

**FINAL
FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND
FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)
TRAINING AREA 1 SHORELINE STABILIZATION AND EROSION PROTECTION AT
JOINT BASE LANGLEY EUSTIS- EUSTIS, VIRGINIA**

Pursuant to provisions of the National Environmental Policy Act (NEPA), 42 United States Code (U.S.C.) 4321 to 4370h; Council on Environmental Quality (CEQ) Regulations, 40 Code of Federal Regulations (CFR) 1500-1508; and 32 CFR Part 989, *Environmental Impact Analysis Process*, the Department of the Air Force (Air Force) prepared the attached Environmental Assessment (EA) to assess the potential environmental consequences associated with the proposed shoreline stabilization and erosion protection of Training Area 1 (TA1) at Joint Base Langley Eustis – Eustis (JBLE-Eustis), Virginia, henceforth referred to as the “Proposed Action”.

Purpose and Need

The purpose of the Proposed Action is to stabilize the existing erosion-affected shoreline and protect from future bluff failure and loss of land (and associated resources) at JBLE-Eustis TA1. The Proposed Action is needed to protect available training land in order to maintain the quality of the training necessary to meet JBLE-Eustis mission and national defense requirements. Failure to implement an appropriate corrective action would result in further erosion and land loss, subsequently impacting the availability and quality of training at JBLE-Eustis.

Description of Proposed Action and Alternatives

The Proposed Action involves stabilizing and protecting TA1’s 1,800 linear feet (LF) of contiguous peninsula shoreline along Bailey Creek and Skiffes Creek. Construction would be conducted over the course of approximately one year, beginning with site preparation, including vegetation clearing and grubbing. After implementation of appropriate stabilization techniques, revegetation would occur and the appropriate marsh, shrub zones, and/or bank areas would be planted. As part of the vegetation management program, additional stabilization erosion control matting would protect the graded areas from erosion and the newly-planted vegetation from waterfowl until the vegetation can become established.

The Air Force is considering three proposed alternatives towards meeting the objectives and goals of the Proposed Action. In addition to these three action alternatives, the No Action Alternative is also being considered:

Alternative A – Marsh Management. Construction of Alternative A would utilize a non-structural stabilization approach focused on enhancing, planting, and protecting existing marshes to maximize the natural protective features of the existing ecosystem. Marsh management techniques include adjacent bank grading, installation of an 875 LF fiber log, vegetation restoration, and long-term vegetation management. This alternative would be implemented in areas higher than the mean-tide level where there is minimal wave action and boat wake. The area behind the fiber log would be graded and planted with new marsh areas. The installation of 4,480 LF of erosion control matting would maintain permanent stabilization of the bank. Long-term vegetation management would include selective tree pruning and clearing, the removal of shoreline debris (particularly after storm events), visual inspections of the restoration status, maintenance of the coir log as needed, and future, supplemental plantings as deemed necessary.

Alternative B – Living Shoreline. Alternative B would employ a living shoreline design to create a structural solution that maintains the natural functionality and connectivity of the existing ecosystem. This alternative includes adjacent bank grading, a 1,150-LF stone sill, a man-made oyster reef, vegetation

restoration, and long-term vegetation management. Alternative B would be suitable for areas that have increased tidal ranges and boat wake. The sill would be located at an elevation near mean low water, with a height between 0 and 1 foot above mean high water to allow for regular wave overtopping, and contain sand fill to support a newly-planted marsh area. Tidal gaps would be strategically placed along the sill to allow for drainage and provide connectivity between ecosystems. The oyster reef would comprise concrete/granite structures constructed within shallow, near-shore water adjacent to the shoreline. Once complete, the oyster reef would serve as a barrier between the near- and far-shore and provide appropriate substrate and habitat for the eastern oyster (*Crassostrea virginica*) and blue crab (*Callinectes sapidus*). In addition, a low and high marsh and a tidal shrub zone would be planted in the same manner as Alternative A, and a long-term vegetation management and maintenance program would be necessary to maintain Alternative B.

Alternative C – Concrete Bulkhead. Alternative C would include the construction of 500 LF of precast concrete walls (bulkheads) to stabilize sections of eroded shoreline, focusing on bluff areas that have eroded into steep and unstable banks. Banks adjacent to the bulkhead would be graded; however, a steeply sloped bank could remain in some cases, as upland areas would not be exposed to regular wave action with the implementation of a bulkhead. In addition to the bulkhead, Alternative C would install a sill on 200-LF of eroded shoreline adjacent to a pedestrian bridge to protect the foundation of the bridge. A low and high marsh and a tidal shrub zone would be planted in the same manner as Alternatives A and B, and a long-term vegetation management and maintenance program would be necessary to maintain Alternative C.

