

FINAL
ENVIRONMENTAL ASSESSMENT
For
NAVAL AIR STATION OCEANA STRIKE FIGHTER TRANSITION
At
NAVAL AIR STATION OCEANA AND
NAVAL AUXILIARY LANDING FIELD FENTRESS, VIRGINIA

OCTOBER 2017



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Abstract

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| Designation: | Environmental Assessment |
| Title of Proposed Action: | Naval Air Station Oceana Strike Fighter Transition |
| Project Location: | Naval Air Station Oceana and Naval Auxiliary Landing Field Fentress, Virginia |
| Lead Agency for the EA: | Department of the Navy |
| Affected Region: | City of Virginia Beach and City of Chesapeake, Virginia |
| Action Proponent: | United States Fleet Forces, Department of the Navy |
| Point of Contact: | Project Manager (Code EV21/TW) Naval Facilities Engineering Command Atlantic 6506 Hampton Boulevard Norfolk, Virginia 23508 |
| Date: | October 2017 |

The United States Fleet Forces, a Command of the U.S. Navy (hereinafter, jointly referred to as the Navy), has prepared this Environmental Assessment in accordance with the National Environmental Policy Act, as implemented by the Council on Environmental Quality Regulations and Navy regulations for implementing National Environmental Policy Act. The Proposed Action would transition the remaining F/A-18A/C/D Hornet aircraft operated by the Fleet squadrons based at Naval Air Station (NAS) Oceana to the F/A-18E/F Super Hornet as well as retire the F/A-18A/C/D Hornet aircraft operated by the Fleet Replacement Squadron (FRS). The majority of the aircraft based at NAS Oceana transitioned to F/A-18E/F Super Hornet over a decade ago (as part of a separate action - the 2003 Record of Decision for the Introduction of the F/A-18 E/F Super Hornet Aircraft to the East Coast) and are currently conducting flight training operations at NAS Oceana and Naval Auxiliary Landing Field (NALF) Fentress. The proposed transition would involve an approximate one-for-one aircraft replacement and would occur at NAS Oceana, Virginia. The F/A-18A/C/D Hornet Fleet squadrons would progressively transition to F/A-18E/F Super Hornet aircraft beginning as early as 2018. Concurrently, the FRS would retire its F/A-18A/C/D aircraft as demand for F/A-18A/C/D replacement pilot training diminishes. The Proposed Action would provide newer, more capable, and more reliable aircraft to the NAS Oceana-based strike fighter community. Since F/A-18E/F Super Hornet flight training is nearly identical to F/A-18A/C/D Hornet flight training, the type and quantity of flight training operations at NAS Oceana and NALF Fentress, and in associated airspace, are not expected to be affected by the proposed transition to F/A-18E/F Super Hornet aircraft and the subsequent retirement of F/A-18A/C/D Hornet aircraft. Other than minor modifications to aircraft auxiliary power utilities in hangars, and installation of F/A-18E/F Super Hornet-compatible electrical distribution on the flight line, no major construction or facility modifications are planned. The Proposed Action would involve an increase of approximately 62 personnel. This Environmental Assessment evaluates the potential environmental impacts associated with the Proposed Action and the No Action Alternative to the following resource areas: noise, air quality, public health and safety, land use, environmental justice, biological resources, and cultural resources.



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EXECUTIVE SUMMARY

ES.1 Proposed Action

The United States (U.S.) Department of the Navy (Navy) proposes to transition the remaining F/A-18A/C/D Hornet aircraft operated by the Fleet squadrons based at Naval Air Station (NAS) Oceana to the F/A-18E/F Super Hornet, as well as retire the F/A-18A/C/D Hornet aircraft operated by the Fleet Replacement Squadron (FRS). The proposed transition would involve an approximate one-for-one aircraft replacement and would occur at NAS Oceana, Virginia. The F/A-18A/C/D Hornet Fleet squadrons would progressively transition to F/A-18E/F Super Hornet aircraft beginning as early as 2018. Concurrently, the FRS would retire its F/A-18A/C/D aircraft as demand for F/A-18A/C/D replacement pilot training diminishes.

