\$168K
Business Closure	No Data	No Data	7 days	48 hrs	24 hrs	24 hrs	72 hrs	-	-



2003 Hurricane Isabel 7.9ft flood



Flood Resiliency

- Grey Infrastructure
 - Seawalls
 - Elevating Building
 - Stormwater Pumping
- Green Infrastructure
 - Natural Shorelines
 - Oyster Reefs
 - Wetland Protection
 - Sediment Placement

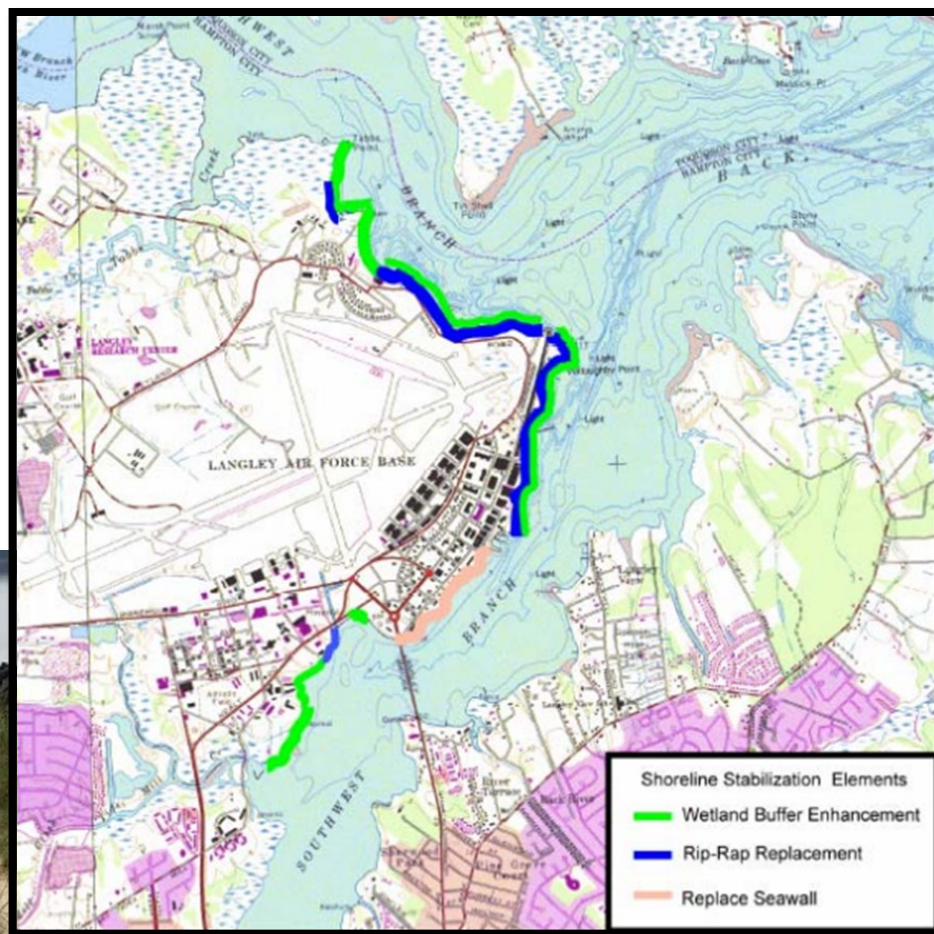




Flood Resiliency



- Natural Shorelines
- 2006-2021





Flood Resiliency





Flood Resiliency



- 2022-23 USACE Engineering With Nature Partnership
 - Natural Infrastructure research and Design
 - Nature Based Solutions
 - Community Collaboration



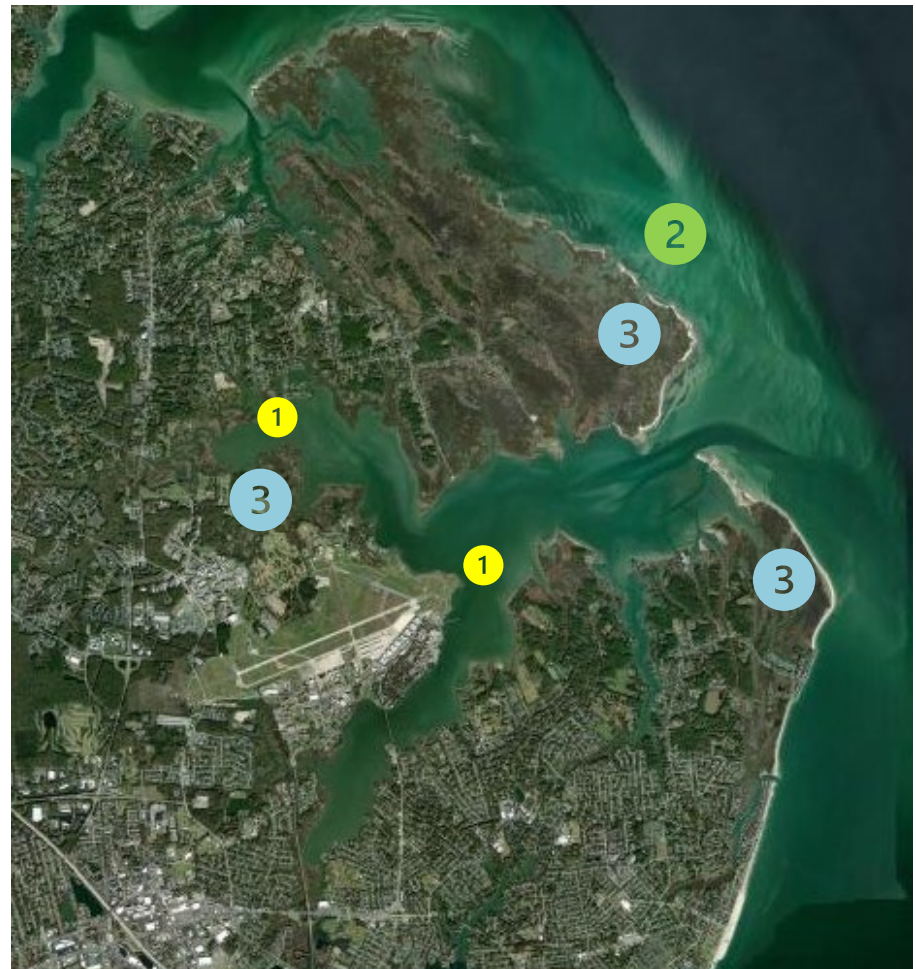


Flood Resiliency



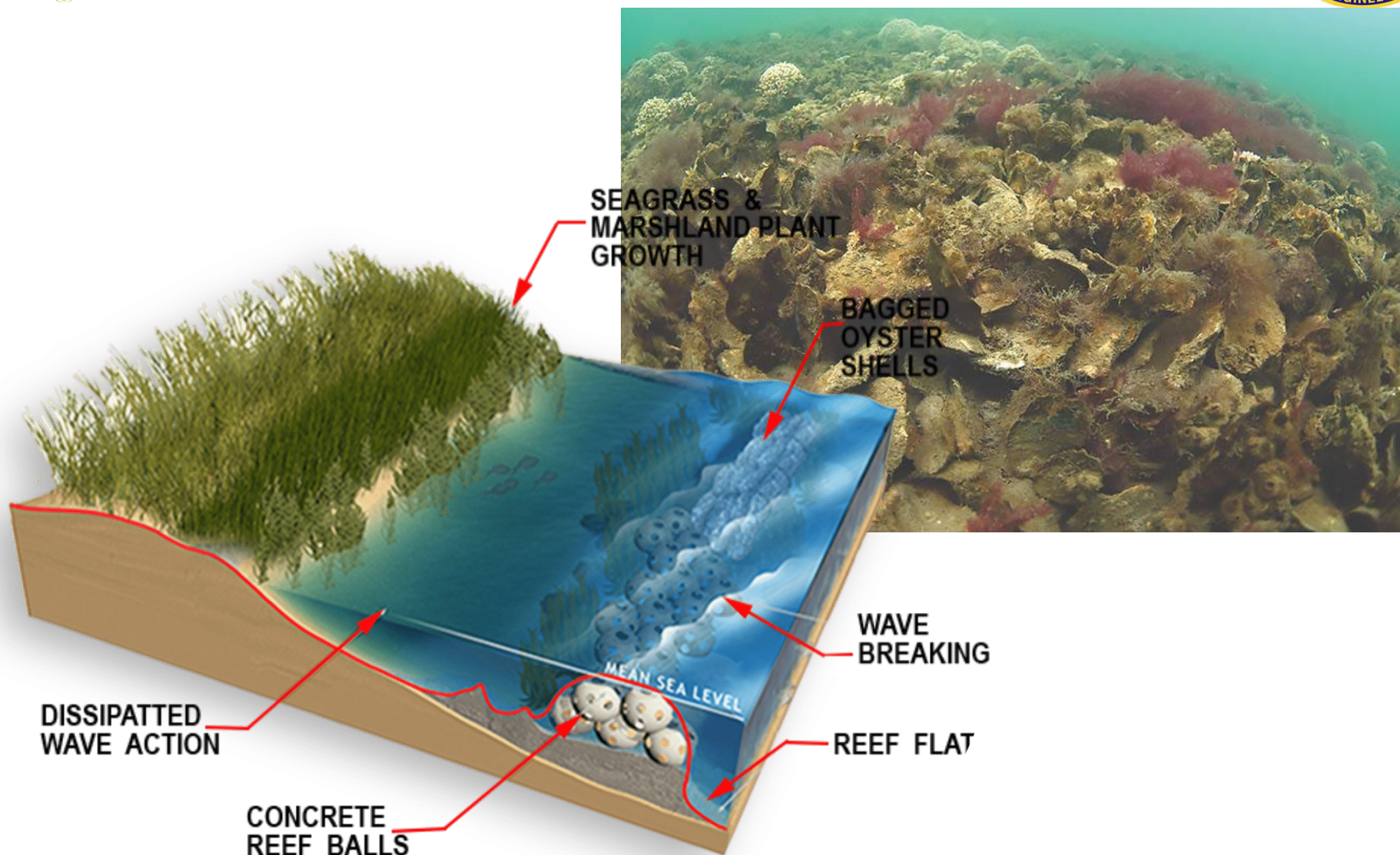
Nature Based Solutions

1. Oyster Reef / breakwater 1
 - Natural Armor for Eroding Shorelines
2. Sand Islands 2
 - Sand engines/motors place sand offshore for tides and waves to distribute
3. Thin Layer Placement 3
 - Raise Marsh Elevations with Dredge Material



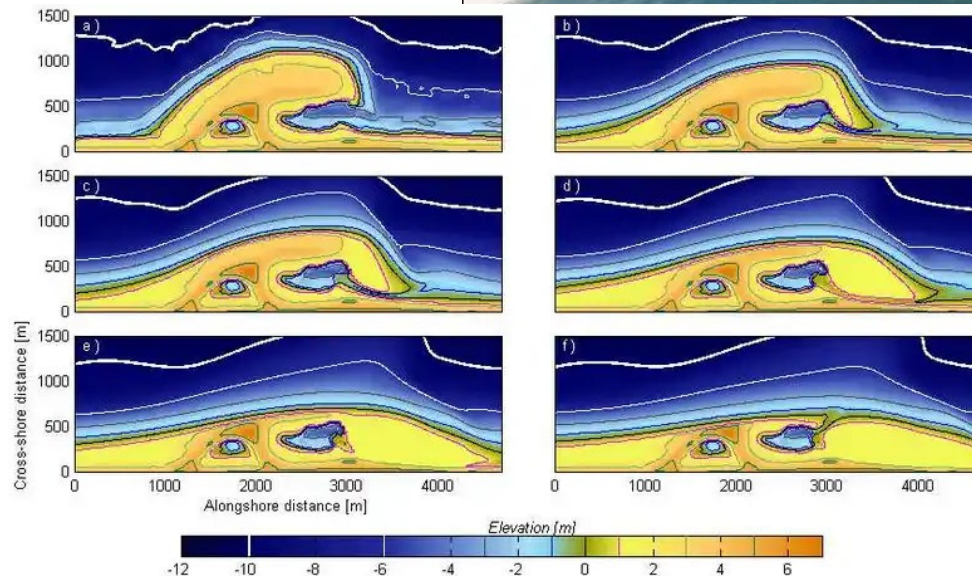


Oyster Breakwater





Sand/ Ephemeral Island





Thin Layer Placement





Back River Resiliency Grant



- 2024 NFWF Grant with City of Hampton advances EWN designs to 90%



NFWF

National Coastal Resilience Fund

Developing Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)

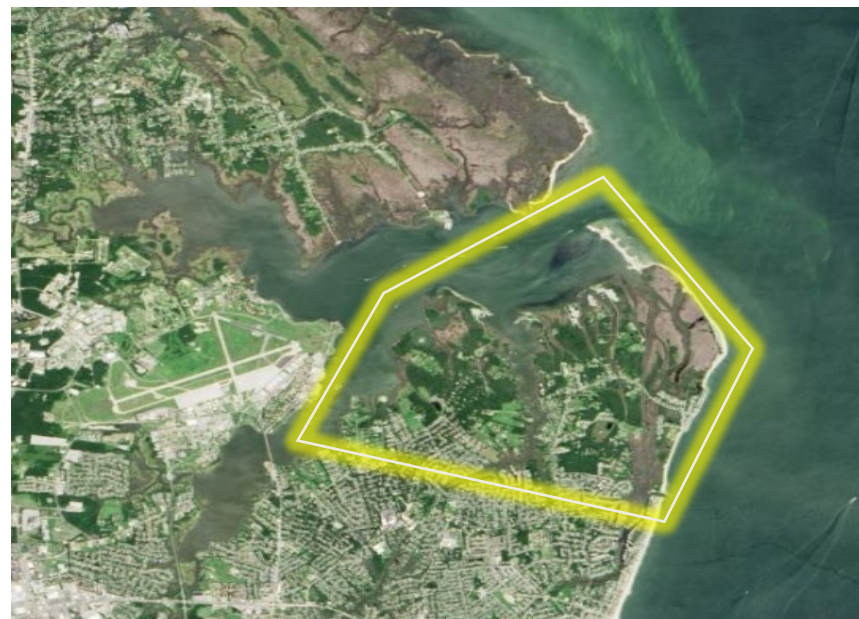
Grantee: City of Hampton

Grant Amount:.....\$845,000

Matching Funds:.....\$142,800

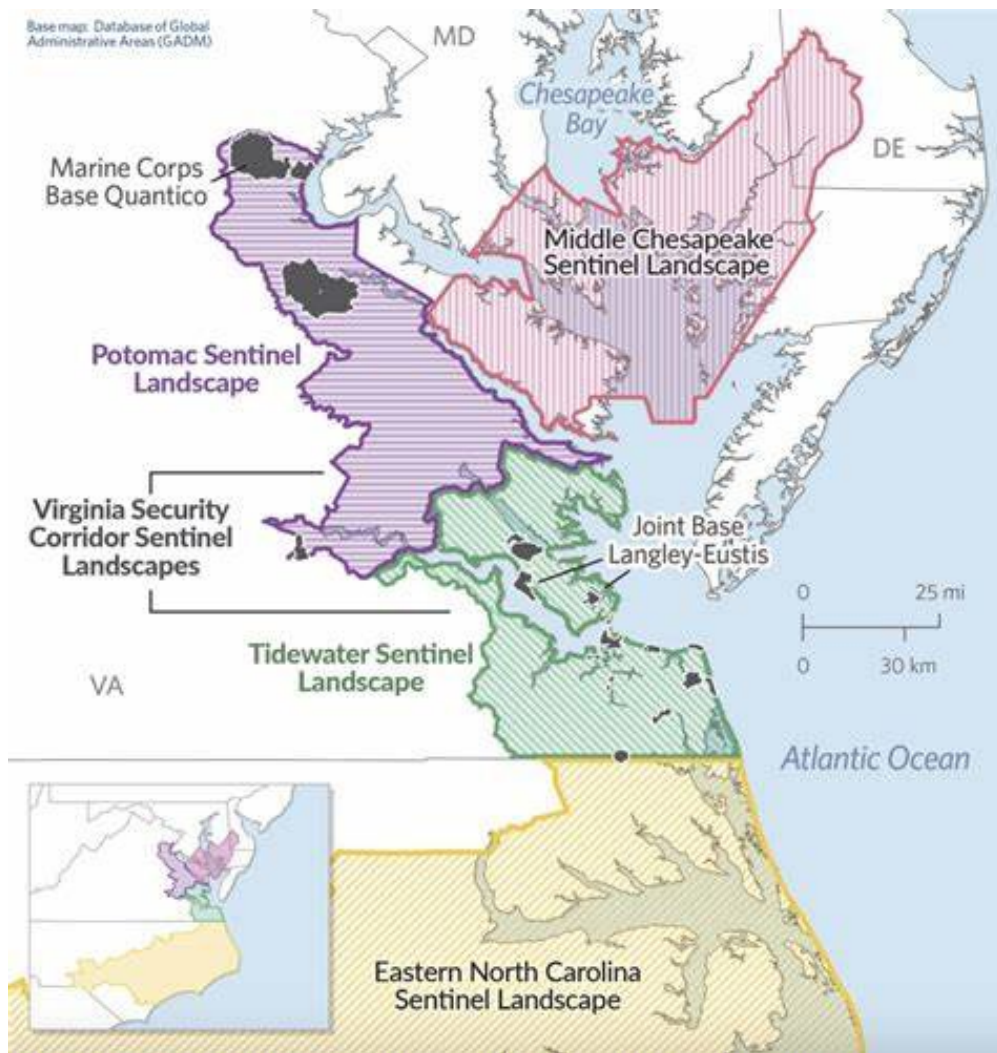
Total Project Amount:.....\$987,800

Develop a holistic series of nature-based solutions such as thin-layer placement for marsh enhancement, oyster reefs, submerged aquatic vegetation bed restoration and ephemeral islands in the Back River Estuary to enhance coastal resilience. Project will increase marsh resilience to wave action and sea-level rise, reduce flood risk in Back River communities, and improve habitat quality and extent in the estuary.