No Action Alternative. Under the No Action Alternative, the Air Force would retain the existing conditions of the eroded site. No construction, alteration, improvement/rehabilitation, or planting of vegetation would be performed. Continued erosion would result in the additional loss of land and habitat, and subsequently continue to impact the quality of training on JBLE-Eustis. While the No Action Alternative would not meet the Proposed Action's purpose and need, it is analyzed in the EA to provide a comparative baseline as required under the CEQ regulations (40 CFR §1502.14).

Summary of Environmental Impacts

The EA evaluates the existing environmental conditions and potential environmental consequences of implementing the Proposed Action with regard to land use and aesthetics; geology topography, and soils; military munitions and restoration sites; water resources; biological resources; cultural resources; and air quality. The Air Force has concluded that the Proposed Action would not affect the following resources: socioeconomics, environmental justice and protection of children, hazardous materials and waste, transportation, utilities, and noise; thus, these resources were eliminated from detailed analysis in the EA. Environmental impacts are summarized below.

Land Use and Aesthetics: Construction of the Proposed Action would interfere with training activities and land use at the site. In addition, construction equipment and activities would interrupt the visual landscape and be visible throughout the viewshed. These disturbances would be temporary and only last for the duration of construction. In the long term, the current land use and aesthetic background of TA1 would be preserved with implementation of the Proposed Action, although some impacts to the visual landscape could occur with placement of the concrete bulkheads under Alternative C. No significant impacts on land use and aesthetics are anticipated.

Geology, Topography, and Soils: The Proposed Action would require varying levels of grading and soil excavation to prevent future shoreline erosion from occurring. Thus, changes in topography and temporary increases in erosion on the construction site may occur; there would be no impacts on geology. An erosion and sediment control (E&SC) plan and a stormwater management (SWM) plan would be required under all action alternatives. Additionally, for Alternatives B and C, a Storm Water Pollution Prevention Plan

(SWPPP) would be developed prior to construction. These plans would include erosion control practices, inspection procedures, and other best management practices (BMPs) designed to reduce erosion during the construction process. Further, compared to Alternatives A and B, Alternative C could have the potential to result in erosion along the sides of and behind the concrete bulkheads. If Alternative C is selected, the Air Force would conduct periodic site visits to determine if erosion is occurring and mitigate it accordingly. In the long term, implementation of the Proposed Action would stabilize the shoreline and minimize erosion and sedimentation events in the vicinity of the TA1 site. No significant impacts on soils, geology, and topography are anticipated.

Military Munitions and Restoration Sites: One Installation Restoration Program (IRP) site (Bailey Creek) occurs along the southern border of TA1. Construction and operation of the Proposed Action could potentially disturb Bailey Creek; however, disturbances are unlikely to affect existing contamination sites at Outfall No. 18 and its associated drainage swale, as TA1 is located over 0.5 mile away. Further, current land use controls are in place surrounding Bailey Creek to minimize disturbance to the IRP site and existing contaminants. While there is a risk of accidental discharge and spills into Bailey Creek during land clearing and grubbing activities, implementation of Spill Prevention, Control and Countermeasure Plans and an Installation-specific Hazardous Materials Management Plan would minimize the potential for adverse impacts to the extent practicable. No military munitions sites are within the Proposed Action area. No significant impacts on munitions and restoration sites are anticipated.

Water Resources: The James River, which borders JBLE-Eustis to the south, does not meet Federal/State water quality standards per the 2018 Virginia Water Quality Assessment (VDEQ, 2019b). Total maximum daily loads have been established for some of the parameters causing impairment within this river. Additionally, Bailey Creek is also listed as impaired for recreation, aquatic life, and fish consumption, due to high levels of bacteria (e.g., *Escherichia coli*), chemicals (e.g., PCBs and aldrin), and low benthic-macroinvertebrate counts. With the amount of grading and earthwork required for the Proposed Action, construction would result in increased turbidity and sedimentation from soil disturbance, degrading the water quality in Bailey Creek. Potential effects to the subaqueous bottomlands in Bailey Creek and Skiffes Creek from increased turbidity and sedimentation could occur as well.

Less than 5 acres of jurisdictional wetlands have been identified within TA1. Additionally, 8 acres within TA1 are within the 100-year floodplain. Because TA1 is within the flood zone and wetlands are present, there is no practicable alternative to implementing shoreline stabilization and erosion protection measures without disturbing the flood zone and wetlands; as such, this FONSI includes a FONPA.