The Proposed Action would provide newer, more capable, and more reliable aircraft to the NAS Oceana-based strike fighter community. Since F/A-18E/F Super Hornet flight training is nearly identical to F/A-18A/C/D Hornet flight training, the type and quantity of flight training operations at NAS Oceana and Naval Auxiliary Landing Field (NALF) Fentress, and in associated airspace, are not expected to be affected by the proposed transition to F/A-18E/F Super Hornet aircraft and the subsequent retirement of F/A-18A/C/D Hornet aircraft. Other than minor modifications to aircraft auxiliary power utilities in hangars, and installation of F/A-18E/F Super Hornet-compatible electrical distribution on the flight line, no major construction or facility modifications are planned. The Proposed Action would involve an increase of approximately 62 personnel.

The Navy has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), as implemented by the Council on Environmental Quality (CEQ) Regulations and Navy regulations for implementing NEPA. The Navy's intent to prepare an Environmental Impact Statement (EIS) for this action has been modified and the Navy is redesignating the EIS as an EA. The reason for this redesignation is that during the development of the EIS, the Navy's analysis showed no significant environmental impacts.

ES.2 Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to provide newer, more capable, and more reliable aircraft to the NAS Oceana-based strike fighter community using F/A-18E/F aircraft until F-35C Joint Strike Fighter aircraft are available, all required analyses have been completed, and a home basing decision has been made. The Proposed Action is needed to support the Navy's national defense requirements under Title 10 U.S. Code (U.S.C.) Section 5062 because F/A-18A/C/D Hornet aircraft have been used in support of worldwide operations at higher rates than originally projected. This has resulted in accelerated airframe fatigue, which is rapidly hastening the date at which F/A-18A/C/D Hornet aircraft will reach the end of their service life and would need to be retired. While the Navy initially intended to replace F/A-18A/C/D Hornet aircraft with F-35C Joint Strike Fighter aircraft, entry of the F-35C Joint Strike Fighter into the Navy inventory has been delayed and will not be available before the current inventory of F/A-18A/C/D Hornet aircraft based at NAS Oceana has been retired. No other aircraft carrier (CVN)-capable strike fighter aircraft exists to cover the delay in the introduction of the F-35C Joint Strike Fighter.

ES.3 Alternatives Considered

The Navy carefully reviewed important factors for the F/A-18E/F community and Navy aviation training in developing the proposed range of alternatives that meet the purpose and need for the Proposed Action. This review included requirements for F/A-18E/F squadron training in light of Title 10 responsibilities, existing training requirements and regulations, existing Navy infrastructure, and Navy guidance to support operating Naval forces. Based on this review, potential alternatives were evaluated against the following screening factors:

- Availability of current CVN-capable strike fighter aircraft
- Preservation and optimization of operational readiness and efficiencies
- Effective and efficient use of existing infrastructure

Based on the reasonable alternative screening factors and meeting the purpose and need for the Proposed Action, no other action alternatives were identified for analysis within this document. This document evaluates the No Action Alternative and the Action Alternative.

Under the No Action Alternative, the Navy would not transition F/A-18A/C/D Hornets to F/A-18E/F Super Hornets at NAS Oceana. The minor facility modifications and utility upgrades would not occur. The remaining NAS Oceana squadrons that operate the F/A-18A/C/D Hornet would continue to do so. The F/A-18A/C/D Hornets in the FRS would also continue to conduct flight training operations. The No Action Alternative would not meet the purpose and need for the Proposed Action; however, the conditions associated with the No Action Alternative serve as reference points for describing and quantifying the potential impacts associated with the Proposed Action.

The Proposed Action is the preferred alternative. The Proposed Action is the only action alternative considered by the Navy to meet the purpose and need for providing newer, more capable, and more reliable aircraft to NAS Oceana-based strike fighter community. The in-place transition of F/A-18A/C/D aircraft at NAS Oceana would preserve and optimize operational efficiencies as well as make efficient use of existing infrastructure.

ES.4 Summary of Environmental Resources Evaluated in the EA

The CEQ regulations, NEPA, and Navy instructions for implementing NEPA specify that an EA should address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact.

The following resource areas have been addressed in this EA: noise, air quality, public health and safety, land use, environmental justice, biological resources, and cultural resources. Since potential impacts were considered to be negligible or nonexistent, the following resources were not evaluated in this EA: water resources, geological resources, visual resources, airspace, infrastructure, transportation, hazardous materials and waste, and socioeconomics.

ES.5 Summary of Potential Environmental Consequences of the Action Alternative

Noise. Under the Action Alternative, no significant impacts from noise would occur. For noise exposure, noise levels ≥ 65 decibels (dB) day-night average sound level (DNL) would affect 3,180 additional acres (7 percent increase) and 6,100 more people (7 percent increase) when compared to the affected environment; DNL would increase by approximately 1 dB DNL and would be barely perceptible, and therefore not significant.