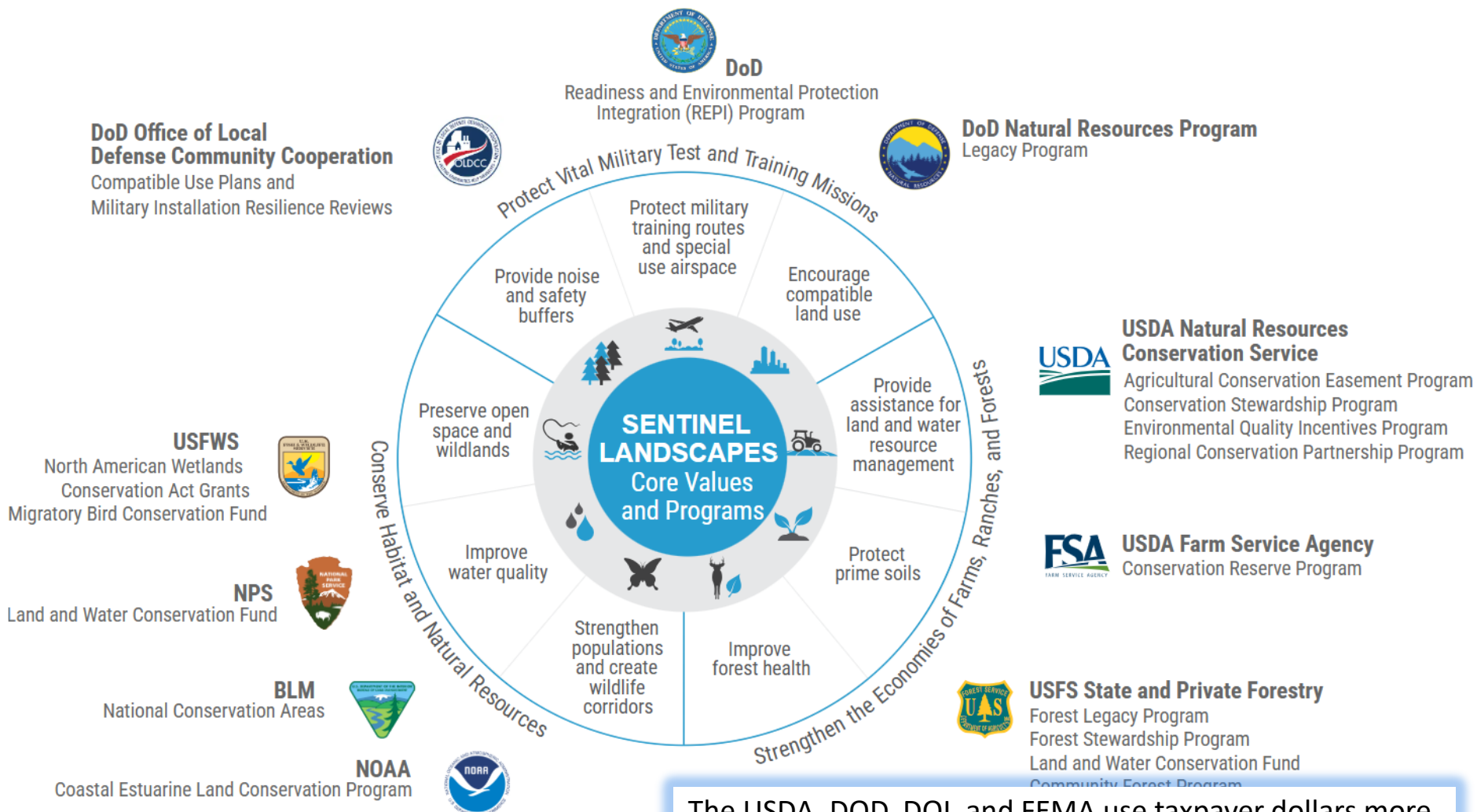
Sentinel Landscape Partnership



- 2023 Virginia Security Corridor JBLE in Tidewater Sentinel Landscape
 - Prevent military encroachment
 - Resiliency against weather hazards
 - Protect habitats to benefit water quality and protected species
- Funding via federal and regional sources from outside installation



Sentinel Landscape Partnership



The USDA, DOD, DOI, and FEMA use taxpayer dollars more efficiently by aligning their efforts in sentinel landscapes to accelerate work on the ground with fewer resources.



Thank You!



733d Mission Support Group



JOINT BASE LANGLEY-EUSTIS INSTALLATION DEVELOPMENT PLAN OVERVIEW/UPDATE



IDP Refresher



The Installation Development Plan (IDP) includes all installation's present/future physical states and guides all future programming and development decisions. The IDP is made up of component and district plans.

- This was the first joint document governing development goals of JBLE as a joint base.
- The IDP is informed by Federal law, DODI, AFI, UFC, and local regulation design guidance documents.
- Strategically aligns vision statements of the DoD, USAF, HAF/A4C, ACC, and 633 ABW.
- Additional goal of providing “apples to apples” comparison mechanism for all USAF installations.
- Living document, annually reviewed document “owned” by JBLE
 - Allows for easy changes based on missions, etc.
 - Updated on the Comprehensive Planning Platform (CPP) “website”

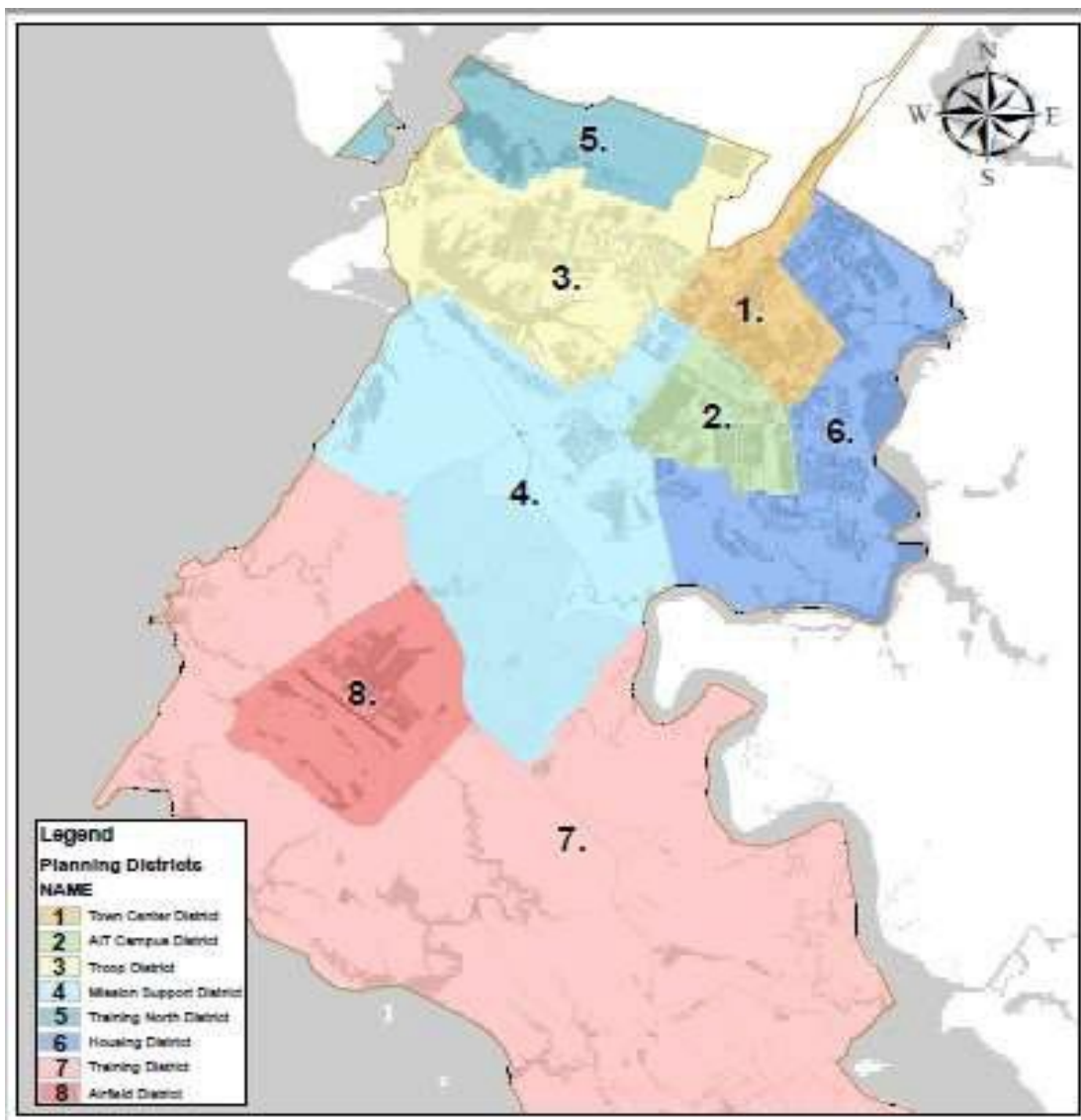


IDP Refresher



- Incorporates component planning documents, such as:
 - Transportation Network Plan
 - Installation Energy Plan
 - Integrated Cultural Resources Management Plan
 - Integrated Natural Resources Management Plan
 - Facility Space Optimization Plan
 - Encroachment Management Plan
 - Installation Climate Resilience Plan
 - District Plans
 - Area Development Plans
 - Joint Land Use Study
 - Air Installations Compatible Use Zones (AICUZ)
- Focus on smart-planning, sustainable planning for mission support, maximum utilization of limited real estate.
- Shared/Updated upon the CPP for use with HAF and AFCEC planning initiatives.

JBLE Planning Districts



1. Town Center

2. AIT Campus

3. Troop

4. Mission Support

5. Training North

6. Housing

7. Training South

8. Felker Army
Airfield

Town Center District

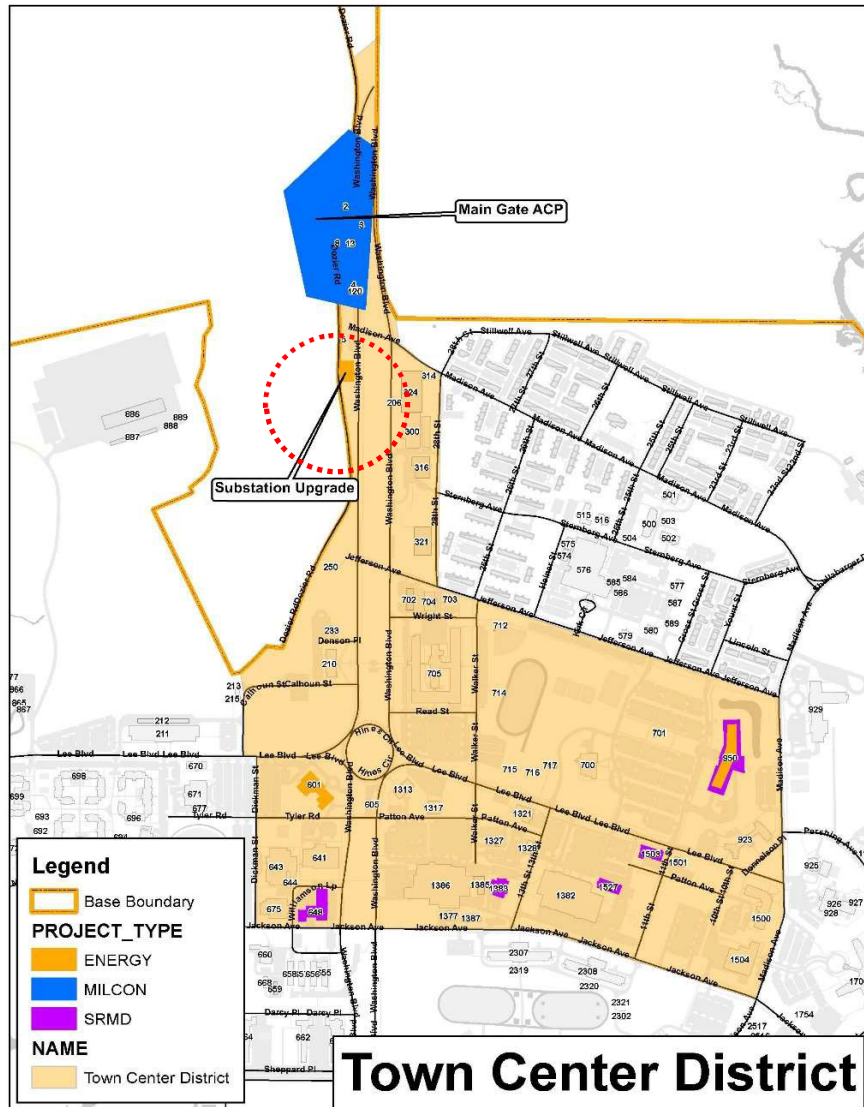
Current/Future Projects

MILCON:

- Main Gate ACP; FY21; **ECD FY27**; 100% final drawings complete. Land acquired from Newport News; **Expected start date May 2025.**
- **Consulted in 2019.**

Impact

- The Main gate project is to meet AT requirement.



