
DRAFT FINAL
**PROGRAMMATIC ENVIRONMENTAL
ASSESSMENT**

FOR

**CONSTRUCTION AND DEMOLITION OF
FACILITIES**

AT

WAKE ISLAND AIRFIELD

**WAKE ISLAND ATOLL
PACIFIC OCEAN**

Prepared on behalf of:

611th Civil Engineer Squadron
10471 20th Street Suite 323
Joint Base Elmendorf-Richardson, Alaska 99506-2200

AUGUST 2024

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DRAFT FINDINGS OF NO SIGNIFICANT IMPACT ENVIRONMENTAL ASSESSMENT

INSTALLATION DEVELOPMENT WAKE ISLAND AIRFIELD, WAKE ATOLL

Pursuant to provisions of the National Environmental Policy Act (NEPA), Title 42 United States Code Sections 4321 to 4347, implemented by Council on Environmental Quality (CEQ) Regulations, Title 40, Code of Federal Regulations (CFR) §1500-1508, and 32 CFR §989, Environmental Impact Analysis Process, the U.S. Air Force (USAF) assessed the potential environmental consequences associated with future installation development at Wake Island Airfield (WIA), Wake Island Atoll, from Fiscal Year (FY) 2024 through 2028.

The purpose of the Proposed Action is to construct, repair, and demolish existing assets and infrastructure at WIA from FY 2024 through 2028 to support current and future mission requirements by maintaining and providing needed infrastructure in a manner that:

- Meets current USAF requirements for functional space, consistent with Air Force Manual 32-1084, *Civil Engineering Facility Requirements* (15 January 2020).
- Provides reliable utilities and an efficient transportation system to support WIA, consistent with Air Force Manual 32-1084.
- Supports and enhances the morale and welfare of personnel assigned to the installation, their families, and civilian staff, consistent with Department of Defense Instruction 1015.10, *Military Morale, Welfare, and Recreation Programs*.
- Follows applicable standards for resilient built installation infrastructure in the *Department of Defense Climate Adaptation Plan* (1 September 2021).

The Proposed Action is needed for WIA to update aging infrastructure that will not meet the current or future mission requirements and to demolish existing buildings that are no longer in use or are unsafe to enter. Many of the existing deteriorating buildings are known or suspected to contain hazardous substances such as asbestos containing materials (ACM), lead based paint (LBP), and polychlorinated biphenyl (PCB). Aging facilities, saltwater corrosion from proximity to the ocean, and tropical storms have contributed to the deterioration of infrastructure at WIA.

The Programmatic EA, incorporated by reference into this finding, analyzes the potential environmental consequences of activities associated with the Proposed Action and provides environmental protection measures to avoid or reduce adverse environmental impacts. The Programmatic EA considers all potential impacts of the Proposed Action, and the No Action Alternative.

PROPOSED ACTION (PREFERRED ALTERNATIVE)

WIA capacity for future development or mission expansion is determined by examining current supply, demand, and capacity of land uses, facilities, utility systems, or land that could support

the mission, quality of life of current and future users of the installation. The Proposed Action includes the construction of one new facility, one infrastructure repair project, and demolition of six facilities that can reasonably be anticipated to be implemented from FY 2024 through 2028. The Proposed Action would maximize functional effectiveness of the WIA, while minimizing operating and maintenance costs. Projects included in the Proposed Action are included below.

Projects Included in the Proposed Action

Project Number	Project	Description
Facility Construction Projects		
180001	Wash Rack Installation	Construction of a new covered vehicle wash rack
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	The current electrical power system will be upgraded to the current standards in the industrial area, the MDA area, and the electrical network area.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	Building B1509 will be demolished.
200018	Replace Water Tank	Six water storage tanks are proposed for demolition because they can no longer be used for their intended purpose and serve no USAF mission purpose. Four of these water storage tanks will be replaced in phases.
70006	Demolition of Storage Facility (B1407)	Building B1407 will be demolished.
190005	Demolition of Air Traffic Control Tower (B1601)	Building 1601 will be demolished.
180020	Demolition of Electrical Power (B950)	Building B950 will be demolished.
180021	Demolition of Storage Facility (B952)	Building B952 will be demolished.

NO-ACTION ALTERNATIVE

Under the No Action Alternative, the Preferred Alternative would not occur and none of the projects described above would be implemented and conditions at WIA would remain as they currently are to date. Without the construction, infrastructure, and demolition projects included in the Proposed Action, WIA would be unable to adequately and efficiently support continuing and new mission requirements assigned to the 611th CES and other tenant units and organizations on the base. In addition, WIA facilities that would be demolished would continue to deteriorate allowing ACMs, LBPs, and PCBs to leach into the surrounding environment. For these reasons, the No Action Alternative cannot be considered a reasonable alternative. However, CEQ regulations require consideration of the No Action Alternative for all Proposed Actions. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential alternatives can be compared. The No Action Alternative will be evaluated in the Programmatic Environmental Assessment as an alternative considered.

SUMMARY OF FINDINGS

The analyses of the affected environment and environmental consequences of implementing the Preferred Alternative presented in the EA concluded that by implementing standing environmental protection measures and operational planning, the USAF would be in compliance with all terms and conditions and reporting requirements. The USAF has concluded that no significant adverse effects would result to the following resources as a result of the Preferred Alternative: noise, land use, air quality, water resources, safety, hazardous materials and wastes, biological resources, cultural resources, earth resources, socioeconomics, and environmental justice. The following best management practices are being implemented to ensure impacts to resources are negligible or minor:

- The use of silt fences and mats would be implemented to reduce soil erosion and sedimentation and to protect water quality.
- All active construction areas would be fenced to deter unauthorized persons from entering the site.
- Contractors would be required to submit safety plans prior to construction activities commencing.
- Construction workers would be required to perform daily inspections, to ensure no spill or leaks have occurred, of equipment and store all fuels and other materials in appropriate containers.
- Construction vehicles and equipment would be locked or secured when not in use.
- In the case of inadvertent discovery of archeological materials or human remains during construction, all work will cease upon discovery and the cultural resources manager be notified and implement a series of step to address the discovery.

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the facts and analyses contained in the attached EA, conducted under the provisions of NEPA, CEQ Regulations, and 32 CFR §989, I conclude that the Preferred Alternative, future installation development at WIA, Wake Island Atoll, from FY 2024 through 2028, would not have a significant environmental impact, either by itself or cumulatively with other known projects. Accordingly, an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact completes the environmental impact analysis process.

Timothy J. Meerstein, Colonel, USAF
Commander, PACAF Regional Support Center

Date

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LIST OF ABBREVIATIONS AND ACRONYMS

611th CES	611 Civil Engineer Squadron
ACM	Asbestos Containing Materials
AFCEC	Air Force Civil Engineer Center
AFI	Air Force Instruction
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health
AFPD	Air Force Policy Directive
AICUZ	Air Installation Compatible Use Zone
BMP	Best management practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon monoxide
CWA	Clean Water Act
dBA	A-weighted decibel(s)
dB	Decibel(s)
DoD	Department of Defense
EA	EA Engineering, Science, and Technology, Inc., PBC
EA	Environmental Assessment
EFH	Essential fish habitat
EO	Executive Order
ESA	Endangered Species Act
ft	Foot (feet)
ft ²	Square foot (feet)
FY	Fiscal Year
GHG	Greenhouse gas
INRMP	Integrated Natural Resources Management Plan
LBP	Lead-Based Paints
MBTA	Migratory Bird Treaty Act of 1918
MDA	Missile Defense Agency
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969, as amended
NHL	National Historic Landmark
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen

NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	Ozone
OSHA	Occupational Safety and Health Administration
PFAS	Per- and polyfluoroalkyl substances
PFBS	Perfluorobutane sulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
Pb	lead
PCB	Polychlorinated biphenyl
PM	Particulate matter
PM _{2.5}	Particulate matter less than or equal to 2.5 microns in diameter
PM ₁₀	Particulate matter less than or equal to 10 microns in diameter
ppm	Part(s) per million
PRSC	Pacific Air Forces Regional Support Center
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SO ₂	Sulfur dioxide
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USASMDC	U.S. Army Space and Missile Defense Command
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile organic compound
WIA	Wake Island Airfield
WWII	World War II

1. PURPOSE OF AND NEED FOR THE ACTION

The Pacific Air Forces Regional Support Center (PRSC) 611th Civil Engineer Squadron (611th CES) have prepared this Programmatic Environmental Assessment (EA) for future installation development at Wake Island Airfield (WIA), Wake Atoll, from Fiscal Year (FY) 2024 through 2028. The Programmatic EA is prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code 4321 et seq.); the Council on Environmental Quality (CEQ) regulations implementing the procedural provisions of NEPA, 40 Code of Federal Regulations (CFR) Parts 1500–1580; and U.S. Air Force (USAF) policy and procedures (32 CFR §989).

1.1 INTRODUCTION

Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles (3,700 kilometers) west of Honolulu, Hawaii (Figures 1 and 2). Wake Atoll is an atoll formed by volcanic activity and is comprised of three islands: Wake, Wilkes, and Peale Islands, which are positioned around a shallow lagoon. Areas of brackish water wetlands are scattered throughout the Atoll. Wake Atoll is a biologically diverse group of islands that includes arthropods, small mammals, marine mammals, birds, and over 200 species of plants. Wake Atoll has a predominantly flat topography, and the maximum elevation is 31 feet (ft), with an average elevation of 12 ft above sea level.

Wake Atoll was attacked by the Japanese on 8 December 1941 during World War II (WWII), due to it being an outpost for American forces. Several artifacts from WWII remain on the island. Wake Island in its entirety was designated a National Historic Landmark in 1985 in order to preserve both the battlefield where important WWII events occurred, and Japanese and American structures from that period. Many of the Japanese structures were constructed with American labor. A group of 98 American prisoners of war were forced to build these defenses until mid-1943, when they were executed by the Japanese. These structures include several pillboxes, bunkers, and aircraft revetments. The Wake Island National Historic Landmark nomination package defines the landmark's boundaries as "the outer edge of the reef that surrounds the Wake Island so as to include the reef, the three islands, and the lagoon." The Pan American facilities and the U.S. Naval submarine and aircraft base, constructed prior to WWII, are also designated as National Historic Landmarks (Verhaaren and Kullen 2015).

The primary mission on Wake is maintenance and operation of the WIA. Wake is under control of the PRSC and the 611th CES based in Joint Base Elmendorf-Richardson in Anchorage, Alaska provides engineering support to WIA. A Base Operating Support Contractor manages the daily operations on Wake. Typical operations include support for trans-Pacific flight crews of the USAF, Marines, Navy, and Army; maintenance of Defense Logistics Agency fuel bulk storage and refueling infrastructure; support for Missile Defense Agency (MDA) operations; support for other U.S. Government Organizations doing testing and monitoring at Wake Island; and base engineering facility, utility, equipment, and grounds maintenance to support operations. The base population on Wake is comprised of fewer than 100 USAF personnel (active-duty military members), contractors (independent workers hired by the U.S. government), and employees (civilians employed by USAF) who live and work (USAF 2023d). Wake Atoll is also designated as a divert location for in flight emergencies.

Installation development and improvements are an on-going process at WIA. In 2021, a Wake

Island Installation Development Plan was prepared in accordance with Unified Facilities Criteria (UFC) 2-100-01, Installation Master Planning; Air Force Instruction (AFI) 32-1015, Integrated Installation Planning; and Air Force Policy Directive (AFPD) 32-10, Installations and Facilities. The Installation Development Plan is to project the long-term needs of USAF and its stakeholders for Wake Island operations in order to define an enduring end state for the installation that maximizes functional effectiveness while minimizing operating and maintenance costs. Because mission needs largely dictate land and facility support requirements, installation development is centered around the capabilities of existing infrastructure and facilities to meet the needs of the existing and projected mission.

1.2 PURPOSE OF THE ACTION

The purpose of the Proposed Action is to construct, repair, and demolish existing assets and infrastructure at WIA from FY 2024 through 2028 to support current and future mission requirements by maintaining and providing needed infrastructure in a manner that:

- Meets current USAF requirements for functional space, consistent with Air Force Manual 32-1084, *Civil Engineering Facility Requirements* (15 January 2020).
- Provides reliable utilities and an efficient transportation system to support WIA, consistent with Air Force Manual 32-1084.
- Supports and enhances the morale and welfare of personnel assigned to the installation, their families, and civilian staff, consistent with Department of Defense (DoD) Instruction 1015.10, *Military Morale, Welfare, and Recreation Programs*.
- Follows applicable standards for resilient built installation infrastructure in the *DoD Climate Adaptation Plan* (1 September 2021).

1.3 NEED FOR THE ACTION

The Proposed Action is needed for WIA to update aging infrastructure that will not meet the current or future mission requirements and to demolish existing buildings that are no longer in use or are unsafe to enter. Many of the existing deteriorating buildings are known or suspected to contain hazardous substances such as asbestos containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB). Aging facilities, saltwater corrosion from proximity to the ocean, and tropical storms have contributed to the deterioration of infrastructure at WIA.

Table 1 includes a specific purpose and need for each individual project included in the Proposed Action.

1.4 INTERGOVERNMENTAL COORDINATION/CONSULTATIONS

1.4.1 Interagency Coordination and Consultations

The Intergovernmental Coordination Act and Executive Order (EO) 12372, Intergovernmental Review of Federal Programs, requires Federal agencies to cooperate with and consider state and local views in implementing a Federal proposal. AFI 32-7060, which was rescinded, required the

USAF to implement a process known as Interagency and Intergovernmental Coordination for Environmental Planning. It was used for the purpose of agency coordination and to implement scoping requirements (i.e., to determine the scope of issues to be addressed in detail in a NEPA document).

Through the interagency coordination and consultation process, WIA will notify relevant federal agencies about the Proposed Action and alternatives. There are no state or local agencies associated with Wake Atoll to notify. The coordination and consultation process provides WIA the opportunity to cooperate with and consider state and local views in implementing the Proposed Action or alternatives. Coordination and consultation will begin by submitting a letter to federal, state, and local agencies containing a description of the Proposed Action and alternatives and will provide the means to comment on the Proposed Action and alternatives. The comment period will last for 30 days. Agency responses will be incorporated into the analysis of potential environmental impacts as part of the development of the EA. Appendix A contains the list of agencies that will be consulted regarding this action.

1.4.2 Government to Government Consultations

Consistent with National Historic Preservation Act of 1966 implementing regulations (36 CFR Part 800), DoD Instruction 4710.02, Interactions with Federally-Recognized Tribes, DAFI 90-2002, Air Force Interaction with Federally-Recognized Tribes, and Air Force Manual 32-7003, Environmental Conservation, the DAF is also consulting with federally recognized tribes that are historically affiliated with the geographic region being considered for the Proposed Action regarding the potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal coordination process is distinct from NEPA consultation or the intergovernmental coordination processes and requires separate notification of all relevant tribes. The timelines for tribal consultation are also distinct from those of intergovernmental consultations.

There are no documented Native American tribes affiliated with the WIA geographic region. No Tribes or Native Hawaiians have historically inhabited the atoll, and there has not been any evidence discovered to indicate that any Native Polynesians, or other native groups, have ever populated the atoll.

1.5 PUBLIC AND AGENCY REVIEW OF THE ENVIRONMENTAL ASSESSMENT

Following development of the EA and prior to signature of the Findings of No Significant Impact (if applicable), a Notice of Availability will be filed with the State of Hawaii Office of Environmental Quality Control, where it will be made available for public review. It will also be placed in the WIA Detachment Headquarters in the Passenger Terminal. The Notice of Availability will initiate a 30-day public review period. If public comments are received, they will be incorporated into the analysis, as appropriate, and included as an appendix to the Final Programmatic EA.

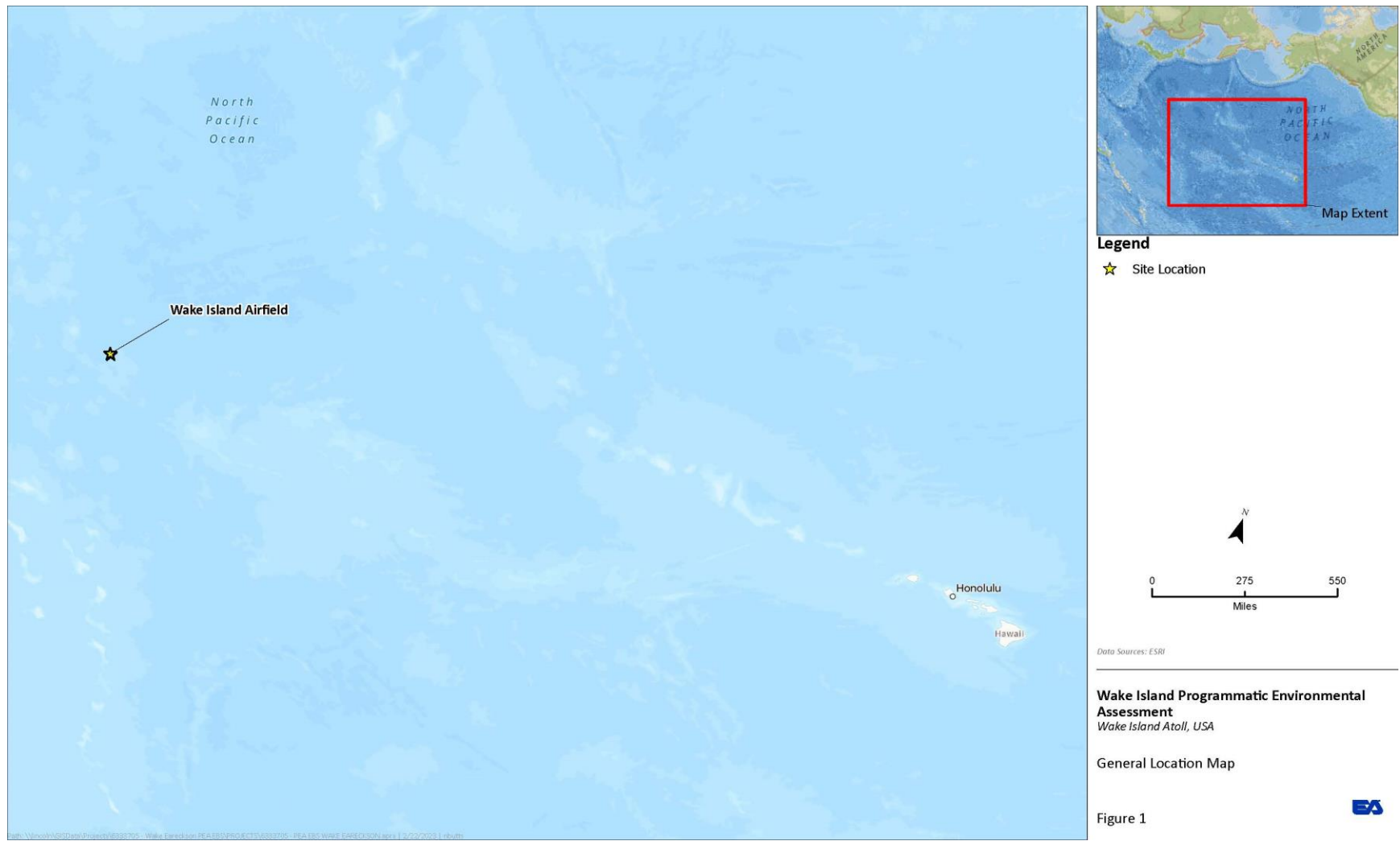


Figure 1. General Location Map



Figure 2. Wake Island Airfield Layout Map

Table 1. Purpose and Need for Each Project in the Proposed Action

Project	Project ID	Purpose of Action	Need for Action
Facility Construction Projects			
Wash Rack Installation	180001	Provide a covered vehicle wash rack to rinse salt water and sand from vehicles operating on the island for corrosion control and to increase the life of vehicles	Currently, there is no wash facility at Wake Island for vehicle wash operations. A portable pressure washer is being used at a deteriorated concrete pad without an oil/water separator or any means of collection of the wash effluent generated during wash operations. Due to the environmental concerns of the wash effluent that is generated without the proper means of decontamination, the USAF has directed personnel not to clean the engine compartments or undercarriage of any vehicle. This restriction inhibits complete corrosion prevention of vehicles operating on Wake Island.
Infrastructure Construction Projects			
Repair Electrical Distribution Industrial Area	190009	Upgrade the current electrical power system to the current standards, avoid loss of power, and reduce the safety risk to electrical technicians maintaining the system and fire fighters in the event of an emergency	Existing electrical infrastructure configuration was installed in the 1950s and has not been updated to meet current National Electrical Code/National Electrical Safety Code or UFC requirements ^(a) . Additionally, there are several locations in the primary distribution that use prohibited T-splices in electrical vaults (see UFC 3-550-01 Section 3-11.5) in place of junctions. No continuous ground exists due to the lack of a system-wide neutral conductor, creating arc flash hazards for technicians performing maintenance. Distribution transformers and isolation/tie switches are badly corroded, limiting the ability to disconnect from power for maintenance or in an emergency. Several transformers are installed improperly, such as a pole mount transformer installed on a concrete pad. Numerous building service entrances are corroded to the point of failure and are improperly installed, creating hazardous situations for electrical technicians and firefighters. Three manual transfer switches are the originals constructed in the 1950s, beyond usable life, and are no longer safely operable. Electrical vault covers throughout the entire island are corroded to failure or missing entirely (replaced with out-of-code wood covers). Conduit in select areas is buried close to the surface and susceptible to damage due to vehicle traffic. The majority of the equipment on the island is not made of weather-resistant materials and experiences accelerated corrosion due to intense sunlight and salt content in the air.
Demolition Projects			
Repair or Replace Petrol Ops (B1509)	150002	This building is proposed for demolition as it is no longer in use, dilapidated, is unsafe to enter, and serves no USAF mission purpose	The building is termite-infested and roof leaks have caused significant damage to the inside of the building. Sheetrock is falling from the ceiling, light fixtures are destroyed, and wood structural components are water and termite damaged. The doors are warped and delaminated, and the windows and louvers are broken. The north entrance door is completely missing, and the fascia boards are termite damaged, rotted, or missing.
Replace Water Tanks	200018	Six water storage tanks are proposed for demolition because	There are two 2-million-gallon (Tanks #7 and 8) and four 300,000-gallon tanks (Tanks #2, 4, 5, and 6) that are unusable tanks. Both 2-million-gallon tanks have outlasted their

Project	Project ID	Purpose of Action	Need for Action
		they can no longer be used for their intended purpose and serve no USAF mission purpose. Four of these water storage tanks will be replaced in phases	usefulness and are no longer operational and are required to be removed. The four 300,000-gallon tanks have either collapsed or have no roof making them no longer useful for potable water and will require replacement.
Demolition of Storage Facility (B1407)	70006	The storage facility proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	The storage facility building has major leaks and the interior concrete walls and the underside of the roof are badly spalling. They pose a safety hazard to personnel and equipment. The rebar is exposed and corroding. In addition, ACM and LBP has been identified in the building.
Demolition of Air Traffic Control Tower (B1601)	190005	The air traffic control tower proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	Super Typhoon Ioke hit Wake Atoll in 2006 and building 1601 suffered significant damage, especially to the air tower. It has not been maintained since Super Typhoon Ioke. Water has seeped in through openings in the masonry and windows, allowing mold to proliferate and causing extensive rotting that has undermined the structural integrity of the ceiling and doorframes. The walls and ceiling of the air tower interior as well as the outside concrete and stucco surface are spalling in several places, exposing the structural rebar underneath. The third-story balcony along the south side of the tower has begun to slump to the west and the concrete is deteriorating. The windows on the north side of the tower have been boarded up and cracks emanate from the window and building corners. The concrete walkway around the tower cab has also begun to crumble.
Demolition of Electrical Power (B950)	180020	The electrical power building proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	The building was abandoned due to deteriorating, unsafe conditions prior to Super Typhoon Ioke and sustained heavy damage during the typhoon. The structure is severely dilapidated with cracked concrete and spalling in many places. There is also obvious buckling of some walls. Portions of the roof have collapsed inside the building, rendering it unsafe for entry and use.
Demolition of Storage Facility (B952)	180021	The storage facility proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	The building is severely storm damaged, with cracked and spalling concrete. It is considered unsafe to enter. A generator remains in this facility that may be salvageable/recyclable.

Notes:

(a) UFC 3-560-02, Electrical Safety
ACM = Asbestos Containing Material
LBP = Lead-Based Paint
UFC = Unified Facilities Criteria
USAF = U.S. Air Force

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2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

WIA capacity for future development or mission expansion is determined by examining current supply, demand, and capacity of land uses, facilities, utility systems, or land that could support the mission, quality of life of current and future users of the installation. The Proposed Action includes the construction of one new facility, one infrastructure repair project, and demolition of six facilities that can reasonably be anticipated to be implemented from FY 2024 through 2028. The Proposed Action would maximize functional effectiveness of the WIA, while minimizing operating and maintenance costs. The list of projects included in the Proposed Action is included in Table 1 and locations of each project are included in Figure 3. A brief description of each project is also provided below.

Construction and demolition activities would generally involve ground disturbance by heavy construction equipment such as excavators, backhoes, bulldozers, graders, wheel rollers, and dump trucks. During construction fugitive dust would be managed by wetting surfaces and structures prior to demolition to control the spread of dust in the air. Other practices outlined in the U.S. Environmental Protection Agency (USEPA) *Fugitive Dust Control Measures and Best Practices* may be used as deemed appropriate (USEPA 2022). A detailed work plan outlining actions to be undertaken to demolish the buildings would be developed by the demolition contractor. All new construction and renovations would comply with applicable building, fire, and safety codes. Landscaping consisting of native vegetation would be used where appropriate to enhance the visual quality where demolition and new installations occurred. Nonhazardous concrete materials would be reused elsewhere on island to the extent possible. The handling and disposal of ACM, LBP, and PCBs is subject to the following federal regulations:

- 40 CFR §260-262: Solid and Hazardous Waste
- 40 CFR §61.141-157: Disposal of regulated ACM
- 40 CFR §61.145: Demolition and renovation of a facility containing asbestos
- 40 CFR §761: PCB manufacturing, processing, distribution, and use prohibitions
- 29 CFR §1910.1001: Occupational Safety and Health Administration (OSHA) asbestos regulations
- 29 CFR §1926.62: OSHA regulations for construction (lead).

2.1.1 Facility Construction Projects

Project 180001: Wash Rack Installation

This project would include the construction of a new covered vehicle wash rack. The facility requires a shade structure and containment wash pad that is corrosion proof. The facility would include a containerized packaged wash system with a wash water oil/water separator, all utilities, pavement, site improvements, pavement demolition, and associated support facilities to provide a complete and usable facility. The facility should not increase the demand of the current water production and storage systems. Used wash water will be discharged to the sanitary sewer through an oil/water separator. The installation of the wash rack, oil/water separator, and the connection to the sanitary sewer will conform to International Plumbing Code and in accordance

with UFC 3-240-01. The facility would be located in the vicinity of Building 1407 (Figure 5). Building 1407 is scheduled for demolition (Project 270006).