For potential hearing loss, there would be an increase for at-risk population in the vicinity of NAS Oceana of 260 additional people. For NALF Fentress there would be no increase in at-risk population for potential hearing loss. The range of potential Noise Induced Permanent Threshold Shift (NIPTS) could be up to 8.5 dB at NAS Oceana and 7.0 dB at NALF Fentress. However, the analysis is based upon an extremely conservative set of parameters, and is only applicable in the extreme case of continuous outdoor exposure at one's residence 8 hours per day, every day, and exposed to all aircraft events occurring over a period of 40 years. Because it is highly unlikely for any individuals to meet all those criteria, it is very unlikely that individuals would experience noise exposure that would result in hearing loss.

For speech interference, the number of indoor speech interfering events per hour for windows opened would decrease by one event at one point of interest near NAS Oceana and increase by one event for two points of interest near NALF Fentress. For windows closed, the number of speech interfering events per hour would not change at points of interest near NAS Oceana and would increase by one event at one point of interest near NALF Fentress.

For classroom learning interference, 9-hour Equivalent Sound Level (Leq(9hr)) noise levels with windows open would increase at 15 of the 16 schools compared to the affected environment by only 1 or 2 dB; noise levels at 1 school would remain the same. With windows closed, noise levels at 14 of the 16 schools would remain the same while 2 schools would experience increased noise levels of 1 or 2 dB. An increase of 3 dB is barely perceptible, therefore, increases of 1 or 2 dB DNL are likely not noticeable. As for noise events per hour over 50 dB Lmax, most schools would experience one more event per hour with windows closed, while 1 school would experience one more event per hour with windows opened.

For sleep disturbance, the probability of awakening at the points of interest would increase by 2 to 4 percent when compared to the affected environment.

Air Quality. Under the Action Alternative, emissions of criteria pollutants associated with aircraft operations would increase relative to the emissions under the affected environment, but this increase would be too small to result in significant impact on air quality. While the Action Alternative would result in additional greenhouse gas (GHG) emissions, this increase by itself would not be enough to aggravate or accelerate climate change and its anticipated impacts.

Public Health and Safety. Implementation of the Action Alternative would not measurably affect public health and safety or aviation safety when compared to the affected environment. This is because the Action Alternative involves a one-for-one swap of F/A-18C/D Hornets with F/A-18E/F Super Hornets. There would be no increase in average annual operations. The potential for aircraft mishaps, therefore, would remain the same as found under the affected environment. The F/A-18E/F Super Hornet is an existing airframe operating at NAS Oceana and NALF Fentress and all current training regulations and procedures would continue to reflect F/A-18E/F Super Hornet specific rules and pilots would continue to adhere to training policies. Because the F/A-18E/F Super Hornet currently operates at the base, emergency and mishap response plans specific to the F/A-18E/F Super Hornet and associated equipment already exist and would not require revisions. There would be no change to the Clear Zones or Accident Potential Zones (APZs) under the Action Alternative.

The risk of bird/animal aircraft strike hazard (BASH) under the Action Alternative would be expected to remain similar to existing levels. No aspect of the Action Alternative would increase concentrations of birds on or near the airfields. The Navy has an existing, robust BASH management program, which would continue to be adhered to for continued minimization of BASH risk.

Children affected under the Action Alternative would not experience disproportionately high and adverse noise or safety effects. At NAS Oceana, the percentage of the population aged 18 and under that would be affected by noise levels ≥ 65 dB DNL under the Action Alternative would be 22.2 percent, slightly higher than under the affected environment (22.1 percent), and less than the City of Virginia Beach threshold (23.1 percent). The percentage of children affected at NALF Fentress would be 26.6 percent, slightly higher than under the affected environment (26.4 percent), and greater than the percentage in the City of Chesapeake (24.7 percent). When comparing the population of children to the general population affected by Action Alternative noise at NAS Oceana, 22.2 percent affected are children, while 77.8 percent affected are adults. For NALF Fentress, 26.6 percent affected are children, while 73.4 percent affected are adults. Within each noise zone, the total population (all age groups) would be equally affected by noise. Noise impacts under the Action Alternative would not result in a disproportionately high and adverse impact to children. There would be no change to APZs under the Action Alternative; no disproportionate environmental health and safety risks to children are anticipated. Therefore, implementation of the Action Alternative would not result in significant impacts to public health and safety, to include children.