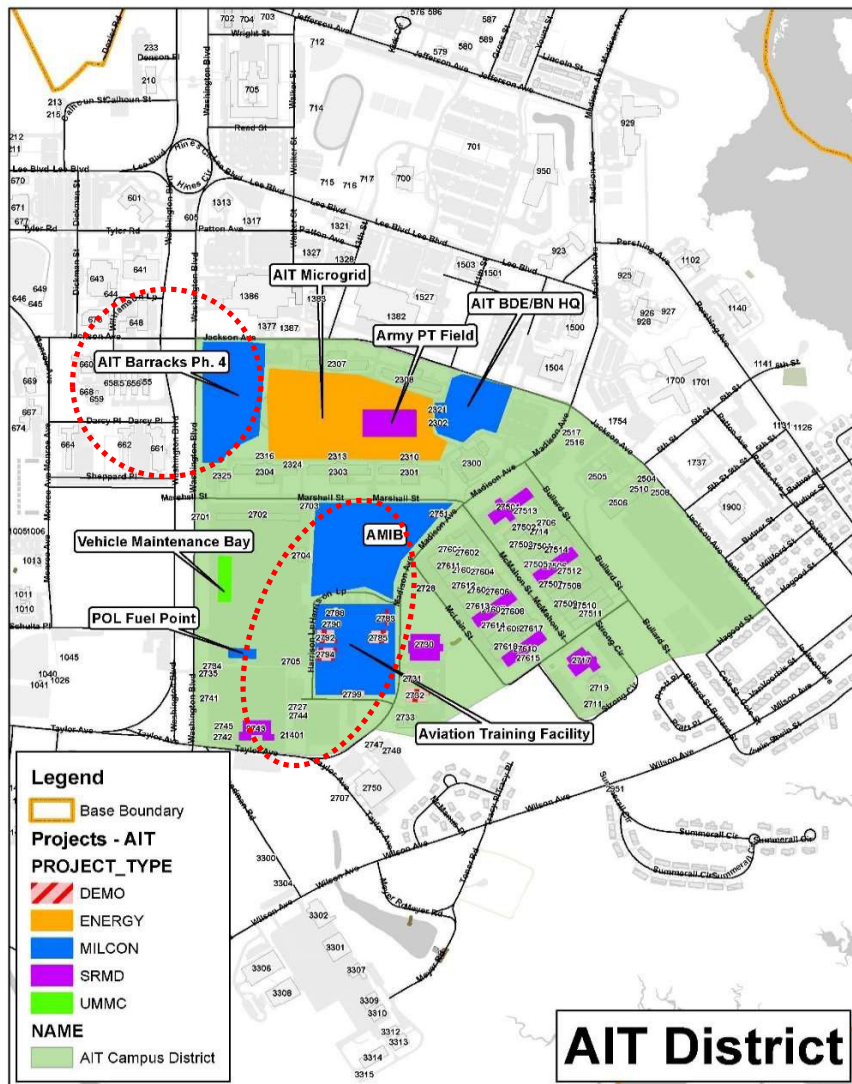
Current/Future Projects

MILCON:

- AIT Barracks Ph. 4; **Complete**
- AIT HQs; as part of AIT Ph.4; **Expected Start Date FY25.**
- Aviation Training Facility; **Long Range.**
- Aviation Maintenance Instruction Building; **99% complete**
- **No identified consulting Tribes in 2009**
- **Did consult with the SHPO**

Impact

- AIT Barracks Ph. 4 consolidates all AIT trainees into one campus.
- Aviation Training Facility relocates 128th AVN BDE off the Felker Airfield.
- AMIB frees up first step of 2700 block renovation plan.





Troop District

Current/Future Projects

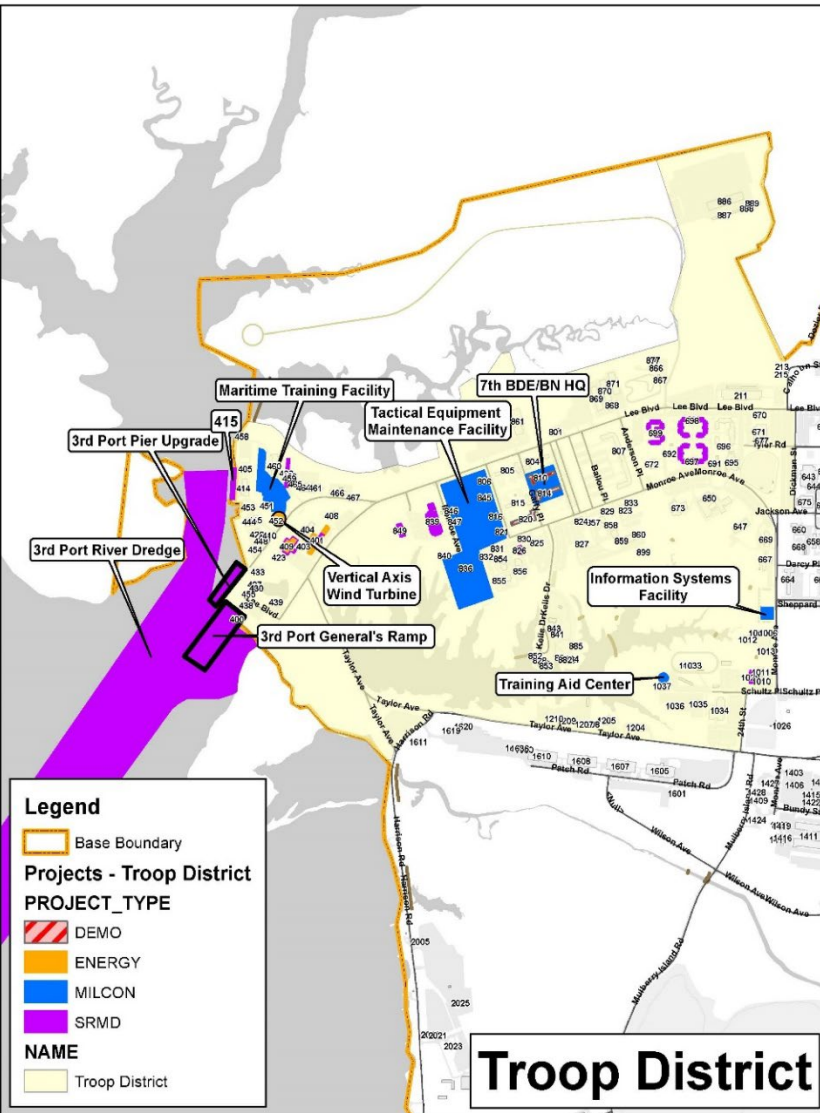
O&M:

- 3rd Port Maintenance Dredging; **Done**
- 3rd Port Pier Upgrade; **replacement of mooring piles, installation of sediment control structures; new fender protection & catwalk at landship**
- **Consultation conducted by by USACE early 2022**
- **Expected Completion Date May 2025**

Impact

- Removal of approximately 500,000 CY of dredge material.
- Cleans up the port and Skiffe's Creek to enable vessels to continue mission deployments & training exercises.
- Re-establish channel depth in accordance with historical requirements.
- Upgrades the finger piers to accommodate 7th BDE new vessels.

6



Felker Army Airfield District

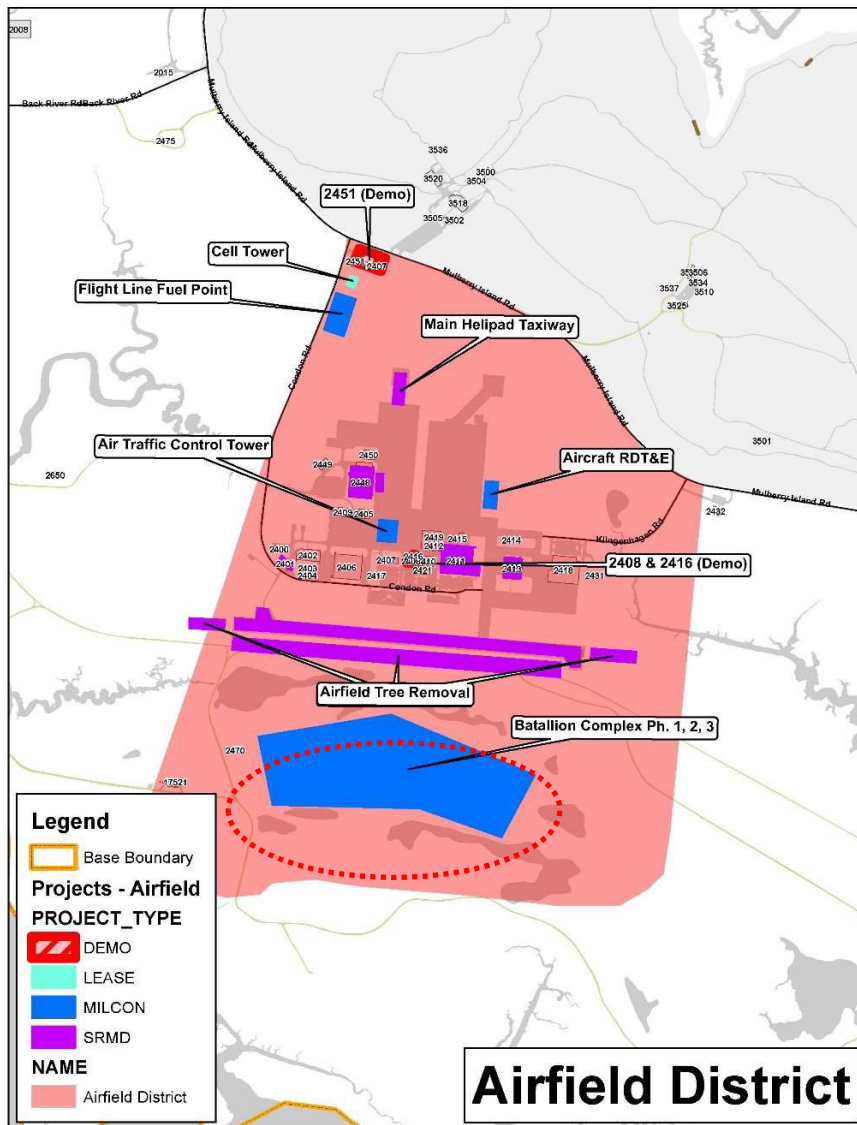
Current/Future Projects

MILCON:

- Airfield Tree Removal; FY21 (O&M); **Done**
 - **Consulted in 2016**
- Felker Airfield Control Tower; **Expected Start Date FY28. Pending Funding Approval. Design started FY24.**
- Runway Expansion;
 - **Pending Funding Approval.**

Impact

- Tree Removal project clears areas that are obstructed in the airfield safety zones.



Felker Runway Extension



Current/Future Projects

- Extend/widen Felker runway; expand mission support capability.

Current Runway:

3025'x75' (25' paved shoulders)

Required Runway:



5300'x100' (25' paved shoulders)

Impact/Challenges

- Meet operational/mission requirements.

Planning Charrette 19-21 Jan 22.

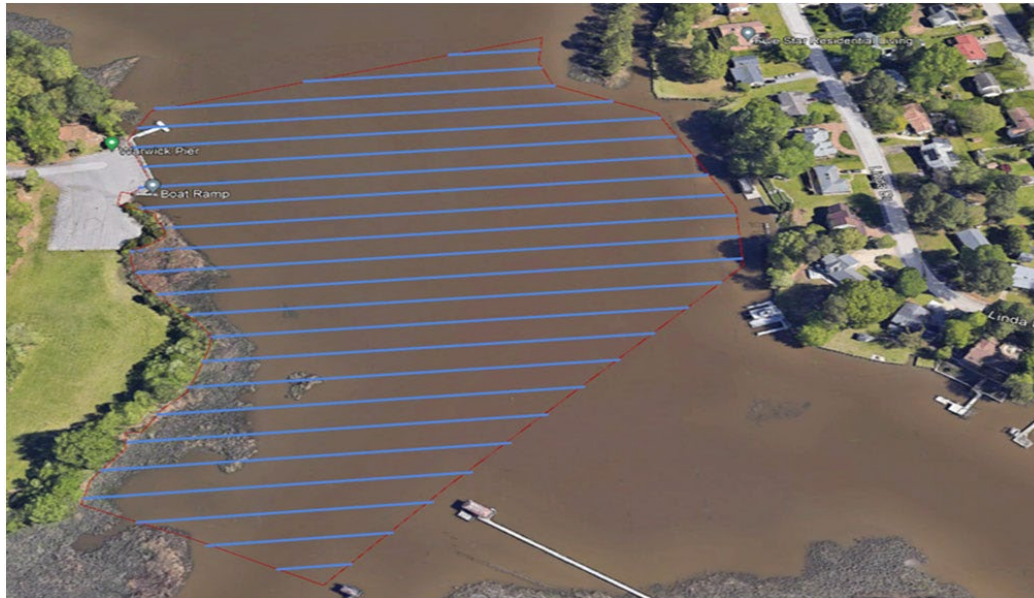
- Operational risk reduction.
- Environmental impacts, wetland mitigation, UXO removal and ATC tower placement.



Warwick River Dredging



Current/Future Projects



- **Status**
- Kickoff meeting is being coordinated for JAN '24. Based on a design completion of Mar '25, **Award occurred in FY25.** Dredging depth requirement has been determined , but the dredge area cannot be determined until the hydrographic survey is completed. **Set for a FY26 award.**
- **Way Ahead**
- Move forward with design and coordinate with PDT as required.



JOINT BASE LANGLEY-EUSTIS INSTALLATION DEVELOPMENT PLAN OVERVIEW

**Jonathan McFarlane-Weinstein
JBLE - Community Planner**



IDP Refresher



The Installation Development Plan (IDP) describes the Installation's past, present and future physical state that guides all future programming and development decisions for the next 20 to 30 years.

- This is the first joint document governing development goals of JBLE as a joint-base.
- The IDP is informed by AFI 32-1015 and local regulation design guidance documents.
- Strategically aligns vision statements of the DoD, USAF, HAF/A4C, ACC and 633 ABW.



IDP Refresher



- Living document, annually reviewed document “owned” by JBLE.
 - Allows for easy changes based on missions, etc.
 - Now updated on the Comprehensive Planning Platform (CPP).
- Incorporates component planning documents such as JLUS, AICUZ, ADPs, ICRP and other plans.
- Utilizes “Form Based Planning” concept.
 - Focuses on creating like-use “campuses” for compact development.
- Focus on smart-planning, sustainable planning for mission support, maximum utilization of limited real estate.
- Shared/Updated on the CPP for use with HAF and AFCEC planning initiatives.



JBLE Districts

JBLE-Langley

- Heavier-Than-Air (HTA) – 100% complete/Next update FY27
- Lighter-Than-Air (LTA) – 100% complete/Next update FY28
- ShellBank - 100% complete/Next update FY30
- Flightline South – 100% complete/Next update FY25
- Flightline North – 100% complete/Next update FY27
- North Base - 100% complete/Next update FY28
- Munitions - 100% complete/Next update FY28
- Bethel Rec and Housing – District Waiver Exempt/Next update FY29



ShellBank ADP Overview



The ShellBank ADP, completed July 2024 supports the re-development of the District by improving wayfinding structures and consolidating its mission footprint into a town center atmosphere, relying upon current best practices to lessen impacts of Stormwater runoff while providing multiple opportunities to support the expanding JBLE-Langley missions.

District Area: 344 Acres

ShellBank ADP Results:

- Implements living shoreline strategy.
- Improves intersections, repairs streets, and replaces sidewalks.
- Provide framework to incorporate green infrastructure.
- Constructs mixed-use buildings and infill housing.
- Strategy to increase non-vehicular travel.
- Constructs new dormitories with a campus quad.



- Medical
- Community Support Functions
- Dorms & Mission Facilities





ShellBank ADP Capacity Plan



Project Number	Projects
46	Construct Two Town Center Buildings
47	Construct Dorm Capacity
48	Replace LaSalle Bridge, Four-Lane Roadway with Dedicated Bike Lanes
49	Construct New Hospital Expansion and Parking Garage





North Base District ADP Overview



The North Base ADP, completed July 2023, provides a focus on future development and missions for the Intel and Communication community, sea level rise resiliency, utilities capacity and condition and quality of life / mission support facilities needed to create a connected and walkable campus.