2.1.2 Infrastructure Construction Projects

Project 190009: Repair Electrical Distribution Industrial Area

The Wake electrical distribution system sections included in this project are within areas in the industrial area, the MDA area, and the electrical network that runs from the MDA area to the Marina and over to the fuel farm (Figure 7). The electrical distribution system consists of primary cable and conduit, secondary cable and conduit, transformers, facility service panels, vaults, and switches. This project includes the following elements:

- Replacing approximately 44,733 linear ft of degraded medium voltage cables with new medium voltage cables
- Updating primary cable from 3-wire configuration to 4-wire configuration (per UFC 3-550-01 including Change 1, Section 2-3 and 3-2) by installing approximately 45,500 linear ft of bonded neutral conductors
- Ensuring that cable shielding is properly grounded by replacing missing and degraded grounding electrodes in each electrical vault
- Replacing 29 degraded and failing transformers with new weather resistant stainless-steel transformers
- Demolishing 6 out-of-code switching enclosures and 33 T-splices in vaults and replacing them with code compliant junctions that allow for sectionalizing of the island power grid
- Demolishing unused electrical vaults in place as necessary
- Demolishing and replacing 10 failed electrical vaults
- Repairing structures and replacing failing vault covers on approximately 150 electrical vaults
- Demolishing and replacing all failing or missing cable racks in the electrical vaults
- Replacing 3,692 failing conduit banks with new and lowering 444 ft of existing conduit to the code required depth of 18 inches (24 inches when near roads), per UFC 3-550-01 Section 3-11.2.2 and performing necessary grading and digging to support replacement of vaults and conduit; the installation of the new electrical system will follow the current utility corridors.

2.1.3 Demolition Projects

Project 150002: Demolition of Fuel Operations Laboratory Building (B1509)

This project includes demolition of the Fuel Operations Laboratory (Figure 5). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques. A detailed work plan outlining actions to be undertaken to demolish the building would be developed by the demolition contractor.



Figure 3. Project Overview Map

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Project 200018: Replace Water Tank

Eight freshwater storage tanks were constructed in the industrial water area to store the freshwater produced by the rainwater catchment basins and desalination facilities on the atoll. All eight tanks are located in the Industrial Area. Demolition of Tanks 2, 4, 5, 6, 7, and 8 would be accomplished using bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques. Tanks 2, 4, 5, and 6 would be replaced with new field-constructed water tanks equivalent to Tanks 1 and 3 (300,000 gallon). The construction would include fabrication and erection of the water tank as well as tank painting, disinfection, and connection of the new tanks to existing Tanks and to the Industrial Water Facility. The installation of the new water tanks and appurtenances will conform to UFC 3-230-01. Tank 4 or another tank slated for demolition would be used to hold non-potable water for the concrete batch plant. Prior to use, the non-potable water tank would be inspected for suitability for temporary use. The contractor selected to construct new storage tanks would be required to set up a project-specific batch plant reverse osmosis water purification unit to fill Tank 4.

Project 70006: Demolition of Storage Facility (B1407)

This project includes the demolition of a vehicle operations parking (Figure 5). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques.

Project 190005: Demolition of Air Traffic Control Tower (B1601)

This project includes demolition of the Air Traffic Control Tower (Figure 6). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), manual techniques, and dump trucks.

Project 180020: Demolition of Electrical Power (B950)

This project includes demolition of Building B950 (Figure 4). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques.

Project 180021 Demolition of Storage Facility (B952)

This project includes demolition of Building B952 (Figure 4). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques.

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Figure 4. Locations of Projects 180020 and 180021

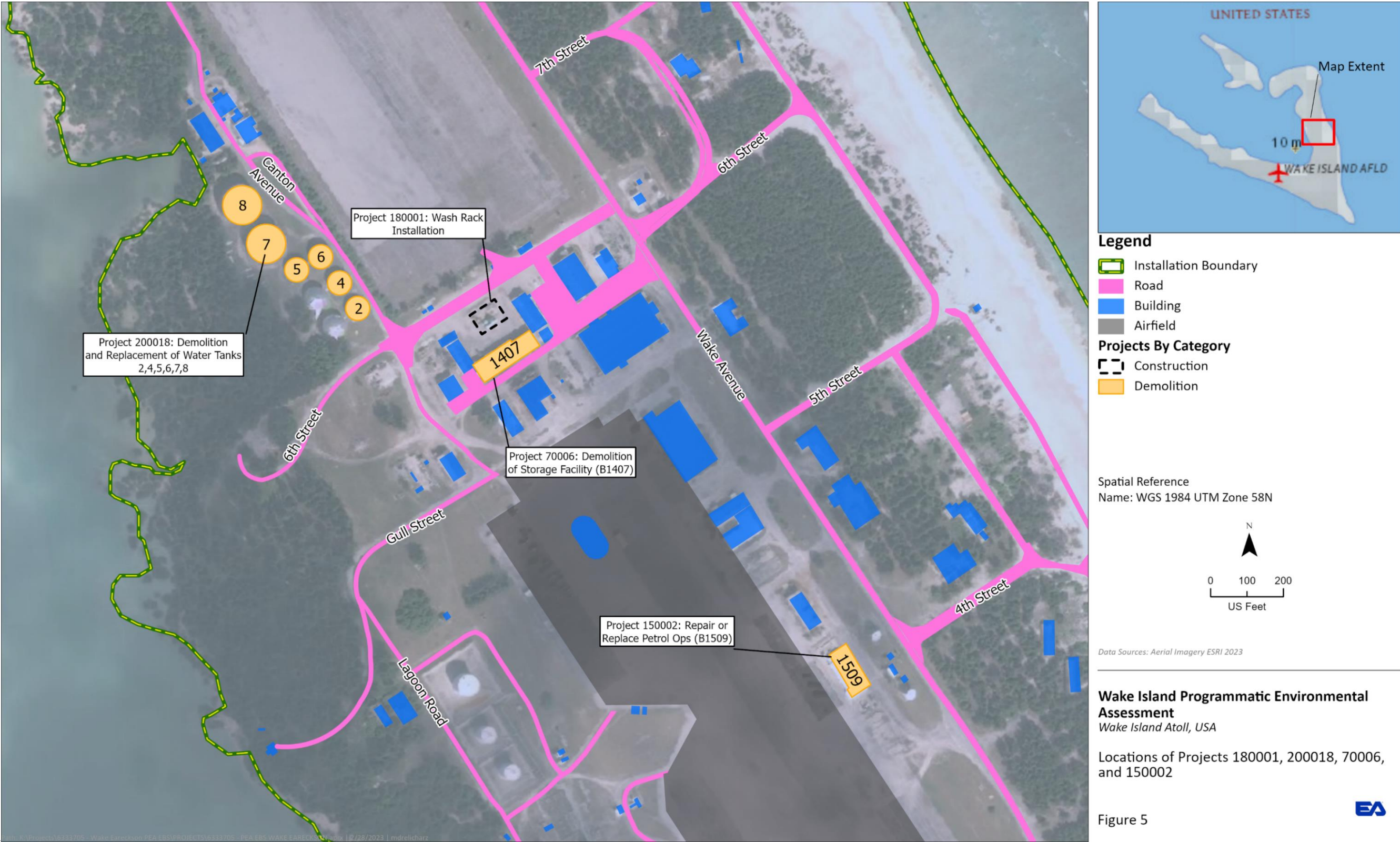


Figure 5. Locations of Projects 180001, 200018, 70006, and 150002



Figure 6. Location of Project 190005



Figure 7. Location of Project 190009

2.2 SELECTION STANDARDS

The NEPA and CEQ regulations mandate the consideration of reasonable alternatives for the Proposed Action. “Reasonable alternatives” are those that also could be utilized to meet the purpose of and need for the Proposed Action. Per the requirements of 32 CFR §989, the USAF Environmental Impact Analysis Process regulations, selection standards are used to identify alternatives for meeting the purpose and need for the USAF action.

The Proposed Action alternatives must meet the following selection standards:

- Meets current USAF requirements for functional space, consistent with Air Force Manual 32-1084, *Civil Engineering Facility Requirements* (15 January 2020)
- Provides reliable utilities and an efficient transportation system to support WIA, consistent with Air Force Manual 32-1084
- Supports and enhances the morale and welfare of personnel assigned to the installation, their families, and civilian staff, consistent with DoD Instruction 1015.10, *Military Morale, Welfare, and Recreation Programs*
- Follows applicable standards for resilient built installation infrastructure in the *DoD Climate Adaptation Plan* (1 September 2021)
- Meets the overall purpose and need, and the project-specific purpose and need
- Makes as much use as possible of existing land and facilities, avoids creating or maintaining redundant space or infrastructure, and avoids or minimizes operational inefficiencies
- Is consistent with known man-made and natural constraints (safety distances, runway, wetlands); constraints may vary depending on the project.

2.3 SCREENING OF ALTERNATIVES

This section describes the potential alternatives considered for each project and how each was assessed relative to the selection standards. Project alternatives that met all selection standards were considered reasonable and retained for consideration in this Programmatic EA. Alternatives that did not meet one or more of the selection standards were considered unreasonable and were not retained for consideration in the Programmatic EA. Table 2 includes alternatives considered for each project.

2.4 DETAILED DESCRIPTIONS OF THE ALTERNATIVES

2.4.1 Proposed Action Alternative

Under the Proposed Action Alternative, the projects described in Section 2.1 would be implemented.

2.4.2 Alternative 2 – No-Action Alternative

Under the No Action Alternative, none of the projects described in Section 2.1 would be implemented and conditions at WIA would remain as they currently are to date. Without the construction, infrastructure, and demolition projects included in the Proposed Action, WIA would be unable to adequately and efficiently support continuing and new mission requirements assigned to the 611th CES and other tenant units and organizations on the base. In addition, WIA facilities that would be demolished would continue to deteriorate allowing ACMS, LBPs, and

PCBs to leach into the surrounding environment. For these reasons, the No Action Alternative cannot be considered a reasonable alternative. However, CEQ regulations require consideration of the No Action Alternative for all Proposed Actions. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential alternatives can be compared. The No Action Alternative will be evaluated in the Programmatic EA as an alternative considered.

2.5 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

As none of the other alternatives that were considered would meet the purpose and need, the following alternative have been eliminated from further consideration:

- Installation of new Manual Wash Bay System
- Upgrade Hydrant Pressure of existing Wash System

These alternatives are not carried forward for analysis in this EA.

Table 2. Alternatives Considered

Project	Project Description	Alternatives Considered	Selection Standard Not Met	Reason for Dismissal
Facility Construction Projects				
180001	Wash Rack Installation	Installation of new Manual Wash Bay System. This alternative action contains all the requirements for secondary containment for wash water and oil separation but does not include the automated washing components.	Meets the overall purpose and need, and the project-specific purpose and need.	This will not alleviate the problem of added man hours required to hand wash large pieces of equipment, which results in the equipment not being washed on a regularly scheduled basis.
		Upgrade Hydrant Pressure of existing Wash System. This option would increase the hydrant pressure and the flow rate output of a conventional pump similar to what is currently in use. Install a longer wash hose to reach the far sides of large vehicles and equipment.	Meets the overall purpose and need, and the project-specific purpose and need.	This alternative will not alleviate the problem for secondary containment for wash water and oil separation. It also does not eliminate the added man hours required to hand wash large pieces of equipment, which results in the equipment not being washed on a regularly scheduled basis. Under current direction from USAF, no vehicles can have the engine compartments or undercarriage washed, and the outsides cannot be washed using solvents or soaps.
Infrastructure Construction Projects				
190009	Repair Electrical Distribution Industrial Area	No proposed alternatives	N/A	N/A
Demolition Projects				
150002	Repair or Replace Petrol Ops (B1509)	No proposed alternatives	N/A	N/A
200018	Replace Water Tank	No proposed alternatives	N/A	N/A
70006	Demolition of Storage Facility (B1407)	No proposed alternatives	N/A	N/A
190005	Demolition of Air Traffic Control Tower (B1601)	No proposed alternatives	N/A	N/A
180020	Demolition of Electrical Power (B950)	No proposed alternatives	N/A	N/A

Project	Project Description	Alternatives Considered	Selection Standard Not Met	Reason for Dismissal
180021	Demolition of Storage Facility (B952)	No proposed alternatives	N/A	N/A

Notes:

N/A = Not Applicable

USAF = U.S. Air Force

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 SCOPE OF THE ANALYSIS

This chapter describes the current conditions of the environmental resources, either human-made or natural, that would be affected by implementing the Preferred Alternative or the No Action Alternative. All potentially relevant resources were considered for analysis. Depending on the resource area, the extent of affected environment may differ.

Table 3 presents definitions for descriptors used to indicate the degree of impacts on resource areas analyzed in this Programmatic EA.

Table 3. Environmental Consequences Descriptors

Category	Descriptor	Definition
Type	Direct	Direct impacts are caused by an action and occur at the same time and place as the action.
	Indirect	Indirect impacts are caused by the action and occur later in time or are farther removed from the place of impact but are reasonably foreseeable.
	Cumulative	Incremental impacts of the action when added to the effects of other past, present, and reasonably foreseeable actions.
Duration	Short-term	Impacts with temporary effects.
	Long-term	Impacts with permanent effects.
Intensity	Negligible	The impact is localized and not measurable, or at the lowest level of detection.
	Minor	The impact is localized and slight, but detectable.
	Moderate	The impact is readily apparent and appreciable.
	Substantial	The impact is large and highly noticeable.
	Significant	Significance indicators are defined in the Environmental Consequences subsection for each individual resource area.
Nature	Adverse	A negatively perceived or undesirable effect on the human or natural environment; the effect may violate an existing environmental regulation or cause a deterioration of the baseline environmental quality.
	Beneficial	A desirable or positive effect on the human or natural environment; the effect may bring a condition closer to achieving compliance with existing environmental regulations or create efficiencies in resource area use.

3.2 AIR INSTALLATION COMPATIBLE USE ZONE LAND USE/NOISE

3.2.1 Affected Environment

Definition of Resource

The Air Installation Compatible Use Zone (AICUZ) is a DoD program designed to promote development compatible with military flight operations. The AICUZ is a land use planning program not a land acquisition or land management program. The purpose of AICUZ is to promote public health and safety through the local adoption of compatible land use controls and to protect the operational capability of the air installation. The DoD developed the AICUZ program in response to increased urban development around military airfields. Incompatible land usage may result in complaints or increased safety concerns over the effects of aircraft operations leading to operational changes, which could ultimately affect the flying mission. AICUZ studies

are advisory planning documents the USAF prepares to assist local governments in land-use planning near installations and manage development. Installations use these studies to provide land-use recommendations for communities to incorporate into their planning regulations to prevent encroachment (USAF 2020).

Noise is defined as unwanted sound that interferes with or disrupts normal human activities. Noise levels are usually measured and expressed in decibels (dB) that are weighted to better reflect human hearing (A-weighted sound level [dBA]). A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB; sound levels above 120 dB begin to be felt inside the human ear as discomfort. Most people are exposed to sound levels of 50 to 55 dBA or higher on a daily basis. The day/night noise level accounts for the increased annoyance of some noise events occurring between 10:00 p.m. and 7:00 a.m. by adding a 10-dB “penalty” to the average A-weighted noise level measured during a 24-hour day.

Land use describes the natural or developed condition of a given parcel of land or area and the type of functions and structures it supports. Examples of land uses include residential, industrial, agricultural, and recreational. Land use designations are generally assigned by land-management agencies and organizations and used as a tool to characterize, manage, understand, and organize the functions and relationships of land within their jurisdiction or under their control.

Existing Conditions

Wake Island has four distinct areas of activity: areas including the airfield, the industrial area, a downtown area, and the MDA area. The airport consists of a runway, supporting taxiways, tarmacs, airport terminal, and various navigational aids, and vacant areas between active and non-active facilities. The industrial area includes aviation and airfield maintenance shops, fire and rescue, aircraft fueling support facilities, civil engineering, and supply and warehouse buildings. Other industrial facilities in the area include shops, water collection, and distribution structures. The downtown area supports housing; cafeteria/dining hall; medical facility; laundromat; retail; and recreation buildings. The MDA area supports a variety of testing and training mission related equipment and infrastructure (PRSC 2023).

Wake Atoll also includes Wilkes Island and Peale Island, which support large numbers of resident and migratory seabirds and visiting winter resident shorebirds and waterfowl. Wilkes Island receives selective grounds maintenance and contains bulk fuel storage and there are no active facilities on Peale Island (PRSC 2017).

Wind and surf contribute to relatively high natural background sound levels on Wake Island. These background levels can mask the approach of vehicles and personnel are not always aware of aircraft landings. Roosting birds also contribute to relatively high natural background sound levels.

Anthropogenic sources of noise at Wake Island are from airfield operations and base maintenance activities. Military Aircraft is estimated to generate A-weighted sound pressure levels of approximately 84 dB at the base dispensary, 69 dB at the midpoint of Peale Island, and 95 dB at the midpoint of Wilkes Island. Hearing protection is required for personnel engaged in

aircraft apron operations. Estimates of aircraft noise were developed using DoD Noise Exposure Model Version 6.1 (U.S. Army Space and Missile Defense Command [USASMDC] 1999). Infrequent missile launches are another noise source on Wake Island.

3.2.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no change to the existing land use or ambient noise levels in the vicinity of WIA. Conditions would remain the same.

Preferred Alternative

Short-term, negligible, direct adverse impacts to noise are expected during the construction period for each project. The duration of noise impacts would vary by project depending on the length of the construction phase. In addition, the intensity of noise impacts would vary based on the type of construction equipment used. Table 4 includes the typical noise associated with construction equipment used for small to medium-sized construction projects. Construction impacts by project are summarized in Table 5.

Following construction, ambient noise levels would return to pre-project levels. Operation of the new wash rack facility may contribute to noise at the base; however, impacts would be negligible as aircraft operation would remain the dominant source of ambient noise. No impact to noise is expected following the infrastructure repair project and the demolition of buildings. Operation impacts by project are summarized in Table 5. Project activities are not anticipated to alter land use designations. Projects affecting airfield imaginary surfaces will require temporary waivers.

Table 4. Construction Equipment Noise Levels at Various Distances

Construction Type	Construction Equipment	L _{max} (dBA) at 50 ft	L _{eq} (dBA) at Various Distances ^(a)			
			100 ft	250 ft	500 ft	1,000 ft
Construction	Auger Drill Rig	85	79	71	65	59
	Compressor	81	75	67	61	55
	Crane	85	79	71	65	59
	Concrete Mixer Truck	85	79	71	65	59
	Flat Bed Truck	84	78	70	64	58
	Welder	73	67	59	53	47
Excavation	Backhoe	80	74	66	60	54
	Blasting	94	88	80	74	68
	Excavator	85	79	71	65	59
	Dump Truck	84	78	70	64	58
	Rock Drill	85	79	71	65	59
	Paver	85	79	71	65	59
	Roller	74	68	60	54	48
	Grader	85	79	71	65	59
	Shovel	82	76	68	62	56
Demolition	Bulldozer	80	74	66	60	54
	Hydraulic Excavators	80	74	66	60	54
	Manual Techniques	84	78	70	64	58
	Dump Truck	80	74	66	60	54
	Shears	85	79	71	65	59

Notes:

^(a) Distance attenuation formula: $L_{eq} = L_{max} - 20 \cdot \log(\text{Distance}/50)$

Source: Federal Highway Administration 2006

dBA = A-weighted decibel

ft = foot/feet

Table 5. Summary of AICUZ Land Use/Noise Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	Short-term, negligible, direct adverse impacts during construction. Long-term, negligible, direct adverse impacts during operation
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	Short-term, negligible, direct adverse impacts during construction. No long-term impact.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
200018	Replace Water Tank	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
70006	Demolition of Storage Facility (B1407)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
190005	Demolition of Air Traffic Control Tower (B1601)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
180020	Demolition of Electrical Power (B950)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
180021	Demolition of Storage Facility (B952)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.

3.3 AIR QUALITY

3.3.1 Affected Environment

Definition of Resource

Air quality is defined by ambient air concentrations of specific pollutants determined by the USEPA to be of concern related to the health and welfare of the general public and the environment. If present in ambient air above certain established concentrations, certain air pollutants may pose a threat to human health and welfare. Factors influencing air quality in a region include the types and sizes of air pollution sources and the quantities of atmospheric pollutants emitted, as well as surface topography and level of development, the size of the topological “air basin,” and prevailing meteorological conditions.

The Clean Air Act (CAA) (42 U.S. Code 7401-7671q), as amended, gives USEPA the responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR §50) that set safe concentration levels for the six *criteria* pollutants: particulate matter less than or equal to 2.5 microns in diameter (PM_{2.5}), particulate matter less than or equal to 10 microns in diameter (PM₁₀), sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead (Pb) (Table 6). Areas that meet the NAAQS for a criteria pollutant are designated “attainment.” Areas where a criteria pollutant level exceeds the NAAQS are “nonattainment” areas. A maintenance area is one that has been re-designated from nonattainment status after submitting a clean ambient monitoring data set to USEPA and has an approved maintenance plan under Section 175 of the CAA. Each state has the authority to adopt standards stricter than those established under the federal program; however, Wake Island accepts the Federal NAAQS (Table 6).

Pollutant emissions contribute to the ambient air concentrations of *criteria* pollutants, either by directly affecting the pollutant concentrations measured in the ambient air or by transforming in the atmosphere to form *criteria* pollutants. Primary pollutants, such as CO, SO₂, Pb, and some particulates, are emitted directly into the atmosphere from emission sources. Secondary pollutants, such as O₃, NO₂, and some particulates, are formed through atmospheric chemical reactions that are influenced by meteorology, ultraviolet light, and other atmospheric processes. Suspended PM₁₀ and PM_{2.5} are generated as primary pollutants by various mechanical processes (for example, abrasion, erosion, mixing, or atomization) or combustion processes. However, PM₁₀ and PM_{2.5} can also be formed as secondary pollutants through chemical reactions or by gaseous pollutants that condense into fine aerosols. In general, emissions of pollutants that are considered “precursors” to secondary pollutants in the atmosphere (such as volatile organic compounds [VOCs] and oxides of nitrogen [NO_x], which are considered precursors for O₃) are regulated to control the level of the secondary pollutant in ambient air.

In areas currently designated as nonattainment or maintenance, federal agencies are required to determine whether a Proposed Action would increase annual emissions of criteria pollutants by more than *de minimis* amounts General Conformity (40 CFR §93.150–93.160). To ensure that federal actions do not interfere with a state’s timely attainment of the NAAQS, the CAA requires that federal agencies demonstrate that their actions conducted in nonattainment and maintenance areas conform to the State Implementation Plan. According to the implementing regulation, promulgated by USEPA, proposed federal action emissions must be specifically identified in the State Implementation Plan, must have emissions below *de minimis* levels identified in the regulations, or must offset any resulting increases in emissions.

Table 6. National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3-month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded
Nitrogen Dioxide (NO ₂)		primary	1 hour	100 ppb	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb ⁽²⁾	Annual Mean
Ozone (O ₃)		primary and secondary	8 hours	0.070 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	PM _{2.5}	primary	1 year	12.0 µg/m ³	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m ³	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m ³	98 th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO ₂)		primary	1 hour	75 ppb ⁽⁴⁾	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years

Pollutant	Primary/ Secondary	Averaging Time	Level	Form
	secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Notes:

- (1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 $\mu\text{g}/\text{m}^3$ as a calendar quarter average) also remain in effect.
- (2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.
- (3) Final rule signed 1 October 2015, and effective 28 December 2015. The previous (2008) O_3 standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O_3 standards.
- (4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a State Implementation Plan call under the previous SO_2 standards (40 CFR §50.4(3)). A State Implementation Plan call is a USEPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

$\mu\text{g}/\text{m}^3$ = Microgram(s) per cubic meter

CFR = Code of Federal Regulation

NAAQS = National Ambient Air Quality Standards

PM = particulate matter

$\text{PM}_{2.5}$ = Particulate matter less than or equal to 2.5 microns in diameter

PM_{10} = Particulate matter less than or equal to 10 microns in diameter

ppb = Part(s) per billion

ppm = Part(s) per million

USEPA = U.S. Environmental Protection Agency

Source: USEPA 2023

Existing Conditions

Wake Island is a territory of the United States located in the central Pacific Ocean. Wake Island is currently designated as an attainment area for all six criterion pollutants, $\text{PM}_{10/2.5}$, NO_2 , SO_2 , CO, Pb, and O_3 . Hence, federal actions in this territory are exempt from the General Conformity Rule.

Wake Island is within the jurisdiction of USEPA Region 9. Limited air quality monitoring data is available for Wake Island, there are no evident air pollution problems because the strong trade winds quickly disperse any local emissions. Furthermore, because there are no other islands within several hundred miles of Wake Island, there are no nearby sources from which Wake Island would receive air pollutants, and there are no nearby communities that could be affected by air pollutants from emissions generated at Wake Island (MDA 2007).

The principal pollutant emission sources are the power plant, motor vehicles, aircraft operations, fuel storage tanks, incinerator emissions, and infrequent rocket launches. None of the emission sources at Wake Island meet the threshold for Title V permitting under the CAA, and no ambient air quality standards have been exceeded (USASMDC 2000 as cited in USASMDC 2002).

Greenhouse Gas Emissions and Climate Change

Global climate change refers to a change in the average weather on the earth. Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions arise from natural processes and human activities. The most common GHGs emitted from natural processes and human activities include carbon dioxide, methane, and nitrous oxide. GHGs are primarily produced by the burning of fossil fuels and through industrial and biological processes. Pursuant to EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, CEQ rescinded its 2019 Draft *NEPA Guidance on Consideration of Greenhouse Gas Emissions* and is reviewing, for revision and update, the 2016 *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change* in NEPA Reviews. When addressing climate change, agencies should consider the potential effect of a proposed action on climate changes as indicated by assessing GHG emissions and the effects of climate change on a proposed action and its environmental impacts.

3.3.2 Environmental Consequences

3.3.2.1 Method for Evaluating Impacts

De minimis emissions thresholds under General Conformity were used as reference benchmarks for evaluating potential air quality impacts. While the General Conformity does not apply to Wake Island, it provides a convenient structure for evaluating air quality impacts. The criteria pollutant emissions were quantified using the construction and operational characteristics of the proposed project, and their potential to approach the general conformity *de minimis* thresholds as specified in 40 CFR §93.153. The analysis uses *de minimis* thresholds as the metric for identifying adverse environmental impacts. Fugitive dust and combustion emissions from construction equipment used at construction sites and vehicle traffic to/from construction sites were calculated and compared with USEPA General Conformity *de minimis* thresholds. GHG emissions were quantified as well and compared with the reference point of 25,000 metric tons per year, which is the threshold for reporting in the USEPA Mandatory Reporting Rule of Greenhouse Gases.

3.3.2.2 Impact Indicators and Significance Criteria

The proposed projects would be considered to impact air quality if construction activities add significant new emissions of criteria pollutants and greenhouse gases to existing conditions where the construction sites are located. Significance of air quality impacts were determined by exceedance of USEPA General Conformity *de minimis* thresholds or the USEPA Mandatory Reporting Rule of Greenhouse Gases reporting threshold as described in Section 3.2.2.1. Impacts to air quality may be short term (i.e., temporary impacts occurring during construction activities) or long term (i.e., a permanent impact from emissions of installed equipment as part of the alternative), and may also be considered direct (“...those emissions of a criteria pollutant or its precursor that are caused or initiated by the Federal action and occur at the same time and place as the action.”) or indirect (“...those emissions of a criteria pollutant or its precursors that: (1) are caused by the Federal action, but may occur later in time and/or may be further removed in distance from the action itself but are still reasonably foreseeable; and (2) the Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency”). Table 7 lists air quality impact indicators and significant criteria.

Table 7. Air Quality Indicators and Significance Criteria

Impact Indicator	Significance Criteria
Increased vehicle and equipment criteria pollutants emissions and generation of fugitive dust during construction and demolition activities	Exceedance of USEPA General Conformity <i>de minimis</i> thresholds
Increased vehicle and equipment greenhouse gases emissions during construction and demolition activities	Exceedance of USEPA Mandatory Reporting Rule of Greenhouse Gases reporting threshold which is 25,000 metric tons ¹

Notes:

USEPA = U.S. Environmental Protection Agency

3.3.2.3 Assumptions

The following assumptions were considered in assessing impacts to air quality.

