FINDING OF NO SIGNIFICANT IMPACT

ROAD REPAIR AND CLIFF STABILIZATION
FOURTH CLIFF, HANSCOM AIR FORCE BASE
SCITUATE, MASSACHUSETTS

Pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended (42 United States Code (U.S.C.) §§ 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations (CFR) §§ 1500–1508); and the U.S. Department of the Air Force (DAF) Environmental Impact Analysis Process (EIAP), 32 CFR § 989, the DAF has prepared an Environmental Assessment (EA) to assess the potential environmental consequences of repairing a DAF-owned road damaged by erosion from coastal storms and addressing ongoing erosion at the Fourth Cliff Recreation Area facility (Fourth Cliff), Scituate, Massachusetts.

This EA was prepared for Fourth Cliff, 56 acres of DAF-owned property on the tip of Humarock Peninsula in Scituate, Massachusetts. Hanscom Air Force Base operates the seasonal recreation facility used by Department of Defense (DoD) personnel and their families. This EA analyzes the potential environmental consequences of alternatives proposed to repair the road and address the ongoing shoreline erosion and destabilization that are threatening the facility and contributing to unsafe conditions for users of Fourth Cliff. The potential environmental consequences of not repairing the road and addressing the erosion and destabilization of the shoreline are also analyzed.

Purpose and Need for the Action (EA §§ 1.2 and 1.3, Page 1-12): The Proposed Action is to evaluate options to address historic and ongoing coastal erosion at storm-threatened Fourth Cliff in light of the DAF's responsibility to be a good steward of its real property assets.

The purpose of the Proposed Action is threefold:

1. Ensure that military service members, their families, and affiliated personnel are not subjected to unsafe or degraded conditions.
2. Protect and/or preserve DAF-owned National Register of Historic Places (NRHP)-eligible historic structures on the property.
3. Resolve impacts related to shoreline erosion as a result of major storms, assuming the DAF continues to retain ownership of the property.

The need for the Proposed Action is to address the following unacceptable conditions caused by the ongoing erosion:

- Unsafe conditions for users of the site
- Threats to the stability of the NRHP-eligible historic properties, one of which is about 20 feet from the edge of the cliff; and,
- Infrastructure failures and increasingly costly repair and maintenance of the facility by the DAF.

Therefore, the Proposed Action is needed to address existing safety concerns and threats to infrastructure at Fourth Cliff caused by erosion.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Alternative 1 (Preferred Alternative) – Retreat, Repair, and Stabilize Fourth Cliff Coastal Property (EA § 2.3, pages 2-3 through 2-8): The key principle embedded in this alternative is that of retreat, which can be defined as the "voluntary movement and transition of people and ecosystems away from vulnerable

coastal areas" (Georgetown University Law Center, Georgetown Climate Center). This alternative involves repairing and stabilizing the Fourth Cliff coastal bank to protect the DAF assets and visitors in a manner that minimizes adverse effects to coastal resources. The alternative acknowledges that the Fourth Cliff Recreation Area activities will eventually have to be relocated as the cliff continues to erode, even if the proposed repairs are implemented. This alternative would be implemented in three phases depending on the availability of resources. Phase 1 would be implemented first and would include a number of projects that would not only address the damage to the roadway caused by the erosion but would also improve a number of amenities and facilities for users of the facility. Phase 2 would stabilize the most severely impacted area of the Fourth Cliff coastal bank, approximately 450 linear feet (l.f.) at the tip of the peninsula, and build a new accessible wood ramp and stairs to the beach on the west side. Phase 3 would stabilize the rest of approximately 700 l.f. of the eastern-facing bank of Fourth Cliff. DAF will prepare a Supplemental EA when Phases 2 and 3 are funded and designed.

Alternative 2 — Divestiture of the Property (EA § 2.4, Pages 2-8 through 2-9): Alternative 2 involves the DAF declaring Fourth Cliff as excess property and proceeding to divest its ownership interest in the facility. "Excess" real property in the DAF is real property that has been screened within the DAF and with other military departments and defense agencies and that is excess to DoD requirements (Air Force Instruction (AFI) 32-9004, Disposal of Real Property). If this decision were to be made, the DAF would follow the approved DAF process for excessing real property (40 U.S.C. Subtitle I, Federal Property and Administrative Services, and the President's Asset Management Initiative, Executive Order (EO) 13327, "Federal Real Property Asset Management"). If the site is transferred out of federal ownership, the DAF would endeavor to protect/mitigate historic and cultural resources listed or eligible for listing in the NRHP (including historic districts) (36 CFR 800). Mitigation measures could include deed restrictions, data collection, photo documentation, or including other terms in property transfer or conveyance documents and would be conducted in coordination with the Massachusetts State Historic Preservation Office.