Land Use. Implementation of the Action Alternative would not result in significant impacts to local or regional land uses. The Action Alternative would result in increased acres of lands exposed to incompatible noise levels; however, these incompatibilities are not considered significantly different from the affected environment. Clear Zones and APZs would remain unchanged under the Action Alternative. All local and regional land use controls would continue to be implemented and there would be no changes to local land use ordinances. The Action Alternative is consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program and therefore, would not introduce significant impacts to coastal zone resources. On September 12, 2017, the Virginia Department of Environmental Quality (VDEQ) concurred that the Navy's Proposed Action at NAS Oceana is consistent with the enforceable policies of the Virginia Coastal Zone Management Program.

Environmental Justice. Minority and low-income populations affected under the Action Alternative would not experience disproportionately high and adverse noise or safety effects. Two census block groups near NAS Oceana would be newly affected by noise ≥ 65 dB DNL; no additional block groups would be affected at NALF Fentress. At NAS Oceana, the total proportion of minority populations exposed to noise levels ≥ 65 dB DNL under the Action Alternative would be 37.6 percent, about the same as under the affected environment (37.8 percent), and less than the threshold minority percentage for Virginia Beach (42.4 percent). At NALF Fentress, the total proportion of minority populations exposed to noise levels ≥ 65 dB DNL under the Action Alternative would be 24.7 percent, about the same as under the affected environment (24.6 percent), and less than the threshold minority percentage for Chesapeake (47.0 percent).

At NAS Oceana, the total proportion of low-income populations exposed to noise levels ≥ 65 dB DNL under the Action Alternative would be 11.1 percent, about the same as under the affected environment (11.3 percent), and greater than the threshold low-income percentage for Virginia Beach (8.3 percent). At NALF Fentress, the total proportion of low-income populations exposed to noise levels ≥ 65 dB DNL under the Action Alternative would be 4.3 percent, about the same as under the affected environment (4.4 percent), and less than the threshold low-income percentage for Chesapeake (9.7 percent).

When comparing the total minority population to the general population affected by Action Alternative noise at NAS Oceana, 37.6 percent affected are environmental justice minority communities, while 62.4

percent affected are non-environmental justice communities. For NALF Fentress, 24.7 percent affected are environmental justice minority communities, while 75.3 percent affected are non-environmental justice minority communities. When comparing the total low-income population to the general population affected by noise at NAS Oceana, 11.1 percent affected are environmental justice low-income communities, while 88.9 percent affected are non-environmental justice communities. For NALF Fentress, 4.3 percent affected are environmental justice low-income communities and 95.7 percent affected are non-environmental justice low-income communities. Within each Action Alternative noise zone, the total population (non-environmental justice and environmental justice communities) is equally affected by noise. There would be no changes to the Clear Zones or APZs under the Proposed Action. Therefore, the Action Alternative would not result in significant noise or public safety impacts to the general population and environmental justice communities.

Biological Resources. There would be no habitat loss and no direct impacts to wildlife from construction activities. Wildlife and migratory birds in the study area would not be significantly impacted from projected aircraft-generated noise increases because these species at or in the vicinity of NAS Oceana and NALF Fentress have already been exposed and have presumably habituated to the noise associated with aircraft operations at and around the airfields. The Action Alternative would have no effect on threatened and endangered species. Under the Action Alternative, the Navy would continue to implement the BASH program to reduce the potential for collisions between aircraft and birds and other animals. Wildlife and migratory birds would continue to be managed in accordance with the NAS Oceana and NALF Fentress Integrated Natural Resource Management Plan and subsequent annual updates. Therefore, implementation of the Action Alternative would not result in significant impacts to biological resources.

Cultural Resources. The Navy has concluded there would be no adverse effects to National Register of Historic Places listed or eligible cultural resources. None of the historic architectural properties in the Area of Potential Effects (APE) would be adversely impacted by noise from the aircraft operations under the Action Alternative. Noise levels for 15 of the 17 historic architectural properties in the APE would remain nearly the same under the Action Alternative when compared to the affected environment. Two historic properties would be exposed to slightly higher noise levels under the Action Alternative; however, an increase in noise from aircraft operations under the Action Alternative would not be expected to diminish the historic integrity of either property. Therefore, implementation of the Action Alternative would not result in significant impacts to historic architectural properties. In their September 20, 2017 memorandum to the Navy, the Virginia Department of Historic Resources (DHR) concluded that no historic properties will be affected by the project.