- The air quality impacts of the proposed projects were determined by estimating anticipated emissions of criteria pollutant and GHG emissions from construction equipment usage, and fugitive dust emissions from the truck traffic and personal vehicle usage for workers' commute.
- The Air Force Air Conformity Applicability Model Version 5.0.17b. Air Conformity Applicability Model is an air-emissions estimating model that is used to perform an analysis to assess the potential air quality impacts associated with the Proposed Action Alternative in accordance with Environmental Compliance and Pollution Prevention, the Environmental Impact Analysis Process (32 CFR §989), and the General Conformity Rule (40 CFR §93 Subpart B). This analysis was used to estimate anticipated emissions of criteria pollutants and greenhouse gases as a result of the Proposed Action Alternative.
- The total emissions for the proposed projects were compared with *de minimis* thresholds for each year of planned construction schedule.

No Action Alternative

Under the No Action Alternative, there would be no increase in air emissions in the vicinity of WIA. Under implementation of the No Action Alternative, demolition and construction activities would not take place, conditions would remain the same; therefore, no impact on air quality would be generated.

Preferred Alternative

The total estimated emissions were calculated for the construction activities associated with proposed projects and are provided and compared with reference thresholds in Table 8. The analysis conducted was a conservative estimate of emissions, intended to capture the greatest potential for impacts. The model input data and all relevant emissions calculation information is provided in Appendix B.

¹ The final guidance CEQ issued on 1 August 2016, titled "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews" (CEQ 2016), which established a significant criteria for GHGs, was withdrawn effective 5 April 2017.

Table 8. Total Estimated Emissions for Proposed Action Alternative

Year	NO _x	VOC	CO	PM ₁₀	PM _{2.5}	SO ₂	CO _{2e} ⁽¹⁾
	tpy	tpy	tpy	tpy	tpy	tpy	tpy
2024	0.472	0.095	0.809	0.028	0.018	0.002	159.0
2025	0.802	0.172	1.587	2.749	0.028	0.004	327.2
2026	0.210	0.040	0.413	0.011	0.007	0.001	68.8
2027	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Reference Threshold ⁽²⁾	100	50	100	100	100	100	27,500 ⁽³⁾

Notes:

⁽¹⁾ CO_{2e} = carbon dioxide equivalent

⁽²⁾ 40 CFR §93.153 and 40 CFR §98

⁽³⁾ 27,500 short tpy is equivalent to 25,000 metric tpy

CFR = Code of Federal Regulations

CO = carbon monoxide

NO_x = oxides of nitrogen

PM_{2.5} = Particulate matter less than or equal to 2.5 microns in diameter

PM₁₀ = Particulate matter less than or equal to 10 microns in diameter

SO₂ = Sulfur dioxide

tpy = tons per year

VOC = volatile organic compound

Implementation of the Proposed Action Alternative would not result in significant impacts to air quality. The demolition and construction of buildings would involve direct disturbance to existing structures and soils, which would result in the generation of fugitive dust and increases in particulate matter (PM) emissions. Demolition of buildings that contain asbestos would be completed by a licensed asbestos abatement company to control fugitive dust emissions. The use of vehicles on non-paved surfaces, in support of demolition and construction activities, would also further increase fugitive dust emissions. Personal and work vehicles and other heavy equipment used during the demolition and construction activities would generate emissions of PM, CO, NO_x, and VOCs. Emissions generated by the Proposed Action Alternative would be temporary and localized with no long-term effect. Increases in PM emissions due to ground and structure disturbing activities would be mitigated through the use of Best Management Practices (BMPs), including watering of exposed soils and soil stabilization, limiting the area that is disturbed at any given time, and reducing the idling time of heavy equipment and machinery.

These temporary impacts do not exceed the established benchmarks and are not expected to violate any of the federal and state standards as their estimated emissions were all below the reference thresholds. There would be no expected long-term effects on air quality due to the Proposed Action Alternative. Therefore, the impacts on air quality from the implementation of the Proposed Action Alternative would be negligible and would not be expected to affect the climate.

Short-term, negligible, direct adverse impacts would occur to the air quality during the construction and demolition period for the Proposed Action Alternative. Emissions from construction and demolition activities would be minor and no exceedance of reference thresholds is anticipated; thus, construction and demolition would not result in significant air quality impacts. Air quality impacts by project are summarized in Table 9.

Table 9. Summary of Air Quality Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	Short-term, negligible, direct adverse impacts during construction. No long-term impact.
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	Short-term, negligible, direct adverse impacts during construction. No long-term impact.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
200018	Replace Water Tank	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
70006	Demolition of Storage Facility (B1407)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
190005	Demolition of Air Traffic Control Tower (B1601)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
180020	Demolition of Electrical Power (B950)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.
180021	Demolition of Storage Facility (B952)	Short-term, negligible, direct adverse impacts during demolition. No long-term impact.

3.4 WATER RESOURCES

3.4.1 Affected Environment

Definition of Resource

Water resources include groundwater, surface water, wetlands, and floodplains. Surface water includes lakes, rivers, streams, and oceans that may be used as sources of potable water, provide habitat for aquatic and amphibious species, support commerce via navigation, and offer recreational opportunities.

The nation's waters are protected under the statutes of the Clean Water Act (CWA). The goal of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's water so that they can support "the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water." Under the CWA Section 402, it is illegal to discharge any point and/or nonpoint pollution sources into any surface water without a National Pollutant Discharge Elimination System (NPDES) permit (USEPA 2021). USEPA is charged with administering the NPDES permit program. Stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. This water flows either directly into surface waterways or storm sewers or can pond and causes flooding in some areas depending on the soil type and topography of the area.

Wetlands are considered sensitive habitats and are subject to federal regulatory authority under Section 404 of the CWA, Section 10 of the Rivers and Harbors Act of 1899, and EO 11990, Protection of Wetlands. Jurisdictional wetlands are defined by the U.S. Army Corps of Engineers (USACE) as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). Wetlands generally include swamps, marshes, bogs, and similar areas. Wetland functions include water quality improvement, groundwater recharge and discharge, filtering of pollutants, nutrient cycling, and erosion protection. In accordance with EO 11990, which extends to non-jurisdictional wetlands as well, construction within wetlands is to be avoided, where practicable. Actions that include construction in a wetland require a Finding of No Practicable Alternative to be prepared and approved by Headquarters, Air Materiel Command. All appropriate permits must be obtained from applicable regulatory agencies to address impacts on wetland areas and determine potential mitigation, if required.

In October 2004, the DoD issued UFC on low impact development (UFC 3-210-10) and most recently was updated on 1 March 2020. UFC 3-210-10 describes stormwater management strategies designed to maintain the hydrologic functions of a site and mitigate the adverse impacts of stormwater runoff from DoD construction projects. All DoD construction projects are required to be compliant with these low impact development building designs. Following UFC 3-210-10, Section 438 of the Environmental Independence Security Act of 2007 (42 U.S. Code 17094) has also been implemented by the DoD. This goes further with stricter stormwater runoff requirements for federal development projects. Section 438 requires federal agencies to develop facilities having a footprint that exceeds 5,000 square feet (ft²) (465 square meters) in a manner that maintains or restores the pre-development site hydrology to the maximum extent technically feasible. Agencies can meet the pre-development hydrology requirements in two ways: (1) managing on site the total volume of rainfall from the 95th percentile storm, or (2) managing on site the total volume of rainfall based on a site-specific hydrologic analysis through various engineering techniques.

If land-disturbing activities disturb 1 acre or more then the project will need stormwater coverage under the EPA NPDES Construction General Permit for Stormwater Discharges from Construction Activities, in compliance with the CWA. Any proposal for construction stormwater permit coverage requires the development and submittal of a Stormwater Pollution Prevention Plan with the application. The Permit also requires contractors to file a Notice of Intent certifying that they have met the Permit's eligibility requirements and that they will comply with the Permit's effluent limits and other requirements (USEPA 2017). Adherence to these requirements regulates stormwater discharges from the time construction begins through the project's lifespan to prevent additional degradation of existing flooding conditions and water quality.

Groundwater includes the subsurface hydrologic resources of the physical environment and is described in terms of depth to aquifer or water table, quality, and surrounding geologic consumption. Floodplains are low-lying areas adjacent to rivers, stream channels, or coastal waters. Areas within a floodplain are subject to periodic or infrequent inundation.

Existing Conditions

Surface Water

Wake lagoon covers approximately 1.5 square miles. The lagoon is shallow and averages 10 ft in depth but ranges from 1 to 12 ft in depth depending on the tidal condition. Depths at the mouth of the lagoon are about 15 ft. The lagoon includes an intertidal zone of reefs with rocky or coral substrate and large areas of sandy bottom. Water in the lagoon is often turbid due to the ocean and tidal currents mixing the sediments. There are also several brackish ponds on Wake Island near the southeasternmost portion of the lagoon.

Deep water surrounds the entire atoll. Inside the lagoon, the mean tide range is approximately 1.5 ft. Low tides have a stand of 2–3 hours (PRSC 2023). Tidal flow through the lagoon has been disrupted as the result of historical activities conducted at the atoll. The solid fill causeway connecting Wake Island with Wilkes Island completely obstructs any natural flow.

Re-contouring of the shoreline has likely caused the currents within the lagoon to shift. Based on *Notes on the Geography and Natural History of Wake Island* compiled by E.H. Bryan in 1959, the Tangier Expedition recorded depths of up to 15 ft in the lagoon in 1923 (Bryan 1959).

Individuals stationed on Wake Island in the 1970s and 1980s indicated that large expanses of living coral occurred in the lagoon, along with a diverse assemblage of invertebrates and fishes (USAF 2008); the lagoon can no longer be qualitatively described in such a manner.

Groundwater

Due to Wake Atoll's small area, flat topography, and substrate, groundwater resources are extremely limited. Shallow brackish groundwater lenses occur in the highly permeable sands. Drinking water on island is collected via 2 active wells and ran through three reverse osmosis units used for water treatment. Any fresh rainwater that infiltrates into the permeable substrate is less dense than the underlying brackish groundwater and remains segregated on top of the brackish water. Freshwater runoff in developed areas (runways, rooftops, roadways, and side) tends to drain rapidly into the lagoon or the Pacific Ocean (PRSC 2017). As a result, groundwater on the Atoll is brackish and non-potable. Drinking water on the island is collected via well and treated at an on-island using a reverse osmosis purification unit in a desalination plant (MDA 2015).

Stormwater

There is one stormwater detention pond located near the east end of the runway on Wake Atoll. There are localized areas where runoff is collected and conveyed through several outfalls on Wake Atoll. Outfalls 1, 2, and 3 are located on Wilkes Island and are associated with the bulk fuel storage containment areas. Each of these outfalls has a drainage area of approximately 1.5 acres. The valves of these outfalls are always kept closed and locked when not in use unless secondary containments require drainage of rainwater. Containments are checked daily, if rainwater is present it is inspected before released. Release records are kept on site and available upon request. The remaining outfalls are located on Wake Island. Outfall 4 is located at the west end of the runway and is not in a location where refueling occurs. This outfall discharges stormwater collected by a drain in the 8.5-acre grassy area on the western end of the runway directly into the lagoon. Outfall 5 is located south of the motor gasoline storage and transfer area. This outfall discharges stormwater collected by two drains into the wetland/lagoon in the 1500-

area. Outfall 6 is located west of the bulk fuel storage containment areas. The outfall discharges stormwater collected by three drains, which have a drainage area of approximately 1 acre, into a ditch in the wooded area west of the bulk fuel storage area. The conveyances to the outfall have valves that remain in the closed/locked position. Outfall 7 is associated with the discharge from the downtown area. Outfall 7 discharges stormwater collected by five drains in the downtown area, which have a drainage area of approximately 1 acre (PRSC 2017). Outfall 8 is used for the reverse osmosis water treatment unit reject located near the water treatment plant and is covered under NPDES permit MW0020338. WIA has authorization to discharge stormwater and allowable non-stormwater associated with industrial activity under EPA's 2021 Multi-Sector General Permit. NPDES permit ID MWR053000. WIA has a SWPPP as required by the NPDES permit.

Wetlands

In August of 2023, EA Engineering, Science, and Technology, Inc., PBC (EA) completed a wetland delineation in accordance with USACE *Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Hawai'i and Pacific Islands Region (Version 2.0)* (USACE 2012). EA's wetland scientists identified and mapped 17 wetlands, totaling 53.91 acres on Wake Island Atoll. The wetlands present on Wake Island Atoll were nearly exclusively dominated by pennis (Pennis acidula) and seaside purslane (Sesuvium portulacastrum) (EA 2024b).

A Jurisdictional Determination was not obtained from USACE for the wetlands delineated by EA. A Jurisdictional Determination establishes concurrence from USACE regarding the delineated boundaries and establishes whether the wetlands are regulated as Waters of the United States under the CWA. In 2012, an Approved Jurisdictional Determination was completed for a detention pond that is abutting the runway. The detention pond was determined to be non-jurisdictional and not a Waters of the United States (USACE 2012). No activities that could result in dredging or the placement of fill, or that could otherwise impact the wetland areas, should occur in or adjacent to the delineated areas to ensure that inadvertent impacts to jurisdictional wetlands do not occur. Any actions that could potentially impact the delineated wetlands will be coordinated with the Honolulu District of USACE prior to implementing the action.

Floodplains

Due to the lack of surface water, there are no 100-year floodplains on Wake Atoll; however, Wake Atoll is surrounded by the Pacific Ocean and is periodically subjected to storm surges.

3.4.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, conditions and operation of WIA would remain the same. There would be no impact to water resources on the installation.

Preferred Alternative

Surface Water

None of the proposed projects are located within the vicinity of surface water features on WIA.

There would be no long-term impacts to water resources from any of the proposed projects. Soil erosion may occur during ground-disturbing activities. To reduce impacts to stormwater, BMPs including the use of silt fences, mats, and hay bales would be utilized during demolition and construction. When possible, work will be halted during heavy rain to reduce the likelihood of runoff. All silt fences or other BMPs will be properly installed, monitored, and maintained during construction. The closest project to surface water is the electrical distribution repairs. Construction disturbance from the repairs will be minimal and appropriate BMPs will be used to ensure runoff into the Lagoon does not occur. Impacts would be localized and runoff outside of the immediate Project Area is not anticipated. WIA would require the implementation of a Stormwater Prevention and Pollution Plan if ground disturbing activities are 1-acre or greater. Because there are no surface water features in the immediate vicinity of the projects, no impacts to water quality during construction would occur.

Groundwater

There would be no long-term or short-term impacts to groundwater associated with the proposed projects. None of the projects would require an increased withdrawal of groundwater or require the installation of new wells within the installation. Facility Construction Project 180001 would not increase the demand of the current water production and storage systems. Additionally, excavation activities would occur at depths above groundwater levels.

Stormwater

During construction, short-term, negligible, direct adverse impacts to stormwater are expected. Soil erosion would occur during the ground-disturbing projects listed above, which could increase sedimentation in the stormwater management system. The BMPs listed in the surface water section above would be implemented. The construction of the wash rack would increase the amount of impervious surface on the base by approximately 1,000 ft² of land that will be converted from pervious to impervious area. The increase in impervious area is minor and would not significantly increase the amount of stormwater entering the system, creating long-term, negligible, direct adverse impacts; however, installation of wash rack will include discharge of water through oil water separator to the wastewater system thereby increasing storm water quality by eliminating the current wash rack system of run off/evaporation of wash water. Repairing the electrical distribution system would have no long-term impact to stormwater. Following the demolition projects, exposed areas will be seeded with grass creating long-term, negligible, direct beneficial impacts to stormwater would occur due to the decrease in impervious areas in these locations.

Wetlands

There would be no short-term or long-term impacts to wetlands from the Proposed Action. There are no wetlands located in the Project areas. The nearest wetland to a project is approximately 250 ft to the northwest of the Water Storage Tanks (Figure 8).

Floodplains

There is no 100-year floodplain at Wake Atoll; therefore, no short-term or long-term impacts to floodplains would occur. Table 10 includes the summary of impacts from the proposed action.

Table 10. Summary of Water Resources Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. Long-term, negligible adverse impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. No long-term impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. Long-term, beneficial impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.
200018	Replace Water Tank	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. No long-term impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.
70006	Demolition of Storage Facility (B1407)	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. Long-term, beneficial impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.
190005	Demolition of Air Traffic Control Tower (B1601)	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. Long-term, beneficial impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.
180020	Demolition of Electrical Power (B950)	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. Long-term, beneficial impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.
180021	Demolition of Storage Facility (B952)	No short-term or long-term impacts to surface water. No short-term or long-term impacts to groundwater. Short-term, minor, direct adverse impacts to stormwater. Long-term, beneficial impacts to stormwater. No short-term or long-term impacts to wetlands. No short-term or long-term impacts to floodplains.

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Figure 8. Wetlands Map

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3.5 SAFETY AND OCCUPATIONAL HEALTH

3.5.1 Affected Environment

Definition of Resource

A safe environment is one in which there is no, or there is an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Safety and Occupational Health addresses both workers' health and public safety during demolition activities.

Construction site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. The health and safety of on-site military and civilian workers are safeguarded by numerous DoD and USAF regulations designed to comply with standards issued by the OSHA and USEPA. These standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors.

Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself together with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of extremely noisy environments. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or human use area with potential explosive or other rapid oxidation process creates unsafe environments for nearby populations. Extremely noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

The Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program (Secretary of the Air Force 1996) implements the Occupational Safety and Health AFD (Secretary of the Air Force 1993) by outlining the AFOSH Program. The purpose of the AFOSH Program is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. In conjunction with the USAF Mishap Prevention Program, these standards ensure all USAF workplaces meet federal safety and health requirements. This instruction applies to all USAF activities.

Existing Conditions

The primary existing hazards at Wake Island are associated with aircraft refueling and base infrastructure support. Typical hazards include the handling and use of hazardous materials, exposure to noise from aircraft operations, and physical safety associated with the use of heavy equipment and support operations. These hazards are managed and controlled through implementation of safety programs, procedures, and the use of safety equipment (USASMDC 1999). Aircraft and pilots are additionally exposed to hazards associated with potentially dangerous bird/animal wildlife strikes in the local flying area of WIA (PRSC 2016).

The missile range extending from Wake Island toward the U.S. Army Kwajalein Atoll is under the jurisdiction of the Ronald Regan Ballistic Missile Defense Test Site. In the event of a

catastrophic event (e.g., natural disaster, hazardous materials spill, aircraft or missile mishap), Operations Plan 355-1, Wake Island Disaster Preparedness Plan, would be implemented (USASMDC 1999).

Construction Site Safety

All construction activities are conducted in a manner that does not pose any safety or health risks to workers, personnel, and bystanders. All staff including contractors performing the construction activities are required to submit and abide by a health and safety plan and are responsible for following OSHA regulations.

All inhabited new construction and major renovation work funded under the Military Construction process must include DoD Antiterrorism/Force Protection standards (per UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, 19 August 2020). Standoff distance must be coupled with appropriate building hardening to provide the necessary level of protection to personnel. These standards apply to all covered new and existing DoD buildings.

3.5.2 Environmental Consequences

No Action Alternative

Projects 150002, 70006, 190005, 180020, and 180021 are no longer in use, dilapidated, are unsafe to enter and contain ACMs, LBPs, and PCBs. Under the No Action Alternative, the buildings would continue to deteriorate creating long-term, minor, direct adverse impacts to the safety or personnel at WIA. The electrical distribution repair project and water tank replacement (Projects 190009 and 200018) would also create long-term, minor, direct adverse impacts to health and safety under the No Action Alternative. The electrical system would remain out of code creating a safety risk to electrical technicians maintaining the system and to fire fighters in the event of an emergency. The four water tanks that will be replaced have collapsed or removed roofs making them not useful for potable water.

Preferred Alternative

Construction projects create safety risks for both installation staff and construction workers. However, these risks are reduced because USAF and OSHA safety practices and BMPs would be implemented during the construction period. All active construction areas would be fenced to deter unauthorized persons from entering the site. Contractors would be required to submit safety plans prior to construction activities commencing. In addition, construction workers would be required to perform daily inspections of equipment and store all fuels and other materials in appropriate containers. Construction vehicles and equipment would be locked or secured when not in use. With these practices implemented, impacts to health and safety during the construction period would result in short-term, negligible, direct adverse impacts.

All of the buildings proposed to be demolished are outdated and in poor condition. The demolition projects and repair of the electrical distribution project (Projects 190009, 150002, 200018, 70006, 190005, 180020, and 180021) would create long-term, minor, direct beneficial impacts to health and safety. The existing electrical utilities are essential to powering critical facilities. Clean, stable power is essential to ensuring the mission of Wake Island continues uninterrupted. The electrical systems would be brought up to code and would provide a safe working environment to complete the overall mission. The water tank replacement project

(Project 200018) and repair of the electrical distribution (Project 190009) would create long-term moderate, direct beneficial impacts to health and safety by replacing four dilapidated portable water storage tanks that currently cannot be used, with new tanks that will provide potable water to WIA and by providing more reliable power. The wash rack installation (Project 180001) would create long-term, minor, direct beneficial impacts to safety by providing a permanent covered wash rack instead of the current portable pressure washer system.

Table 11. Summary of Safety and Occupational Health Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	Short-term, negligible, direct adverse impacts. Long-term, minor, direct beneficial impacts.
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	Short-term, negligible, direct adverse impacts. Long-term, moderate, direct beneficial impacts.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	Short-term, negligible, direct adverse impacts. Long-term, minor, direct beneficial impacts.
200018	Replace Water Tank	Short-term, negligible, direct adverse impacts. Long-term, moderate, direct beneficial impacts.
70006	Demolition of Storage Facility (B1407)	Short-term, negligible, direct adverse impacts. Long-term, minor, direct beneficial impacts.
190005	Demolition of Air Traffic Control Tower (B1601)	Short-term, negligible, direct adverse impacts. Long-term, minor, direct beneficial impacts.
180020	Demolition of Electrical Power (B950)	Short-term, negligible, direct adverse impacts. Long-term, minor, direct beneficial impacts.
180021	Demolition of Storage Facility (B952)	Short-term, negligible, direct adverse impacts. Long-term, minor, direct beneficial impacts.

3.6 HAZARDOUS MATERIALS AND WASTE

3.6.1 Affected Environment

Definition of Resource

Hazardous materials and hazardous waste refer to substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act and the Solid Waste Disposal Act, as amended by Resource Conservation and Recovery Act (RCRA). Hazardous materials include any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that may cause an increase in mortality, a serious irreversible illness, incapacitating reversible illness, or pose a substantial threat to human health or the environment. Hazardous wastes that are regulated under RCRA include any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that exhibit one or more of the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity, or are listed as a hazardous waste under 40 CFR §261, *Identification and Listing of Hazardous Waste*.

AFPD 32-70, *Environmental Quality*, and the AFI 32-7000 series incorporate the requirements of all federal regulations and other AFIs and DoD Directives for the management of hazardous materials, hazardous wastes, and special hazards.

Existing Conditions

Throughout the history of military use of Wake Atoll, hazardous materials have been used and discarded in connection with mission support activities.

Hazardous Materials

Current fuel storage areas at Wake Atoll is used primarily for aircraft refueling and power plant generators (PRSC 2017). They also contain small quantities of lubricants, gasoline, and diesel stored in bulk for base operations and infrastructure support. These materials are transported by ship to WIA and transferred to the on-site storage facilities. Potential spills are managed and minimized through implementation of existing Spill Prevention, Control, and Countermeasures Plans (MDA 2007). All hazardous materials transferred to, utilized, and stored on WIA will be in compliance with the WIA Hazardous Materials Management Plan (HMMP).

Hazardous Waste

There are several satellite accumulation points located around the installation where waste is temporarily stored. The Solid Waste Accumulation Area (SWAA) only accepts common residential waste that can be incinerated. A Waste Analysis Plan includes a strategy for barging all waste generated from projects and receive Air Force approval to ensure no waste to include but not limited to, Hazardous Material, Hazardous Waste, Construction and Demolition Debris, and Asbestos is deposited at the SWAA or on WIA. All hazardous waste is moved from the satellite accumulation sites to a main hazardous waste accumulation site to await transportation off-site via barge. All liquid waste is stored on spill pallets. Types of waste generated include small quantities of used solvents, paints, cleaning fluids, ACM (generated during building maintenance activities), and pesticides. Waste may be placed in DOT-E-9618-approved polyethylene overpack containers for added security until shipment for treatment or disposal. Hazardous waste shipments are normally consigned to the Wake Island supply barge for shipment to Hawaii. (USASMDC 2002).

In 1986, a sampling program was performed to identify PCB containing transformers (over 500 parts per million [ppm] PCBs), PCB-contaminated transformers (50 to 500 ppm PCBs), and PCB capacitors. Between 1986 and 1993, 12 transformers with PCB concentrations greater than 50 ppm were removed. In 1994, four old transformers were discovered in a Japanese bunker on south Wake Island. The final disposition of the four transformers is unknown.

In September and October 1997, the USAF initiated a PCB transformer survey to ensure compliance with the Toxic Substances Control Act of 1976 and 40 CFR §761. The principal objective of the transformer survey was to delineate those transformers containing PCB dielectric fluid, and to safely remove and properly dispose of the units. A complete data review was performed as an initial investigative strategy. Eighty-one transformers were identified on WIA that necessitated characterization (USAF 2008). The analysis showed that all transformers sampled between 23 September and 6 October 1997 were below the PCB regulatory threshold of 50 ppm (USAF 2008) and required no corrective action. Today, PCB collection and storage is limited to old light ballasts.

The presence of LBP is almost certain in buildings constructed on Wake Island prior to the 1978 DoD LBP ban. Most painted surfaces are maintained so that this material is not a health threat.

All buildings with a construction date of 1980 or earlier, which may contain LBP, have been identified (USAF 2008). Today, only project-specific surveys are being conducted. In 2014, a total of 7,811 pounds of LBP was abated and packaged to be barged to a proper disposal facility in the Northwest Continental United States (PRSC 2017).

Table 12 includes the year of building construction for buildings proposed to be demolished or repaired. Buildings constructed prior to 1978 have the potential to contain LBP.

Table 12. Construction Year of Buildings Associated with Proposed Projects

Project Number	Facility	Construction Year
150002	Building 1509	1970
200018	N/A	1954-1971
70006	Building 1407	1972
190005	Building 1601	1949
180020	Building 950	1962
180021	Building 952	1959

Notes:

N/A = not applicable

3.6.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no construction, demolition, or repair of facilities throughout WIA. There would be no change in the number of hazardous materials used or the amount of hazardous materials generated. Therefore, no impacts to hazardous materials and waste would occur.

Preferred Alternative

During the construction phase of each project, hazardous materials would be used and would include fuels, petroleum, oil, and lubricants, and hydraulic fluid. Equipment spills or leaks would be managed per Spill Prevention Control and Countermeasure Plans and other applicable hazardous materials and waste guidance in order to minimize potential impacts to human health and the environment. All hazardous materials stored on WIA would be managed per the HMMP. In general, all of the projects would generate small amounts of hazardous material and would create short-term, negligible, direct adverse impacts.

Construction projects (180001 and 190009) would require excavation of soils. The projects are in a location that has PCB contamination. Depth of contamination is approximately 8 ft below ground surface (USAF 2008). Any excavation in the area will require the dig permit to be reviewed by 611th CES Environmental and by the Air Force Civil Engineer Center (AFCEC) Remedial Action Manager. Any excavated soils, particularly on the north side of Parakeet Steet, will need to be tested for PCBs. Soil stockpiles would be analyzed for contaminants and disposed of at a facility permitted to accept hazardous waste. Construction project 190009 intersects Installation Restoration Program site FT04 - Fire Training Area No. 1 for approximately 370 ft. Oil, solvents, hydraulic fluid, and fuel were historically burned here. The site was initially closed with No Further Remedial Action Planned in 2006. In 2019 and perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), both per- and polyfluoroalkyl substances (PFAS), were both detected in surface soil samples during the investigation. An expanded site investigation was recommended at the site to further delineate PFOS, PFOA, and

perfluorobutane sulfonic acid (PFBS) contamination at the site. The 2022 expanded site investigation included soil and groundwater sampling for PFAS. Based on the results for FT04, further site evaluation in the remedial investigation phase was recommended to characterize the nature and extent of PFAS. PFAS investigation is ongoing at the site (EA 2024a).