District Area: 521 Acres

North Base ADP Results:

- Relocate facilities incompatibly sited in the ShellBank District.
- Sites a satellite fire station for support of the entire Tri-District.
- Sites a Consolidated Communications Facility.
- Provides quality of life amenities through a 'Recharge Center'.
- Proposes recreational spaces supported by a series of quads and open areas with pedestrian pathways.
- Redirects the munitions haul route currently running through the middle of the ISR campus.
- Proposes an additional CDC and parking garage to support the increase of personnel.



North Base Existing Conditions

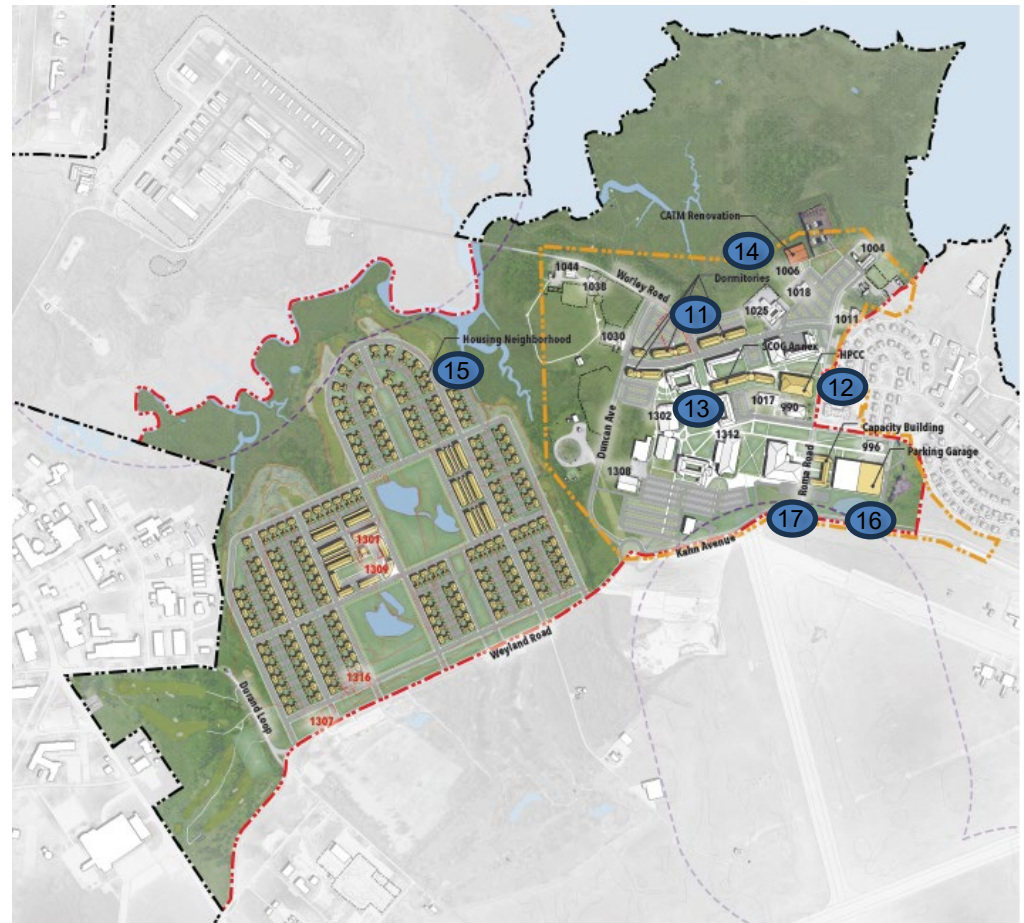




North Base District ADP Capacity Plan



Project Number	Projects
11	Dormitories
12	High-Performance Computing Center (HPCC)
13	Supply Chain Operations Group (SCOG) Annex
14	Combat Arms Training and Maintenance (CATM) Renovation
15	Housing Neighborhood
16	Parking Garage
17	Capacity Building

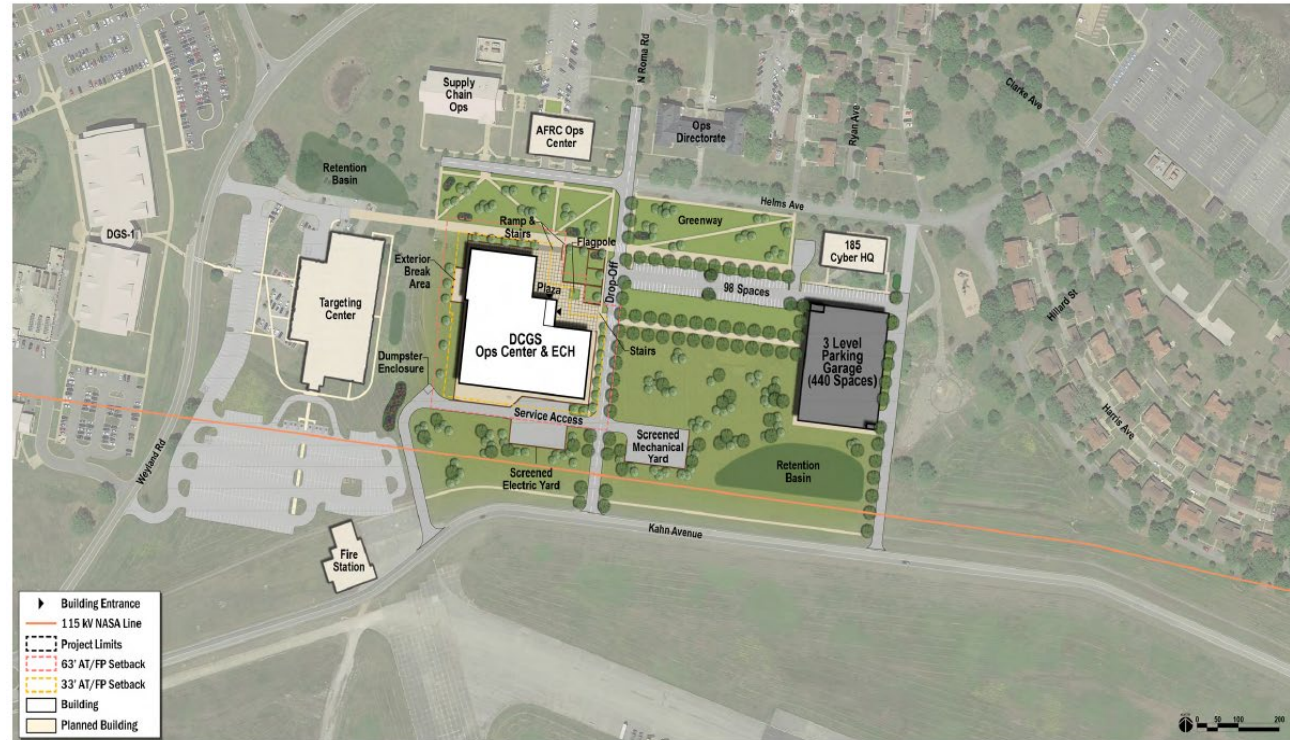




480 ISRW Distributed Common Ground Station Ops Center & East Coast Hub



- Required to direct agile, globally distributed, regionally autonomous operational capabilities in the event of disrupted global communications.
- 200,000 SF
- 3-story facility providing space for the Wing Operations Center; DCGS Operations Center; East Coast Hub.
- Estimated FY30 completion.

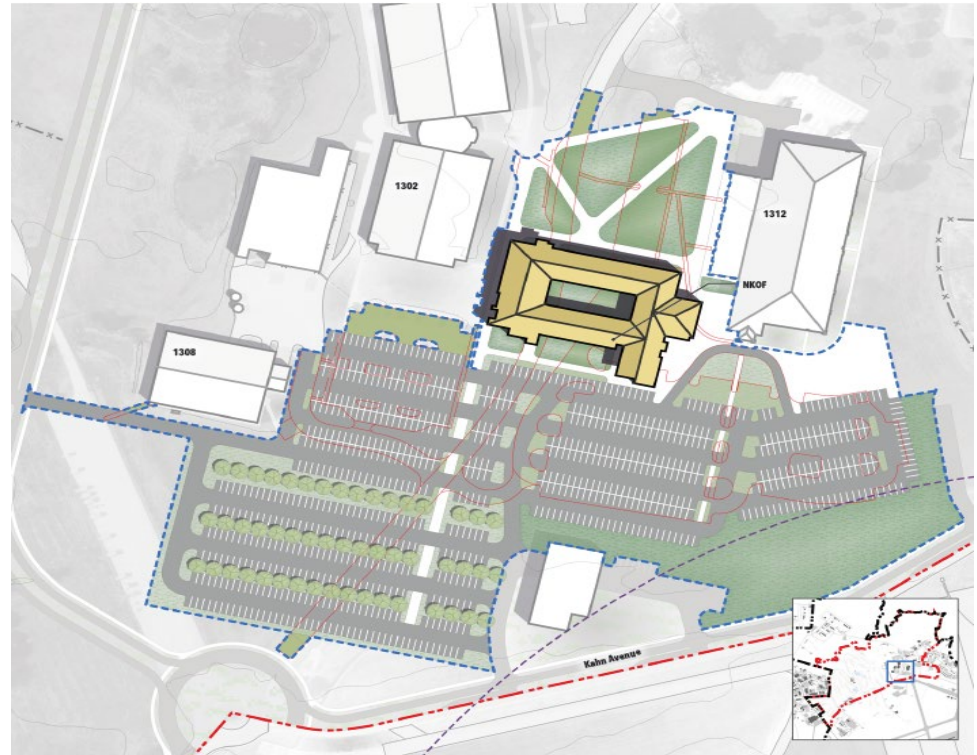




363 ISRW Non-Kinetic Operations Center



- FY24 planning charrette has been completed.
- Estimated FY30 completion.
- 91,600 SF.
- Completes 363 ISRW move from Flightline South and 300 Exploration Way.
- The completion of the NKOF facility will allow Wing Staff to move out of buildings 326, 329 and leased space into the new facility; buildings 326 and 329 will be turned over to JBLE-Langley (consolidation of space).
- Will be able to support large Top Secret- Secure Compartmentalized Information (TS-SCI) operations and conferences.

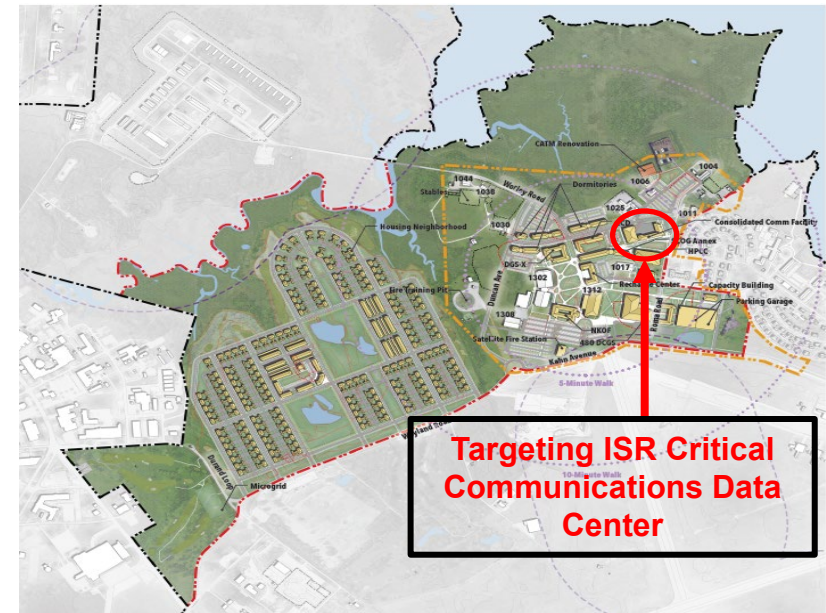




Targeting ISR Critical Communications Data Center



- Existing communications infrastructure is insufficient to support mission growth.
- Will reduce the risk of a catastrophic network failure by elevating the critical operational communications node above the 100-year floodplain.
- 86,000 SF.
- Estimated FY28 completion.
- Location: ISR Campus in the North Base District.





Flightline South District ADP Overview



The Flightline South ADP completed April 2020, provides a framework to maximize development potential in the District to support the AF flying missions. Additional hangars for aircraft, facilities for flying operations and designated parking all contribute to the District's main priority of supporting flying operations.

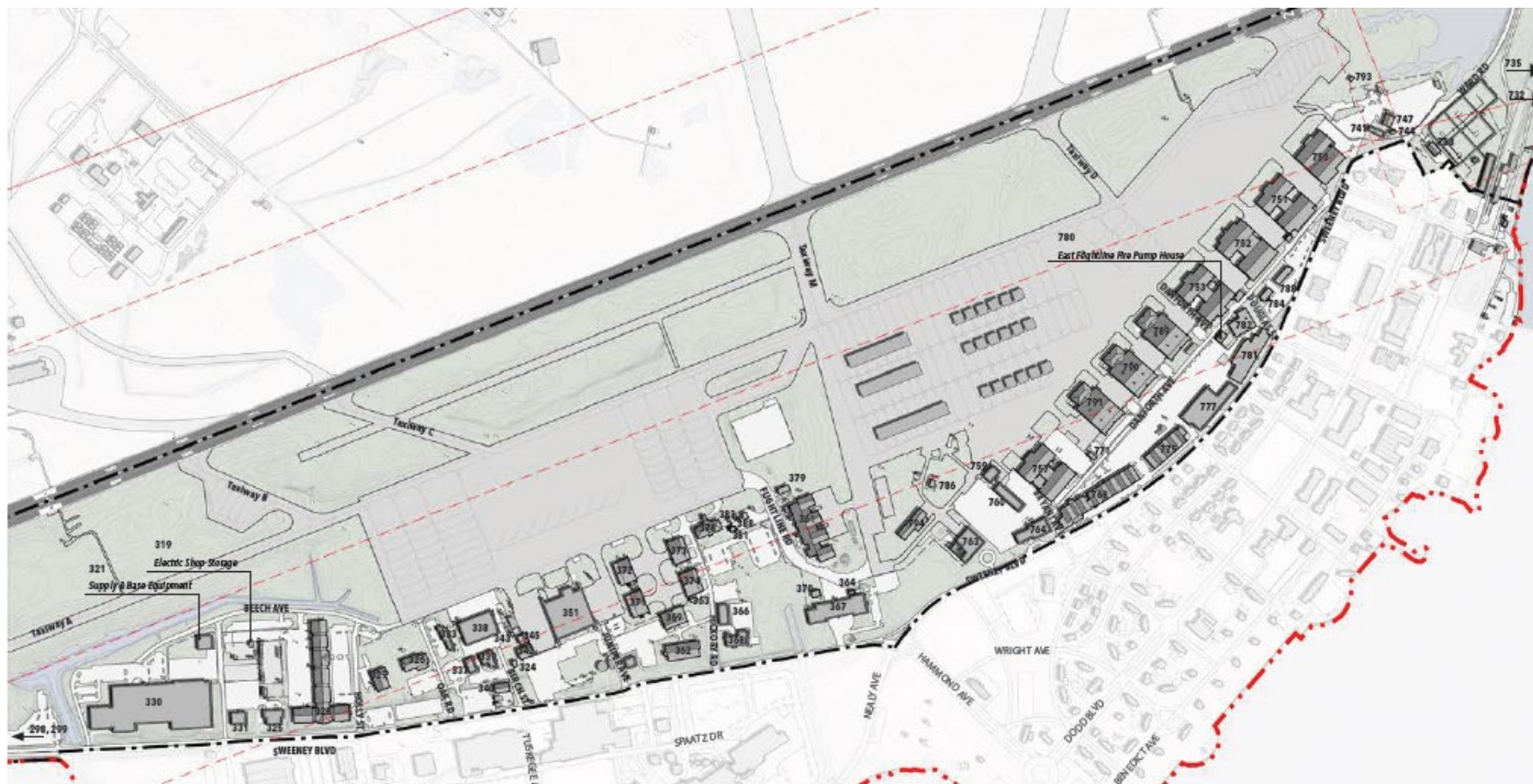
District Area: 663 Acres

Flightline South ADP Results:

- Provides framework for resolving airfield infractions for facilities in proximity to the airfield.
- Facility layout supports efficient movement of personnel, equipment, and aircraft.
- Flightline facilities house flightline functions only.
- Incorporate walkability within the District.
- Create designated parking areas to conserve developable land.
- Addresses flooding in the east portion of the District by guiding developments and all above ground utilities must be sited 11 feet above sea level as prescribed by the UFC 3-201-01.



