

**HEADQUARTERS,
DEPARTMENT OF THE ARMY**

**Report on the Effects of Military Helicopter Noise
on National Capital Region Communities and Individuals**

REPORT TO CONGRESS



HEADQUARTERS, DEPARTMENT OF THE ARMY

2018

The estimated cost of this report for the Department of Defense is approximately \$29,000 in Fiscal Years 2017 - 2018. This includes \$18 in expenses and \$29,000 in DoD labor.

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I. Purpose

This report is provided in response to Fiscal Year 2017 National Defense Authorization Act (NDAA), Public Law 114-328, Section 1073 which requires a report on the effects of military helicopter noise on National Capital Region (NCR) communities and individuals.

II. Original Reporting Requirement as Written in NDAA

SEC. 1073. STUDY ON MILITARY HELICOPTER NOISE.

(a) IN GENERAL.—The Secretary of Defense, in coordination with the Administrator of the Federal Aviation Administration, shall—

(1) Conduct a study on the effects of military helicopter noise on National Capital Region communities and individuals; and

(2) Develop recommendations for the reduction of the effects of military helicopter noise on individuals, structures, and property values in the National Capital Region.

(b) FOCUS.—in conducting the study under subsection (a), the Secretary and the Administrator shall focus on air traffic control, airspace design, airspace management, and types of aircraft to address helicopter noise problems and shall take into account the needs of law enforcement, emergency, and military operations.

(c) CONSIDERATION OF VIEWS.—in conducting the study under subsection (a), the Secretary shall consider the views of representatives of—

(1) Members of the Armed Forces;

(2) Law enforcement agencies;

(3) Community stakeholders, including residents and local government officials; and

(4) Organizations with interest in reducing military helicopter noise.

(d) REPORT.—

(1) IN GENERAL.—Not later than 90 days after the date of the enactment of this Act, the Secretary shall submit to Congress a report on the results of the study conducted under subsection (a).

(2) AVAILABILITY TO THE PUBLIC.—The Secretary shall make the report required under paragraph (1) publicly available.

III. Report Contents

After the passage of the NDAA there were subsequent discussions between the Army (acting on behalf of DoD) and the congressional committee regarding the report requirements. Based on those discussions, the Army is required to provide a report by January 31, 2018 addressing:

- Overview of current corridors, historical data on traffic (frequency, altitudes, and restrictions)

- Previous National Environmental Policy Act (NEPA) mitigation efforts in place for noise abatement
- List of constructive solutions/recommendations to further mitigate noise
- Recommendations for DoD to receive, track, and analyze complaints from citizens on an ongoing basis

IV. Helicopter Operators

The different organizations known to operate helicopters in the NCR, highlighting the complex and congested airspace, include:

- The Army Aviation Brigade, United States Army
- Marine Helicopter Squadron One (HMX1), United States Marine Corps
- The 1st Helicopter Squadron, United States Air Force
- District of Columbia Army National Guard
- The United States Coast Guard
- The United States Park Police
- The United States Capitol Police
- The United States Border Patrol
- The Federal Bureau of Investigation
- The Metropolitan Washington Police Department
- Virginia State Police
- Maryland State Police
- Fairfax County Police
- Prince George's County Police
- Department of Energy
- Charter helicopter companies (e.g., Monumental Helicopters)
- FOX5 Television
- ABC7 Television
- NBC4 Television
- MedStar
- American Helicopter – Helicopter Flight School

V. Background

According to Title 49 United States Code, Section 40103, the Federal Aviation Administration (FAA) has broad authority to regulate the safe and efficient use of the navigable airspace and issue air traffic rules and regulations to govern the flight of aircraft. This includes military aircraft.

The airspace inside the NCR is one of the busiest and most restrictive in the United States. In response to September 11, 2001, the FAA, in consultation with the Department of Homeland Security (DHS), the Department of Defense (DoD), and other Federal agencies, implemented a 25 nautical-mile (NM) radius Temporary Flight Restriction (TFR) area, extending from the surface to 18,000 feet around Washington,

DC. In 2009, the FAA established the 30 NM Washington, DC metropolitan area Special Flight Rules Area (SFRA) and the 15 NM DC Flight Restricted Zone (FRZ) centered on Ronald Reagan Washington National Airport (DCA). The SFRA and the FRZ extends from the surface to 18,000 feet. There are two prohibited flight zones, P-56A and P56B, within the FRZ where all aircraft operations are forbidden. P-56A and P-56B incorporate the airspace around White House, the U.S. Capitol Building, and the Naval Observatory to an altitude of 18,000 feet. Both prohibited areas are depicted on the Washington inset in annex D, map 2.