Construction Project 190009 also has the potential to contain PCBs within the transformers being replaced. An inspection of the transformer will be performed to see if they are labeled or stamped "PCB Free." If any of the 29 transformers being replaced do not state "PCB Free" then they must be sampled for PCB. If lab results show PCBs 50 ppm or greater they are regulated under Toxic Substances Control Act of 1976 and do not have a RCRA waste code. 611th CES would be contracted prior to starting the project and the transformers will be stored and disposed of in the following manner:

- PCB equipment must not be stored for more than 30 days (if possible).
- Leaking PCB equipment would be stored in a suitable non-leaking container or over pack-drum with enough sorbent material to soak up all fluid released.
- Placement of "CAUTION contains PCBs" labels will be on all items and doorways.
- The storage facility will be leak proof, preventing rainfall from encountering the PCB containing items.
- The storage facility floor will be relatively impervious with a 6-inch-high curb and no drains or other openings.
- Contained volume must equal at least twice the volume of the largest item stored or 1/4 the volume of all equipment.
- The storage area floor will be above the 100-year floodplain.
- If PCB equipment is to be shipped, it must be transported under a hazardous waste manifest and hazardous material waybill.

PCBs must be disposed of per 40 CFR §761.60.b. Repair of the electrical distribution system would involve short-term use of construction equipment that would generate small amounts of hazardous waste. Short-term, minor, direct impacts to hazardous materials and wastes would occur for the repair activities. Replacing transformers that may contain PCBs, will have long-term, direct beneficial impacts to hazardous materials and wastes.

Building demolition projects (Projects 150002, 70006, 190005, 180020, and 180021) all contain LBP and ACM. Demolition debris containing hazardous substances such as ACM, LBP, and PCBs would be transported from Wake Atoll to Hawaii. According to Hawaii regulations, ACM waste may be disposed of at permitted landfills. A hazardous waste determination using the Toxicity Characteristic Leaching Procedure must be conducted for LBP waste. Non-hazardous LBP waste (less than 5 ppm) may be disposed of at permitted landfills. Hazardous LBP waste (greater than or equal to 5 ppm) must be disposed of at a hazardous waste landfill. PCBs must be disposed of per 40 CFR §761.60.b. Other environmentally hazardous materials present in the buildings to be demolished include fluorescent bulbs and ballasts, mercury containing thermostats and vapor lamps, air conditioning units, smoke detectors, and chillers. Demolition and construction repair projects that have ACM, LBP, and PCBs present and are removed, will have long-term, minor, direct beneficial impacts to hazardous materials and wastes. Demolition projects (Projects 150002, 70006, 180020, and 180021) are wholly located within the Land Use

Control Management Plan Site ST032F Runway staging area underground storage tanks (USAF 2023). Four inactive underground storage tanks of unknown capacities used by Pan American to refuel aircrafts are located near the site. Any excavation will require a dig permit reviewed by 611th CES Environmental and by AFCEC Remedial Project Manager.

Project 180001 will use an oil/water separator and ensure that proper storage, handling, and disposal methods of hazardous materials and waste would occur; therefore, no long-term impacts are expected. Table 13 includes the summary of impacts from the proposed action.

Table 13. Summary of Hazardous Materials and Waste Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	Short-term, negligible, direct adverse impacts due to potential contaminated soil and heavy equipment usage. No long-term impacts.
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	Short-term, negligible, direct adverse impacts due to potential of contaminated soil and PCBs, and heavy equipment usage. Long-term, minor beneficial impacts.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	Short-term, minor, direct adverse impacts due to potential of LBP, PCBs and ACM, and heavy equipment usage. Long-term, minor, direct beneficial impacts.
200018	Replace Water Tank	Short-term, negligible, direct impacts due to heavy equipment usage. No long-term impacts.
70006	Demolition of Storage Facility (B1407)	Short-term, minor, direct adverse impacts due to potential of LBP, PCBs and ACM, and heavy equipment usage. Long-term, minor, direct beneficial impacts.
190005	Demolition of Air Traffic Control Tower (B1601)	Short-term, minor, direct adverse impacts due to potential of LBP, PCBs and ACM, and heavy equipment usage. Long-term, minor, direct beneficial impacts.
180020	Demolition of Electrical Power (B950)	Short-term, minor, direct adverse impacts due to potential of LBP, PCBs and ACM, and heavy equipment usage. Long-term, minor, direct beneficial impacts.
180021	Demolition of Storage Facility (B952)	Short-term, minor, direct adverse impacts due to potential of LBP, PCBs and ACM, and heavy equipment usage. Long-term, minor, direct beneficial impacts.

Notes:

ACM = asbestos containing materials

LBP = lead based paint

PCB = polychlorinated biphenyl

3.7 BIOLOGICAL/NATURAL RESOURCES

3.7.1 Affected Environment

Definition of Resource

Biological resources include vegetation, wildlife, threatened and endangered species, and their associated habitats. Specific concerns relating to biological resources consist of declines in

species diversity, impacts on threatened and endangered species, and degradation of wetlands and riparian zones.

Federal status as a threatened or endangered species is derived from the Endangered Species Act (ESA) of 1973. Under the ESA, species may be designated as federally endangered or federally threatened depending on the likelihood of the species becoming extinct throughout all or a significant portion of its range (U.S. Fish and Wildlife Service [USFWS] 2021). A status of federal candidate can also be applied under the ESA. Candidate species receive no statutory protection under the ESA, but USFWS encourages conservation efforts for these species because they may warrant future protection under the ESA (USFWS 2021). Section 7(a)(2) of the ESA requires federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any listed endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. Federal agencies are required to consult with USFWS or the National Marine Fisheries Service if an action may affect a listed species. In addition to federal protection, certain species are given protection under state law. Species may be designated as state threatened or endangered and not federally protected.

The Migratory Bird Treaty Act of 1918 (MBTA) established federal responsibilities for protecting nearly all migratory species of birds, eggs, and nests. Bird migration is defined as the periodic seasonal movement of birds from one geographic region to another, typically coinciding with available food supplies or breeding seasons. More than 1,000 species are protected under the MBTA. USFWS is responsible for administering the provisions of the act and maintaining a list of bird species protected under MBTA.

The Magnuson-Stevens Fishery Conservation and Management Act that governs marine fisheries management in U.S. federal waters. First passed in 1976, the Magnuson-Stevens Fishery Conservation and Management Act fosters the long-term biological and economic sustainability of marine fisheries. Its objectives include preventing overfishing, rebuilding overfished stocks, increasing long-term economic and social benefits, ensuring a safe and sustainable supply of seafood, and protecting habitat that fish need to spawn, breed, feed, and grow to maturity.

Existing Conditions

Wake Atoll is a biologically diverse group of islands that includes arthropods, small mammals, marine mammals, over 30 species of birds, and over 200 species of plants. A comprehensive review of biological resources is provided in Section 2.3.3 and Appendix C of the WIA Integrated Natural Resources Management Plan (INRMP) and is not repeated here (PRSC 2023).

Waters surrounding the Atoll are part of the Pacific Remote Islands Marine National Monument. This USFWS approved document establishes guidelines to support and maintain healthy recreational activities while protecting the Atolls' terrestrial and marine ecosystems for many years to come. The monument boundaries at Wake Atoll, include the Atoll and the surrounding waters up to 200 nautical miles.

Vegetation

The environmental conditions conducive to developing complex and varied plant associations are lacking on Wake Atoll. The lack of soils, soil nutrients, and organic matter is made more

inhospitable by rapid drainage through the porous calcareous substrate in undeveloped areas. With minimal topographic relief, there is little opportunity for the development of microclimatic conditions. High temperatures and limited rainfall keep the island in a perpetual state of drought. An average annual rainfall of 35.8 inches provides little drought relief (Weatherbase 2015). Combined with harsh ambient environmental conditions, the natural vegetation of Wake Atoll has been subjected to some extreme human disturbance as well as periodic natural disturbances.

Human disturbance, including the construction of WIA and associated American and Japanese fortifications and bombardment by American planes during WWII, has ravaged the landscape since the early 20th century. Seven major natural ecosystems are present on WIA: *Tournefortia* forest, *Casuarina* forest, ruderal vegetation, *Pemphis* shrubs, wetland, *Cordia* forest, and open water. Surveys conducted in 2019 in combination with past survey data demonstrate that the flora of Wake Atoll is highly invaded. Of the 229 taxa on the island, only 21 are native (Hathaway et al. 2021). There is one plant species endemic to Wake Island, the Wake Island cotton (*Gossypium stephensii*), and the remainder of the native plant species found on WIA occur in various regions of the Pacific Islands. According to Hathaway et al. (2021) the Wake Island cotton was abundant on both Wake and Peale Islands and on the south part of Wilkes Island. It aggressively colonizes disturbed sites. Another native species, Polynesian heliotrope (*Heliotropium anomalum*), was found in only two locations on Wake Island. A complete list of species present on WIA is available in Table 14-1 in Appendix C of the INRMP (PRSC 2023). During the site reconnaissance in August 2023 vegetation was surveyed in the vicinity of each of the projects in the Proposed Action as shown on Table 14.

Table 14. Vegetation in the Vicinity of Each Proposed Project

Project Number	Project Description	Vegetation
Facility Construction Projects		
180001	Wash Rack Installation	Graveled and concrete areas. *Bermuda grass (<i>Cynodon dactylon</i>), morinda trees (<i>Morinda citrifolia</i>), and *ironwood (<i>Casuarina equisetifolia</i>)
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	Graveled and concrete areas. * Tangantangan (<i>Leucaena leucocephala</i>), *white beggar-tick (<i>Bidens alba</i>), *hairy horseweed (<i>Conyza bonariensis</i>), bayhops (<i>Ipomoea pes-caprae</i>), branched porterweed (<i>Stachytarpheta australis</i>), *Bermuda grass and *ironwood
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	Graveled areas. *Bermuda grass
200018	Replace Water Tank	Graveled and concrete areas. * Tangantangan *white beggar-tick, hurricane grass (<i>Fimbristylis cymosa</i>), bayhops (<i>Ipomoea pes-caprae</i>), branched porterweed, *Bermuda grass, and *ironwood
70006	Demolition of Storage Facility (B1407)	Graveled and concrete areas. *Bermuda grass, morinda trees, and *ironwood
190005	Demolition of Air Traffic Control Tower (B1601)	Graveled and concrete areas. *white beggar-tick and *Bermuda grass
180020	Demolition of Electrical Power (B950)	Graveled areas. *Ironwood
180021	Demolition of Storage Facility (B952)	Graveled areas. *Ironwood

Project Number	Project Description	Vegetation
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Notes:

*Invasive species

Wildlife

Wildlife on Wake Atoll is dominated by a diversity of seabirds, migratory shorebirds, and waterfowl. Wilkes and Peale islands support large numbers of resident and migratory seabirds and visiting winter resident shorebirds and waterfowl. Prior to the presence of humans on Wake Atoll, the islands likely supported a diverse assemblage of seabirds and shorebirds. More than 30 species of resident, migrant, visitor, vagrant, accidental, and exotic birds have been observed on Wake Atoll, including seabirds, shorebirds, land birds, and water birds (PRSC 2017).

There are no indigenous mammals on Wake Atoll. Historically, domesticated cats (*Felis catus*) were kept by island residents and naturalized feral cats were common on all three islands. A cat eradication program was funded in 2000 and in 2021 no cats were observed on WIA (PRCS 2023). Various species of rat have been residents of the island, and it currently has a large Polynesian rat (*Rattus exulans*) population despite eradication efforts conducted in May 2012 (Brown et al. 2013). Currently a rodent eradication project is occurring and is in the post baiting monitoring phase of the project (Personal communication, M. Evans-Shontofski, August 22, 2024).

Reptiles and amphibians present on WIA include three species of geckos, the mourning gecko (*Lepidodactylus lugubris*), house gecko (*Hemidactylus frenatus*), and stump-toes gecko (*Gehyra mutilata*), and two species of skinks, the azure-eyed skink (*Emoia cyanura*) and the snake-eyed skink (*Cryptoblepharus boutonii*) (Bryan 1959; Fritts et al., no date). Green sea turtles (*Chelonia mydas*) have also been spotted regularly in the nearshore ocean and lagoon waters at Wake Atoll (PRSC 2017).

Invertebrates present on Wake Atoll include terrestrial strawberry hermit crabs (*Coenobita perlata*), and several other species of hermit crabs which occur in tidal pools. Two species of land crabs (*Geograpsus crinipes* and *Geograpsus* sp.) are also present, where they dig burrows in casuarina and tournefortia forests (PRSC 2023).

Marine resources include coral reefs off the coast of WIA, which are protected under EO 13089, Coral Reef Protection, which requires federal agencies to “identify their actions that may affect U.S. coral reef ecosystems; utilize their programs and authorities to protect and enhance the conditions of such ecosystems; and to the extent permitted by law, ensure that any actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems” (MDA 2007). The lagoon supports a large population of fish, and the surrounding reefs host a diverse assemblage of reef fish. Nearshore fish important for food and recreational purposes include peacock hind (*Cephalopholis argus*), bonefish (*Albula vulpes*), and jacks (*Carangidae*). Sharks are present (MDA 2007). Also present in the region are three ESA-listed coral species, *Acropora globiceps*, *Acropora retusa*, and *Acropora speciose*, of which *Acropora globiceps* and *Acropora retusa* have been confirmed in to exist in multiple locations along the southern portion of Wake Atoll (USFWS 2017).

Marine mammals are protected under the Marine Mammal Protection Act of 1972 and may occur in the open ocean area surrounding Wake Atoll and between Wake and Kwajalein Atolls. Marine mammals that may be present include several species of cetaceans: the blue whale (*Balaenoptera musculus*), the finback whale (*Balaenoptera physalus*), the humpback whale (*Megaptera novaeangliae*), Cuvier’s beaked whale (*Ziphius cavirostris*), and the sperm whale (*Physeter catodon*). Bottlenose (*Tursiops truncatus*) and spinner dolphins (*Stenella longirostris*) may also be present around Wake Atoll. Hawaiian monk seals (*Monachus schauinslandi*) have also previously been sighted at Wake Island on occasion (MDA 2007).

Threatened and Endangered Species and Essential Fish Habitat

Federally listed threatened and endangered terrestrial biota on Wake Atoll are limited to migratory seabirds and shorebirds. There are no other exclusively terrestrial biota, either plant or animal, federally listed as threatened or endangered under the ESA, currently known or reported from Wake Atoll (PRSC 2023). These birds are classified as “migratory” and are protected under the MBTA (16 U.S. Code 703-712). Table 15 lists the migratory birds that have been documented on Wake Atoll by the 2023 INRMP and supporting studies, as well as their status. Species listed by USFWS as a Bird of Conservation Concern (USFWS 2008) or by the International Union for Conservation of Nature (2015) as Vulnerable Near Threatened are also included in the table. The Pacific reef heron was added to the list based on observations of the pied morph of the species on the shore of Peale Island in October 2013.

Table 15. Migratory Birds Documented on Wake Atoll

Scientific Name	Common Name	Status
<i>Actitis hypoleucos</i>	Common sandpiper	MBTA
<i>Anas acuta</i>	Northern pintail	MBTA
<i>Anas crecca</i>	Green-winged teal	MBTA
<i>Anas clypeata</i>	Northern shoveler	MBTA
<i>Anas penelope</i>	Eurasian wigeon	MBTA
<i>Anous minutus</i>	Black noddy	MBTA
<i>Anous stolidus</i>	Brown noddy	MBTA
<i>Arenaria interpres</i>	Ruddy turnstone	MBTA
<i>Anas acuta</i>	Pintail duck	MBTA
<i>Anas querquedula</i>	Garganey	MBTA
<i>Asio flammeus</i>	Short-eared owl	MBTA
<i>Aythya fuligula</i>	Tufted duck	MBTA
<i>Branta hutchinsii leucopareia</i>	Aleutian cackling goose	MBTA
<i>Bubulcus ibis</i>	Cattle egret	MBTA
<i>Bucephala clangula</i>	Common goldeneye	MBTA
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	MBTA
<i>Calidris alba</i>	Sanderling	MBTA
<i>Calidris alpina</i>	Dunlin	MBTA
<i>Calidris melanotos</i>	Pectoral sandpiper	MBTA
<i>Charadrius mongolus</i>	Lesser sand plover	MBTA
<i>Egretta sacra</i>	Pacific reef heron	MBTA
<i>Eudynamis taitensis</i>	Long-tailed cuckoo	MBTA
<i>Gygis alba</i>	White tern	MBTA
<i>Fregata ariel</i>	Lesser frigatebird	MBTA
<i>Fregata minor</i>	Great frigatebird	MBTA
<i>Gallinago gallinago</i>	Common snipe	MBTA
<i>Haliaeetus spp.</i>	Sea-eagle	MBTA
<i>Larus atricilla</i>	Laughing gull	MBTA

Scientific Name	Common Name	Status
<i>Larus glaucescens</i>	Glaucous-winged gull	MBTA
<i>Limnodromus scolopaceus</i>	Long-billed dowitcher	MBTA
<i>Milvus migrans</i>	Black kite	MBTA
<i>Numenius phaeopus</i>	Whimbrel	MBTA
<i>Numenius tahitiensis</i>	Bristle-thighed curlew	MBTA, BCC, IUCN Vulnerable
<i>Oceanodroma leucorhoa</i>	Leach's storm-petrel	MBTA
<i>Onychoprion fuscatus</i>	Sooty tern	MBTA
<i>Onychoprion lunata</i>	Gray-backed tern	MBTA
<i>Philomachus pugnax</i>	Ruff	MBTA
<i>Pterodroma nigripennis</i>	Black-winged petrel	MBTA
<i>Phaethon rubricauda</i>	Red-tailed tropicbird	MBTA
<i>Phaethon lepturus</i>	White-tailed tropicbird	MBTA
<i>Phoebastria immutabilis</i>	Laysan albatross	MBTA, BCC, IUCN Near Threatened
<i>Phoebastria nigripes</i>	Black-footed albatross	MBTA, BCC, IUCN Near Threatened
<i>Pluvialis dominica</i>	Pacific golden plover	MBTA
<i>Puffinus auricularis newelli</i>	Newell's shearwater	MBTA, FT
<i>Ardenna griseus/tenuirostris</i>	Sooty shearwater	MBTA
<i>Puffinus nativitatis</i>	Christmas shearwater	MBTA, BCC
<i>Ardenna pacificus</i>	Wedge-tailed shearwater	MBTA
<i>Sula dactylatra</i>	Masked booby	MBTA
<i>Sula leucogaster</i>	Brown booby	MBTA
<i>Sula sula</i>	Red-footed booby	MBTA
<i>Tringa brevipes</i>	Gray-tailed tattler	MBTA
<i>Tringa incana</i>	Wandering tattler	MBTA
<i>Tringa melanoleuca</i>	Greater yellowlegs	MBTA

Sources: Rauzon et al. 2008; IUCN 2015.

Notes:

BCC = Bird of Conservation Concern

FT = federally threatened

IUCN = International Union for Conservation of Nature

MTBA = Migratory Bird Treaty Act of 1918

Federally endangered and threatened species using marine habitats occur within the lagoon and waters surrounding Wake Atoll. Table 16 lists species of concern and their current federal status that have been documented on Wake Atoll in the 2023 INRMP and supporting studies. The federally threatened green sea turtle (*Chelonia mydas*) is regularly sighted in the waters surrounding Wake Island (PRSC 2023).

Table 16. Wake Atoll Protected Species and Species of Concern

Scientific Name	Common Name	Status
<i>Puffinus auricularis newelli</i>	Newell's shearwater	FT
<i>Bolbometopon muricatum</i>	Bumphead parrotfish	SOC
<i>Cheilinus undulatus</i>	Humphead wrasse	SOC
<i>Chelonia mydas</i>	Green sea turtle	FE
<i>Eretmochelys imbricata</i>	Hawksbill sea turtle	FE
<i>Monachus schauinslandi</i>	Hawaiian monk seal	FE
<i>Tridacna maxima</i>	Giant clam	Low Risk Conservation Dependent
<i>Acropora retusa</i>	No common name	FT
<i>Acropora globiceps</i>	No common name	FT
<i>Sphyrna lewini</i>	Scalloped hammerhead shark	FT
<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	FT
<i>Manta birostris</i>	Giant manta ray	FT

Sources: PRCS 2023

Notes:

FE = federally endangered

FT = federally threatened

SOC = species of concern

The Western Pacific Regional Fishery Management Council has authority over fisheries seaward of state/territorial waters of Hawaii and the U.S. Pacific Islands, including Wake Island. The marine water column from the surface to a depth of 1,000 meters (3,000 ft) from the shoreline to the outer boundary of the Exclusive Economic Zone (the zone where the U.S. and other coastal nations have jurisdiction over natural resources; 230 miles), and the seafloor from the shoreline out to a depth of 100 meters (300 ft) around Wake Island have been designated as essential fish habitat (EFH; Western Pacific Regional Fishery Management Council 2009a and 2009b). The water column and bottom of the nearshore Pacific Ocean surrounding Wake Atoll are designated as EFH and support various life stages for the management unit species identified under the Western Pacific Regional Fishery Management Council Fishery Ecosystem Plans for Pacific Pelagic Fisheries of the Western Pacific Region and Pacific Remote Island Areas.

3.7.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impact to biological resources at WIA. Present conditions would continue.

Preferred Alternative

Vegetation

Short-term, negligible, direct adverse impacts to vegetation would occur during grading for construction and demolition activities. Vegetation impacts would be in previously disturbed areas with minimal vegetative cover. Following construction, damaged and bare areas would be reseeded and re-established with vegetation.

Long-term, minor, direct beneficial impacts to vegetation would occur from the removal of invasive vegetation species and existing buildings and along the electrical distribution line. Table 14 shows the dominant vegetation in the vicinity of each Project along with which ones are invasive. The vegetation near each Project predominately consists of invasives. Removal of the

invasive plant species and the buildings will create open space on Wake Island for native plant communities to become re-established in areas previously disturbed.

Construction Project 180001 is in an area that consists of concrete, graveled areas, and one native shrub species (morinda tree). Because most of the plants in the vicinity of the project are invasive and the area is disturbed, the project would result in short-term, minor, direct adverse impacts to vegetation and long-term, negligible, direct adverse impacts.

Wildlife

During a site visit in August 2023, an informal assessment of bird activity, wildlife species, and threatened and endangered species was completed. The assessment involved documenting species in the area at the time of the visual site inspection of the Preferred Alternative. The presence of the following bird species was noted: brown noddy (*Anous stolidus*), fairy tern (*Sternula nereis*), white-tailed tropicbird (*Phaethon lepturus*) and red-tailed tropicbird (*Phaethon rubricauda*). No other wildlife species or threatened and endangered species were observed.

Short-term, negligible, direct adverse impacts to wildlife would occur during the construction and demolition period of all the projects. Negligible impacts would result from the presence and noise associated with construction equipment. The project areas do not provide high quality wildlife habitat. However, construction equipment could negatively impact roosting habitat for birds by displacement and disruption. Tree trimming/removal activities would occur outside peak nesting seasons from July to August and January to February (PRSC 2023).

There would be no long-term impacts following the construction period as noise levels and use would return to present conditions. Construction Project 180001 would result in no long-term impacts to wildlife from as it is located in a disturbed area that is not conducive for wildlife presently and would result in minimal noise levels only during operation.

Demolition of the dilapidated buildings would result in long-term, minor, direct beneficial impacts to wildlife since the building removal would create open space on Wake Island for native plant communities to become re-established in areas previously disturbed providing more habitat for wildlife.

Threatened and Endangered Species and Essential Fish Habitat

Short-term, minor, direct impacts to birds listed under the MBTA; and long-term, minor, direct beneficial impacts to birds listed under the MBTA are expected from the Proposed Action. No impacts to threatened or endangered species, critical habitat, or EFH are expected from the Proposed Action.

The Proposed Action would result in short-term, minor, direct adverse impacts to birds listed under the MBTA, and while no incidental takes are anticipated, any incidental takes would not be in violation of the MBTA, per the U.S. Department of the Interior Solicitor's Opinion M-37050, The MBTA Does Not Prohibit Incidental Take, dated 22 December 2017. Construction equipment could negatively impact roosting habitat for birds by displacement and disruption. However, tree trimming activities would occur outside typical nesting seasons from July to August and January to February (PRSC 2023). Birds would be encouraged to exit dilapidated

buildings prior to demolition. No long-term impacts to birds are expected for Projects 180001 and 190009. For all the demolition projects long-term, minor, direct beneficial impacts to birds are expected since the building removal would create open space on Wake Island for native plant communities and would create additional open roosting habitat.

During implementation of the Proposed Action, it is not anticipated that an increase in barge traffic would result from the Proposed Action; therefore, no impacts to listed species, critical habitat, or EFH would occur from barge traffic.

Soil erosion would occur during the ground-disturbing projects listed above, which could increase sedimentation in the stormwater management system. To reduce impacts to stormwater, BMPs including the use of silt fences, mats, and hay bales would be utilized during demolition and construction. When possible, work will be halted during heavy rain to reduce the likelihood of runoff. All silt fences or other BMPs will be properly installed, monitored, and maintained during construction. Construction equipment will be inspected prior to use each day to ensure there are no leaks and the equipment will be stored in a designated staging area to ensure if a leak or spill occurs it cannot run off-site. Refueling equipment will take place at least 50 ft from water in a containment area or on an impervious surface. Impacts would be localized and runoff outside of the immediate vicinity is not anticipated; therefore, there would be no effect to species or EFH from construction runoff or sedimentation.

During construction of the Proposed Action, short-term, impacts to noise would occur and following construction, ambient noise levels would return to pre-project levels. Operation of the new wash rack facility may contribute to noise at the base; however, impacts would be negligible as aircraft operation would remain the dominant source of ambient noise. There are no listed species in the immediate vicinity and no work occurs in marine habitat; therefore, there would be no effects to species from noise.

The Proposed Action does not occur on a beach or include any potential nesting habitat for sea turtles; therefore, exterior lighting will have no effect on listed species.

Based on the impact analysis and with implementation of the BMP's, the 611th CES determined that the Proposed Action would have no effect on any federally listed marine species or EFH. A full report evaluating the potential effects to listed species is provided in Appendix C.

Table 17. Summary of Biological Resources Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	Short-term, negligible, direct adverse impacts to vegetation. Long-term, negligible, direct adverse impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. No long-term, impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	Short-term, negligible, direct adverse impacts to vegetation. Long-term, minor, direct beneficial impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. No long-term, impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	Short-term, negligible, direct adverse impacts to vegetation. Long-term, minor, direct beneficial impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. Long-term, minor, direct beneficial impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.
200018	Replace Water Tank	Short-term, negligible, direct adverse impacts to vegetation. Long-term, minor, direct beneficial impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. Long-term, minor, direct beneficial impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.
70006	Demolition of Storage Facility (B1407)	Short-term, negligible, direct adverse impacts to vegetation. Long-term, minor, direct beneficial impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. Long-term, minor, direct beneficial impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.
190005	Demolition of Air Traffic Control Tower (B1601)	Short-term, negligible, direct adverse impacts to vegetation. Long-term, minor, direct beneficial impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. Long-term, minor, direct beneficial impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.
180020	Demolition of Electrical Power (B950)	Short-term, negligible, direct adverse impacts to vegetation. Long-term, minor, direct beneficial impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. Long-term, minor, direct beneficial impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.
180021	Demolition of Storage Facility (B952)	Short-term, negligible, direct adverse impacts to vegetation. Long-term, minor, direct beneficial impacts to vegetation. Short-term, minor, direct adverse impacts to wildlife. Long-term, minor, direct beneficial impacts to wildlife. No short-term or long-term impacts to threatened and endangered species.