Flightline South ADP Existing Conditions





Flightline South District ADP Capacity Plan



Project Number	Projects
1	Construct Notational Hangars
2	Construct Notational Warehouse
3	Construct Notational Buildings
4	Construct Notational West End Car Park





Training Support Squadron Facility (TRSS-F)



- Consists of an eight-bay facility to support F-22A pilot training.
 - Will house academic classrooms, simulators, computer support, briefing rooms, staff space, SCIF space and building systems support.
- Estimated FY27 completion.
- 70,500 SF.





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733d Mission Support Group



Coastal Resilience and Shoreline Management at JBLE-Eustis



Agenda



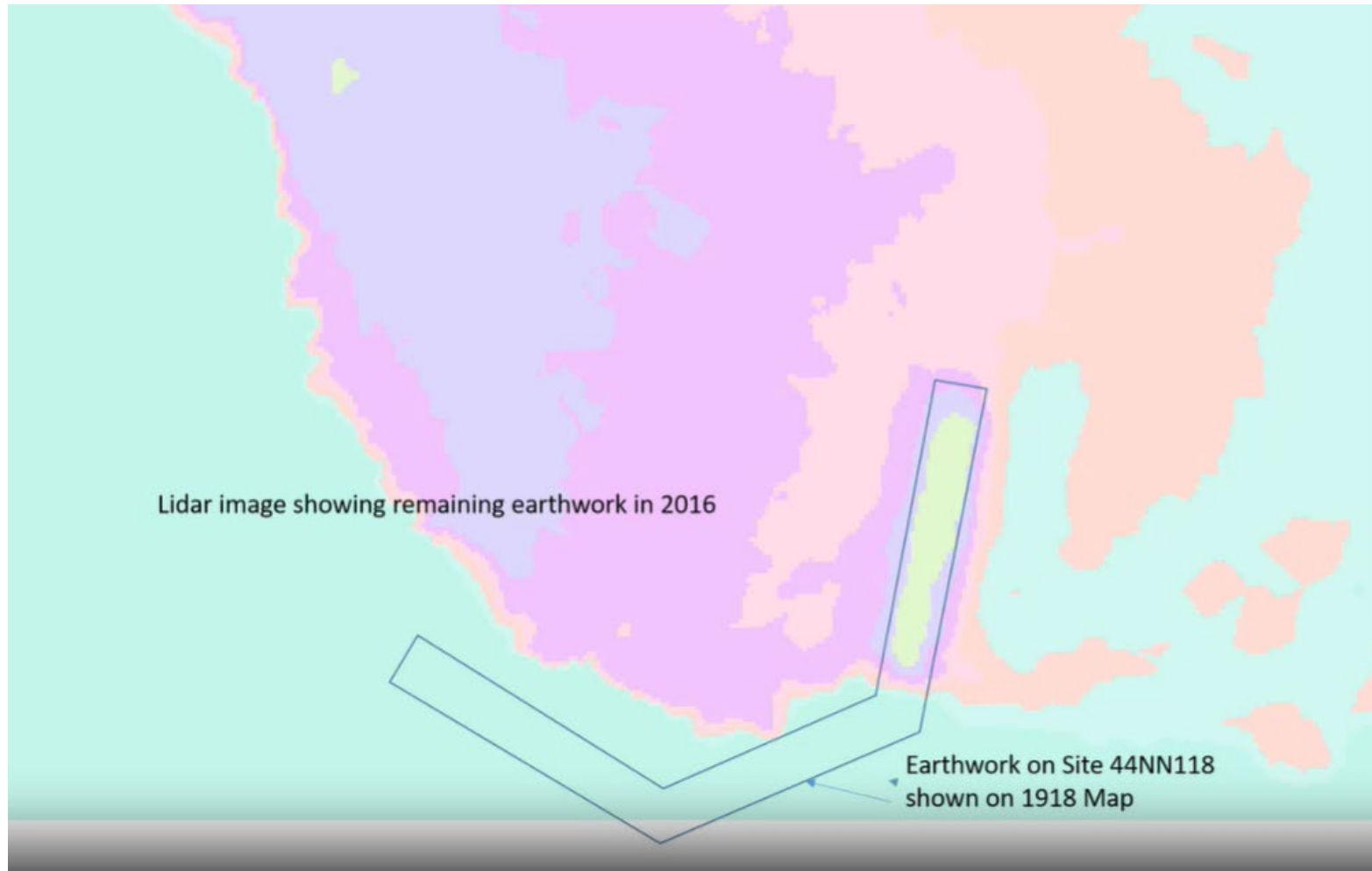
- Background
- Results of Erosion Study
- Past Efforts
- Training Area 1
- Current Challenges
- Current Accomplishments
- Sentinel Landscape Partnership
- Other Initiatives
- Water Quality
- Moving Forward

Shoreline Erosion

- Considered the biggest archaeological issue on JBLE-Eustis
- World-wide problem for coastal heritage sites.
- Site monitoring began on JBLE-Eustis by the Cultural Resources team in 2010.



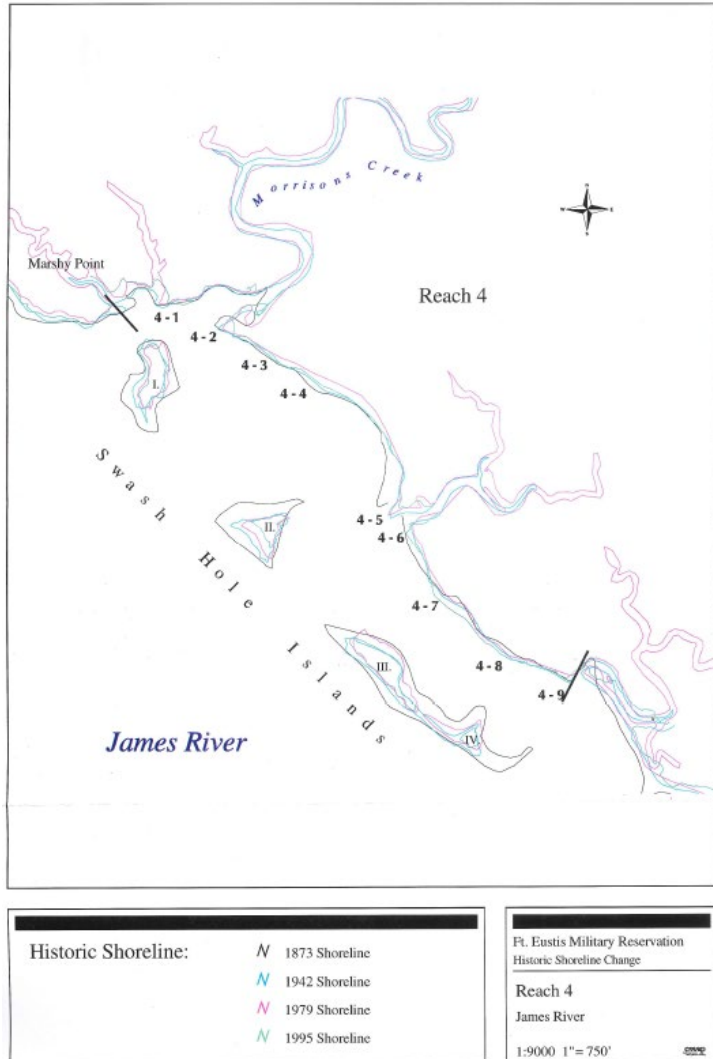
Composite Image



4/28/2025

Shoreline Erosion

JBLE-Eustis is actively working to combat land loss.

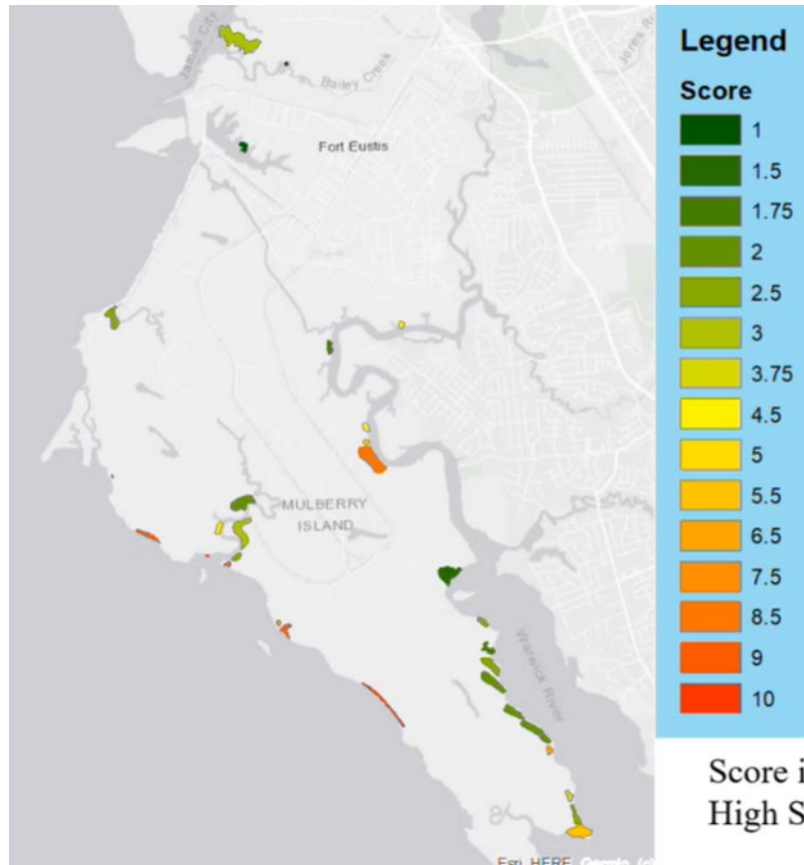


Left: 1997 figure showing 1873 to 1997 changes in JBLE-Eustis shoreline.

Above: Google map imagery of "Swash Hole Islands" in 2024

Past Efforts

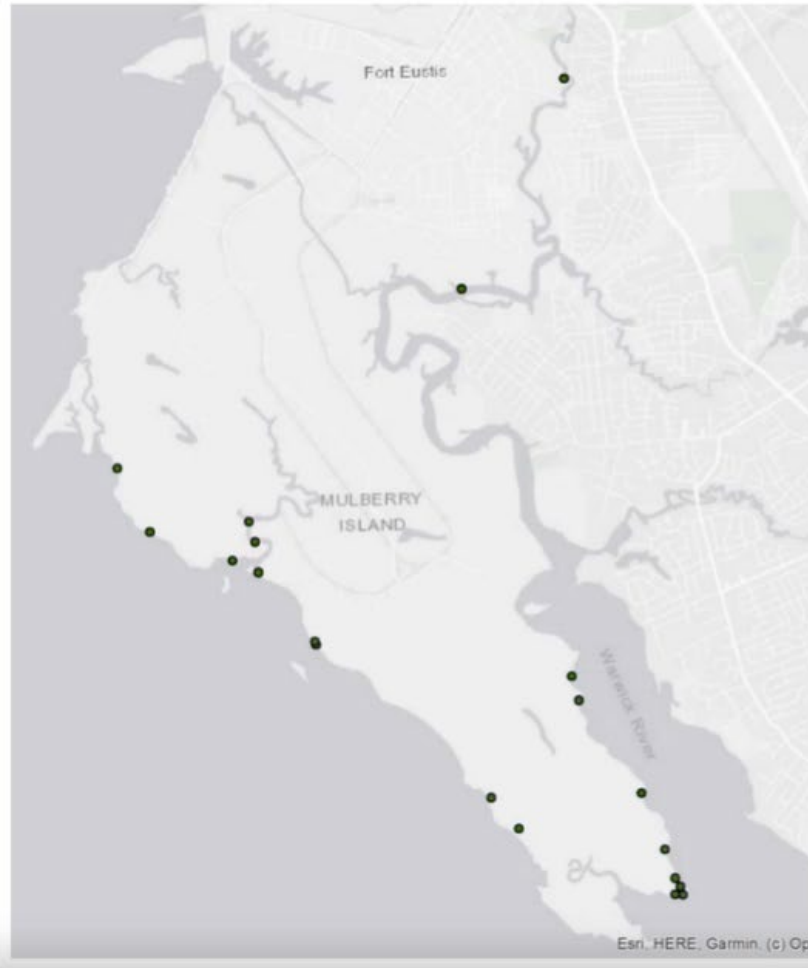
- A shoreline management plan was developed for the Base by the Virginia Institute of Marine Science's Shoreline Studies Program (SSP) in 1997.
- Site monitoring began by the Cultural Resources team in 2010. Within 2 years, it was determined that erosion was the biggest threat to cultural heritage and archaeological sites.



Score is severity of erosion on site
High Score more risk

- Air Force financed erosion study for JBLE-Eustis.
- Conducted in 2014 – 2016 for 31 sites. Archeologists, hydrologists, and coastal engineers from URS (now AECOM)
- Left with 15 sites to evaluate after removing the sites situated in the impact area.

Past Efforts, Cont.



Points established after study

Started in 2015

Data collected annually

In part to validate study findings

Average loss – 0.33 m/year

Range 0.02 m/year to 1.1 m/year

Results consistent with study

Past Efforts, Cont.

- Coir logs have worked as temporary solutions.
 - Labor intensive – need constant upkeep
 - Don't do well in major storm events (Nor-Easters, Hurricanes) or major tides (i.e. king tides)
- Created plan for hybrid living shoreline using stone sill and subaquatic vegetation in clean fill to stabilize, then created plan for oyster castle living shoreline.
 - Added benefit of securing oyster habitat.
 - High costs due to remote locations - need all materials and equipment to be barged in at many locations.



TA-1 is the Army's primary Land Navigation training site on JBLE-Eustis



Shoreline Plans:

- Given the shoreline's long fetch exposure (e.g., approximately 5.2-mile southwest vector fetch to the Burwell Bay), design was for a hybrid-living shoreline approach with an armored rock sill to provide structural protection for a living shoreline of sand fill and marsh plantings.
- Consultation with the SHPO and the Tribes completed
- NEPA completed
- Construction of living shoreline for TA1 planned for FY28-29.
- Similar effort being planned for adjacent Third Port site.