No Action Alternative (EA § 2.5, Page 2-9): The CEQ regulation 40 CFR § 1502.14(c) requires the inclusion of a No Action Alternative in the NEPA analysis. The No Action Alternative serves as the baseline against which alternatives can be evaluated to identify impacts to the natural and built environments. Under the No Action Alternative, the DAF would not address the shoreline erosion and continued storm damage at Fourth Cliff. The No Action Alternative would continue with periodic maintenance, as needed, resulting in no change to the status quo. A long-term solution to address shoreline erosion would still be needed. Fourth Cliff would continue to sustain damage, and the asset's existing roadway, parking, camping area, picnic area and fencing would be impacted. Continued erosion would eventually threaten the stability of the historic bunker and the stability of the northern observation tower.

Alternatives Eliminated From Further Consideration (EA § 2.2, pages 2-1 through 2-3, and § 2.6, pages 2-9 and 2-10)

Four other alternatives were initially considered during the environmental impact analysis process and eliminated from further consideration because they did not meet all of the criteria for the DAF selection standards as presented on EA page 2-1. The following alternatives were eliminated:

Nature-based Solution: Beach nourishment would place sand along the 1,300-foot beach to establish a wider and higher elevation beach to force incoming waves to break farther offshore, thereby reducing wave damage to the toe of the cliff during storm events. This alternative was eliminated from further consideration because it would not meet the selection standards to provide a long-term solution to reduce erosion with reasonable maintenance needs that would not cause other impacts.

Vertical Bulkhead: A vertical bulkhead wall would be built in front of the cliff parallel to the shoreline to create an armored shoreline. Hardening can interrupt natural shoreline processes, eliminate nursery habitat for marine species and foraging habitat for wading birds, and degrade water quality. Regulations

(310 *Code of Massachusetts Regulations* 10.00) administering the Massachusetts Wetlands Protection Program (Massachusetts General Law (M.G.L.) c. 131 § 40) include performance standards that require no adverse effects from projects. A vertical bulkhead wall would alter the coastal bank by impacting a sediment source, and this alternative was eliminated.

Geotextile Tubes: A geotextile tube revetment would be built to protect the cliff toe along the length of the Fourth Cliff in the offshore region. Geotextile tubes—sediment-filled sleeves of geotextile fabric—are placed on a fabric scour apron with sediment-filled anchor tubes at the edge. The tubes are filled with a water-sediment slurry. Water seeps from the geotextile fabric, leaving the sediments in the sleeve. This alternative would not meet the selection standards because it would not protect the historic tower and maintenance requirements over the long term and could affect sediment transport, beach access, habitat and other aspects. This alternative was eliminated.

Riprap Revetment with Vegetated Slope: A composite shore protection structure would be installed along 1,300 feet of coastal bank. The composite structure would be placed as far landward as possible using a riprap revetment with a 1.5:1 slope topped with a reduced-slope vegetative cover and drainage improvements. The existing, irregular slope of the coastal bank would be smoothed, and a riprap revetment would be built of armor stone weighing between 4 and 7 tons with an underlayer of various size stones. This alternative was proposed in 2019 because it would provide protection during a 100-year storm condition but has been eliminated because it would not meet the selection standards due to its incompatibility with Massachusetts Office of Coastal Zone Management guidance and Massachusetts Department of Environmental Protection regulations.

ENVIRONMENTAL CONSEQUENCES

The EA, incorporated by reference into this finding, analyzes the potential environmental consequences of activities associated with the road repair and cliff stabilization at Fourth Cliff. The EA considers all potential impacts of the three alternatives studied. The analyses of the affected environment and environmental consequences of implementing the Preferred Alternative concluded that the Preferred Alternative would not affect the following resources:

- Socioeconomic Conditions;
- Transportation; and
- Hazardous Materials and Waste

The DAF has concluded that no significant adverse effects would result to the following resources from implementation of the Preferred Alternative.

Environmental Justice (EA § 4.2, page 4-4): No environmental justice populations are found within the region of influence. No impacts would be experienced because of the Preferred Alternative.

Air Quality, Greenhouse Gases, and Climate Change (EA § 4.3, pages 4-4 through 4-8): The project would not generate emissions beyond the construction period. Air quality impacts would be limited to short-term, increased fugitive dust and mobile source emissions expected to occur during approximately five weeks of construction activities for Phase 1 of the Preferred Alternative and 12 months of cliff repair operations for Phases 2 and 3 of the Preferred Alternative.

Soils (EA § 4.4, pages 4-8 through 4-9): Phase 1 of the Preferred Alternative, road repair, would result in negligible, long-term impacts to soils at Fourth Cliff. Phases 2 and 3 of the Preferred Alternative, cliff stabilization, would have a positive direct impact.