3.8 CULTURAL RESOURCES

3.8.1 Affected Environment

Definition of Resource

Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural resources.

Historic properties are districts, sites, buildings, structures, and objects that are included in the National Register of Historic Places (NRHP) or that meet the criteria for the NRHP; they also include records and human remains that are related to and located within such properties. Consideration of effects on historic properties is mandated both by NEPA and by Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S. Code 306108). Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation an opportunity to comment on such undertakings.

Existing Conditions

No evidence of prehistoric cultural resources has been identified on Wake Atoll. The remoteness and lack of freshwater sources other than rainfall probably discouraged settlement of the Atoll by native Pacific populations (USAF 2008). Wake Island Atoll is designated as a National Historic Landmark (NHL) since 1985 because of its significance in association with WWII in the Pacific. This NHL encompasses all American and Japanese structures, earthworks, fortifications, and weapons that are found over all of the three islands from the period 1941 to 1945. The NHL also includes structures and ruins of the Pan American facilities, built before 1941, but standing as the war began. The NHL comprised individual features such as fortifications, buildings, and trenches, and well as closely related groups of features referred to as clusters. To date, 119 feature clusters consisting of over 300 recorded features have been defined within the landmark. The nomination package defines the landmark's boundaries as "the outer edge of the reef that surrounds the Wake Island so as to include the reef, the three islands, and the lagoon." (Thompson 1984). Therefore, the NHL includes the entire atoll.

Wake Atoll's reefs have been the site of six known shipwrecks. Three Japanese craft beached themselves along the southern shore of Wake Island—two during the invasion of the Atoll and one on a supply run. Their wreckage has been partly salvaged for scrap metal, but portions of the vessels remain. Additionally, the remains of two 19th-century sailing craft that foundered on the reefs lie off the eastern shore, and the remains of an unidentified sailing craft have been identified near Heel Point at the northern tip of Wake Island. The wreckage of WWII aircraft and many unexploded bombs have also been reported just beyond the reefs, along with more recent aircraft and missile parts (Hirsh and Rex, no date). No investigations have been conducted on aircraft, tanks, or other artifacts that may be in the Wake lagoon. At least six ships are known to have sunk at Wake Atoll. Any ships, aircraft, or other equipment associated with the Battle for Wake Island and the subsequent Japanese occupation should be considered contributing elements

of the Wake Island NHL. The Libelle shipwreck in 1866 may be a significant historic resource and should also be afforded protection (Verhaaren and Kullen 2015).

Additional cultural resources surveys, primarily to record archaeological resources, have been conducted on Wake Atoll. The northwestern third of Peale Island and the entirety of Wilkes Island have been completely (100 percent) inventoried and all cultural resources recorded. The central portion and southeast end of Peale Island and the Peacock Point area of Wake Island have been inventoried. Much of the atoll remains to be surveyed (Verhaaren and Kullen 2015).

3.8.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impacts to cultural resources. There would be no construction, demolition, or ground disturbance that would impact archeological resources or historic resources.

Preferred Alternative

Wake Atoll did not support an indigenous population, so the potential to encounter prehistoric resources is extremely low. The potential for historic archaeological resources is considered variable across Wake Island because the island saw extensive reuse by American forces and domestic airline personnel after the war. Human remains are occasionally encountered on Wake Atoll. Most of these remains are those of participants in the WWII battle and subsequent Japanese occupation of the atoll. The 611th Civil Engineering Squadron has a Standard Operating Procedures for managing the unexpected discovery of archeological resources and human remains (Appendix D). The contractor will be required to implement the Standard Operating Procedure during ground disturbing activities, as necessary. During the ground disturbance and excavation phase, if historical items or remains are encountered, work at that location will be stopped and the Cultural Resources Project Manager contacted. Therefore, there would be no adverse effect to the unknown resources.

In 2007, buildings constructed since WWII (between 1946 and 1989) were evaluated for historical significance. Those dating to 1957 or earlier were evaluated using the National Register evaluation criteria. Those dating from 1958 or later were evaluated for exceptional importance under Criteria Consideration (G). Only two buildings were eligible for listing on the NRHP including B1502 (the terminal) and B1601 (the control tower) (Verhaaren and Kullen 2015). The 2008 Cultural Resources Inventory and Determination of Eligibility of Pose WWII Cultural Resources at Wake Atoll document was reviewed and Buildings 950, 952, 1407, or 1509 (Projects 150002, 70006, 180020, and 180021) have not achieved NRHP eligibility, even though they are now over 50 years old (Aaron 2008). The buildings were in fair to good condition in 2008 but have deteriorated and are now in fair to poor condition. They lack Criterion A significance for specific historical importance with historic events or trends. They are not associated with significant persons under Criterion B. They are not architecturally distinctive under Criterion C. They are unlikely to yield important information under Criterion D. The buildings housed support functions and are characteristic of buildings on U.S. military installations all over the world. Concurrence with SHPO was received on 18 April 2024 that Buildings 950, 952, 1407, and 1509 are not eligible for the NRHP; therefore, no adverse impacts to historic properties will occur.

The PRSC entered into a Memorandum of Agreement on 20 March 2014, with the Alaska SHPO along with the Advisory Council on Historic Preservation to demolish Building 1601 (the control tower Project 190005) with a stipulation that the history of this building and the context under which it and other USAF control and support facilities on the island were constructed be documented (Wake Atoll Air Traffic Control Towers, Historical Context Report, January 2017). The history of Building 1601 history was documented to mitigate the adverse effects to historic properties that will occur during demolition. No new effects would occur to this building; therefore, the demolition would result in no adverse impacts.

The 611th CES prepared the Wake Atoll Water System Historic Context Report in February 2017. The purpose of this report was to provide history and context for water systems on Wake Atoll. The report also includes an evaluation of the various water system buildings and infrastructure. The water tanks are associated with the two large, poured concrete rainwater catchment basins (Building 1300) which were an essential feature of the atoll's water systems from the 1950s to the 1970s. However, the integrity of the individual basins are compromised due to neglect and continued deterioration. The water tanks, as individual features, or part of the larger system, do not have the integrity required to be eligible for listing on the NRHP under Criterion A. The water tanks are not known to be associated with a person who made an important contribution to history. They are therefore not eligible under Criterion B. They do not represent the work of a master, possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction. The features' structural integrity has been compromised by deterioration over time. Accordingly, they are not eligible under Criterion C. The water tanks have not yielded, nor are likely to yield, information important in history or prehistory. They are therefore not eligible under Criterion D. Concurrence with SHPO was received on 18 April 2024 that the water tanks are not eligible for the NRHP; therefore, no historic properties are affected.

Figures 3-1, 3-2, and 3-3 in Appendix A, *Interagency/Intergovernmental Coordination and Public Participation*, show the location of the NHL features on Wake Atoll overlain with the locations of the proposed projects under this Preferred Alternative. The features of the NHL would be avoided during the Proposed Action, therefore, there would be no adverse effects to the NHL. The Electrical Power Repair project is located adjacent in NHL features in different areas throughout the island. All NHL features near the repair project will be flagged with a 20-ft buffer to prevent accidental damage during construction work.

Besides Building 1601 (Project 190005) none of the proposed projects would impact historic properties. None of the facilities proposed for demolition or renovations are listed as eligible under the NRHP. Table 18 includes the summary of impacts from the proposed action.

Table 18. Summary of Cultural Resource Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	No impact.
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	No impact.

Project Number	Project Description	Impact
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	No impact.
200018	Replace Water Tank	No impact.
70006	Demolition of Storage Facility (B1407)	No impact
190005	Demolition of Air Traffic Control Tower (B1601)	No impact. Impacts were previously mitigated per the Memorandum of Agreement.
180020	Demolition of Electrical Power (B950)	No impact
180021	Demolition of Storage Facility (B952)	No impact

3.9 EARTH RESOURCES

3.9.1 Affected Environment

Definition of Resource

Earth resources include the geology, topography, and soils located within the project area. Topography describes the physical surface characteristics of land such as slope, elevation, and general surface features. Long-term geological, erosional, and depositional processes typically influence topographic relief of an area. The geology of an area includes bedrock materials and mineral deposits. The principal geologic factors influencing the stability of structures are soil stability, bedrock depth, and seismic properties. Soil refers to unconsolidated earthen materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, liquefaction potential, and its potential to erode, all determine the ability of the ground to support structures and facilities.

Existing Conditions

Wake Island is part of a mid-Pacific Ocean atoll that formed when a volcano rose above the ocean surface, then subsided below the surface due to deflation of the underlying magma chamber. Slow volcanic island subsidence allowed coral reefs to form around the island and grow at a rate equal to that of the subsidence, forming a ring-shaped reef with a shallow central lagoon (USASMDC 1999).

The reef rock is formed entirely from the remains of marine organisms including reef corals, coralline algae, mollusks, echinoderms, foraminifera, and green sand-producing algae. These organisms secrete external skeletons of calcium and magnesium carbonates that, as they grow and die, are either cemented in place to form hard reef rock or erode and wash down slopes to accumulate as sediment deposits, particularly in the lagoon or on deep terraces downslope on the ocean side of reefs. The reefs are growing actively as a result of vigorous development and populations of corals, coralline algae, and large mollusks. Only the thin upper veneer of the reef structure is alive and growing, accreting over the remains of prior generations of reef organisms. Although coral reefs are unique because they build and advance wave-resistant structures in the face of persistent and severe wave and storm attack, the organisms that form the reefs are vulnerable to sedimentation, burial, and changes in circulation caused by human development activities (USASMDC 1999).

The land masses at Wake Island have formed by one or both of two processes: accumulation of reef debris deposited on the lagoon side of the reef by large waves and the lowering of sea levels during periods of global cooling. The island's building process by large storm-generated waves is evidenced on the south side of Wake Island by the burial of pill boxes constructed during WWII under sand, gravel, and cobble-sized pieces of reef debris. As a result of these building processes, atoll island soils are predominantly coarse-grained and almost exclusively composed of calcium carbonate. Therefore, they are of low fertility and lack many of the nutrients required to support many plant species (USASMDC 1999).

Geology and Soils

The ground surface on Wake Atoll is composed of disintegrated coral interspersed with coral cobble. A typical pedogenic profile consists of sand, shells, coral, and limestone that are often intermixed. The substrate is coarse-grained and almost completely composed of calcium carbonate and is droughty and desiccating to plants. Fertility is very low due to the lack of essential nutrients and organic matter. Soil formation processes are precluded by high winds, high waves, and localized inundation of the atoll. As a result, soil formation on Wake Atoll is minimal (PRSC 2017).

Topography

The local is generally flat with an average surface elevation of 3 meters (10 ft) above mean sea level and a maximum elevation of 6.4 meters (21 ft) above mean sea level (USASMDC 1999).

3.9.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impact to earth resources as conditions would remain the same.

Preferred Alternative

None of the projects would have impacts to geology. Construction would not include blasting or changes to the geologic strata underlying WIA. In addition, none of the projects would alter the topography within the vicinity of each project. Although excavation and grading would occur for some of the construction projects, no change in topography would occur. For the demolition projects, after removal of the buildings, the land would be graded to be relatively flat similar to surrounding areas.

All of the projects would require excavation and grading of soil. Soil removed from the site would be reused on site. If soils cannot be reused, soils would be stockpiled, tested, and disposed of in accordance with federal, state, local, and USAF regulations and as directed by Civil Engineering Environmental. Any excavation will require a dig permit that would be reviewed by 611th CES Environmental and by AFCEC Remedial Project Manager. During construction there is potential for soil erosion to occur. To reduce impacts, BMPs would be implemented to reduce soil runoff and sedimentation. Short-term, minor, direct adverse impacts to soils are expected in the immediate vicinity during construction for all the projects. The construction of the wash rack would increase the amount of impervious surface on the base by approximately 1,000 ft² of land that will be converted from pervious to impervious area. Project 180001 will have long-term,

minor, direct adverse impacts to soils. None of the other projects will have long-term impacts to soils. Table 19 includes the summary of impacts from the proposed action.

Table 19. Summary of Earth Resources Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. Long-term, minor, direct adverse impacts to soil.
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. No long-term impacts to soil.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. No long-term impacts to soil.
200018	Replace Water Tank	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. No long-term impacts to soil.
70006	Demolition of Storage Facility (B1407)	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. No long-term impacts to soil.
190005	Demolition of Air Traffic Control Tower (B1601)	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. No long-term impacts to soil.
180020	Demolition of Electrical Power (B950)	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. No long-term impacts to soil.
180021	Demolition of Storage Facility (B952)	No impact to geology. No impact to topography. Short-term, minor, direct adverse impacts to soil. No long-term impacts to soil.

3.10 SOCIOECONOMIC RESOURCES/ENVIRONMENTAL JUSTICE

3.10.1 Affected Environment

Definition of Resource

Socioeconomics

Socioeconomics is typically defined as the relationship between economies and social elements, such as population and economic activity. Factors that describe the socioeconomic resources represent a composite of several attributes. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, income, unemployment, poverty level, and employment.

Environmental Justice

EO 12898 pertains to environmental justice issues and relates to various socioeconomic groups and the disproportionate impacts that could be imposed on them. That EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The EO was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a Proposed Action.

Existing Conditions

The region of influence for Wake Island is limited to the island itself. Since the island is an isolated military installation, actions taken there have little effect on outside employment, population immigration, or local area expenditures. Therefore, key socioeconomic indicators concerned with effects of regional employment and income data were not examined.

The military and contractor personnel who work at Wake Island include Americans. Island personnel live in billets constructed on the island, which are military controlled. Some individuals live in private structures throughout the island. There are no private homes, motels/hotels, or private retail businesses on the island. The economy on the island is dominated by the military installation. Government and contractor employment are the only contributor to the island economy (USASMDC 1999).

3.10.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impact to socioeconomics or environmental justice as present conditions would remain the same.

Preferred Alternative

There would be no impact to socioeconomics on Wake Island Atoll. Implementation of the Preferred Alternative would not require the addition of new staff within the base. There would be no population increase, change in demographics, or economic loss in the community as a result of the construction and demolition projects at WIA.

Project activities would require temporary personnel on the island. These transient personnel would be housed in existing military-controlled billets, which are kept vacant for these types of activities. Consequently, no impact to housing and thus socioeconomic resources is anticipated.

Table 20. Summary of Socioeconomics/Environmental Justice Impacts by Project

Project Number	Project Description	Impact
Facility Construction Projects		
180001	Wash Rack Installation	No impact to socioeconomics. No impact to environmental justice communities.
Infrastructure Construction Projects		

Project Number	Project Description	Impact
190009	Repair Electrical Distribution Industrial Area	No impact to socioeconomics. No impact to environmental justice communities.
Demolition Projects		
150002	Repair or Replace Petrol Ops (B1509)	No impact to socioeconomics. No impact to environmental justice communities.
200018	Replace Water Tank	No impact to socioeconomics. No impact to environmental justice communities.
70006	Demolition of Storage Facility (B1407)	No impact to socioeconomics. No impact to environmental justice communities.
190005	Demolition of Air Traffic Control Tower (B1601)	No impact to socioeconomics. No impact to environmental justice communities.
180020	Demolition of Electrical Power (B950)	No impact to socioeconomics. No impact to environmental justice communities.
180021	Demolition of Storage Facility (B952)	No impact to socioeconomics. No impact to environmental justice communities.

3.11 OTHER NEPA CONSIDERATIONS

3.11.1 Unavoidable Adverse Effects

This EA identifies any unavoidable adverse impacts that would be required to implement the Proposed Action and the significance of the potential impacts to resources and issues.

Unavoidable short-term, direct adverse impacts associated with the construction phase of the Proposed Action would include: temporary intermittent noise during construction, increases in criteria pollutant emissions, increase in sedimentation and erosion, increase safety risks, increase use of hazardous materials, increase generation of hazardous wastes, and vegetation and wildlife disturbance. However, these effects are considered minor and would be confined to the project areas. Use of BMPs would minimize potential impacts. Unavoidable long-term, direct adverse impacts associated with implementation of the Proposed Action would include intermittent noise associated with the wash rack, increased stormwater due to an increase in impervious surfaces, and permanent removal of vegetation. For the Proposed Action to be accomplished, these impacts would occur. The action is required to continue to provide infrastructure that is adequate to meet the needs of the 611th CES.

3.11.2 Relationship of Short-Term Uses and Long-Term Productivity

The relationship between short-term uses and enhancement of long-term productivity from implementation of the Proposed Action is evaluated from the standpoint of short-term effects and long-term effects. The short-term effects would be those associated with the construction period for the various construction, demolition, and renovation projects proposed. The long-term enhancement of productivity would be those effects associated with the mission activities within each project area. The Proposed Action represents an enhancement of long-term productivity for the mission of the 611th CES. The short-term negative effects during construction would be negligible to minor compared to the positive benefits of the installation development over the next five years at WIA. Immediate and long-term benefits would be realized for mission support after completion of the Proposed Action.

3.11.3 Irreversible and Irretrievable Commitments of Resources

This Programmatic EA identifies any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action if implemented. An irreversible effect results from the use or destruction of resources (e.g., energy) that cannot be replaced within a reasonable time. An irretrievable effect results from loss of resources (e.g., endangered species) that cannot be restored as a result of the Proposed Action. The short-term irreversible commitments of resources that would occur would include planning and engineering costs, building materials and supplies and their cost, use of energy resources during construction, labor, generation of air emissions, and creation of temporary construction noise. The long-term irretrievable commitments of resources that would occur is the loss of soil and vegetation due to excavation, grading, and paving.

3.11.4 Cumulative Impacts

Cumulative impacts are "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions"(40 CFR §1508.7). Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over time by various agencies (federal, state, and local) or private parties.

The scope of the cumulative effects analysis involves both the timeframe and geographic extent in which effects could be expected to occur, as well as a description of what resources could potentially be cumulatively affected. For the purposes of this analysis, the temporal span of the proposed action is 6 years. The geographic extent consists of the base and surrounding census tracts (PRCS 2021 and Jacobs 2021).

The following past, present, and future actions at WIA were considered in the cumulative impact analysis:

- Repair Sanitary Sewer System – FY2021
- Repair Wake Island Roads – FY2022
- Demolish Storage Facility (B1406) – FY2022
- Demolish Hazmat Storage (B400) – FY2022
- Temporarily Replace Facilities with Prefabricated Structures for Warehouse Space- FY2023
- Repair Alpha Aprons and Taxiways Alpha, Bravo, Charlie, Delta, Echo – FY2023
- Repair by Replacement ROWPUs (B1303) – FY2024
- Repair by Replacement Plumbing Shop (B1304) – FY 2024
- Repair Concrete Walls of Heavy Equip Shop (B1519) – FY2024
- Repair Chapel (B1181) – FY2025
- Repair Well Pump Houses (B1308, 1309) – FY2025
- Replace Bridge to Peale Island (dependent on rat eradication) – FY2026
- Construct Running Path – FY2026
- Improve Harbor and Fuel Pier – FY2026
- New Storage/Warehouse Facility – FY2027
- Construct Base Support Facility – FY29

- Construct Base Operations Facility – FY27
- Construct Aircraft Parking Apron – FY26
- Construct Living Base Quarters – FY29 and FY30.

Table 21 includes a summary of the potential long-term cumulative impacts on resources from the proposed action when combined with past, present, and reasonably foreseeable future projects.

Table 21. Cumulative Impacts

Resource	Cumulative Impact
AICUZ Land Use/Noise	No cumulative impacts. Existing noise levels around WIA would continue to be dominated by aircraft. There would be no changes to land use.
Air Quality	No cumulative impacts. An increase in air emissions is expected from the proposed action; however, impacts would be short-term, and the area would still be in attainment for criteria air pollutants.
Water Resources	Negligible cumulative impacts. The proposed action would have an increase in impervious surfaces throughout the base resulting in an increase in stormwater runoff. Although a cumulative increase in stormwater is anticipated, the increase is not likely to result in significant adverse impacts on water resources.
Safety	Beneficial cumulative impacts. The long-term impacts associated with the proposed action would be beneficial due to the renovation and demolition of unsafe, outdated facilities. When considered along with the beneficial impacts to safety from repairing unsafe structures, the new base facilities, cumulative impacts would be beneficial.
Hazardous Materials and Waste	No cumulative impacts. There would be no long-term impacts pertaining to hazardous substances from the proposed action.
Biological Resources	Negligible cumulative impacts. The proposed action would have a long-term negligible impact to vegetation and wildlife through disturbance. However, no valuable habitat would be lost, and no protected species would be affected.
Cultural Resources	No cumulative impact. The proposed action would have no adverse impacts on cultural resources.
Earth Resources	Negligible cumulative impacts to soils. No cumulative impact to geology or topography. The proposed action would have no impact to geology or topography. The proposed action would result in a loss of soil and an increase to impervious areas. The new base facilities would also include an increase in impervious area. The cumulative loss of soil would be long-term, adverse, and negligible.
Socioeconomics/Environmental Justice	No cumulative impacts. The proposed action would have no long-term adverse impacts to socioeconomics or the potential to impact an environmental justice community.

Notes:

AICUZ = Air Installation Compatible Use Zone

WIA = Wake Island Airfield

4. LIST OF PREPARERS

Wake Island Airfield

Sean Palmer, Environmental Program Manager
Karlene Leeper, Cultural Resource Program Manager
Keith Roberts, Natural Resources Program Manager

USACE – Alaska District

Heidi Long, Project Manager
Lisa Geist, Contracting Officer Representative

EA Engineering, Science, and Technology, Inc., PBC

Dan Bigbee, Project Manager
Miranda Hanson, Environmental Scientist
Kat Cerny-Chipman, NEPA Specialist
Sierra Barr, Air Quality Specialist
Dan Savercool, Principal

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5. PERSONS AND AGENCIES CONSULTED/COORDINATED

Wake Island Airfield

Programmatic Environmental Assessment for Construction and Demolition of Facilities Consultation and Coordination List

Federal Agencies

Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001

National Oceanic and Atmospheric Administration Fisheries
Pacific Island Regional Office
1845 Wasp Boulevard
Building 176
Honolulu, HI 96818

Sherry Frear
National Park Service
Chief, National Register & National Historic Landmarks Program
1849 C Street, NW (7228)
Washington, DC 20240

U.S. Army Corps of Engineers
Honolulu District
Building 230, Room 302
Fort Shafter, HI 96858

U.S. Fish and Wildlife Service
Pacific Island Fish and Wildlife Office
300 Ala Moana Boulevard
Rooms 3-122
Honolulu, HI 96850

State Agencies

Sarah Meitl
Review and Compliance Coordinator
Office of History and Archaeology
550 W 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

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Appendix A

**Interagency/Intergovernmental Coordination and
Public Participation**

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**DEPARTMENT OF THE AIR FORCE
ELEVENTH AIR FORCE (PACAF)
JOINT BASE ELMENDORF-RICHARDSON ALASKA**

MEMORANDUM FOR ADVISORY COUNCIL ON HISTORIC PRESERVATION

FROM: 611 CES/CEIE

Subject: Programmatic Environmental Assessment for Construction and Demolition of Facilities at Wake Island Airfield, Wake Island Atoll.

Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001

To ACHP:

The U.S. Air Force (USAF) is seeking to develop an installation-wide Programmatic Environmental Assessment for actions identified in the Installation Development Plan (IDP) at Wake Island Airfield (WIA) on Wake Island Atoll for development from Fiscal Year 2024 through 2028. The purpose of this letter is to initiate Section 106 consultation. This Section 106 consultation initiation is pursuant to 36 CFR 800.2. Section 106 compliance shall be accomplished in coordination with National Environmental Policy Act (NEPA) compliance per 36 CFR Part 800.8. Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles (3,700 kilometers) west of Honolulu, Hawaii (Figure 1). Installation development and improvements are an on-going process at WIA. The IDP is to project the long-term needs of USAF and its stakeholders for Wake Island operations in order to define an enduring end state for the installation that maximizes functional effectiveness while minimizing operating and maintenance costs. Because mission needs largely dictate land and facility support requirements, installation development is centered around the capabilities of existing infrastructure and facilities to meet the needs of the existing and projected mission.

Proposed Action (Undertaking)

The purpose of the project is to construct, repair, and demolish existing assets and infrastructure at WIA from FY 2024 through 2028 to support current and future mission requirements by maintaining and providing needed infrastructure. The project is needed as many of the facilities at WIA are outdated and deteriorating, providing unsafe working conditions. Many of the existing deteriorating buildings are known or suspected to contain hazardous substances such as asbestos containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB). The Proposed Action (Undertaking) would support mission growth and quality of life for installation users. The list of projects included in the Proposed Action (Undertaking) is included in Table 1. The locations of each project are included in Attachment 2.

Table 1. Projects Included in the Proposed Action (Undertaking)

Project Number	Project	Description
Facility Construction Projects		
180001	Wash Rack Installation	Construction of a new covered vehicle wash rack
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	The current electrical power system will be upgraded to the current standards in the industrial area, the MDA area on the southern portion of the island, and the electrical network area.

Project Number	Project	Description
Demolition Projects		
150002	Repair or Replace Petrol Ops (building [B]1509)	B1509 will be demolished.
200018	Replace Water Tank	Six water storage tanks are proposed for demolition because they can no longer be used for their intended purpose and serve no USAF mission purpose. Four of these water storage tanks will be replaced in phases.
70006	Demolition of Storage Facility (B1407)	B1407 will be demolished.
190005	Demolition of Air Traffic Control Tower (B1601)	B1601 will be demolished.
180020	Demolition of Electrical Power (B950)	B950 will be demolished.
180021	Demolition of Storage Facility (B952)	B952 will be demolished.

Area of Potential Effect

Wake Atoll is an atoll formed by volcanic activity and is comprised of three islands: Wake, Wilkes, and Peale Islands, which are positioned around a shallow lagoon (Attachment 1). The proposed projects would occur on two of the islands Wake Island and Wilkes Island. The Area of Potential Effect (APE) is shown on Attachment 2. Peale Island will not be affected by the project.

Identification of Historic Properties

In 2007, buildings constructed since WWII (between 1946 and 1989) were evaluated for historical significance. Those dating to 1957 or earlier were evaluated using the National Register evaluation criteria. Those dating from 1958 or later were evaluated for exceptional importance under Criteria Consideration (G). Only two buildings were eligible for listing on the National Register of Historic Places including B1502 (the terminal) and B1601 (the control tower) (ICRMP 2015). We have reviewed the 2008 document and do not believe that buildings 950, 952, 1407, or 1509 have achieved NRHP eligibility, even though they are now over fifty years old. The buildings were in fair to good condition in 2008 but have deteriorated and are now in fair to poor condition (Attachment 3). They lack criterion A significance for specific historical importance with historic events or trends. They are not associated with significant persons under criterion B. They are not architecturally distinctive under criterion C. They are unlikely to yield important information under criterion D. The buildings housed support functions and are characteristic of buildings on US military installations all over the world. We would appreciate your concurrence on the non-NRHP eligibility.

The 611 CES prepared the *Wake Atoll Water System Historic Context Report* in February 2017. The purpose of this report was to provide history and context for water systems on Wake Atoll. The report also includes an evaluation of the various water system buildings and infrastructure. The water tanks are associated with the two large, poured concrete rainwater catchment basins (Building 1300) which were an essential feature of the atoll's water systems from the 1950s to the 1970s. However, the integrity of the individual basins have been compromised due to neglect and continued deterioration. Only two 300,000-

gallon water storage tanks (Tanks #1 and #3) are usable for potable water. The other storage tanks, including two 2-million-gallon (Tanks #7 and 8) and four 300,000-gallon tanks (Tanks #2, 4, 5, and 6), are unusable. It is recommended that the water tanks, as individual features, or part of the larger system, do not have the integrity required to be eligible for listing on the NRHP under criterion A. The water tanks are not known to be associated with a person who made an important contribution to history. They are therefore not eligible under criterion B. They do not represent the work of a master, possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction. The features' structural integrity has been compromised by deterioration over time. Accordingly, they are not eligible under criterion C. The water tanks have not yielded, nor are likely to yield, information important in history or prehistory. They are therefore not eligible under criterion D. The water tanks are recommended as *not eligible* for the NRHP.