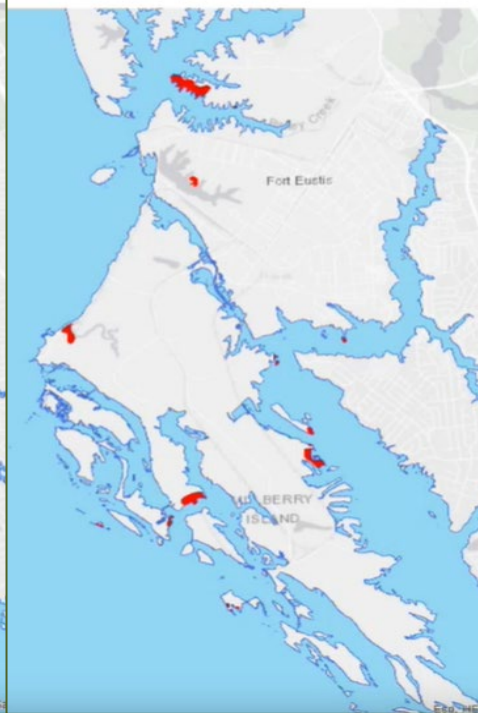
Unknown Future of Sea Level Rise

The JBLE-Eustis 2016 study says that the worst-case scenario is 4.5 feet

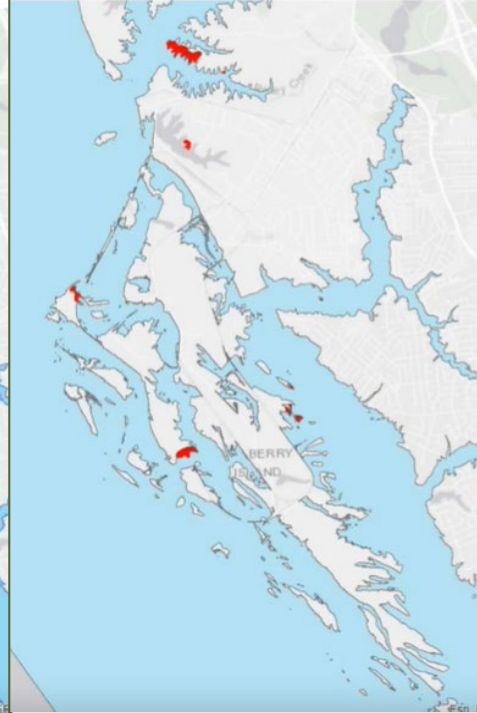
0 feet Sea Level Rise



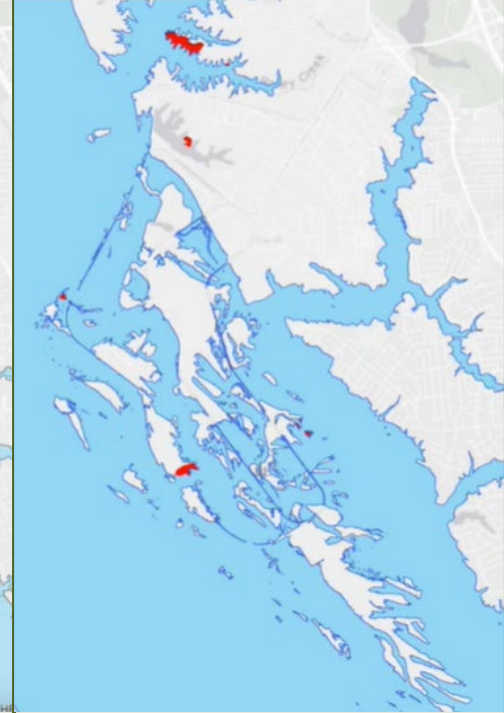
2 feet Sea Level Rise



4 feet Sea Level Rise



5 feet Sea Level Rise



Map Source: NOAA, 2022

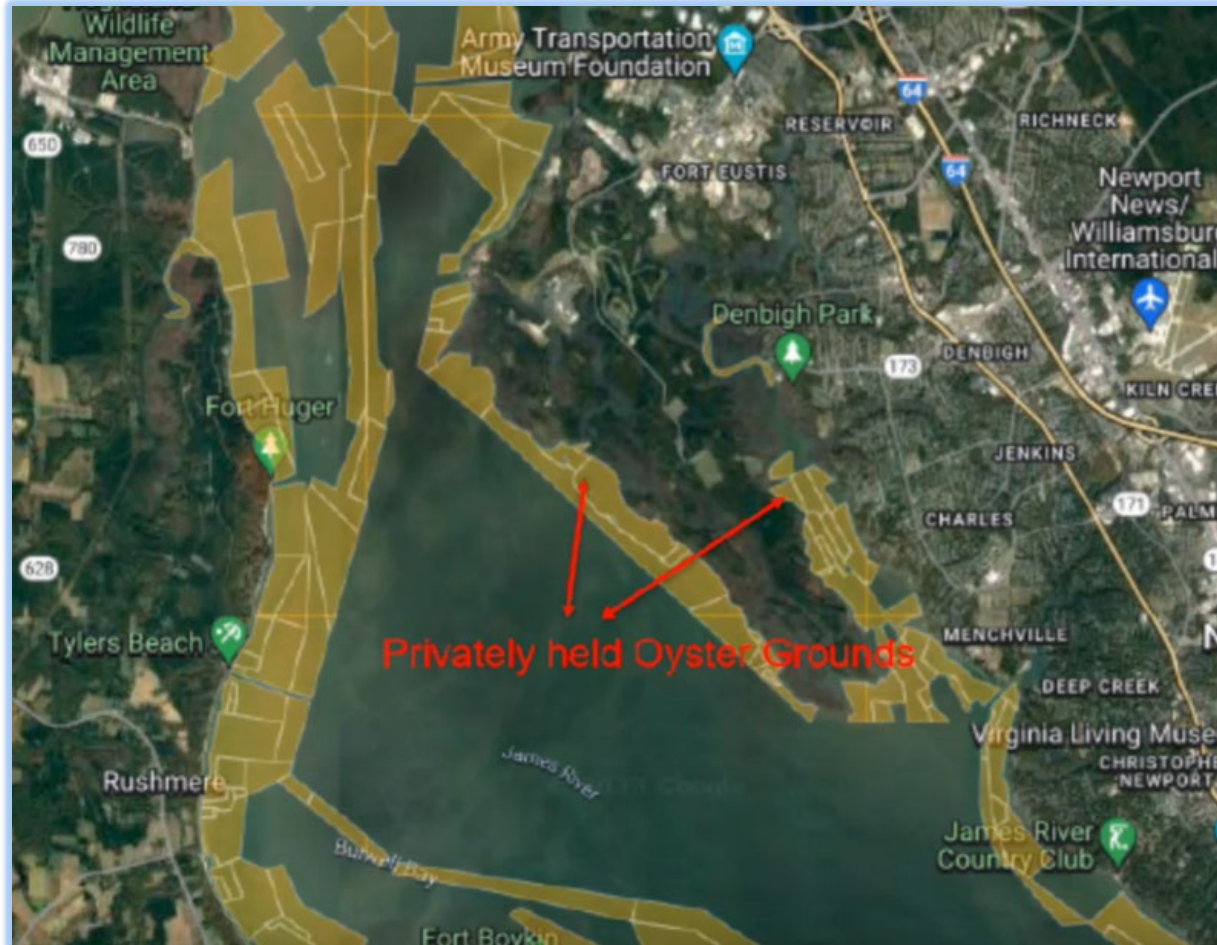
Current Challenges

- According to the Virginia Institute of Marine, in 2022 Norfolk was experiencing 5.38 mm/yr of sea level rise
 - One of the highest rates in the U.S.
 - Land sinking is also a factor
 - Similar rates of change on JBLE-Eustis
- As relative sea level changes, ecosystems and infrastructure will be impacted
- JBLE-Eustis is not the only DoD installation “fighting this fight” so we must be tactical as we seek limited resources



A modular floating pier set up for training on JBLE-Eustis. These piers are used for ship to shore delivery of supplies in real-world operations.

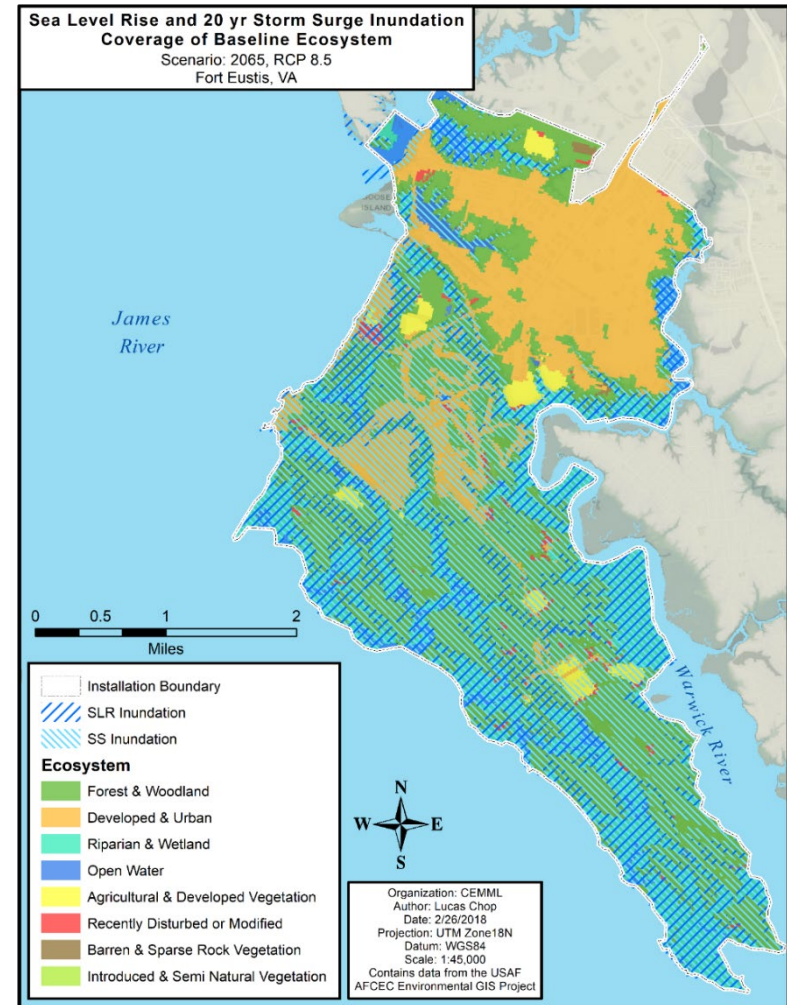
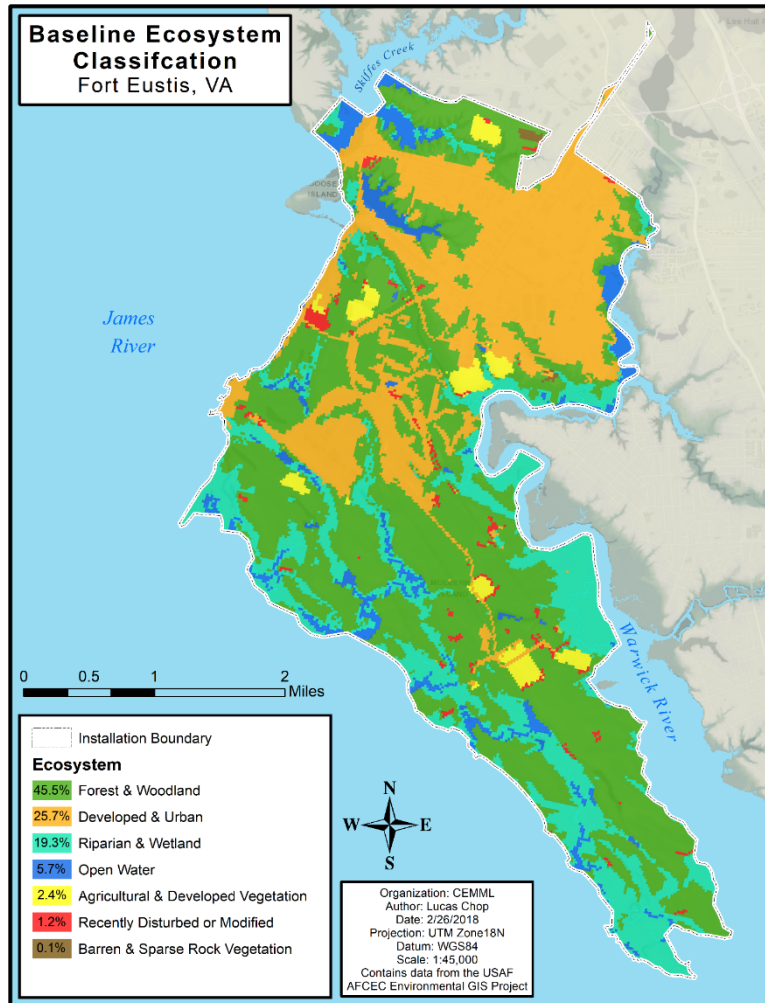
Current Challenges – Oyster Leases



Any land from the mean low water mark outward belongs to the Commonwealth of Virginia.

Virginia Marine Resources Commission (VMRC) leases river bottoms to the public for oyster harvesting

- Sustainable management for both mission & environment must be innovative to adapt to future pressures



Current Accomplishments

- The DoD Legacy Program
 - Funding for an updated shoreline management plan -- design work for 2 high-risk areas, anticipate completion March 2025
- Received funding to begin efforts to stabilize shoreline around 3rd Port
- Environmental Assessment for Erosion Prevention and Sea Level Rise Mitigation in progress, anticipate completion September 2025
- The environmental team is actively working with both federal and non-federal partners to seek funding and develop solutions
 - USACE Engineering with Nature
 - Hampton Roads Planning District
 - U.S. Fish and Wildlife Service
 - DoD Chesapeake Bay Program
 - Chesapeake Bay Foundation
 - DoD Strategic Environmental Research and Development Program
 - James River Association
 - Virginia Dept of Forestry



Next location for shoreline restoration on JBLE-Eustis



Sentinel Landscape Partnership



Advance Sustainable Land Management



Support Agricultural Productivity



Strengthen Military Readiness



Increase Access to Recreation



Preserve Natural Resources



Enhance Environmental Resiliency



Other Initiatives/Partnerships



REPI

Utilize the newly designated Tidewater Sentinel Landscape Partnership to leverage DoD, federal agency, state, local, and NGO funds to implement climate resilience strategies

USACE Coastal Resilience Feasibility Study:

We are participating in the U.S. Army Corps of Engineers (USACE) Virginia Peninsula Coastal Storm Risk Management Feasibility Study. This multi-year study will identify future projects w/in the VA Peninsula region to reduce damage caused by coastal storms.

Project is currently in the *scoping* phase; establishing the frame within which USACE will focus their study.

JBLE Installation Climate Resilience Plan (ICRP)

Informs planning and programming processes to incorporate risk mitigation strategies into the design and construction of future facilities

Collaboration with JBLE - Langley



Water Quality



Looking into mussel restoration, however there are not many shellfish on any of the sites surveyed along the Skiffes Creek/James River side to the west, The rock structures along Harrison Road have been in for 20+ years, and no barnacles, mussels or oysters occurred on the rocks. There are some on the Warwick River, however.

Ribbed mussels (*Geukensia demissa*) can tolerate a wide range of salinities but prefer salinities between 8 and 30 ppt.

Ribbed mussels are euryhaline, meaning they can tolerate a wide range of salinities. They are also tolerant of other environmental stressors, including extreme temperatures and relative flooding rates. These tolerances may help explain why ribbed mussels are successful in introduced habitats.

Ribbed mussels are an important species in salt marshes, where they form large aggregates and have a mutualistic relationship with marsh cordgrass. They stimulate the growth of marsh plant roots and rhizomes, bind sediment, increase marsh height, stabilize the marsh, and reduce erosion.

Moving Forward

- Implement shoreline restoration where most critical
- Leverage partnerships and drive research to combat marsh loss
 - Thin Layer Placement of Dredge Material
 - Work with base Community Planner -- Apply for Readiness & Environmental Protection Integration (REPI) grants
 - Address encroachment
- **Not Mission OR Environment – Mission AND Environment**



Thin layer placement of dredge spoil material into a marsh area to preserve marsh habitat due to sea level rise

QUESTIONS?