The DoD possesses helicopters which operate and train inside the NCR supporting multiple missions to include continuity of operations, defense support of civil authorities, executive transport, and other activities as directed. These helicopter operations are necessary to enable the DHS and the DoD to effectively execute their respective constitutional and congressionally mandated duties to secure, protect, and defend the United States. While carrying out these missions, DoD must comply with FAA-dictated flight restrictions.

VI. Overview of Current Corridors, Historical Data on Traffic (Frequency, Altitudes, and Restrictions)

The NCR as described in the National Capital Planning Act of 1952 (Title 40, United States Code, Section 8702) is defined as Arlington, Fairfax, Prince William, and Loudoun counties in Virginia; and Montgomery and Prince George Counties in Maryland; the District of Columbia and all the cities in Virginia and Maryland in the geographic area encompassed by the outer boundary of the NCR counties.

Inside the NCR there are three "Class B" airports so designated as the Nation's busiest airports based on the number of flights. These three airports are Dulles International Airport (IAD), Baltimore-Washington International Airport (BWI) (includes the greater Washington D.C Metropolitan area, the outer suburbs and the NCR), and Ronald Reagan Washington National Airport (DCA). Class B airports have protected airspace which takes priority over other aircraft operations. However, in the case of the NCR, the three Class B airports overlap and encroach on each other's airspace. In addition to these three major airports, there are also three military airfields (Joint Base Andrews (ADW), Joint Base Anacostia-Bolling Heliport (BOF), and Fort Belvoir's Davison Army Airfield (DAAF)) which reside in the NCR. Lastly, in addition to those six airfields, there are three other "minor" airfields known collectively as the "Maryland Three Airports" (College Park Airport (CGS), Potomac Airfield (VKX), and Washington Executive/Hyde Field (W32)). Air traffic control personnel don't differentiate between fixed wing aircraft and helicopters under their control. Within the NCR, Reagan National Airport averages about 800 aircraft operations a day (mainly fixed wing), Dulles Airport averages 820 (mainly fixed wing), Joint Base Andrews averages 190 (mainly helicopter), and Davison AAF averages 115 operations a day (mainly helicopter).

The air traffic control tower at Ronald Reagan Washington National Airport controls helicopters operating within the Baltimore-Washington airspace. The helicopters are

subject to extensive monitoring and are limited in their routing choices. The Baltimore-Washington map is found at annex D, map 1. A magnified view is provided in annex D, map 2. Where possible, the FAA has made maximum use of routes over the Potomac River and the Anacostia River and major roads such as I-95 and I-495 to restrict helicopters from flying over populated areas. The FAA is challenged by the flight profiles of large commercial passenger jets and relatively small helicopters. The routes provide for the safe and expeditious flow of helicopters through the Class B airspace by mandating both maximum altitudes and flight path. The routes provide ATC with a predictable and repeatable route structure.

The FAA assigns helicopters the lower airspace from the surface up to as high as 1300 feet Mean Sea Level (MSL). Altitude restrictions are based on relative height above sea-level, not the ground. A helicopter is assigned a maximum altitude to avoid collisions and wake turbulence produced by large aircraft. Since the assigned maximum altitude is given in MSL this generally results in the aircraft's actual height above the ground being lower than the MSL. These mandatory altitudes are depicted on the maps referenced above (see annex D, maps 1 and 2). For example, if an aircraft is at its maximum legal altitude of 1300 MSL in "Zone 2" but is flying over parts of Northwest DC where the surface elevation is 400 feet MSL, the aircraft itself may only be 900 feet Above Ground Level (AGL) (see annex D, map 3, for pictorial representation).

VII. Previous National Environmental Policy Act Mitigation Efforts in Place for Noise Abatement

There are no previously conducted NEPA studies or noise abatement mitigation efforts in-place within the NCR. However, there is a NEPA study currently underway for Davison Army Airfield. It is linked to the Fort Belvoir area development plan and focuses on the noise contours surrounding Davison Army Airfield. The NEPA environmental analysis will result in an environmental impact statement (EIS). In compliance with the NEPA, there will be a public comment opportunity on the EIS. The study results are expected in the summer of 2018. Three non-NEPA NCR military noise studies were completed and are included as annexes (see annex A, plans 1-3).