Wake Island Atoll is designated as a National Historic Landmark (NHL) since 1985 because of its significance in association with World War II in the Pacific. This NHL encompasses all American and Japanese structures, earthworks, fortifications, and weapons that are found over all of the three islands from the period 1941 to 1945. The NHL also includes structures and ruins of the Pan Am facilities, built before 1941, but standing as the war began. The NHL comprised individual features such as fortifications, buildings, and trenches, and well as closely related groups of features referred to as clusters. To date, 119 feature clusters consisting of over 300 recorded features have been defined within the landmark. The nomination package defines the landmark's boundaries as "the outer edge of the reef that surrounds the Wake Island so as to include the reef, the three islands, and the lagoon." (Thompson 1984). Therefore, the NHL includes the entire atoll.

Assessment of Effects

The PRSC entered into a Memorandum of Agreement (MOA) on 20 March 2014, with the Alaska SHPO along with the Advisory Council on Historic Preservation (ACHP) to demolish Building 1601 (the control tower Project 190005) with a stipulation that the history of this building and the context under which it and other Air Force control and support facilities on the island were constructed be documented (Wake Atoll Air Traffic Control Towers, Historical Context Report, Jan 2017). The history of building 1601 history was documented to mitigate the adverse effects to historic properties that will occur during demolition. No new effects would occur to this building, and no additional mitigation is proposed.

Based on the above eligibility, none of the buildings or water tanks proposed for demolition are considered historic properties, therefore, there would be no historic properties directly affected by these proposed actions. Table 2 provides a summary of the Air Force identification of historic properties and assessment of effects.

Table 2. Identification of Historic Properties and Assessment of Effect

Bldg. No.	Facility Name	Date of Construction	AF Eligibility Determination	Proposed Project	Assessment of Effect
950	Electrical Power	1962	Not eligible	Demolish	No historic properties effected
952	Storage Facility	1959	Not eligible	Demolish	No historic properties effected
1407	Storage Facility	1972	Not eligible	Demolish	No historic properties effected
1509	Petrol Ops	1970	Not eligible	Demolish	No historic properties effected

1601	Air Traffic Control Tower	1949	Eligible, mitigation complete	Demolish	No effect
	Water Tanks	1954 - 1971	Not eligible	Six tanks - demolish Four tanks - replaced	No historic properties effected
	Repair Electrical Distribution Industrial Area		Not eligible	Repair	No historic properties effected

Attachment 4 shows the location of the NHL features on Wake Atoll overlain with the locations of the proposed projects under this Proposed Action (Undertaking). The features of the NHL would be avoided during the Proposed Action (Undertaking), therefore, there would be no adverse effects to the NHL. The Electrical Power Repair project is located adjacent to in NHL features in different areas throughout the island. All NHL features near the repair project will be flagged with a 20-foot buffer to prevent accidental damage during construction work.

Human remains are occasionally encountered on Wake Atoll. Most of these remains are those of participants in the WWII battle and subsequent Japanese occupation of the atoll. The 611th Civil Engineering Squadron has a Standard Operating Procedure (SOP) for managing the unexpected discovery of cultural resources and human remains. The SOP is provided as Attachment 5. The contractor will be required to implement the SOP during ground disturbing activities, as necessary. During the ground disturbance and excavation phase, if historical items or remains are encountered, work at that location will be stopped and the Cultural Resources PM contacted. Therefore, there would be no adverse effect to the unknown resources.

Conclusion

The USAF requests your concurrence with the determination of eligibility for the above resources, and well as the assessment of effect.

Thank you in advance for your comments. Please return your comments to me at the mailing address below or email to sean.palmer.16@us.af.mil. If you have questions, please contact me at 907-552-5520 or by email.

Sincerely,

Sean Palmer
EIAP/NEPA
611th Civil Engineer Squadron (611 CES/CEIE)
10471 20th Street Suite 323
JBER, AK 99506-2200

Attachments:

Attachment 1 – Figure 1 Wake Island Airfield Layout Map
Attachment 2 – Figure 2 Proposed Locations of Projects/Area of Potential Effect
Attachment 3 – Photographs of Buildings
Attachment 4 – Figures 3-1, 3-2, 3-3 Wake Island Cultural Resources Consultation Map
Attachment 5 – Standard Operating Procedure for Discoveries of Archaeological Resources and NAGPRA Cultural Items



**DEPARTMENT OF THE AIR FORCE
ELEVENTH AIR FORCE (PACAF)
JOINT BASE ELMENDORF-RICHARDSON ALASKA**

MEMORANDUM FOR NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

FROM: 611 CES/CEIE

Subject: Programmatic Environmental Assessment for Construction and Demolition of Facilities at Wake Island Airfield, Wake Island Atoll.

NOAA Fisheries
Pacific Island Regional Office
1845 Wasp Boulevard
Building 176
Honolulu, HI 96818

To Whom it May Concern:

The U.S. Air Force (USAF) is seeking to develop an installation-wide Programmatic Environmental Assessment for actions identified in the Installation Development Plan (IDP) at Wake Island Airfield (WIA) on Wake Island Atoll for development from Fiscal Year 2024 through 2028. Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles (3,700 kilometers) west of Honolulu, Hawaii (Figure 1). Installation development and improvements are an on-going process at WIA. The IDP is to project the long-term needs of USAF and its stakeholders for Wake Island operations in order to define an enduring end state for the installation that maximizes functional effectiveness while minimizing operating and maintenance costs. Because mission needs largely dictate land and facility support requirements, installation development is centered around the capabilities of existing infrastructure and facilities to meet the needs of the existing and projected mission.

Proposed Action

The purpose of the project is to construct, repair, and demolish existing assets and infrastructure at WIA from FY 2024 through 2028 to support current and future mission requirements by maintaining and providing needed infrastructure. The project is needed as many of the facilities at WIA are outdated and deteriorating, providing unsafe working conditions. Many of the existing deteriorating buildings are known or suspected to contain hazardous substances such as asbestos containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB). The Proposed Action would support mission growth and quality of life for installation users. The list of projects included in the Proposed Action is included in Table 1. The locations of each project are included in Figure 2.

Table 1. Projects Included in the Proposed Action

Project Number	Project	Description
Facility Construction Projects		
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180020	Demolition of Electrical Power (B950)	B950 will be demolished.
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Based on review of the Integrated Natural Resource Management Plan for Wake Island Airfield; Kōkeʻe Air Force Station, Kauaʻi, Hawaiʻi; and Mount Kaʻala Air Force Station, Oʻahu, Hawaiʻi the federally endangered and threatened species using marine habitats occurring within the lagoon and waters surrounding Wake Atoll including the green sea turtle (*Chelonia mydas*), Hawaiian monk seal (*Monachus schauinslandi*), Newell’s shearwater (*Puffinus auricularis newelli*), and two coral species (*Acropora retusa* and *Acropora globiceps*) (PRSC 2017).

Because the project areas are not within suitable habitat nor will any potential suitable habitat be disturbed, no listed species would be directly or indirectly impacted. Furthermore, there are no impacts to marine habitat, the lagoon, or other native habitat that supports the above listed species. The USAF has therefore determined the proposed project will have no effect on listed species and further consultation with your office is not necessary. Your written concurrence with this determination of no effect is, however, requested.

Thank you in advance for your comments. Please return your comments to me at the mailing address below or email to sean.palmer.16@us.af.mil. If you have questions, please contact me at 907-552-5520 or by email.

Sincerely,

Sean Palmer
EIAP/NEPA
611th Civil Engineer Squadron (611 CES/CEIE)
10471 20th Street Suite 323
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**DEPARTMENT OF THE AIR FORCE
ELEVENTH AIR FORCE (PACAF)
JOINT BASE ELMENDORF-RICHARDSON ALASKA**

MEMORANDUM FOR NATIONAL PARK SERVICE

FROM: 611 CES/CEIE

Subject: Programmatic Environmental Assessment for Construction and Demolition of Facilities at Wake Island Airfield, Wake Island Atoll.

Ms. Sherry Frear
National Park Service
Chief, National Register & National Historic Landmarks Program
1849 C Street, NW (7228)
Washington, DC 20240

To Ms. Frear:

The U.S. Air Force (USAF) is seeking to develop an installation-wide Programmatic Environmental Assessment for actions identified in the Installation Development Plan (IDP) at Wake Island Airfield (WIA) on Wake Island Atoll for development from Fiscal Year 2024 through 2028. The purpose of this letter is to initiate Section 106 consultation. This Section 106 consultation initiation is pursuant to 36 CFR 800.2. Section 106 compliance shall be accomplished in coordination with National Environmental Policy Act (NEPA) compliance per 36 CFR Part 800.8. Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles (3,700 kilometers) west of Honolulu, Hawaii (Attachment 1). Installation development and improvements are an on-going process at WIA. The IDP is to project the long-term needs of USAF and its stakeholders for Wake Island operations in order to define an enduring end state for the installation that maximizes functional effectiveness while minimizing operating and maintenance costs. Because mission needs largely dictate land and facility support requirements, installation development is centered around the capabilities of existing infrastructure and facilities to meet the needs of the existing and projected mission.

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Conclusion

The USAF requests your concurrence with the determination of eligibility for the above resources, and well as the assessment of effect.

Thank you in advance for your comments. Please return your comments to me at the mailing address below or email to sean.palmer.16@us.af.mil. If you have questions, please contact me at 907-552-5520 or by email.

Sincerely,

Sean Palmer
EIAP/NEPA
611th Civil Engineer Squadron (611 CES/CEIE)
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**DEPARTMENT OF THE AIR FORCE
ELEVENTH AIR FORCE (PACAF)
JOINT BASE ELMENDORF-RICHARDSON ALASKA**

MEMORANDUM FOR ALASKA STATE HISTORIC PRESERVATION OFFICE

FROM: 611 CES/CEIE

Subject: Programmatic Environmental Assessment for Construction and Demolition of Facilities at Wake Island Airfield, Wake Island Atoll.

Ms. Sarah Meitl,
Review and Compliance Coordinator
Office of History and Archaeology
550 W 7th Avenue, Suite 1310
Anchorage, AK 99501-3565

To Ms. Meitl:

The U.S. Air Force (USAF) is seeking to develop an installation-wide Programmatic Environmental Assessment for actions identified in the Installation Development Plan (IDP) at Wake Island Airfield (WIA) on Wake Island Atoll for development from Fiscal Year 2024 through 2028. The purpose of this letter is to initiate Section 106 consultation. This Section 106 consultation initiation is pursuant to 36 CFR 800.2. Section 106 compliance shall be accomplished in coordination with National Environmental Policy Act (NEPA) compliance per 36 CFR Part 800.8. Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles (3,700 kilometers) west of Honolulu, Hawaii (Attachment 1). Installation development and improvements are an on-going process at WIA. The IDP is to project the long-term needs of USAF and its stakeholders for Wake Island operations in order to define an enduring end state for the installation that maximizes functional effectiveness while minimizing operating and maintenance costs. Because mission needs largely dictate land and facility support requirements, installation development is centered around the capabilities of existing infrastructure and facilities to meet the needs of the existing and projected mission.

Proposed Action (Undertaking)

The purpose of the project is to construct, repair, and demolish existing assets and infrastructure at WIA from FY 2024 through 2028 to support current and future mission requirements by maintaining and providing needed infrastructure. The project is needed as many of the facilities at WIA are outdated and deteriorating, providing unsafe working conditions. Many of the existing deteriorating buildings are known or suspected to contain hazardous substances such as asbestos containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB). The Proposed Action (Undertaking) would support mission growth and quality of life for installation users. The list of projects included in the Proposed Action (Undertaking) is included in Table 1. The locations of each project are included in Attachment 2.

Table 1. Projects Included in the Proposed Action (Undertaking)

Project Number	Project	Description
Facility Construction Projects		
180001	Wash Rack Installation	Construction of a new covered vehicle wash rack
Infrastructure Construction Projects		

Project Number	Project	Description
190009	Repair Electrical Distribution Industrial Area	The current electrical power system will be upgraded to the current standards in the industrial area, the MDA area on the southern portion of the island, and the electrical network area.
Demolition Projects		
150002	Repair or Replace Petrol Ops (building [B]1509)	B1509 will be demolished.
200018	Replace Water Tank	Six water storage tanks are proposed for demolition because they can no longer be used for their intended purpose and serve no USAF mission purpose. Four of these water storage tanks will be replaced in phases.
70006	Demolition of Storage Facility (B1407)	B1407 will be demolished.
190005	Demolition of Air Traffic Control Tower (B1601)	B1601 will be demolished.
180020	Demolition of Electrical Power (B950)	B950 will be demolished.
180021	Demolition of Storage Facility (B952)	B952 will be demolished.

Area of Potential Effect

Wake Atoll is an atoll formed by volcanic activity and is comprised of three islands: Wake, Wilkes, and Peale Islands, which are positioned around a shallow lagoon (Attachment 1). The proposed projects would occur on two of the islands Wake Island and Wilkes Island. The Area of Potential Effect (APE) is shown on Attachment 2. Peale Island will not be affected by the project.

Identification of Historic Properties

In 2007, buildings constructed since WWII (between 1946 and 1989) were evaluated for historical significance. Those dating to 1957 or earlier were evaluated using the National Register evaluation criteria. Those dating from 1958 or later were evaluated for exceptional importance under Criteria Consideration (G). Only two buildings were eligible for listing on the National Register of Historic Places including B1502 (the terminal) and B1601 (the control tower) (ICRMP 2015). We have reviewed the 2008 document and do not believe that buildings 950, 952, 1407, or 1509 have achieved NRHP eligibility, even though they are now over fifty years old. The buildings were in fair to good condition in 2008 but have deteriorated and are now in fair to poor condition (Attachment 3). They lack criterion A significance for specific historical importance with historic events or trends. They are not associated with significant persons under criterion B. They are not architecturally distinctive under criterion C. They are unlikely to yield important information under criterion D. The buildings housed support functions and are characteristic of buildings on US military installations all over the world. We would appreciate your concurrence on the non-NRHP eligibility.

The 611 CES prepared the *Wake Atoll Water System Historic Context Report* in February 2017. The purpose of this report was to provide history and context for water systems on Wake Atoll. The report also includes an evaluation of the various water system buildings and infrastructure. The water tanks are

associated with the two large, poured concrete rainwater catchment basins (Building 1300) which were an essential feature of the atoll's water systems from the 1950s to the 1970s. However, the integrity of the individual basins have been compromised due to neglect and continued deterioration. Only two 300,000-gallon water storage tanks (Tanks #1 and #3) are usable for potable water. The other storage tanks, including two 2-million-gallon (Tanks #7 and 8) and four 300,000-gallon tanks (Tanks #2, 4, 5, and 6), are unusable. It is recommended that the water tanks, as individual features, or part of the larger system, do not have the integrity required to be eligible for listing on the NRHP under criterion A. The water tanks are not known to be associated with a person who made an important contribution to history. They are therefore not eligible under criterion B. They do not represent the work of a master, possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction. The features' structural integrity has been compromised by deterioration over time. Accordingly, they are not eligible under criterion C. The water tanks have not yielded, nor are likely to yield, information important in history or prehistory. They are therefore not eligible under criterion D. The water tanks are recommended as *not eligible* for the NRHP.

Wake Island Atoll is designated as a National Historic Landmark (NHL) since 1985 because of its significance in association with World War II in the Pacific. This NHL encompasses all American and Japanese structures, earthworks, fortifications, and weapons that are found over all of the three islands from the period 1941 to 1945. The NHL also includes structures and ruins of the Pan Am facilities, built before 1941, but standing as the war began. The NHL comprised individual features such as fortifications, buildings, and trenches, and well as closely related groups of features referred to as clusters. To date, 119 feature clusters consisting of over 300 recorded features have been defined within the landmark. The nomination package defines the landmark's boundaries as "the outer edge of the reef that surrounds the Wake Island so as to include the reef, the three islands, and the lagoon." (Thompson 1984). Therefore, the NHL includes the entire atoll.

Assessment of Effects

The PRSC entered into a Memorandum of Agreement (MOA) on 20 March 2014, with the Alaska SHPO along with the Advisory Council on Historic Preservation (ACHP) to demolish Building 1601 (the control tower Project 190005) with a stipulation that the history of this building and the context under which it and other Air Force control and support facilities on the island were constructed be documented (Wake Atoll Air Traffic Control Towers, Historical Context Report, Jan 2017). The history of building 1601 history was documented to mitigate the adverse effects to historic properties that will occur during demolition. No new effects would occur to this building, and no additional mitigation is proposed.

Based on the above eligibility, none of the buildings or water tanks proposed for demolition are considered historic properties, therefore, there would be no historic properties directly affected by these proposed actions. Table 2 provides a summary of the Air Force identification of historic properties and assessment of effects.

Table 2. Identification of Historic Properties and Assessment of Effect

Bldg. No.	Facility Name	Date of Construction	AF Eligibility Determination	Proposed Project	Assessment of Effect
950	Electrical Power	1962	Not eligible	Demolish	No historic properties effected
952	Storage Facility	1959	Not eligible	Demolish	No historic properties effected
1407	Storage Facility	1972	Not eligible	Demolish	No historic properties effected

1509	Petrol Ops	1970	Not eligible	Demolish	No historic properties effected
1601	Air Traffic Control Tower	1949	Eligible, mitigation complete	Demolish	No effect
	Water Tanks	1954 - 1971	Not eligible	Six tanks - demolish Four tanks - replaced	No historic properties effected
	Repair Electrical Distribution Industrial Area		Not eligible	Repair	No historic properties effected

Attachment 4 shows the location of the NHL features on Wake Atoll overlain with the locations of the proposed projects under this Proposed Action (Undertaking). The features of the NHL would be avoided during the Proposed Action (Undertaking), therefore, there would be no adverse effects to the NHL. The Electrical Power Repair project is located adjacent to in NHL features in different areas throughout the island. All NHL features near the repair project will be flagged with a 20-foot buffer to prevent accidental damage during construction work.

Human remains are occasionally encountered on Wake Atoll. Most of these remains are those of participants in the WWII battle and subsequent Japanese occupation of the atoll. The 611th Civil Engineering Squadron has a Standard Operating Procedure (SOP) for managing the unexpected discovery of cultural resources and human remains. The SOP is provided as Attachment 5. The contractor will be required to implement the SOP during ground disturbing activities, as necessary. During the ground disturbance and excavation phase, if historical items or remains are encountered, work at that location will be stopped and the Cultural Resources PM contacted. Therefore, there would be no adverse effect to the unknown resources.

Conclusion

The USAF requests your concurrence with the determination of eligibility for the above resources, and well as the assessment of effect.

Thank you in advance for your comments. Please return your comments to me at the mailing address below or email to sean.palmer.16@us.af.mil. If you have questions, please contact me at 907-552-5520 or by email.

Sincerely,

Sean Palmer
EIAP/NEPA
611th Civil Engineer Squadron (611 CES/CEIE)
10471 20th Street Suite 323
JBER, AK 99506-2200

Attachments:

Attachment 1 – Figure 1 Wake Island Airfield Layout Map
Attachment 2 – Figure 2 Proposed Locations of Projects/Area of Potential Effect
Attachment 3 – Photographs of Buildings
Attachment 4 – Figures 3-1, 3-2, 3-3 Wake Island Cultural Resources Consultation Map
Attachment 5 – Standard Operating Procedure for Discoveries of Archaeological Resources and NAGPRA Cultural Items



**DEPARTMENT OF THE AIR FORCE
ELEVENTH AIR FORCE (PACAF)
JOINT BASE ELMENDORF-RICHARDSON ALASKA**

MEMORANDUM FOR U.S. ARMY COPRS OF ENGINEERS

FROM: 611 CES/CEIE

Subject: Programmatic Environmental Assessment for Construction and Demolition of Facilities at Wake Island Airfield, Wake Island Atoll.

U.S. Army Corps of Engineers
Honolulu District
Building 230, Room 302
Fort Shafter, HI 96858

To Honolulu Regulatory District:

The U.S. Air Force (USAF) is seeking to develop an installation-wide Programmatic Environmental Assessment for actions identified in the Installation Development Plan (IDP) at Wake Island Airfield (WIA) on Wake Island Atoll for development from Fiscal Year 2024 through 2028. Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles (3,700 kilometers) west of Honolulu, Hawaii (Figure 1). Installation development and improvements are an on-going process at WIA. The IDP is to project the long-term needs of USAF and its stakeholders for Wake Island operations in order to define an enduring end state for the installation that maximizes functional effectiveness while minimizing operating and maintenance costs. Because mission needs largely dictate land and facility support requirements, installation development is centered around the capabilities of existing infrastructure and facilities to meet the needs of the existing and projected mission.

Proposed Action

The purpose of the project is to construct, repair, and demolish existing assets and infrastructure at WIA from FY 2024 through 2028 to support current and future mission requirements by maintaining and providing needed infrastructure. The project is needed as many of the facilities at WIA are outdated and deteriorating, providing unsafe working conditions. Many of the existing deteriorating buildings are known or suspected to contain hazardous substances such as asbestos containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB). The Proposed Action would support mission growth and quality of life for installation users. The list of projects included in the Proposed Action is included in Table 1. The locations of each project are included in Figure 2.

Table 1. Projects Included in the Proposed Action

Project Number	Project	Description
Facility Construction Projects		
180001	Wash Rack Installation	Construction of a new covered vehicle wash rack
Infrastructure Construction Projects		
190009	Repair Electrical Distribution Industrial Area	The current electrical power system will be upgraded to the current standards in the industrial area, the MDA area on the southern portion of the island, and the electrical network area.
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In August of 2023, EA Engineering, Science, and Technology, PBC completed a wetland delineation in accordance with U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Hawai'i and Pacific Islands Region (Version 2.0)* (Hawai'i and Pacific Islands Regional Supplement). EA's wetland scientists identified and mapped 17 wetlands, totaling 53.91 acres on Wake Island Atoll. The wetlands present on Wake Island Atoll were nearly exclusively dominated by pennis (Pennis acidula) and seaside purslane (Sesuvium portulacastrum) (EA 2024).

There are no wetlands located within the vicinity of the projects; therefore, no federally jurisdictional waters will be impacted by the projects. The USAF has therefore determined the proposed project will have no effect on Waters of the United States and further consultation with your office is not necessary. Your written concurrence with this determination of no effect is, however, requested.

Thank you in advance for your comments. Please return your comments to me at the mailing address below or email to sean.palmer.16@us.af.mil. If you have questions, please contact me at 907-552-5520 or by email.

Sincerely,

Sean Palmer
EIAP/NEPA
611th Civil Engineer Squadron (611 CES/CEIE)
10471 20th Street Suite 323
JBER, AK 99506-2200

Attachments:

Attachment 1 – Figure 1 Wake Island Airfield Layout Map
Attachment 2 – Figure 2 Proposed Locations of Projects



**DEPARTMENT OF THE AIR FORCE
ELEVENTH AIR FORCE (PACAF)
JOINT BASE ELMENDORF-RICHARDSON ALASKA**

MEMORANDUM FOR U.S. FISH AND WILDLIFE SERVICE

FROM: 611 CES/CEIE

Subject: Programmatic Environmental Assessment for Construction and Demolition of Facilities at Wake Island Airfield, Wake Island Atoll.

Mr. Earl Campbell
Project Leader
U.S. Fish and Wildlife Service
Pacific Island Fish and Wildlife Office
300 Ala Moana Boulevard
Rooms 3-122
Honolulu, HI 96850

To Mr. Campbell:

The U.S. Air Force (USAF) is seeking to develop an installation-wide Programmatic Environmental Assessment for actions identified in the Installation Development Plan (IDP) at Wake Island Airfield (WIA) on Wake Island Atoll for development from Fiscal Year 2024 through 2028. The purpose of this letter is to initiate Section 7 of the Endangered Species Act consultation. Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles (3,700 kilometers) west of Honolulu, Hawaii (Figure 1). Installation development and improvements are an on-going process at WIA. The IDP is to project the long-term needs of USAF and its stakeholders for Wake Island operations in order to define an enduring end state for the installation that maximizes functional effectiveness while minimizing operating and maintenance costs. Because mission needs largely dictate land and facility support requirements, installation development is centered around the capabilities of existing infrastructure and facilities to meet the needs of the existing and projected mission.

Proposed Action

The purpose of the project is to construct, repair, and demolish existing assets and infrastructure at WIA from FY 2024 through 2028 to support current and future mission requirements by maintaining and providing needed infrastructure. The project is needed as many of the facilities at WIA are outdated and deteriorating, providing unsafe working conditions. Many of the existing deteriorating buildings are known or suspected to contain hazardous substances such as asbestos containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB). The Proposed Action would support mission growth and quality of life for installation users. The list of projects included in the Proposed Action is included in Table 1. The locations of each project are included in Figure 2.

Table 1. Projects Included in the Proposed Action

Project Number	Project	Description
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Based on review of the Integrated Natural Resource Management Plan for Wake Island Airfield; Kōkeʻe Air Force Station, Kauaʻi, Hawaiʻi; and Mount Kaʻala Air Force Station, Oʻahu, Hawaiʻi the federally listed threatened and endangered terrestrial biota on Wake Atoll are limited to migratory seabirds and shorebirds. There are no other exclusively terrestrial biota, either plant or animal, federally listed as threatened or endangered under the ESA, currently known or reported from Wake Atoll. There are federally endangered and threatened species using marine habitats occurring within the lagoon and waters surrounding Wake Atoll including the green sea turtle (*Chelonia mydas*), Hawaiian monk seal (*Monachus schauinslandi*), Newell’s shearwater (*Puffinus auricularis newelli*), and two coral species (*Acropora retusa* and *Acropora globiceps*) (PRSC 2017).

Because the project areas are not within suitable habitat nor will any potential suitable habitat be disturbed, no listed species would be directly or indirectly impacted. Furthermore, there are no impacts to marine habitat, the lagoon, or other native habitat that supports the above listed species. The USAF has therefore determined the proposed project will have no effect on listed species and further consultation with your office is not necessary. Your written concurrence with this determination of no effect is, however, requested.

Thank you in advance for your comments. Please return your comments to me at the mailing address below or email to sean.palmer.16@us.af.mil. If you have questions, please contact me at 907-552-5520 or by email.