Biological Resources (EA § 4.5, pages 4-9 through 4-14): Phase 1 of the Preferred Alternative, road repair, would have less-than-significant permanent negative impacts to vegetation and less-than-significant temporary impacts to wildlife. Phase 2 and 3 of the Preferred Alternative, cliff

stabilization, would have less-than-significant negative impacts to vegetation, wildlife, threatened and endangered species (piping plovers, red knots and least terns). The direct impact of building the ramp and stairs and the cobble berm on vegetation, common shore birds, and wildlife is expected to be less than significant. During construction, if nesting areas are observed, the environmental oversight personnel will document the location, physically stake the nesting area, and inform construction workers to avoid the area. The DAF will identify staging areas and develop a restoration plan for the construction access. Indirect impacts during construction could cause common wildlife species to be temporarily displaced from the construction area but they are expected to return after construction. Long-term preservation of locally important habitat would be advanced under the Preferred Alternative as bird nesting habitat on the west side of the cliff would likely benefit from long-term monitoring and sediment replenishment.

Noise (EA § 4.6, pages 4-15 through 4-16): The Preferred Alternative would not generate noise. Construction activities would generate temporary noise impacts at the project site. Construction would take place between April 2023 and December 2023. Noise-sensitive receptors could be affected by noise generated from the construction site as well as noise generated from construction vehicles transporting workers and materials to and from the construction area. No long-term noise impacts would be experienced because of the Preferred Alternative.

Safety and Occupational Health (EA § 4.7, pages 4-16 through 4-17): The Preferred Alternative would improve the safety of users of the property by cleaning up the damaged upland areas and would have a beneficial impact. The damaged recreational vehicle (RV) sites would be removed, and turnarounds on the east and west side for fire access would be built along with accessible parking spaces and new pedestrian paths to connect the east and west sides of the cliff, currently generally impassible due to the severe grade differential.

Cultural Resources (EA § 4.8, Pages 4-17 through 4-19): Phase 1 of the Preferred Alternative would have no permanent negative impacts and would have beneficial impacts to the Fire Control Observation Tower by improving fire truck access. Temporary impacts during construction would be less-than-significant. Battery #208, the Fire Control Observation Tower, and the Fire Control Observation Station would be protected by exclusion fencing to ensure that structures or foundations are not damaged. Any construction activities adjacent to these structures also would be monitored for unexpected discoveries. Phase 2 and 3 of the Preferred Alternative, cliff stabilization, would have a positive impact, providing protection to Fourth Cliff resources eligible for listing in the NRHP. The Preferred Alternative would slow the erosion, stabilize the shoreline, and protect the historic structures at Fourth Cliff eligible for listing in the NRHP. There would be no adverse effect, in accordance with 36 CFR § 800.5.

Utilities and Utility Infrastructure (EA § 4.9 page 4-20): Phase 1 of the Preferred Alternative would have positive impacts on utilities and infrastructure by removing approximately 6,772 square feet (s.f.) of existing asphalt and concrete pavement, removing 120 feet of concrete curb at the damaged cliff area, providing improved pedestrian access and use of the facility, recreating some of the camping amenities and safety features lost to erosion, restoring full fire department access, constructing Americans with Disabilities Act-compliant parking and access to site features, and installing a safety railing. Utilities damaged by storms would be permanently addressed, including damaged sanitary pipe, a waterline, and obsolete electrical service from the former RV sites. Phase 2 and 3 of the Preferred Alternative would have no impacts.

Geology and Topography (EA § 4.10, page 4-21). Implementation of Phase 1 of the Preferred Alternative would not substantially alter a unique or recognized geologic feature, adversely affect geologic conditions or processes, or expose people or property to geologic hazards that could result in injury or loss of use. Impacts to topography would be negligible. Implementation of Phases 2 and 3, cliff stabilization, using a cobble berm and vegetated bluff at the cliff would change the geology of a small

portion of Fourth Cliff. The material forming the toe of the cliff would become stones sized up to 10 inches and the vegetated berm would be created by backfilling and planting. The nearly vertical, exposed cliff face with no vegetation would become a sloped, partially vegetated bank. The impacts to geology and topography would be less than significant.