Impacts and encroachments (both temporary and permanent) on tidal wetlands and waters are anticipated as part of the Proposed Action. Therefore, authorizations are anticipated from the Local Wetlands Board (LWB) and/or Virginia Marine Resource Commission (VMRC), pursuant to the Virginia Tidal Wetlands Act, and the US Army Corps of Engineers (USACE), pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. A Tidewater Joint Permit Application (JPA) would need to be submitted to the VMRC for coordination with the LWB and USACE. It is anticipated the Proposed Action may qualify for authorization under the USACE Regional Permit 19 (13-RP-19). The State Water Control Board has issued unconditional 401 Water Quality Certification for the 13-RP-19. As such, the activities that qualify for 13-RP-19 also meet the requirements of the Virginia Department of Environmental Quality (DEQ) Virginia Water Protection Permit (VWP) Regulation and no additional authorization from DEQ would be required as long as the Proposed Action meets the terms and conditions of 13-RP-19. In lieu of 13-RP-19, USACE may also authorize shoreline stabilization projects under Nationwide Permit 13 (Bank Stabilization). Measures identified as part of these permits would be implemented to minimize impacts to jurisdictional waters including water quality, wetlands, and floodplains. Additionally, the Proposed Action would not contribute to any measurable loss in the area's flood control capacity; the Air Force would comply

with all local, State, and Federal floodplain regulations. No significant impacts on water resources would be anticipated.

Biological Resources: Required clearing and grubbing from construction of the Proposed Action would temporarily affect vegetation; cleared areas would be re-vegetated with native species. The tidal shrub and marsh plantings proposed under all of the action alternatives, along with long-term stabilization of the shoreline and decreased erosion at the site, would permanently benefit vegetation communities (including wetlands). No significant impacts on vegetation would be anticipated.

Terrestrial and aquatic wildlife would be temporarily displaced during construction activities; however, it is anticipated that once construction is complete, wildlife would establish communities similar to pre-construction levels. In the long term, both terrestrial and aquatic wildlife would benefit from shoreline stabilization and decreased erosion and sedimentation. No significant impacts on wildlife would be anticipated.

Potential effects to the federally threatened northern long eared bat (NLEB) (*Myotis septentrionalis*) and Indiana Bat (*Myotis sodalis*) may occur as a result of shoreline stabilization activities and tree clearance. To protect any potential maternal roosting and pupping habitat in the project area, the Air Force would adhere to a seasonal restriction on tree cutting during the maternal roost and pup season (April 15-September 15). Similarly, the Proposed Action would adhere to time of year restrictions for migratory birds. No bald eagle nests are present in or near TA1. No significant impacts on special status species would be anticipated.

Construction of the Proposed Action could potentially affect Essential Fish Habitat (EFH) and EFH species from increased turbidity and sedimentation, as well as the placement of in-water structures. Water conditions surrounding TA1 are not conducive to supporting EFH; therefore, EFH species are not likely to occur or would occur in limited numbers. In the long-term, the Proposed Action would reduce erosion and minimize sedimentation in Bailey Creek and Skiffes Creek, resulting in improved water quality. No significant impacts on EFH would be anticipated.

Construction of the Proposed Action would occur within Resource Protection Areas (RPAs) and RPAs would be impacted from required clearing and grubbing. Following completion of construction, cleared areas would be revegetated with native species. Shoreline stabilization in conjunction with tidal shrub and marsh plantings proposed under all action alternatives would benefit RPAs. No significant impacts on RPAs would be anticipated.

Cultural Resources: Heavy equipment staging and grading activities during construction of the Proposed Action would have the potential to impact the National Register of Historic Places-eligible archaeological site 44NN0024 located within TA1. However, the Air Force would implement protective measures such as requiring all vehicles remain on established roads and prohibiting skidding or dragging of downed trees to protect archaeological resources. In addition, the proposed access road and turn around area would be sited in a location that avoids significant archaeological deposits; disturbance of site 44NN0024 is unlikely. In the long-term, shoreline stabilization and reduction in erosion would help preserve the site. Further, should Alternative C be selected, the Air Force would conduct additional consultation with the Pamunkey Tribe who noted concerns associated with Alternative C's ability to control erosion. No significant impacts on cultural resources are anticipated.

Air Quality and Climate: Construction activities would temporarily increase air emissions from the use of construction equipment and vehicles. Implementation of the vegetation management program would also involve fossil fuel-powered equipment in the long term. The Air Force's Air Conformity Applicability Model (ACAM) was used to analyze the potential air quality impacts associated with the Proposed Action. Results

from ACAM indicate emissions associated with the Proposed Action would not hinder maintenance of the region's National Ambient Air Quality Standards. No significant impacts on air quality are anticipated.