Sincerely,

Sean Palmer
EIAP/NEPA
611th Civil Engineer Squadron (611 CES/CEIE)
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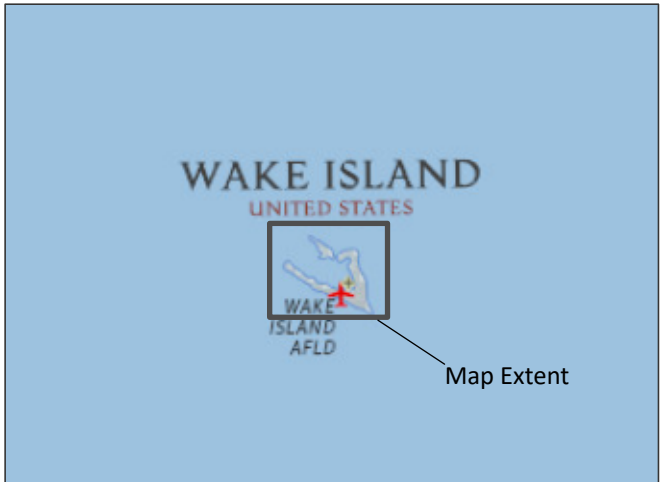
Attachments:

Attachment 1 – Figure 1 Wake Island Airfield Layout Map
Attachment 2 – Figure 2 Proposed Locations of Projects

Attachment 1

Figure 1 Wake Island Airfield Layout Map

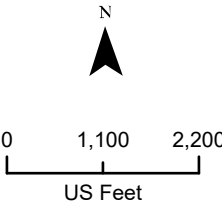
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Legend

- Road
- Building
- Airfield
- Installation Boundary

Spatial Reference
Name: WGS 1984 UTM Zone 58N



Data Sources: Google Earth, ESRI

Wake Island Programmatic Environmental Assessment
Wake Island Atoll, USA

Wake Island Airfield Layout Map

Figure 1



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Attachment 2

Figure 2 Proposed Locations of Projects/Area of Potential Effect

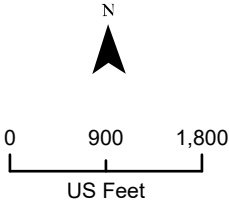
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Legend

- Road
- Building
- Installation Boundary

Spatial Reference
Name: WGS 1984 UTM Zone 58N



Data Sources: Google Earth, ESRI

Wake Island Programmatic Environmental Assessment

Wake Island Atoll, USA

Proposed Locations of Projects/
Area of Potential Effect

Figure 2



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Attachment 3

Photographs of Buildings

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Attachment 3 – Photographs of Buildings

Building 950 - Warehouse Supply and Equipment Base



Building 950 on left, building 952 on right, facing northeast



Inside building 950, facing east

Building 952 - Electric Power Station Building



Building 952 facing southwest



Inside building 952, facing east

Building 1407 - Vehicle Operations Parking Shed



Building 1407 looking east



Building 1407 looking west



Building 1407 Bay looking northeast



Building 1407 Bay looking southeast

Building 1509 - Petroleum Operations Building



Building 1509 looking north



Building 1509 looking northeast



Interior Building 1509 looking south



Building 1509 looking east

Attachment 4

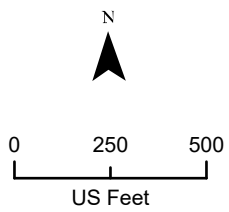
Figures 3-1, 3-2, 3-3 Wake Island Cultural Resources Consultation Map

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- ⊕ Cultural Resources
- ▨ Cult. Res. Feature clusters
- ▨ Building (abandoned)
- Building (cult. res.)
- Building (in use)
- ▨ Recreation areas
- Ponds (manmade)
- ▨ Wetlands
- Coastline

Spatial Reference
Name: WGS 1984 UTM Zone 58N



Data Sources: 2019 USAF Wake Island Airfield (Wake Atoll) Cultural Resources Map, ESRI

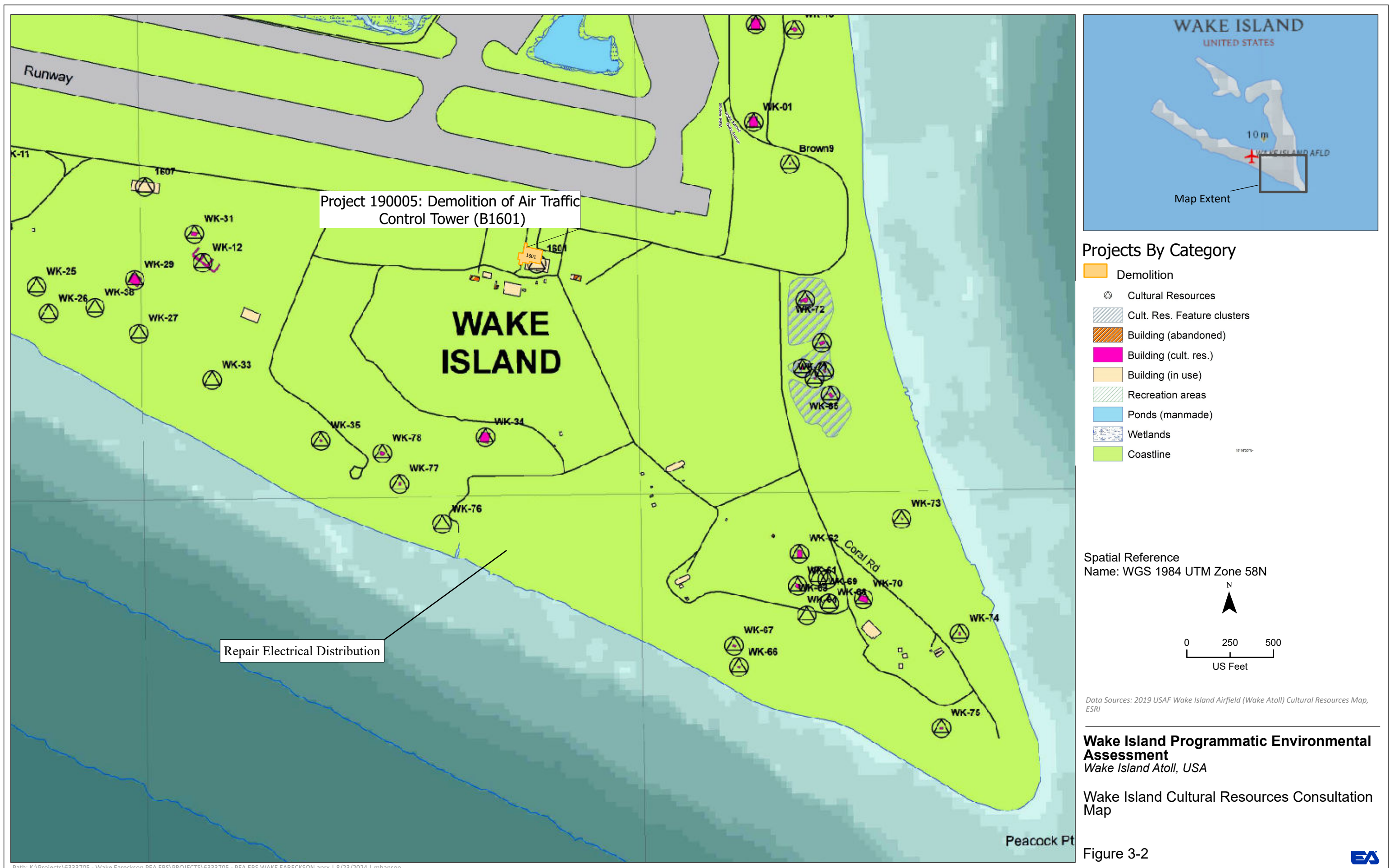
Wake Island Programmatic Environmental Assessment

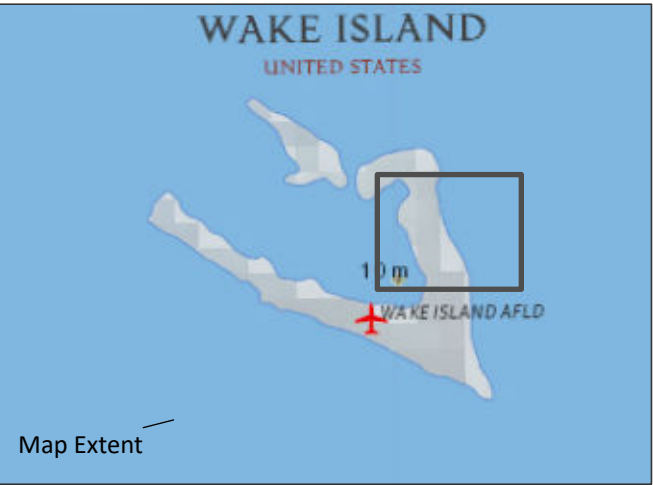
Wake Island Atoll, USA

Wake Island Cultural Resources Consultation Map



Figure 3-1









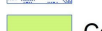




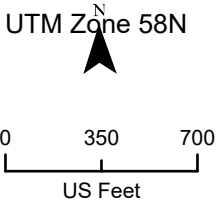


Projects By Category

-  Construction
-  Demolition

-  Cultural Resources
-  Cult. Res. Feature clusters
-  Building (abandoned)
-  Building (cult. res.)
-  Building (in use)
-  Recreation areas
-  Ponds (manmade)
-  Wetlands
-  Coastline

Spatial Reference
Name: WGS 1984 UTM Zone 58N



Data Sources: 2019 USAF Wake Island Airfield (Wake Atoll) Cultural Resources Map, ESRI

Wake Island Programmatic Environmental Assessment Wake Island Atoll, USA

Wake Island Cultural Resources Consultation Map

Figure 3-3



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Attachment 5

Standard Operating Procedure for Discoveries of Archaeological Resources and NAGPRA Cultural

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**Attachment 5 - Standard Operating Procedure for Discoveries of Archaeological Resources and
NAGPRA Cultural Items
ICRMP 2020**

Applicability Statement:

This SOP applies to all USAF installations that contain, or potentially contain, archaeological resources. Installations that have agreements with tribes concerning the treatment of these two types of resources in discovery situations should include those procedures, in addition to the SOP described below. Cite the title and date of the agreement(s) when summarizing the procedures and ensure a copy of the agreement(s) is appended to the ICRMP.

Background/Overview:

Accidental or unanticipated discoveries of archaeological resources may occur on USAF controlled lands. When discoveries occur, the proper actions must be taken to minimize damage to these resources and to ensure that legal requirements are met. The relevant statute is ARPA and the regulation is 32 CFR Part 229, Protection of Archaeological Resources.

Cultural resources can be defined as physical evidence or place of past human activity: site, object, landscape, structure; or a site, structure, landscape, object or natural feature of significance to a group of people traditionally associated with it. Keep in mind that Wake Island is a NHL, collectively one of the most significant historic properties in the U.S. The term "historic property" is defined in the NHPA as: "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register"; such term includes artifacts, records, and remains which are related to such district, site, building, structure, or object. 16 U.S.C. Section 470(w)(5).

Human remains:

If there are bones or potential human remains, stop excavation and secure the area. See if the remains can be identified by the physician on Wake Island. If the bones are obviously not human, carry on with excavation. If the physician is not sure, send photos to the Defense Prisoners of War (POW)/Missing in Action Accounting Agency (DPAA), for identification. Secure the area and the bones in situ. It is important to keep the remains in situ in order that DPAA is able to excavate and accurately collect important stratigraphical and contextual information.

It is a federal offense, under the provisions of ARPA and 32 CFR Part 229, to excavate, remove, damage, or otherwise deface any archaeological resources located on federal lands, without authorization. The provisions of ARPA apply to archaeological material greater than 100 years in age, regardless of the NRHP status of the site where they are found. Any person wishing to excavate or remove archaeological resources from an USAF installation must apply for an ARPA permit. USAF-contracted work is exempted from the permitting provision of ARPA. In the event of a permit request, the installation 611 CES/CEIE/CRM should notify the AFCEC Section Cultural Resources Specialist. Detailed information to assist in facilitating ARPA permitting is available in the Cultural Resources Management Playbook.

“36 CFR 800.13 requires Federal agencies to plan for post-Section 106 review discoveries.” Some types of historic properties cannot be identified by traditional survey methods. Many archaeological sites are buried, leaving no visible evidence of their existence on the ground surface. Buried resources are most often discovered during construction operations. Unevaluated resources must be treated as if they are significant (AFI 32–7065 §2.4). Under Section 106 and Section 110(f) of the NHPA, federal agencies are responsible for buried historic properties. If unanticipated buried archaeological remains are discovered

Attachment 5 – Standard Operating Procedure
for Discoveries of Archaeological Resources and NAGPRA Cultural Items

during construction or other activities, or if there are unanticipated effects on known historic properties, the following procedure should be followed (AFI 32–7065 §3.9):

Procedure:

USAF or contractor personnel that make or become aware of a potential archaeological discovery on installation lands should:

1. Cease all construction activity in the vicinity of the discovery/property. If possible, do not remove the discovered artifact or historic property;
2. Take steps to secure the area and protect the discovery/property from further damage. Leave the object in place and take pictures.
3. Notify the 611 CEIE representative of the discovery/property. If the discovery/property involves human remains, follow the procedures for handling unanticipated human remains (below).
4. The 611 CEC/CEIE/CRM representative notifies installation commander.
5. The installation commander certifies in writing that he or she has been notified.
6. If the properties must be moved, communicate with the CRM on methods and take lots of pictures.
7. The 611 CEC/CEIE/CRM will prepare a treatment plan; and
8. Earth-disturbing activities may be resumed after the treatment plan has been executed, (AFI 32–7065 §3.9.1.6).

The 611 CES/CEIE/CRM should:

- Ensure that all archaeological items are left in place and that no further disturbance is permitted to occur
- Sufficiently identify the location of the discovery to provide efficient relocation, yet take efforts to minimize the types of signs that could attract personnel and place the discovery in danger
- Direct installation personnel and contractors to take efforts to resume mission-associated activities in a reasonable and timely manner

Human remains are occasionally encountered on Wake Atoll. Most of these remains are from participants in the WWII battle and subsequent Japanese occupation. If skeletal remains are encountered on the atoll, the following steps should be taken:

1. All work in the immediate vicinity of the find spot shall be halted and the area secured to protect the remains from damage.
2. The installation commander shall be notified.
3. The installation commander shall notify WIA Security and the BOS medical officer.
4. The security officer shall seal off the site, including associated artifacts.
5. The BOS medical officer will try to confirm that the remains are human or non-human.
6. The remains will be protected in place when the site is secured.
7. The installation commander shall notify the 611 CES/CEIE/CRM.
8. The 611 CES/CEIE/CRM will notify the Central Identification Laboratory, of the Defense POW/Missing in Action Accounting Agency, 590 Moffet Street, Building 4077, Joint Base Pearl Harbor-Hickam, Hawaii, 96853-5530, 808-448-4500 x3715 or www.dpss.mil/contact/contactus.aspx10. DPAA and the CRM will determine who will recover the remains. (**Updated Leeper 1/11/2021)
9. The remains will be removed by an archaeologist or DPAA.

Appendix B

Air Force Air Conformity Applicability Model (ACAM) Model Input Data

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AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR §989); and the General Conformity Rule (GCR, 40 CFR §93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: NO BASE
State: U.S. Minor Outlying Islands
County(s): Wake Island
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Wake Island Airfield, Wake Atoll

c. Project Number/s (if applicable):

d. Projected Action Start Date: 6 / 2024

e. Action Description:

WIA capacity for future development or mission expansion is determined by examining current supply, demand, and capacity of land uses, facilities, utility systems, or land that could support the mission, quality of life of current and future users of the installation. The Proposed Action includes the construction of one new facility, one infrastructure repair project, and demolition of six facilities that can reasonably be anticipated to be implemented from FY 2023 through 2027. The Proposed Action would maximize functional effectiveness of the WIA, while minimizing operating and maintenance costs.

f. Point of Contact:

Name: Sierra Barr
Title: Scientist II
Organization: EA Engineering, Science, and Technology, Inc. PBC
Email: sbarr@eaest.com
Phone Number: 478-308-7372

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5% of any NAAQS). These indicators do not define a

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

2024

2024

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.095	250	No
NOx	0.472	250	No
CO	0.809	250	No
SOx	0.002	250	No
PM 10	0.028	250	No
PM 2.5	0.018	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	159.0		

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.172	250	No
NOx	0.802	250	No
CO	1.587	250	No
SOx	0.004	250	No
PM 10	2.749	250	No
PM 2.5	0.028	250	No
Pb	0.000	25	No
NH3	0.002	250	No
CO2e	327.2		

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.040	250	No
NOx	0.210	250	No
CO	0.413	250	No
SOx	0.001	250	No
PM 10	0.011	250	No
PM 2.5	0.007	250	No
Pb	0.000	25	No
NH3	0.001	250	No
CO2e	68.8		

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF AIR ANALYSIS (ROAA)

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	0.0		

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.

Sierra R. Barr

04 January 2024

Sierra Barr, Scientist II DATE

Appendix C

Biological Evaluation

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BIOLOGICAL EVALUATION

FOR

CONSTRUCTION AND DEMOLITION OF

FACILITIES

AT

WAKE ISLAND AIRFIELD

WAKE ISLAND ATOLL

PACIFIC OCEAN

Prepared on behalf of:

611th Civil Engineer Squadron
10471 20th Street Suite 323
Joint Base Elmendorf-Richardson, Alaska 99506-2200

JUNE 2024

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LIST OF ABBREVIATIONS AND ACRONYMS

BMP	Best Management Practice
GST	Green sea turtle
ESA	Endangered Species Act
HST	Hawksbill sea turtle
INRMP	Integrated Natural Resources Management Plan
IPaC	Information for Planning and Consultation
MDA	Missile Defense Agency
NOAA	National Oceanic and Atmospheric Administration
PRSC	Pacific Air Forces Regional Support Center
UFC	Unified Facilities Criteria
U.S.C.	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WIA	Wake Island Airfield

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1. INTRODUCTION

Wake Atoll is approximately 1,821 acres and is located in the middle of the Pacific Ocean, approximately 2,300 miles west of Honolulu, Hawaii (Figures 1 and 2). Wake Atoll is an atoll formed by volcanic activity and coral growth and is comprised of three islands: Wake, Wilkes, and Peale Islands, which are positioned around a shallow lagoon. Areas of brackish water wetlands are scattered throughout the Atoll. Wake Atoll is a biologically diverse group of islands that includes arthropods, small mammals, marine mammals, birds, and over 200 species of plants. Wake Atoll has a predominantly flat topography, and the maximum elevation is 31 feet, with an average elevation of 12 feet above sea level.

1.1 PURPOSE AND OBJECTIVES

The purpose of this Biological Evaluation is to assess the potential effects of the Proposed Action on species protected under the Endangered Species Act (ESA). The Proposed Action includes construction of a wash rack, repairs to the electrical distribution system, and demolition of six facilities on Wake Island. This review includes sufficient detail to determine the extent to which the project may affect any federally protected species.

This Biological Evaluation was developed in accordance with the legal requirements set forth under the ESA (16 U.S. Code [U.S.C] 1531 et seq.) and following the guidance outlined in 50 Code of Federal Regulations §402.12(f).

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3
June 2024



Figure 2. Wake Island Airfield Layout Map

1.2 PROPOSED ACTION

Wake Island Airfield (WIA) capacity for future development or mission expansion is determined by examining current supply, demand, and capacity of land uses, facilities, utility systems, or land that could support the mission and quality of life of current and future users of the installation. The Proposed Action includes the construction of one new facility, one infrastructure repair project, and demolition of six facilities that can reasonably be anticipated to be implemented from Fiscal Year 2024 through 2028. The Proposed Action would maximize functional effectiveness of the WIA, while minimizing operating and maintenance costs. The list of projects included in the Proposed Action is included in Table 1 and locations of each project are included in Figure 3. A brief description of each project is also provided below.

Construction and demolition activities would generally involve ground disturbance by heavy construction equipment such as excavators, backhoes, bulldozers, graders, wheel rollers, and dump trucks. During construction, fugitive dust would be managed by wetting surfaces and structures prior to demolition to control the spread of dust in the air. Other practices outlined in the U.S. Environmental Protection Agency (USEPA) Fugitive Dust Control Measures and Best Practices may be used as deemed appropriate (USEPA 2022). Construction and demolition materials and debris will be hauled on/off the island via barge.

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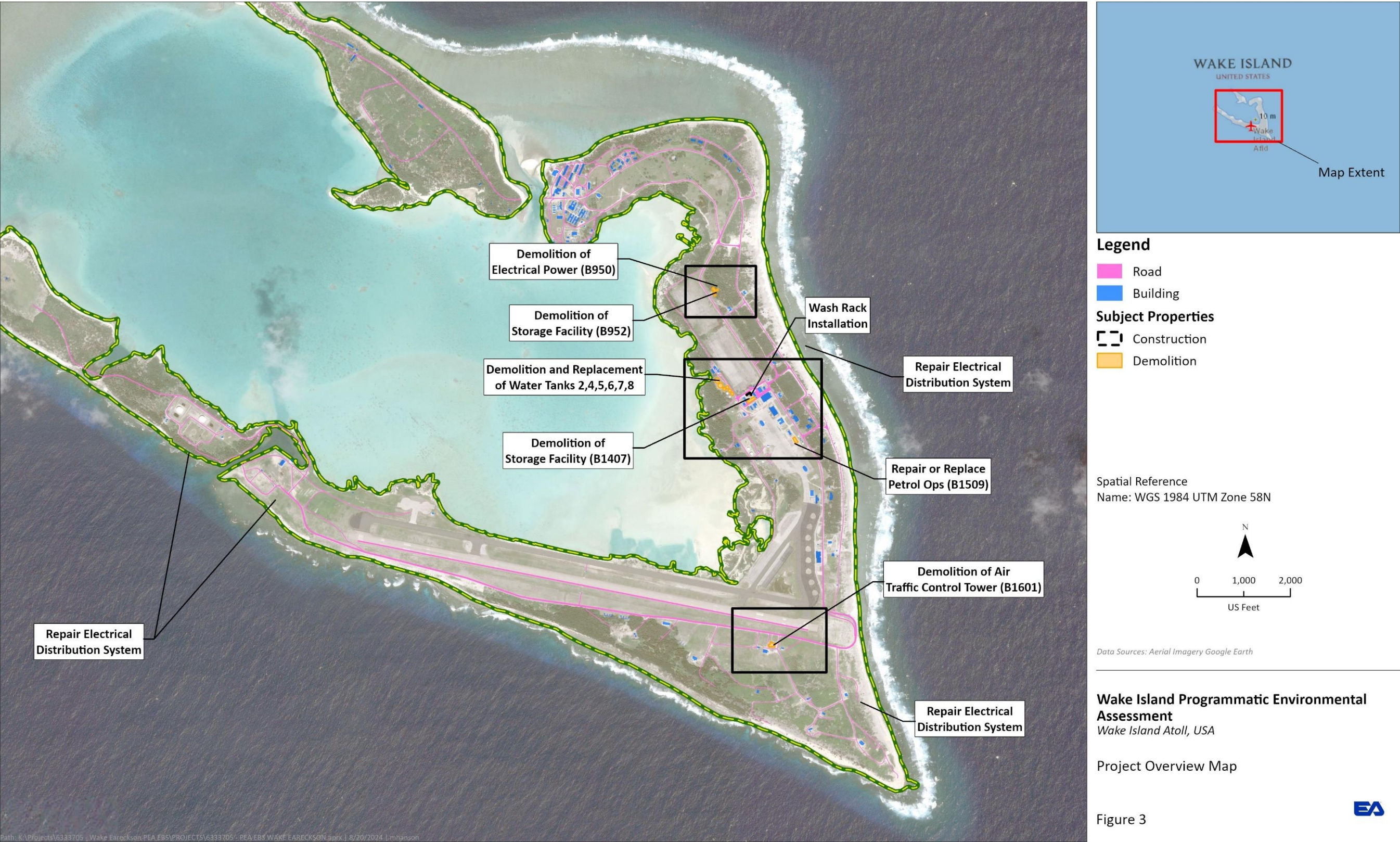


Figure 3. Project Overview Map

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Table 1. Projects in the Proposed Action

Project	Project ID	Purpose of Action	Project Location
Facility Construction Projects			
Wash Rack Installation	180001	Provide a covered vehicle wash rack to rinse salt water and sand from vehicles operating on the island for corrosion control and to increase the life of vehicles	The facility would be located on Parakeet Street in front of Building 1407 (Figure 5). Building 1407 is scheduled for demolition; please see Project 270006.
Infrastructure Construction Projects			
Repair Electrical Distribution Industrial Area	190009	Upgrade the current electrical power system to the current standards, avoid loss of power, and reduce the safety risk to electrical technicians maintaining the system and fire fighters in the event of an emergency	The Wake electrical distribution system sections included in this project are within the industrial area, the MDA area on the southern portion of the island, and the electrical network that runs from the MDA area along the southern side of the main runway to the Marina and over to the fuel farm (Figure 7).
Demolition Projects			
Repair or Replace Petrol Ops (B1509)	150002	This building is proposed for demolition as it is no longer in use, dilapidated, is unsafe to enter, and serves no USAF mission purpose	This project includes the demolition of the Fuel Operations Laboratory building located along the east side of the northernmost parking apron/Bravo North taxiway (Figure 5).
Replace Water Tanks	200018	Six water storage tanks are proposed for demolition because they can no longer be used for their intended purpose and serve no USAF mission purpose. Four of these water storage tanks will be replaced in phases	All eight tanks are located approximately 500 feet to the southeast of Building 1303, Main Industrial Water Facility, on the south side of Canton Avenue (Figure 5).
Demolition of Storage Facility (B1407)	70006	The storage facility proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	located between Parakeet and Gull Streets, south of Wake Avenue Figure 5.

Project	Project ID	Purpose of Action	Project Location
Demolition of Air Traffic Control Tower (B1601)	190005	The air traffic control tower proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	This project includes demolition of the Air Traffic Control Tower located south of the main runway (Figure 6).
Demolition of Electrical Power (B950)	180020	The electrical power building proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	This project includes demolition of Building B950 located on a northwest-southeast axis in the central area of Wake Island between Wake Avenue and North Pacific Road (Figure 4).
Demolition of Storage Facility (B952)	180021	The storage facility proposed for demolition is no longer in use, is dilapidated, is unsafe to enter, and serves no USAF mission purpose	This project includes demolition of Building B952 located on a northwest-southeast axis in the central area of Wake Island between Wake Avenue and North Pacific Road (Figure 4).

Notes:

MDA = Missile Defense Agency

USAF = U.S. Air Force

2. PROJECT DESCRIPTION

A detailed work plan outlining actions to be undertaken to demolish the buildings would be developed by the demolition contractor. All new construction and renovations would comply with applicable building, fire, and safety codes. Landscaping consisting of native vegetation would be used where appropriate to enhance the visual quality where demolition and new installations occurred.

2.1.1 Facility Construction Projects

Project 180001: Wash Rack Installation

This project would include the construction of a new covered vehicle wash rack. The facility requires a shade structure and containment wash pad that is corrosion proof. The facility would include a containerized packaged wash system with a wash water oil/water separator, all utilities, pavement, site improvements, pavement demolition, and associated support facilities to provide a complete and usable facility. The facility should not increase the demand of the current water production and storage systems. Used wash water will be discharged to the sanitary sew through an oil/water separator. The installation of the wash rack, oil/water separator, and the connection to the sanitary sewer will conform to International Plumbing Code and in accordance with Unified Facilities Criteria (UFC) 3-240-01. The facility would be located on Parakeet Street in the vicinity of Building 1407 (Figure 5). Building 1407 is scheduled for demolition (Project 270006).

2.1.2 Infrastructure Construction Projects

Project 190009: Repair Electrical Distribution Industrial Area

The Wake electrical distribution system sections included in this project are within areas in the industrial area, the Missile Defense Agency (MDA) area on the southern portion of the island, and the electrical network that runs from the MDA area along the southern side of the main runway to the Marina and over to the fuel farm (Figure 7). The electrical distribution system consists of primary cable and conduit, secondary cable and conduit, transformers, facility service panels, vaults, and switches. This project includes the following elements:

- Replacing approximately 44,733 linear feet of degraded medium voltage cables with new medium voltage cables
- Updating primary cable from 3-wire configuration to 4-wire configuration (per UFC 3-550-01 including Change 1, Section 2-3 and 3-2) by installing approximately 45,500 linear feet of bonded neutral conductors
- Ensuring that cable shielding is properly grounded by replacing missing and degraded grounding electrodes in each electrical vault
- Replacing 29 degraded and failing transformers with new weather resistant stainless-steel transformers

- Demolishing 6 out-of-code switching enclosures and 33 T-splices in vaults and replacing them with code compliant junctions that allow for sectionalizing of the island power grid
- Demolishing unused electrical vaults in place as necessary
- Demolishing and replacing 10 failed electrical vaults
- Repairing structures and replacing failing vault covers on approximately 150 electrical vaults
- Demolishing and replacing all failing or missing cable racks in the electrical vaults
- Replacing 3,692 failing conduit banks with new and lowering 444 feet of existing conduit to the code required depth of 18 inches (24 inches when near roads), per UFC 3-550-01 Section 3-11.2.2 and performing necessary grading and digging to support the replacement of vaults and conduit; the installation of the new electrical system will follow the current utility corridors.