Table ES-1 provides a tabular summary of the potential impacts to the resources associated with the No Action Alternative and Proposed Action.

Table ES-1. Summary of Potential Impacts to Resource Areas

| <i>Resource Area</i> | <i>No Action Alternative</i> | <i>Action Alternative</i> |
|--------------------------|---|--|
| Noise | The Proposed Action would not be implemented and the affected environment would remain unchanged. | <p>No significant impacts from noise would occur. For noise exposure, areas affected by noise levels ≥ 65 dB DNL would increase by 3,180 acres and the population by 6,100; DNL would increase by approximately 1 dB DNL and would be barely perceptible.</p> <p>For potential hearing loss, more people would be exposed to increased noise levels, but it is unlikely they would be outdoors at their residence 8 hours per day, every day, and exposed to all aircraft events over a 40-year period. Therefore, it is very unlikely that individuals would experience noise exposure that would result in hearing loss.</p> <p>For speech interference, the number of speech interfering events per hour would remain the same at seven points of interest, while three points of interest would experience either an increase or a decrease of one event.</p> <p>For classroom learning interference, Leq(9hr) noise levels would increase at 15 of the 16 schools. Noise interference events per hour would increase by one event at 14 of the 16 schools.</p> <p>For sleep disturbance, the probability of awakening at the points of interest would increase by 2 to 4 percent.</p> |
| Air Quality | The Proposed Action would not be implemented and the affected environment would remain unchanged. | No significant impacts on air quality would occur. Emissions of criteria pollutants and greenhouse gases associated with aircraft operations would increase relative to emissions under the affected environment, but this increase would be too small to result in significant impacts on air quality or climate change. |
| Public Health and Safety | The Proposed Action would not be implemented and the affected environment would remain unchanged. | No significant public health and safety impacts, including those related to flight safety and bird/animal aircraft strike hazard risk, would occur. There would be no change to Clear Zones or Accident Potential Zones. No disproportionate environmental health and safety risk to children would occur. |
| Land Use | The Proposed Action would not be implemented and the affected environment would remain unchanged. | No significant impacts to local or regional land use would occur. Acres of lands exposed to incompatible noise levels would increase; however, these incompatibilities are not considered significantly different from the affected environment. There would be no change to Clear Zones or Accident Potential Zones. All local and regional land use controls would continue to be implemented. No significant impacts to coastal zone resources would occur. On September 12, 2017, the VDEQ concurred that the Navy's Proposed Action at NAS Oceana is consistent with the enforceable policies of the Virginia Coastal Zone Management Program. |

Table ES-1. Summary of Potential Impacts to Resource Areas

| <i>Resource Area</i> | <i>No Action Alternative</i> | <i>Action Alternative</i> |
|-----------------------|---|--|
| Environmental Justice | The Proposed Action would not be implemented and the affected environment would remain unchanged. | No significant noise or public safety impacts to environmental justice communities would occur. There would be no change to Clear Zones or Accident Potential Zones. No disproportionately high and adverse impact to environmental justice communities would occur. |
| Biological Resources | The Proposed Action would not be implemented and the affected environment would remain unchanged. | No significant impacts on biological resources would occur. There would be no habitat loss from construction activities. Wildlife and migratory birds would not be significantly impacted from proposed increases in noise associated with aircraft operations. Wildlife and migratory bird populations would not be significantly impacted by strikes with aircraft as the bird/animal aircraft strike hazard potential would not increase. The Action Alternative would have no effect on threatened and endangered species. |
| Cultural Resources | The Proposed Action would not be implemented and the affected environment would remain unchanged. | No significant impacts to historic architectural properties would occur. Only two historic properties would be exposed to slightly higher noise levels under the Action Alternative; however, an increase in noise from aircraft operations under the Action Alternative would not affect the historic integrity of either property. In their September 20, 2017 memorandum to the Navy, the Virginia DHR concluded that no historic properties will be affected by the project. |

ES.6 Public Involvement

The Navy solicited public and agency comments during a scoping period from September 10, 2015 through October 26, 2015. Scoping meetings were held on September 29, 2015 in Virginia Beach, Virginia and on September 30, 2015 in Chesapeake, Virginia. Comments received during the scoping period were considered in preparing the Draft EA. The Navy circulated the Draft EA for public review from August 16, 2017 to September 15, 2017.