A seal resting at 3rd Port on JBLE-Eustis



LANGLEY COASTAL RESILIENCE AND SHORELINE MANAGEMENT/NEPA



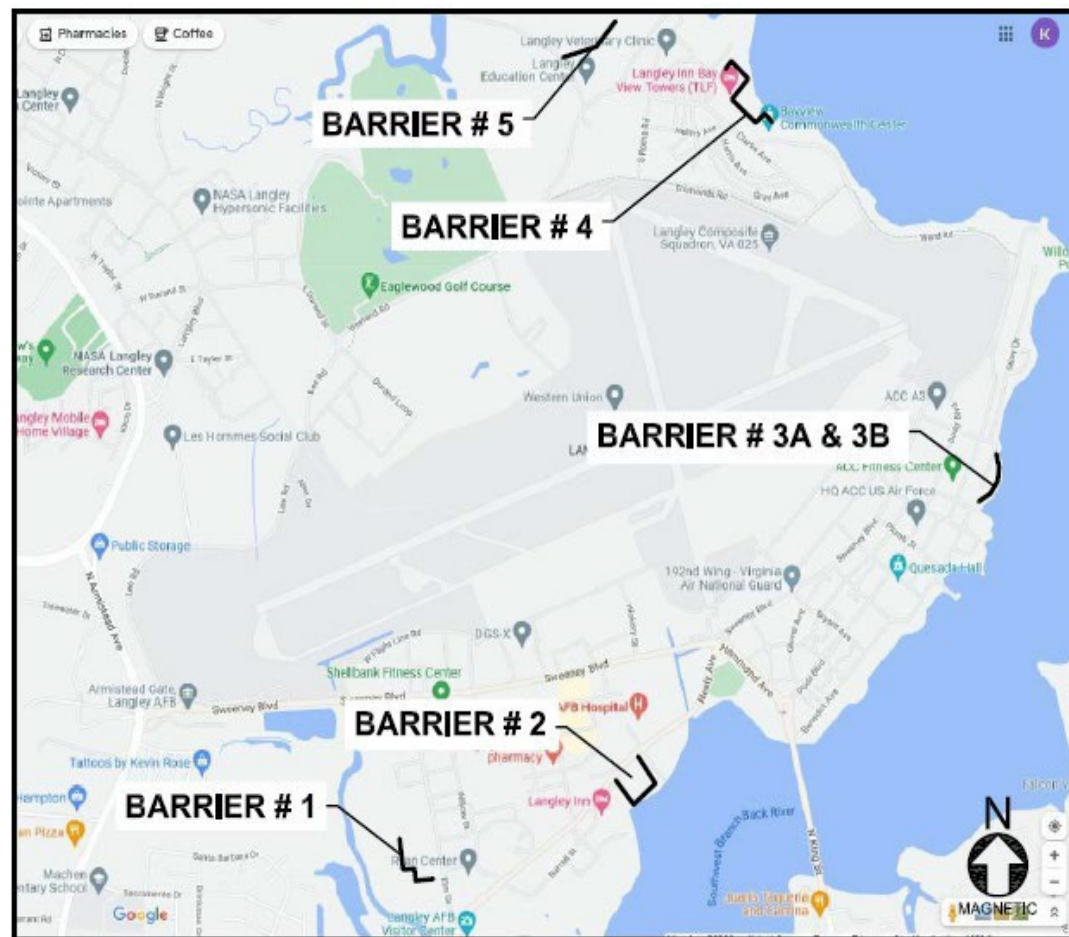
Current NEPA Actions at JBLE-Langley



- Seawall Improvements to Increase Base Resilience FONSI
 - Installing 3 concrete wall designed barriers to flood prone areas behind current riprap and shoreline where sidewalks and parking lots are current located; will require limited trenching
 - Installing 2 earthen designed barriers to prevent flood progression further inland; will require limited grading
 - Builds upon seawall originally built in 1930's on East and Southern shorelines and various projects to stabilize the entire shoreline over the years
- North Flightline Area Development Environmental Assessment
 - Partnering with the City of Hampton to move West Gate (Armistead Ave.) to the North for aircraft and community safety to remove obstructions from clear zone; additional surveys will be required
 - Relocating 2 Squadrons to the North Flightline Area and elevating runway

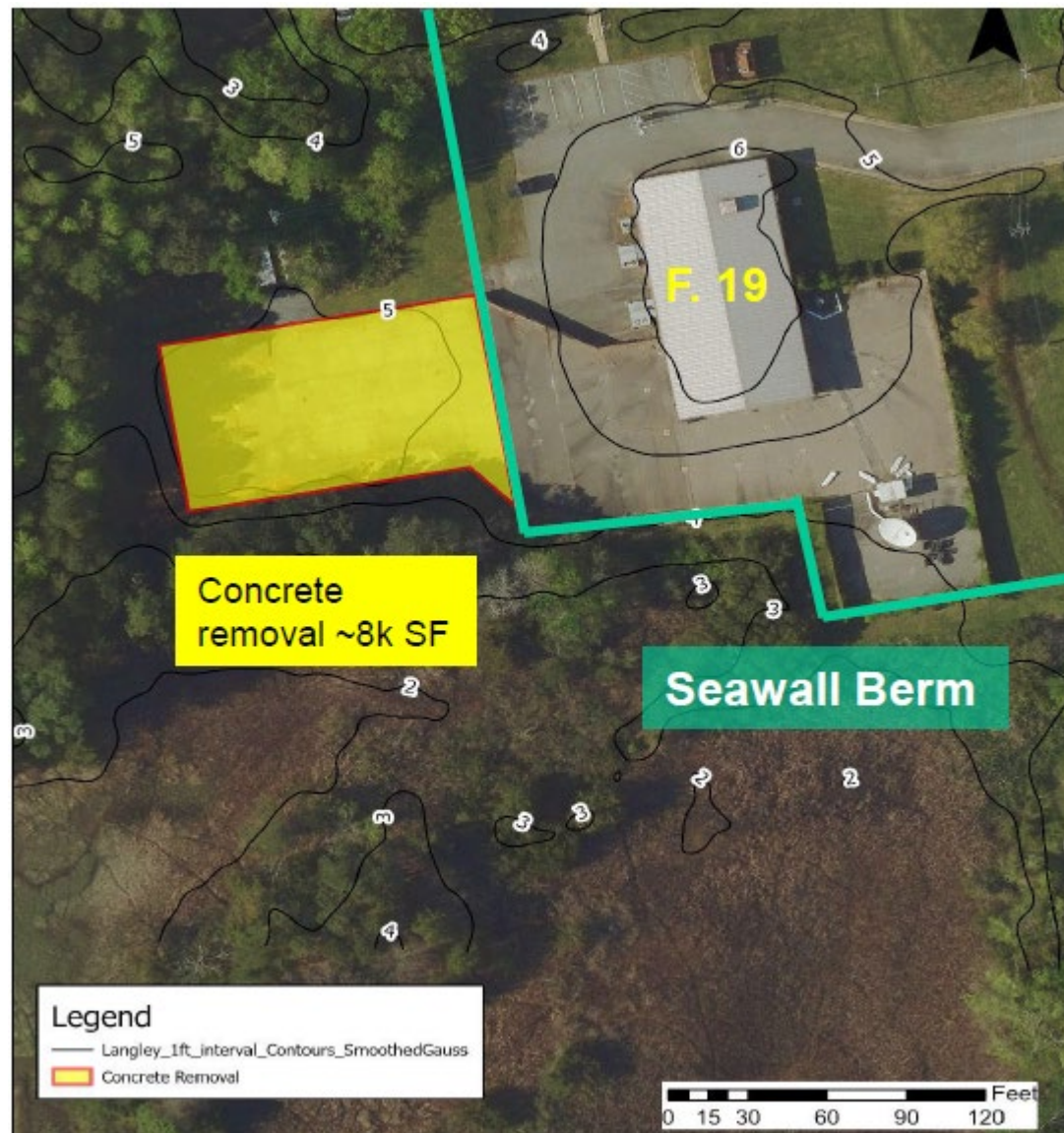


Seawall Improvement to Increase Base Resilience Project Barrier Map





Barrier 1: Shellbank – F.19





Barrier 2: Shellbank – F. 90





Barrier 3: NASA/ACC



Barrier 3A



Barrier 3B





Barrier 4: LTA – Bayview F. 945



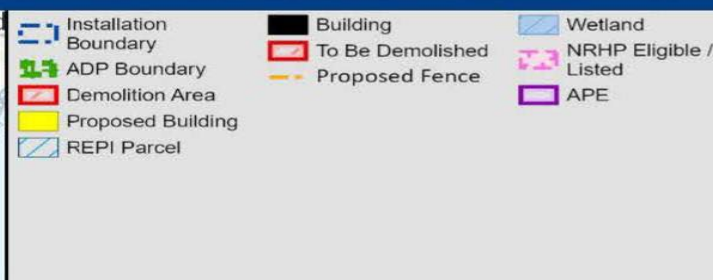
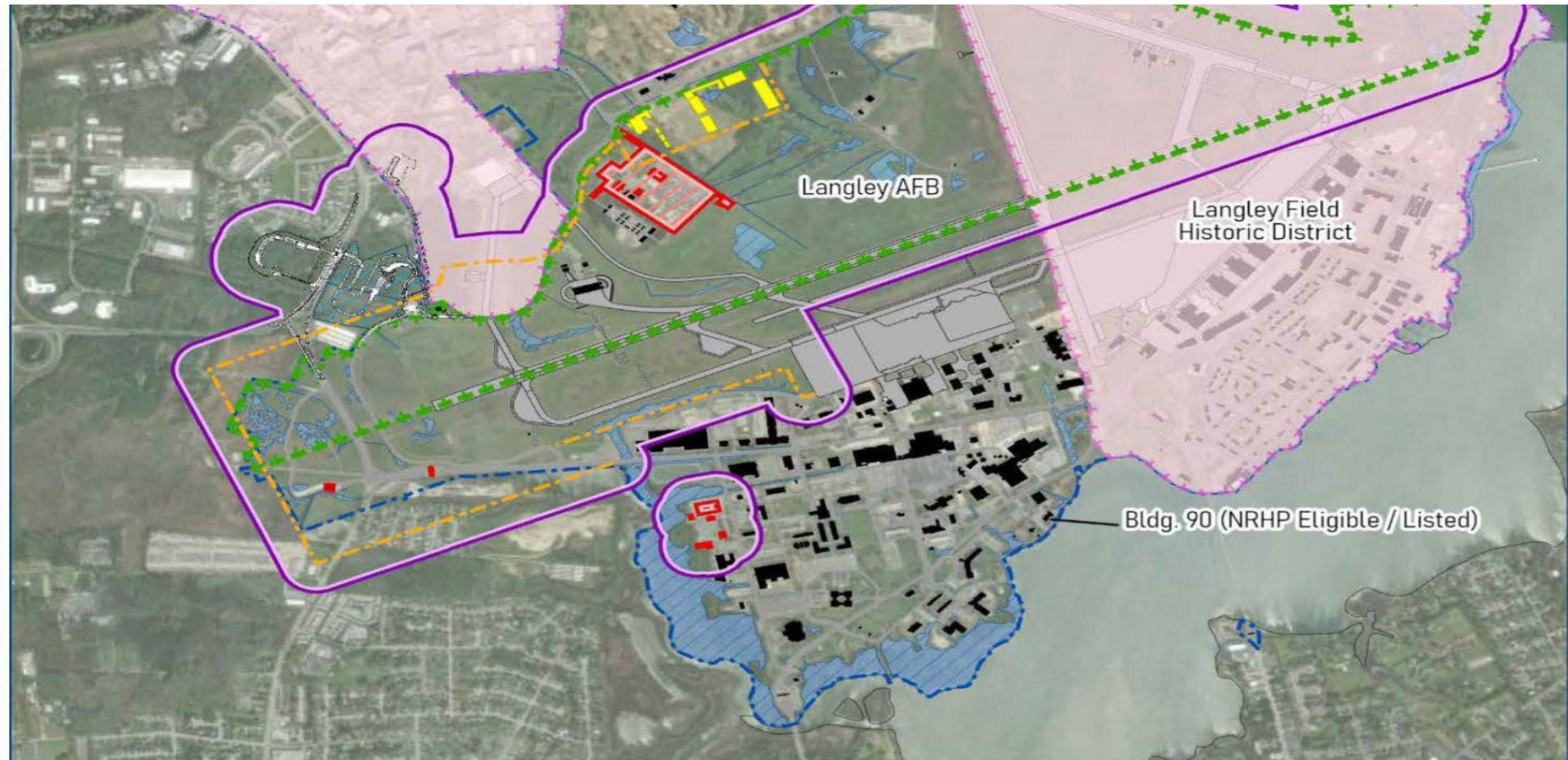


Barrier 5: North Base F.1025



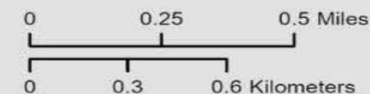


Area of Potential Effect for the Proposed North Flightline ADP EA Actions



May 2024

Source: Joint Base Langley-Eustis, Esri Topographic 2023



Air Force Installation & Mission Support Center



Joint Base Langley-Eustis Environmental Restoration Program

Ms. D Chock – Eustis
Mr. John Tice – Langley
AFCEC/CZOE
24 January 2025

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Purpose



Provide update to Tribal Leadership on the Joint Base Langley-Eustis (JBLE) Environmental Restoration Program (ERP) to include:

- **ERP Program Overview**
- **Installation Restoration Program (IRP) Activities**
- **Military Munitions Response Program (MMRP) Activities**
- **Per- and Polyfluoroalkyl Substances (PFAS) Activities**
- **Community Involvement Plan Activities**



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JBLE – ERP Overview



What led to the development of the JBLE ERP?

- **The potential risk to human health and the environment was significant enough for the U.S. Environmental Protection Agency (USEPA) to place JBLE-Langley and JBLE-Eustis on the National Priorities List in 1994 due to:**
 - **Analysis of samples indicated presence of polychlorinated biphenyls (PCBs), pesticides, polyaromatic hydrocarbons (PAHs), lead, and silver in surface water and sediment**
 - **Migration of contaminants to creeks and estuaries and the upper water table at some sites; potential for impact to the James and Back Rivers**
- **On October 1, 2010, Joint Base Langley-Eustis was formed, and the U.S. Air Force assumed the U.S. Army's obligations under the 2009 Federal Facility Agreement (FFA) to outline how to proceed with cleanup**



JBLE – Eustis ERP Overview



- **IRP Sites: 30**
 - **Closed: 22**
 - **Study Phase: 2**
 - **Long-Term Management (LTM): 6**
- **MMRP Sites: 17**
 - **Closed (No Further Action/Admin Closure): 9**
 - **Study Phase: 8**
- **PFAS Areas: 3**
 - **Study Phase: 3 (Phase 1 Remedial Investigation (RI) sampling completed Aug 2024; results being analyzed)**
 - **Due Diligence project in progress**
- **No Native American artifacts discovered to date**



Photo: Land Use Control signage at Brown's Lake.



Eustis IRP Activities



■ **Study**

■ **LF001 Officers Club Landfill**

- **Previously in LTM; identified additional soil cover needed and pre-design investigation underway to address sea level rise and incorporate native vegetation**
- **Remedial Action planned Fall 2025 pending Remedial Action/Remedial Design work plan approval**

■ **AT006 Former Fire Training Area**

- **Finalizing Supplemental RI**

■ **Response Complete → LTM**

■ **SR037/SR038 Upland and Wetland Skeet Range**

- **Further erosion control/vegetation repairs completed Jan 2024; additional SR037 bank repair and re-seeding planned for Spring 2025**
- **Remedial Action Completion Report finalized May 2024; Response Complete Aug 2024**



Eustis IRP Activities (cont.)