Included in the annexes is a Joint Base Andrews Air Installations Compatible Use Zones (AICUZ) study. Similar to the NEPA study, AICUZ studies are conducted when there are anticipated changes to the relative noise footprint and for development planning. A study was conducted in 2007 (see annex A, plan 4). A new AICUZ study was completed in 2017 and will be released in the spring of 2018. Helicopter pad and local pattern operations have changed little since the 2007 AICUZ. These changes did not increase the noise footprint for residential areas near Joint Base Andrews.

VIII. List of Constructive Solutions/Recommendations to Further Mitigate Noise

Under the direction of the NDAA, the FAA and DoD are working on the mitigation of military helicopter aviation noise in the NCR.

FAA: The FAA created a "Noise Complaint Initiative" that is responsive to the public while applying the best use of FAA resources. The FAA established a cross-agency team responsible for addressing noise complaints. The team gathered data on complaints, assessed current processes, and recommended process improvements. Some of the ideas being implemented include:

- Development of a webpage to better educate the public on FAA initiatives to address aircraft noise.
- Development of a Noise Portal and noise complaint repository to improve FAA internal coordination.
- The FAA conducted a test of the Noise Complaint Initiative in the Eastern Service Center which concluded in September 2017. The test was designed to ensure the FAA can properly conduct internal coordination and provide responses to the public. The data is being analyzed. If successful, the test will be expanded to the Central and Western Service Centers for further testing.

The FAA Noise Complaint Initiative will lead to improved understanding of noise effects on citizens. Additionally, it will inform future noise mitigation efforts resulting in a more efficient and consistent response to the public, and provide an effective means to evaluate trends and identify areas of concerns.

DoD: The DoD has no jurisdictional authority over non-military helicopters using NCR airspace. Non-DoD agencies are subject to the same FAA regulations; however DoD cannot direct their compliance. The Army Aviation Brigade, Marine Corps HMX1, and the 1st Helicopter Squadron are committed to reducing helicopter noise in the NCR and have engaged non-military organizations to share "best practices" to minimize noise impact. Military leaders are working to better recognize the noise impact on the surrounding community. Whenever possible, DoD plans its operations and training to minimize the noise impact. Avoidance of noise-sensitive areas, if practical, is preferable to overflight at higher altitudes.

It is DoD policy for pilots to exercise leadership, discipline, and the highest level of safety in efforts to minimize aircraft noise. It is Army, Air Force, and Marine policy to follow FAA-approved routes unless emergencies or air traffic control directs otherwise. Each Service has its own regulations regarding avoidance of Noise Sensitive Areas. All Services avoid charted Wildlife Refuge and National Recreation Areas by 2,000 feet Above Ground Level (AGL). Minimum altitude varies from 500 feet AGL to 2,000 feet AGL depending on how populated an area is unless a conflict with Federal Aviation Regulations, air traffic control clearances, or instructions dictates a lower altitude. When lower altitudes are deemed necessary to ensure safe operation, then consideration is given to minimize aircraft noise while operating at low altitudes. The Army Aviation Brigade, Marine Corps HMX1, and the 1st Helicopter Squadron have policies and procedures to ensure they fly the maximum altitude commensurate with the mission being flown in accordance with the Baltimore-Washington Helicopter Route Chart. This concept is anecdotally referred to in military parlance as the "Fly Friendly"

policy and, in regards to Army aircraft, is codified in its Army Regulation 95-1 (Flight Regulations): "Traffic pattern altitudes at Army airfields for airplanes should be set at 1,500 feet AGL. Helicopter traffic pattern altitudes should be at least 700 feet AGL. Installation and/or garrison commanders may set different altitudes based on noise abatement, fly-friendly policies, or other safety considerations. These will be displayed in flight operations and provided to the U.S. Army Aeronautical Services Agency (USAASA) for publication in the DoD and/or U.S. Government Flight Information Publications (FLIP)." These mitigation efforts are normally reinforced through the use of local standing operating procedures (SOP) (see annex C).