2.1.3 Demolition Projects

Project 150002: Demolition of Fuel Operations Laboratory Building (B1509)

This project includes the demolition of the Fuel Operations Laboratory building located along the east side of the northernmost parking apron/Bravo North taxiway (Figure 5). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques. A detailed work plan outlining actions to be undertaken to demolish the building would be developed by the demolition contractor.

Project 200018: Replace Water Tank

Eight freshwater storage tanks were constructed in the industrial water area to store freshwater captured by the rainwater catchment basins and desalination facilities on the atoll. All eight tanks are located approximately 500 ft to the southeast of Building 1303, Main Industrial Water Facility, on the south side of Canton Avenue (Figure 5). Demolition of Tanks 2, 4, 5, 6, 7, and 8 would be accomplished using bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques. Tanks 2, 4, 5, and 6 would be replaced with new field-constructed water tanks equivalent to Tanks 1 and 3 (300,000 gallons). The construction would include fabrication and erection of the water tank as well as tank painting, disinfection, and connection of the new tanks to existing Tanks and to the Industrial Water Facility (Building 1303). The installation of the new water tanks and appurtenances will conform to UFC 3-230-01. Tank 4 or another tank slated for demolition would be used to hold non-potable water for the concrete batch plant. Prior to use, the non-potable water tank would be inspected for suitability for temporary use. The contractor selected to construct new storage tanks would be required to set up a project-specific batch plant reverse osmosis water purification unit to fill Tank 4.

Project 70006: Demolition of Storage Facility (B1407)

This project includes the demolition of a vehicle operations parking shed located between Parakeet and Gull Streets, south of Wake Avenue (Figure 5). Demolition would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (e.g., grapples, shears, hammers, and concrete crushers), and manual techniques.

Project 190005: Demolition of Air Traffic Control Tower (B1601)

This project includes the demolition of the Air Traffic Control Tower located south of the main runway (Figure 6). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), manual techniques, and dump trucks.

Project 180020: Demolition of Electrical Power (B950)

This project includes the demolition of Building B950 located on a northwest-southeast axis in the central area of Wake Island between Wake Avenue and North Pacific Road (Figure 4). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques.

Project 180021 Demolition of Storage Facility (B952)

This project includes the demolition of Building B952 located on a northwest-southeast axis in the central area of Wake Island between Wake Avenue and North Pacific Road (Figure 4). Demolition of the building would be conducted using standard wrecking practices, which involve the use of bulldozers, hydraulic excavators with attachments (i.e., grapples, shears, hammers, and concrete crushers), and manual techniques.

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Figure 4. Locations of Projects 180020 and 180021

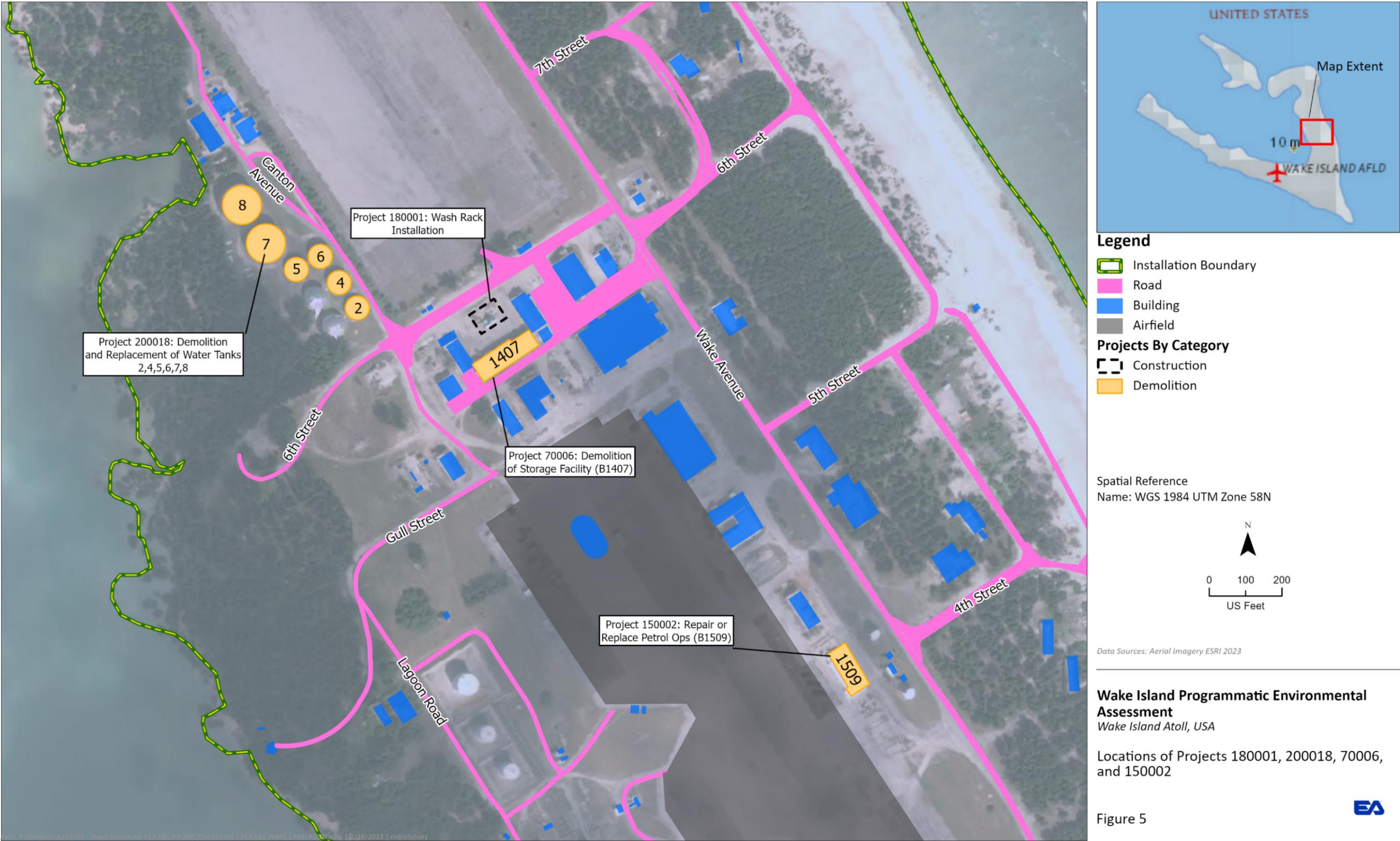


Figure 5. Locations of Projects 180001, 200018, 70006, and 150002



Figure 6. Location of Project 190005



Figure 7. Location of Project 190009

2.2 ACTION AREA

The action area of the Proposed Action is shown on Figure 3 through Figure 7. The action area includes approximately 24.29 acres, which is entirely within existing developed or previously disturbed areas. The affected area for this Proposed Action includes a 20- to 30-foot buffer zone that extends beyond the project areas. This represents the action area, and the limit of potential effects of the Proposed Action.

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3. PROTECTED SPECIES/CRITICAL HABITAT CONSIDERED

3.1 SPECIES AND CRITICAL HABITAT

Section 7 of the ESA (16 U.S.C. 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any federally protected endangered or threatened species or result in the destruction or adverse modification of critical habitat. Table 2 below provides the species of concern and their current federal status that have the potential to occur on or near Wake Atoll based on documentation in the 2023 Integrated Natural Resources Management Plan (INRMP), United State Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool, and National Oceanic and Atmospheric Administration's (NOAA) - Fisheries Species in the Pacific Islands (USFWS 2023 and NOAA 2023a).

Table 2. Wake Atoll Protected Species and Species of Concern

Scientific Name	Common Name	Status	Observed on/near Wake Atoll	Evaluated
<i>Puffinus auricularis newelli</i>	Newell's shearwater	Federally Threatened	Yes	No
<i>Hydrobates castr</i>	Band-rumped storm-petrel ¹	Federally Endangered	No	No
<i>Phoebastria albatrus</i>	Short-tailed albatross	Federally Endangered	No	No
<i>Bolbometopon muricatum</i>	Humphead parrotfish	Species of Concern	Yes	No
<i>Cheilinus undulatus</i>	Humphead wrasse	Species of Concern	Yes	No
<i>Sphyrna lewini</i>	Scalloped hammerhead shark ²	Federally Threatened	Yes	No
<i>Carcharhinus longimanus</i>	Oceanic whitetip shark ³	Federally Threatened	Yes	No
<i>Manta birostris</i>	Giant manta ray ⁴	Federally Threatened	Yes	No
<i>Chelonia mydas</i>	Green sea turtle ⁵	Federally Endangered	Yes	Yes
<i>Eretmochelys imbricata</i>	Hawksbill sea turtle	Federally Endangered	Yes	Yes
<i>Caretta caretta</i>	Loggerhead sea turtle	Federally Endangered	No	No
<i>Dermochelys coriacea</i>	Leatherback sea turtle	Federally Endangered	No	No
<i>Lepidochelys olivacea</i>	Olive ridley sea turtle	Federally Threatened	No	No
<i>Acropora retusa</i>	Unnamed coral	Federally Threatened	Yes	Yes
<i>Acropora globiceps</i>	Unnamed coral	Federally Threatened	Yes	Yes
<i>Acropora speciosa</i>	Unnamed coral	Federally Threatened	Yes	Yes
<i>Acropora jacquelineae</i>	Unnamed coral	Federally Threatened	No	No
<i>Isopora crateriformis</i>	Unnamed coral	Federally Threatened	No	No
<i>Euphyllia paradivisa</i>	Unnamed coral	Federally Threatened	No	No
<i>Nautilus pompilius</i>	Chambered nautilus	Federally Threatened	No	No
<i>Balaenoptera musculus</i>	Blue whale	Federally Endangered	No	No
<i>Pseudorca crassidens</i>	False killer whale	Federally Endangered	No	No

Scientific Name	Common Name	Status	Observed on/near Wake Atoll	Evaluated
<i>Balaenoptera physalus</i>	Fin whale	Federally Endangered	No	No
<i>Megaptera novaeangliae</i>	Humpback whale	Federally Endangered	No	No
<i>Orcinus orca</i>	Killer whale	Federally Endangered	No	No
<i>Balaenoptera borealis</i>	Sei whale	Federally Endangered	No	No
<i>Physeter macrocephalus</i>	Sperm whale	Federally Endangered	No	No
<i>Monachus schauinslandi</i>	Hawaiian monk seal ⁶	Endangered Species	Yes	No
<i>Tridacna maxima</i>	Giant clam	Low Risk Conservation Dependent	Yes	No

¹ The band-rumped storm-petrel and short-tailed albatross have not been observed at Wake Island (PRSC 2017).
² A single NOAA diver observed one individual scalloped hammerhead shark in the water surrounding WIA. This is the only recording of this species to date, and it may have been a transient individual, rather than part of a permanent population (Brown 2021).
³ Oceanic whitetip shark has been infrequently detected in the waters around Wake Atoll (Brown 2021) and is pelagic, occupying open-ocean, outer continental shelf, and oceanic island habitats that are deeper than 590 feet (PRCS 2023).
⁴ Giant manta ray are infrequently detected in the waters around Wake Atoll (Brown 2021), with one detection in 2014 during surveys from 2005–2017 (NMFS 2019).
⁵ Green sea turtles are documented in the waters surrounding Wake Island but have not been documented basking or nesting in terrestrial areas.
⁶ Hawaiian monk seals have not been observed at Wake Island in more than two decades (PRSC 2023).
NMFS = National Marine Fisheries Service
NOAA = National Oceanic and Atmospheric Administration
PRSC = Pacific Air Forces Regional Support Center
WIA = Wake Island Airfield

3.2 SPECIES ADDRESSED IN THE BIOLOGICAL EVALUATION

Based on a review of the 2023 INRMP, several species identified on IPaC and NOAA have not been observed on WIA; no habitat critical to their survival is located within or near the action area, are not expected to occur within the action area, and therefore these species will not be evaluated in this biological evaluation. Species of Concern and Low Risk Conservation Dependent species were not evaluated because they are not currently protected under the ESA. No critical habitat is located within the action area.

3.3 DESCRIPTION OF PROTECTED SPECIES

Dependent species were not evaluated because they are not currently protected under the ESA. No critical habitat is located within the action area.

3.3.1 Marine Sea Turtles

Green Sea Turtle

The green sea turtle (GST) is the largest hard-shelled sea turtle, but have a comparatively small head. A typical adult is 3 to 4 feet long and weighs 300 to 350 pounds. They are unique among

sea turtles in that they are herbivores, eating mostly seagrasses and algae, a diet which gives their fat the greenish color for which is where their name comes from. GST are found throughout the world, nesting in over 80 countries and live in the coastal areas of more than 140 countries. Historically, GST were exploited for their fat, meat, and eggs, causing global population declines. GST, like all sea turtles, are reptiles, and must surface to breathe and lay their eggs on land. GST migrate hundreds to thousands of kilometers each way between their foraging grounds and nesting beaches. They are solitary, night-time nesters (NOAA 2023b).

GST are found worldwide primarily in subtropical and temperate regions of the Atlantic, Pacific, and Indian Oceans, and in the Mediterranean Sea. The life history of GST involves a series of developmental stages from hatchling to adulthood. The GST dig nests on beaches and lay eggs during the night. Eggs incubate for about 2 months. After emerging from the nest, hatchlings swim to offshore areas, where they live for several years in pelagic (open ocean) habitats. Juveniles eventually leave this habitat and travel to nearshore foraging grounds in shallow coastal habitats, where they mature to adulthood and spend the remainder of their lives. Adults migrate every 2 to 5 years from their coastal foraging areas to the waters off the nesting beaches where they originally hatched to reproduce. Their diet mainly consists of algae and seagrasses, though they may also forage on sponges, invertebrates, and discarded fish. Prior to traveling to nearshore foraging areas, pelagic juveniles forage on plant and animal life found in oceanic drift communities, such as pelagic *Sargassum* (brown microalgae) communities (NOAA 2023b).

Threats to GST include fishing bycatch, direct harvest of turtles and eggs, loss of and degradation of nesting habitat, vessel strikes, pollution, climate change, and disease. WIA has documented occasional sightings of GST in the waters surrounding the atoll, though there has been no documented evidence of GST nesting on the beaches of WIA (Pacific Air Forces Regional Support Center [PRSC] 2023).

Hawksbill Sea Turtle

Hawksbill sea turtles (HST) inhabit the tropical and sub-tropical waters of all the world's major oceans. HST get their name from their unique beak-like mouth, which resembles that of a hawk and is perfect for finding food sources in hard-to-reach cracks and crevices. HST have mottled shells consisting of an irregular combination of shades of amber, orange, red, yellow, black and brown. HST are omnivorous, but their preferred food in many areas is sea sponges. They will also eat marine algae, corals, mollusks, tunicates, crustaceans, sea urchins, small fish, and jellyfish. Like the GST, HST migrate long distances between foraging areas and nesting beaches. The nesting season varies by location, but in most places occurs between April and November of each year. Hawksbills typically nest at night on small and isolated "pocket" beaches, with little or no sand and a rocky approach, usually high up on the beach under or in vegetation. After about two months incubating in the warm sand, the eggs hatch, and the hatchlings make their way to the water (NOAA 2023c).

Threats to HST include fishing bycatch, direct harvest of turtles and eggs, loss of and degradation of nesting habitat, predation of eggs and hatchlings, vessel strikes, pollution, climate change, and disease. HST have been documented in the waters surrounding WIA. In 2020, a HST estimated to be 18 inches in length was observed in 10 feet of water just offshore of the fuel storage tanks on Wilkes Island feeding on algae (NOAA 2022, as cited in PRSC 2023).

3.3.2 Coral Species

Acropora retusa

Acropora retusa is found from the western Indian Ocean to French Polynesia in the south Pacific Ocean. Within the United States, it occurs in American Samoa and the Pacific Remote Island Areas. Colonies are made up of flat plates with short, thick, finger-like branches that appear rough and spiky due to the variable length of radial corallites. Colonies are typically brown or green in color.

Threats to the species include climate change (including ocean warming and ocean acidification), disease, habitat degradation, land-based sources of pollution, small population size, and unsustainable fishing practices (NOAA 2023d).

Acropora globiceps

Acropora globiceps is found from the Maldives in the Indian Ocean to French Polynesia in the south Pacific Ocean. Within the United States, it occurs in Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, the Pacific Remote Island Areas, and at Lalo (French Frigate Shoals) in the Papahānaumokuākea Marine National Monument. Colonies consist of thick, finger-like branches and are typically cream to brown, but can be bright green in some locations.

Threats include climate change (including ocean warming and ocean acidification), diseases, fishing, habitat degradation, and land-based sources of pollution (NOAA 2023e).

Acropora speciosa

Acropora speciosa is found from the Maldives in the Indian Ocean to French Polynesia in the south Pacific Ocean. In the United States, it occurs in American Samoa. Colonies of *Acropora speciosa* form thick cushions or bottlebrush branches. Colonies are cream or light brown in color with delicately colored branch tips.

Threats to the species include climate change (including ocean warming and ocean acidification), disease, habitat degradation, land-based sources of pollution, small population size, and unsustainable fishing (NOAA 2023f).

4. DESCRIPTION OF THE ACTION AND CUMULATIVE EFFECTS

Construction and demolition activities would generally involve ground disturbance by heavy construction equipment such as excavators, backhoes, bulldozers, graders, wheel rollers, and dump trucks.

4.1 BARGE TRAFFIC

Barges travel at a rate of about 10 knots and the vast majority of whale vessel strikes are from vessels traveling at speeds in excess of 15 knots, the likelihood of an individual whale being struck during the towing vessel and barge transiting to/from WIA is extremely unlikely. It is not anticipated that an increase in barge traffic would result from the implementation of the proposed action. If it is determined in the future that the Proposed Action will increase barge traffic a supplemental Environmental Assessment may be required.

4.2 FUGITIVE DUST/SEDIMENTATION/CONSTRUCTION RUNOFF

Fugitive Dust

The demolition and construction of buildings would involve direct disturbance to existing structures and soils, which would result in the generation of fugitive dust and increases in particulate matter emissions. The use of vehicles on non-paved surfaces, in support of demolition and construction activities, would also increase fugitive dust emissions. Increases in particulate matter emissions due to ground and structure disturbing activities would be mitigated using Best Management Practices (BMPs), including watering of exposed soils, soil stabilization, watering unpaved roads to prevent dust, limiting the area that is disturbed at any given time and other practices outlined in the USEPA Fugitive Dust Control Measures and Best Practices may be used as deemed appropriate (USEPA 2022). Implementation of the Proposed Action would not result in significant impacts to air quality and fugitive dust will be mitigated.

Construction Runoff/Sedimentation

Soil erosion would occur during the ground-disturbing projects listed above, which could increase sedimentation in the stormwater management system. To reduce impacts to stormwater, BMPs including the use of silt fences, mats, and hay bales would be utilized during demolition and construction. When possible, work will be halted during heavy rain to reduce the likelihood of runoff. All silt fences or other BMPs will be properly installed, monitored, and maintained during construction. Construction equipment will be inspected prior to use each day to ensure there are no leaks and the equipment will be stored in a designated staging area to ensure if a leak or spill occurs it cannot run off-site. Refueling equipment will take place at least 50 feet from water in a containment area or on an impervious surface.

4.3 NOISE

During construction of the Proposed Action, short-term impacts to noise would occur and following construction, ambient noise levels would return to pre-project levels. Operation of the new wash rack facility may contribute to noise at the base; however, impacts would be negligible as aircraft operation would remain the dominant source of ambient noise.

4.4 EXTERIOR LIGHTING

Exterior lighting is not anticipated to be required for the Proposed Action.

5. EFFECTS ANALYSIS

5.1 GREEN SEA TURTLE AND HAWKSBILL SEA TURTLE

Barge Traffic

Various types of watercraft can strike green turtles when they are at or near the surface resulting in injury or death. Vessel strikes are a major threat to green turtles, in particular large juveniles and adults near ports, waterways, and developed coastlines throughout their range; however, because the barge traffic would remain the same and would not increase due to the Proposed Action no impacts to sea turtle will occur.

Fugitive dust/construction runoff/sedimentation

Increasing pollution of nearshore and offshore marine habitats threatens all sea turtles and degrades their habitats. Because the BMPs will be put in place to manage/mitigate fugitive dust and potential erosion would be localized and runoff outside of the action area is not anticipated during construction and demolition of the Proposed Action, no impact will occur to marine turtles.

Noise

The action area does not include any potential nesting habitat for the GST or HST therefore, terrestrial noise will not impact either species. No work occurs in marine habitat; therefore, marine noise levels will remain unchanged and no impacts will occur.

Exterior Lighting

Exterior lighting is not anticipated in the Proposed Action; therefore, no impacts will occur to the GST or HST.

Based on an analysis of the potential effects of the above components, the Proposed Action will have **no effect** on GST and HST.

5.2 CORAL SPECIES

Barge Traffic

No impact would occur to any of the three protected coral species because the barge traffic would remain the same and would not increase due to the Proposed Action.

Fugitive dust/construction runoff/sedimentation

Coral species are sensitive to land-based pollution. Because the BMPs will be put in place to manage/mitigate fugitive dust and potential erosion would be localized and runoff outside of the action area is not anticipated during construction and demolition of the Proposed Action, no impact will occur to coral species.

Noise

No work occurs in marine habitat; therefore, marine noise levels will remain unchanged, and no impacts will occur.

Exterior Lighting

Exterior lighting is not anticipated in the Proposed Action; therefore, no impacts will occur to coral species.

Based on an analysis of the potential effects of the above components, the Proposed Action will have **no effect** on corals.

5.3 CRITICAL HABITAT

No critical habitat is located in the action area; therefore, there are no effects to critical habitat.

5.4 ESSENTIAL FISH HABITAT

No essential fish habitat is located in the action area and fugitive dust and construction runoff/sedimentation will be mitigated through BMPs; therefore, no effects will occur to essential fish habitat.

6. CONCLUSION AND DETERMINATION OF EFFECTS

Based on the rationale provided in Section 4 and the lack of ESA-protected species protected under ESA within the action area, the Proposed Action will have no effect on ESA-protected species.

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Appendix D

Standard Operating Procedure for Discoveries of Archaeological Resources and NAGPRA Cultural Items

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Standard Operating Procedure for Discoveries of Archaeological Resources and NAGPRA Cultural Items ICRMP 2020

Applicability Statement:

This SOP applies to all USAF installations that contain, or potentially contain, archaeological resources. Installations that have agreements with tribes concerning the treatment of these two types of resources in discovery situations should include those procedures, in addition to the SOP described below. Cite the title and date of the agreement(s) when summarizing the procedures and ensure a copy of the agreement(s) is appended to the ICRMP.

Background/Overview:

Accidental or unanticipated discoveries of archaeological resources may occur on USAF controlled lands. When discoveries occur, the proper actions must be taken to minimize damage to these resources and to ensure that legal requirements are met. The relevant statute is ARPA and the regulation is 32 CFR Part 229, Protection of Archaeological Resources.

Cultural resources can be defined as physical evidence or place of past human activity: site, object, landscape, structure; or a site, structure, landscape, object or natural feature of significance to a group of people traditionally associated with it. Keep in mind that Wake Island is a NHL, collectively one of the most significant historic properties in the U.S. The term "historic property" is defined in the NHPA as: "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register"; such term includes artifacts, records, and remains which are related to such district, site, building, structure, or object. 16 U.S.C. Section 470(w)(5).

Human remains:

If there are bones or potential human remains, stop excavation and secure the area. See if the remains can be identified by the physician on Wake Island. If the bones are obviously not human, carry on with excavation. If the physician is not sure, send photos to the Defense Prisoners of War (POW)/Missing in Action Accounting Agency (DPAA), for identification. Secure the area and the bones in situ. It is important to keep the remains in situ in order that DPAA is able to excavate and accurately collect important stratigraphical and contextual information.

It is a federal offense, under the provisions of ARPA and 32 CFR Part 229, to excavate, remove, damage, or otherwise deface any archaeological resources located on federal lands, without authorization. The provisions of ARPA apply to archaeological material greater than 100 years in age, regardless of the NRHP status of the site where they are found. Any person wishing to excavate or remove archaeological resources from an USAF installation must apply for an ARPA permit. USAF-contracted work is exempted from the permitting provision of ARPA. In the event of a permit request, the installation 611 CES/CEIE/CRM should notify the AFCEC Section Cultural Resources Specialist. Detailed information to assist in facilitating ARPA permitting is available in the Cultural Resources Management Playbook.

“36 CFR 800.13 requires Federal agencies to plan for post-Section 106 review discoveries.” Some types of historic properties cannot be identified by traditional survey methods. Many archaeological sites are buried, leaving no visible evidence of their existence on the ground surface. Buried resources are most often discovered during construction operations. Unevaluated resources must be treated as if they are significant (AFI 32-7065 §2.4). Under Section 106 and Section 110(f) of the NHPA, federal agencies are responsible for buried historic properties. If unanticipated buried archaeological remains are discovered

during construction or other activities, or if there are unanticipated effects on known historic properties, the following procedure should be followed (AFI 32–7065 §3.9):

Procedure:

USAF or contractor personnel that make or become aware of a potential archaeological discovery on installation lands should:

1. Cease all construction activity in the vicinity of the discovery/property. If possible, do not remove the discovered artifact or historic property;
2. Take steps to secure the area and protect the discovery/property from further damage. Leave the object in place and take pictures.
3. Notify the 611 CEIE representative of the discovery/property. If the discovery/property involves human remains, follow the procedures for handling unanticipated human remains (below).
4. The 611 CEC/CEIE/CRM representative notifies installation commander.
5. The installation commander certifies in writing that he or she has been notified.
6. If the properties must be moved, communicate with the CRM on methods and take lots of pictures.
7. The 611 CEC/CEIE/CRM will prepare a treatment plan; and
8. Earth-disturbing activities may be resumed after the treatment plan has been executed, (AFI 32–7065 §3.9.1.6).

The 611 CES/CEIE/CRM should:

- Ensure that all archaeological items are left in place and that no further disturbance is permitted to occur
- Sufficiently identify the location of the discovery to provide efficient relocation, yet take efforts to minimize the types of signs that could attract personnel and place the discovery in danger
- Direct installation personnel and contractors to take efforts to resume mission-associated activities in a reasonable and timely manner

Human remains are occasionally encountered on Wake Atoll. Most of these remains are from participants in the WWII battle and subsequent Japanese occupation. If skeletal remains are encountered on the atoll, the following steps should be taken:

1. All work in the immediate vicinity of the find spot shall be halted and the area secured to protect the remains from damage.
2. The installation commander shall be notified.
3. The installation commander shall notify WIA Security and the BOS medical officer.
4. The security officer shall seal off the site, including associated artifacts.
5. The BOS medical officer will try to confirm that the remains are human or non-human.
6. The remains will be protected in place when the site is secured.
7. The installation commander shall notify the 611 CES/CEIE/CRM.
8. The 611 CES/CEIE/CRM will notify the Central Identification Laboratory, of the Defense POW/Missing in Action Accounting Agency, 590 Moffet Street, Building 4077, Joint Base Pearl Harbor-Hickam, Hawaii, 96853-5530, 808-448-4500 x3715 or www.dpss.mil/contact/contactus.aspx10. DPAA and the CRM will determine who will recover the remains. (**Updated Leeper 1/11/2021)
9. The remains will be removed by an archaeologist or DPAA.