- **LTM**
 - **LF004 Landfill 7**
 - **CS036 Eustis Lake, SI029 Brown's Lake and CS030 Bailey Creek Water**
 - **Currently Land Use Controls restricting sediment disturbance**
 - **Catch and release fishing at CS036 and SI029; catch and release fishing at CS030 only from footbridge down gradient of site**
- **Fourth Five Year Review (FYR)**
 - **Virginia Department of Environmental Quality (VDEQ)/USEPA reviewed draft and draft final**
 - **Determination due 30 Sep 2023 - USEPA extended deferred determination to 15 Apr 2025**

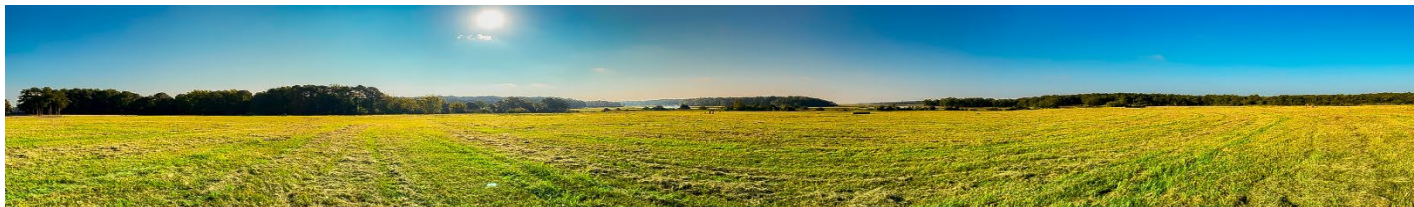


Photo: Panoramic view of Landfill 7.



Eustis MMRP Activities

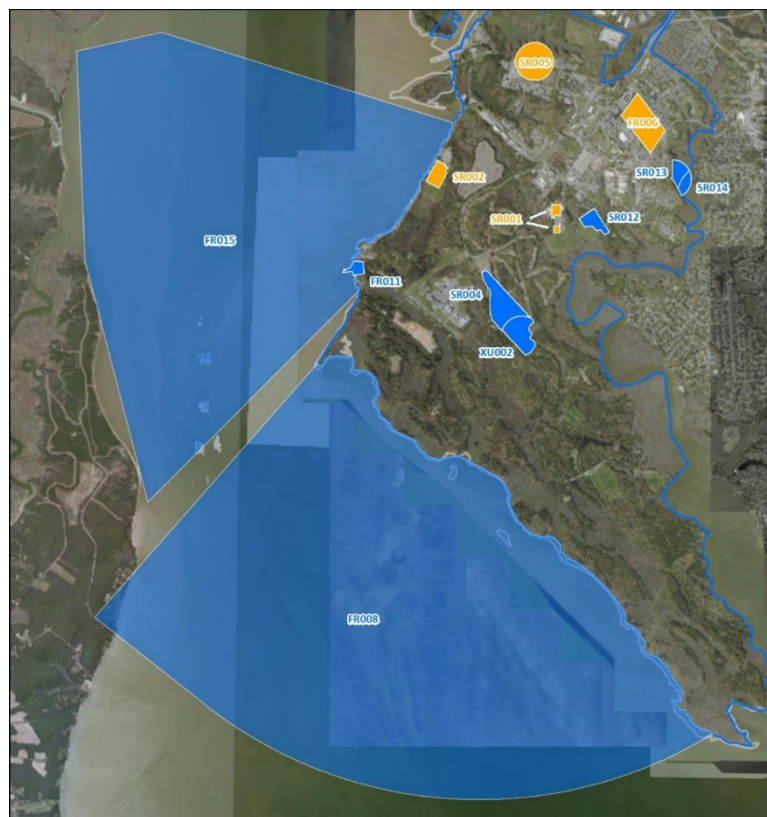


- **17 Areas identified as potential “ranges”**
- **9 – No Further Action: ineligible, no hazard or never constructed**
- **8 – Under study**
 - **6 – RI Phase:**
 - **SR004 Langley Field Gunnery Range/XU002 Bombing Target H**
 - **Field work planned for Feb 2025**
 - **SR012 1000-inch Rifle Range**
 - **SR013 / SR014 Shotgun Range**
 - **FR011 Camp Wallace Firing Fan**
 - **2 – Site Inspection (SI) (No Further Action):**
 - **FR008 Towable Target Range**
 - **FR015 Western Shore Ranges**

SR – Small Arms Range XU – Unexploded Munitions Area FR – Firing Range



Eustis MMRP Site Map



SITE STATUS



Active Sites



Closed/NFA

NOT SHOWN

- PR001 Pistol Range (never built)
- SR007 Thompson Circle Range (never built)
- SR009 Mulberry Island Aerial Gunnery Range (ineligible)
- UX010 Range Impact Area (ineligible)
- FR010 Towable Target Range (never built)



Eustis PFAS Activities

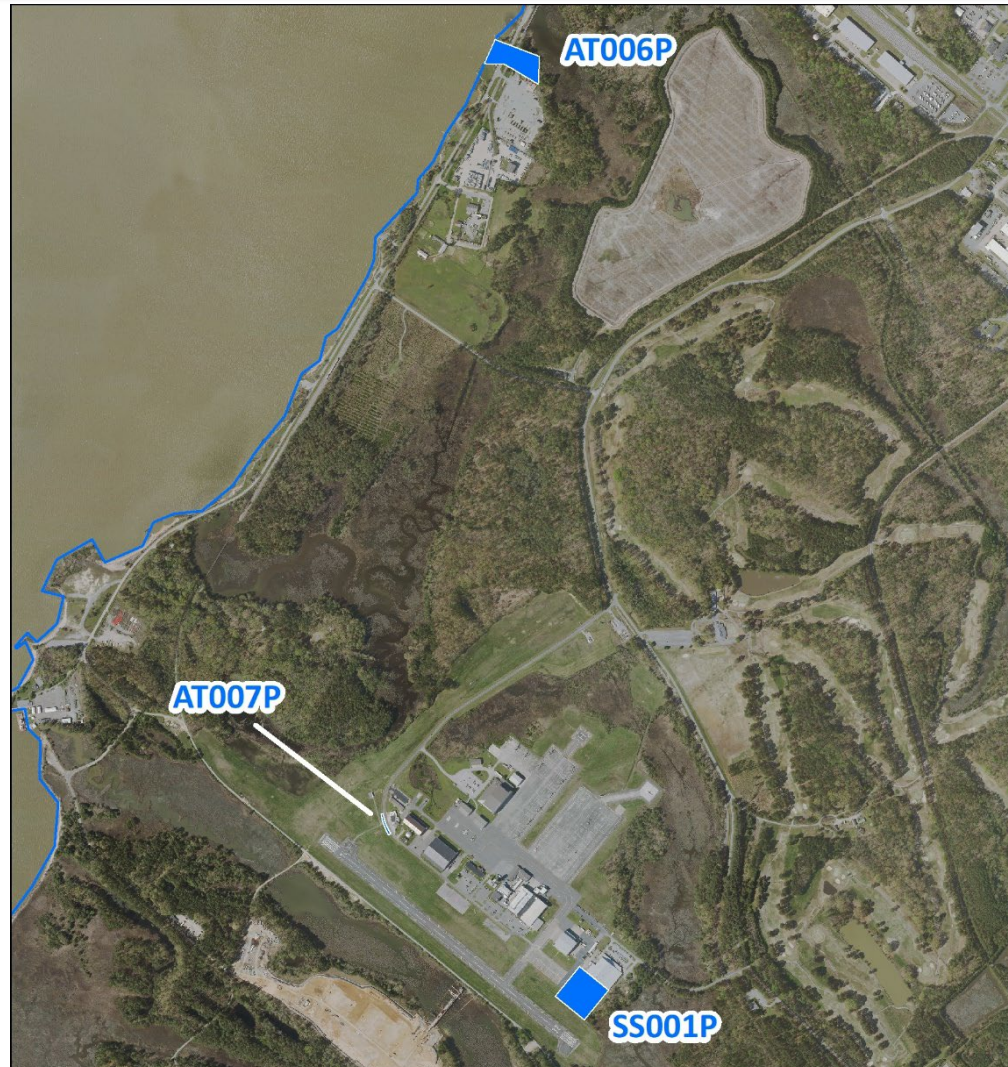


- **Apr 2015 - Final Preliminary Assessment**
- **Jun 2017 - Final SI at 3 areas**
 - **Former Fire Training Area, Current Fire Training Area and Fire Station #2**
 - **No human health exposure**
- **Phase 1 RI contract awarded – Jun 2022**
 - **Determine nature/extent in soil and groundwater**
 - **First round of sampling completed Aug 2024; results expected Jan/Feb 2025**
 - **Second round of sampling planned for May 2025**
- **Phase 2 RI - Estimated start date 2026**
 - **Conduct human health and ecological risk assessments**

Note: Eustis drinking water is provided by Newport News Water Works



Eustis PFAS RI Site Map



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- Due Diligence project for Non-Aqueous Film Forming Foam (AFFF) Areas at JBLE
 - Reviewed historical records and conducted interviews on activities that may have contributed to PFAS contamination from non-AFFF sources
 - e.g., Wastewater treatment plants, paint booths, motor pools, radar domes, and oil/water separators
 - Draft Final Due Diligence report in progress. ECD: TBD



ECD – estimated completion date
TBD – to be determined



Eustis Community Involvement Plan



- **Drafting JBLE-Eustis Community Involvement Plan (CIP) – ECD 2025**
- **Previous plan updated 2020**
- **JBLE-Eustis does not have a Restoration Advisory Board (RAB); next community assessment Mar 2025**
- **Public outreach efforts**
 - **Periodic emails to community members**
 - **Environmental presentation for local 5th graders**
 - **Earth Day cleanup**
- **If interested in public involvement, email 733MSG.733CES.EUSTISRESTORATION@us.af.mil**



Photo: JBLE-Eustis Remedial Program Manager, D. Chock, conducts presentation on sea level rise to local 5th graders.



Langley MMRP Activities



Former Skeet Range

- **TS158 – Soil Removal**
 - **SVOCs in soil**
 - **Field Work – Spring 2025**
 - **~ 5,200 cy to be excavated/disposed off-site**
 - **Remedial Action Completion Report ECD Jul 2025**
- **TS158A – Monitored Natural Recovery**
 - **Lead shot and SVOCs in sediment an ecological risk**
 - **Natural sediment to cover shot**
 - **Four years of sediment monitoring**
 - **Completed 1st round of sediment sampling for SVOCs**
 - **Final Report ECD late 2027**



SVOC – semi-volatile organic compounds
cy – cubic yard



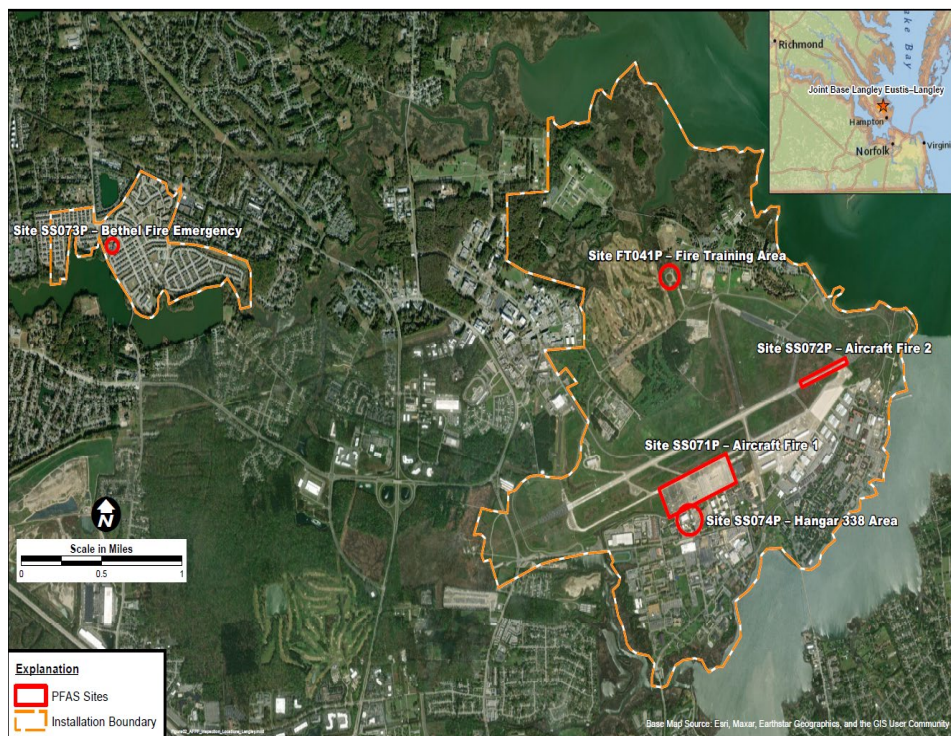
Langley PFAS Activities



Remedial Investigation (RI) – Two Phases

- Phase 1 Determine nature/extent in soil and groundwater
 - 1st sampling round completed Sep 2024
 - 2nd sampling round (step-out) May 2025
- Phase 2 Conduct risk assessments
 - Analyze Phase 1 data to determine human/ecologic risk

Note: Langley drinking water is provided by Newport News Water Works





Langley Community Involvement Plan



- **JBLE-Langley Community Involvement Plan**
 - **Previous plan updated 2022**
 - **Update planned for 2025**
- **Restoration Advisory Board (RAB)**
 - **No public meetings; annual updates provided via email**
 - **RAB members contacted annually by email to determine need for public meeting**
 - **Public notice to solicit input published in Daily Press every other year (next notice 2026)**



Contact/Web Site Information



- D. Chock, JBLE-Eustis Remedial Program Manager, 757-878-7379; d_malama.chock@us.af.mil
- Matthew Moore, RPM Contract Support, 757-878-5219; matthew.moore.82.ctr@us.af.mil
- John Tice, JBLE-Langley Remedial Program Manager, 757-764-9394; john.tice@us.af.mil
- Chris Boes, RPM Contract Support, 757-764-9317; christopher.boes.1.ctr@us.af.mil
- Public Administrative Record: <https://ar.cce.af.mil/>
- JBLE Facebook: [Joint Base Langley-Eustis | Facebook](#)
- Official JBLE Website: <https://www.jble.af.mil>



Questions?



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JOINT BASE LANGLEY-EUSTIS POTENTIAL PARTNERSHIPS AND OPPORTUNITIES



Potential Partnerships & Opportunities



- U.S. Department of Energy Office (DOE) of Indian Energy funding opportunities under Tribal Clean Energy Planning and Development - 2025 (DE-FOA-0003401). Webinar slides: <https://www.energy.gov/sites/default/files/2024-10/ie-clean-energy-2025-foa-webinar.pdf>
 - (1) conduct clean energy planning
 - (2) comprehensively assess the feasibility and viability of deploying clean energy technology
 - (3) conduct clean energy design and development activities
- Other funding and opportunities:
 - Weekly Funding Flyer at <https://www.energy.gov/indianenergy/current-funding-opportunities#flyer>
 - Office of Clean Energy Demonstrations: Energy Improvements in Rural or Remote Areas (ERA) Program focuses on clean energy systems, increasing clean energy knowledge, capacity, and self-reliance throughout rural America
 - Renewable Energy Siting through Technical Engagement and Planning (R-STEP™) program focuses on large-scale renewable energy planning, siting, and permitting



Potential Partnerships & Opportunities



- Office of the Secretary of the Air Force for Environment, Safety, and Infrastructure (SAF/IEE) is seeking to expand Tribal partnerships
- Awarding a DAF pilot project in 2025
- Supporting Tribal partners in the grant application process
- Projects that mutually benefit both the Department of the Air Force (DAF) and Tribal communities
- Are there project ideas and/or site recommendations for a collaborative energy pilot project?
- Are there any unmet energy resiliency needs?
- Are there suggestions for grant or pilot opportunity projects?



Questions / Comments