Land Use and Visual Resources (EA § 4.11, pages 4-21 through 4-23): Phase 1 of the Preferred Alternative would have positive impact to land use at Fourth Cliff by restoring RV pads and enabling pedestrian access from one side of the cliff to the other. The visual quality of the recreation area itself would be improved for DoD personnel. The replanted areas would restore the bucolic appearance of the recreation area. Views of the ocean would be improved by removing the chain link fence and replacing it with a low wood post and cable barrier. Phase 1 would slightly improve the appearance of the cliff from the beach by removing the unsightly chain link safety fence, sawcutting damaged pavement, and removing damaged utilities. Views from the water and the beach would be unchanged, as Phase 1 would not address cliff erosion, and the appearance of most of the damaged cliff would not change. Phases 2 and 3 of the Preferred Alternative, cliff stabilization, would change the visual character of the coastal bank along Fourth Cliff. The shoreline would change from nearly vertical, exposed cliff face with no vegetation to a sloped, partially vegetated bank. This change would be noticeable from the key viewpoints, the beach below Fourth Cliff and the water east or north of the site. There would be no change in visual quality from the buildings, RV sites, and recreational areas at the Fourth Cliff facility itself. The impacts would be less than significant.

Scenic Protected River and National Natural Landmark (EA § 4.12, pages 4-23 through 4-24): Phase 1 of the Preferred Alternative would have less-than-significant impacts to the North and South rivers, National Natural Landmarks. Phase 2 and 3 of the Preferred Alternative would have less-than-significant impacts and the long-term monitoring and sediment replenishment included in the design of the cobble berm could provide a benefit to adjacent habitat.

Massachusetts Coastal Zone Program Policies (EA § 4.13, page 4-24): The Preferred Alternative is consistent with Massachusetts Office of Coastal Zone Management policies and principles.

Water Resources (EA § 4.14, pages 4-24 through 4-34): Phase 1 of the Preferred Alternative would impact 7,400 s.f. of high-risk (AE) flood zone located along the western side of the facility, a less-than-significant impact. Temporary impacts to surface water would be minimized using temporary stormwater best management practices (BMPs). Permanent BMPs would be included at the base of the proposed turnaround on Cliff Road, grading the surface to drain as it does under existing condition—into the woods. Elevations and stormwater management currently prevent stormwater from the top of the cliff from flowing over the edge of the cliff and would continue under the Preferred Alternative. Construction stormwater and permanent stormwater would flow inland, away from the edge of the cliff, traveling a path primarily of pervious lawn or woods, before flowing into the storm catch basin or water quality swale.

Phase 1, 2, and 3 of the Preferred Alternative would impact coastal wetland as follows:

- Flood zone (79,559 s.f.)
- Coastal beach (41,606 s.f.)
- Coastal dune (43,184 s.f.)
- Barrier beach (temporary impact from barge; 11,200 s.f.)
- Coastal bank (1,436 l.f.)
- Land subject to coastal storm flowage (84.790 s.f.)

These impacts are expected to be less than significant. The Preferred Alternative is the only practicable alternative that meets the selection standards.

SCOPING AND PUBLIC REVIEW

The DAF sent scoping letters to federal and state agencies, tribes and other interested stakeholders during preparation of the EA. These letters requested that any issues or concerns relevant to the Proposed Action be provided prior to completion of the EA. Informal consultation with the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, Massachusetts Natural Heritage and Endangered Species Program, Massachusetts Office of Coastal Zone Management and the Massachusetts Historical Commission was done early in the process via regular mail and email. The DAF published a draft EA and the draft Finding of No Significant Impact for this previous Preferred Alternative in June 2019 and accepted comments through July 8, 2019.

The DAF filed an Environmental Notification Form (ENF) for the Massachusetts Environmental Policy Act (M.G.L. c. 30 §§ 62–62L) May 31, 2022, and sent copies to 30 stakeholders soliciting comment. The Proposed Action's three-phase approach was introduced in the ENF and Supplemental Information, with review open for 50 days. A virtual public consultation session on June 16, 2022, was attended by 10 stakeholders and included a video showing the current conditions at the site and a review of three proposed phases of work. This EA incorporates comments and input from the 2019 EA effort, 2022 ENF comments and the Executive Office Energy and Environmental Affairs Secretary's Certificate on the ENF issued August 8, 2022. Correspondence in 2022 is included in Appendix A of the EA.

FINDING OF NO SIGNIFICANT IMPACT

Based upon my review of the facts and analysis summarized above and contained within the subject EA, I find Phase 1 of the Preferred Alternative and Alternative 2, Divesture, intended to ensure safety for DoD affiliate personnel and address threats to historic structures, will not have a significant impact on the natural or human environment. Because the design of Phase 2 and 3 of the Preferred Alternative has not been advanced beyond the concept stage, I cannot determine that Phase 2 and 3 will not have significant impacts without more design and environmental evaluation. This analysis fulfills NEPA; the President's CEQ 40 CFR §§ 1500–1508; the Air Force Regulation 32 CFR § 989; and EOs 11988, "Floodplain Management" and 11990, "Protection of Wetlands."

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DATE

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