DoD Instruction 4165.57 (Air Installations Compatible Use Zones (AICUZ)) is a program designed to educate airport, heliport, and seaport personnel. The AICUZ Program is designed to promote the health, safety, and welfare of persons in the vicinity of and on air installations by minimizing aircraft noise and safety impacts without degrading flight safety and mission requirements; and promotes long-term compatible land use on and in the vicinity of air installations.

Some of the steps DoD has taken to "Fly Friendly" in the NCR include:

- Helicopter use of the Pentagon helipad is limited to only DoD-directed exercises and three and four star executive travel (and their civilian equivalents). There was an average of 40 operations per month in the last year.
- HMX-1 abides by FAA regulations unless their operational requirements, in support of the President of the United States, dictate otherwise. HMX-1 maximizes the use of published FAA routes. It also minimizes the use of the MV-22 Osprey tilt-rotor aircraft within the beltway.
- To reduce traffic in the Newington and Fort Belvoir area, operational units established a traffic pattern on the southwest side of the Davison Army Airfield. Units are required to split helicopter traffic between the original northeast pattern and the new southwest pattern to reduce overflight of Newington, VA (see annex D, map 4).
- Davison Army Airfield published Notices to Airmen (NOTAMS) directing rotary-wing traffic to fly runway heading until reaching I-95 and achieve traffic pattern altitude prior to turning downwind over populated areas or transitioning to the FAA helicopter routes. All aircrews using DAAF are required to read and comply with these published NOTAMS.
- All United States Army Military District of Washington (USAMDW) aircrews fly the highest allowable published altitudes on helicopter routes unless an emergency, weather, or ATC directs a lower altitude.

- All USAMDW aircrews are prohibited from conducting flights off the published helicopter routes unless unique mission requirements, emergencies, weather or ATC require deviation.
- USAMDW policy limits the hours of night training to Monday-Saturday, 8:00 am – 10:00 pm and Sunday, 12:00 pm – 10:00 PM. During daylight savings, the hours are extended until 11:00 pm, Monday – Friday.
- Aircrews operating out of Joint Base Andrews are also provided with immediate and semi-annual noise-reduction updates through Flight Crew Bulletins (semi-annual) and Flight Crew Information Files (immediately published guidance). This information includes:
 - a. Amplifying information for Davison Army Airfield noise sensitive areas.
 - b. Guidance on the use of airspace between Manassas Airport and Dulles International Airport.
 - c. Guidance regarding flight restrictions at the airfield in College Park, Maryland.
 - d. Avoidance of noise sensitive housing areas in the vicinity of landing zones on government property at remote sites near Davidsonville and College Park, MD and Paris, VA.
- Helicopter landing zones are surveyed every 6 months. The surveys include instructions explaining noise abatement requirements with either specific flight path or ground track recommendations. More detail can be found in annex B.

The Army Aviation Brigade, 1st Helicopter Squadron, and Marine Corps HMX1 remain engaged with the local community and elected officials. Representatives from USAMDW, Air Force District of Washington, and Marine Corps HMX1 attended a town hall meeting concerning helicopter noise on December 10, 2016 and attended a public forum hosted by REP Beyer on January 16, 2018. USAMDW also participated in the federal Quiet Skies caucus attended by REP Beyer and hosted by REP Holmes-Norton. Additionally, affected communities will be notified when abnormal operations will occur (contingency alerts, exercises).

IX. Recommendations for DoD to Receive, Track, and Analyze Complaints from Citizens on an Ongoing Basis

DoD should pursue the following actions to further mitigate helicopter noise and to receive, track, and analyze complaints from citizens in the NCR on an ongoing basis:

- Develop a noise inquiry website based off of Reagan National and Dulles International Airport's websites. The site should be linked to USAMDW's, Air Force District of Washington's, and the Marine Corps' HMX1's organizational websites. The website should: (1) provide a form to collect inquiry information; (2) geo-tag the location of the inquiry to an exportable map; (3) export information to an Excel spreadsheet; and (4) send an email response to the

individual making the inquiry. By creating this repository, mitigation efforts can be directed toward concentrated areas of inquiries.

- Establish a DoD-led monthly helicopter noise abatement working group to collect, correlate, and identify trends associated with helicopter noise within the NCR. The working group will recommend procedural and systematic changes to mitigate the impact of helicopter noise on the community while sustaining aircrew readiness, training, and mission support.

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