Throughout the 30-day public comment period on the Draft EA, a total of 12 comments addressing multiple issues were received in writing and verbally at the public meetings, by mail, and on the project website. While four comments were positive in nature, eight comments expressed concerns. Primary concerns identified by commenters included:

- Actual noise is currently much higher than publicized; noise has increased recently; current noise is excessive and disrupts children’s activities.
- Noise study does not show actual impacts, is incomplete, should include Sound Exposure Level (SEL) and Maximum Sound Level (Lmax) noise metrics, and should use a pre-Super Hornet baseline to show real long-term changes in noise levels.

- Planes do not follow established current flight tracks, which creates a greater potential of shifting accident potential zones over populated areas; planes should fly within noise contours.
- Flights continue well past midnight.
- Navy should strive to reduce noise rather than increase it.
- Navy should change current flight patterns to reduce noise impacts on residential areas and compensate homeowners in areas supposedly not impacted by noise.

Environmental Assessment
Naval Air Station Oceana Strike Fighter Transition
Naval Air Station Oceana and Naval Auxiliary Field Fentress, Virginia

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Abbreviations and Acronyms

| Acronym | Definition | Acronym | Definition |
|-------------------|---------------------------------------|-----------------|---|
| AGL | Above Ground Level | ESA | Endangered Species Act |
| AICUZ | Air Installation Compatible Use Zone | FAA | Federal Aviation Administration |
| ANSI | American National Standards Institute | FCLP | Field Carrier Landing Practice |
| APE | Area of Potential Effect | FONSI | Finding of No Significant Impact |
| APZ | Accident Potential Zone | FRS | Fleet Replacement Squadron |
| ASA | Acoustical Society of America | FY | Fiscal Year |
| BASH | Bird/Animal Aircraft Strike Hazard | GHG | greenhouse gas |
| BCC | Birds of Conservation Concern | GIS | Geographic Information Systems |
| BGEPA | Bald and Golden Eagle Protection Act | HAP | hazardous air pollutant |
| BRAC | Base Realignment and Closure Act | IFLOLS | Improved Fresnel Lens Optical Landing System |
| CAA | Clean Air Act | JLUS | Joint Land Use Study |
| CEQ | Council on Environmental Quality | Leq | Equivalent Sound Level |
| CFR | Code of Federal Regulations | Lmax | Maximum Sound Level |
| CO | carbon monoxide | MBTA | Migratory Bird Treaty Act |
| CO ₂ | carbon dioxide | MSAT | Mobile Source Air Toxics |
| CO ₂ e | CO ₂ equivalent | NA | number of events above |
| CVN | Aircraft Carrier, Nuclear-powered | NAAQS | National Ambient Air Quality Standards |
| CZMA | Coastal Zone Management Act | NALF | Naval Auxiliary Landing Field |
| dB | decibel | NAS | Naval Air Station |
| dba | A-weighted sound level | NEPA | National Environmental Policy Act |
| DNL | day-night average sound level | NHPA | National Historic Preservation Act |
| DHR | Department of Historic Resources | NIOSH | National Institute for Occupational Safety and Health |
| DoD | United States Department of Defense | NIPTS | Noise Induced Permanent Threshold Shift |
| DON | United States Department of the Navy | NO ₂ | nitrogen dioxide |
| EA | Environmental Assessment | NOAA | National Oceanic and Atmospheric Administration |
| EIS | Environmental Impact Statement | NO _x | Nitrogen Oxides |
| EO | Executive Order | NRHP | National Register of Historic Places |
| | | O ₃ | Ozone |

| Acronym | Definition | Acronym | Definition |
|-------------------|--|-----------------|--|
| OPNAVINST | Office of the Chief of Naval Operations Instruction | SEL | Sound Exposure Level |
| PLM | Precision Landing Mode | SO ₂ | sulfur dioxide |
| PM ₁₀ | particulate matter less than or equal to 10 microns in diameter | tpy | tons per year |
| PM _{2.5} | particulate matter less than or equal to 2.5 microns in diameter | U.S. | United States |
| REPI | Readiness and Environmental Protection Integration | U.S.C. | U.S. Code |
| SEGA | Special Economic Growth Areas | USCB | U.S. Census Bureau |
| | | USEPA | U.S. Environmental Protection Agency |
| | | USFWS | U.S. Fish and Wildlife Service |
| | | VDEQ | Virginia Department of Environmental Quality |
| | | VOC | Volatile organic Compound |