Cumulative Impacts

The EA considered cumulative impacts that could result from the incremental impact of proposed shoreline protection measures in conjunction with effects of other past, present, or reasonably foreseeable future actions occurring in the same ROI. Incremental impacts of the Proposed Action would likely contribute to cumulative impacts on soils, restoration sites, water resources, biological resources, and air quality, when taken into consideration with three planned projects that would occur in the same geographic and temporal scope. Cumulative impacts would be minimized to the extent practicable through implementation of BMPs and adherence to regulatory guidelines under the Proposed Action. No significant cumulative impacts are anticipated.

Mitigations

The EA concluded that no significant impacts to the environment would result from proposed shoreline restoration activities under any of the action alternatives. While impacts on wetlands and floodplains are unavoidable given the nature of the Proposed Action, compliance with all Federal, State, local, and Air Force regulations would ensure impacts are avoided or minimized to the greatest extent practicable. Implementation of standard construction BMPs and low impact development measures would ensure that impacts on the 100-year floodplain, downstream areas, and wetlands remain minimal. Prior to construction, the Air Force would obtain coverage under applicable permits issued by USACE. Adherence to the requirements of applicable permits would minimize harm to wetlands resulting from the Proposed Action to the extent practicable.

In addition, avoidance measures would be implemented to ensure no adverse effect on cultural resources. Archaeological site 44NN0024 would be incorporated as a design constraint on the Limits of Disturbance. Further, protective fencing would be installed to restrict access to the archaeological site. Further, should Alternative C be selected, the Air Force would conduct additional consultation with the Pamunkey Tribe who noted concerns associated with Alternative C's ability to control erosion and conduct periodic site visits to determine if erosion is occurring and mitigate it accordingly.

Public Review

An early public notice was published in the local newspaper, *The Daily Press*, on 23 August 2019, detailing that the Proposed Action would take place in a floodplain and/or wetland, and seeking advanced public comment. No comments were received.

The Draft EA and Draft FONSI/FONPA were made available for public review and comment for 30 days following publication of a Notice of Availability in two local newspapers, *The Daily Press* and the *Peninsula Warrior Base Newspaper*. During the public review period, one response was received from the VDEQ (see Appendix B of the EA). The VDEQ conducted a review of the Proposed Action in coordination with Virginia Department of Game and Inland Fisheries (VDGIF), Virginia Marine Resources Commission (VMRC), Virginia Department of Conservation and Recreation (VDCR), Virginia Department of Health (VDH), and the Hampton Roads Planning District Commission, and concluded that the Proposed Action would be unlikely to have significant effects provided activities are performed in accordance with VDEQ's recommendations. The VDEQ indicated that both the VMRC and VDGIF expressed a preference for Alternative B (Living Shoreline); the VDGIF also noted Alternative A (Marsh Management) as a second choice, while Alternative C (Concrete Bulkhead) is not supported. Further, VDGIF noted the No Action Alternative would leave the shoreline vulnerable to continued erosion.

Comments have been incorporated into the Final EA, as appropriate. No other public comments were received.

Interagency and Intergovernmental Coordination for Environmental Planning

Consultation with agencies and Native American tribes was initiated in 2017. Throughout the development of the EA, the 733rd Civil Engineer Division continued coordination with agencies and Native American tribes to address concerns surrounding the Proposed Action. All agency and tribal responses have been considered and incorporated in the EA, as appropriate. Appendix A of the EA includes records of agency and tribal correspondence.

Findings

Finding of No Practicable Alternative. Because TA1 is within a flood zone and wetlands are present, there is no practicable alternative to implementing shoreline stabilization and erosion protection activities without disturbing the flood zone and wetlands. Pursuant to Executive Orders 11988 and 11990 and taking the above information into account, I find that there is no practicable alternative to this action and that the proposed shoreline stabilization and erosion protection actions include all practicable measures to minimize harm to the environment. This decision has been made after taking into account all submitted information, and considering a full range of practical alternatives that meet project requirements and are within the legal authority of the US Air Force. This finding fulfills both the requirements of the referenced Executive Orders and 32 CFR Part 989 for a FONPA.

Finding of No Significant Impact. After review of the EA prepared in accordance with the requirements of NEPA, CEQ regulations, and 32 CFR Part 989, and which is hereby incorporated by reference, I have determined that the proposed shoreline stabilization and erosion protection actions for JBLE-Eustis TA1 will not have a significant impact on the quality of the human or natural environment. Accordingly, an Environmental Impact Statement is not required. This decision has been made after taking into account all submitted information, and considering a full range of practical alternatives that meet project requirements and are within the legal authority of the US Air Force. The signing of this FONSI/FONPA completes the environmental impact analysis process.

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09-Jun-2021

DEE JAY KATZER, Colonel, USAF

Date

Chief, Civil Engineer Division

Air Combat Command (ACC/A4C)

Attachment: Environmental Assessment for Training Area 1 Shoreline Stabilization and Erosion Protection at Joint Base Langley-Eustis