



DoD INSTRUCTION 4715.13

DoD OPERATIONAL NOISE PROGRAM

Originating Component: Office of the Under Secretary of Defense for Acquisition and Sustainment

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Approved by: Ellen M. Lord, Under Secretary of Defense for Acquisition and Sustainment

Purpose: In accordance with the authority in DoD Directive 5134.01 and the July 13, 2018 Deputy Secretary of Defense Memorandum, this issuance:

- Establishes policy, assigns responsibilities, and prescribes procedures for administering the DoD Operational Noise Program and managing military noise.
- Establishes the DoD Noise Working Group (DNWG).

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SECTION 1: GENERAL ISSUANCE INFORMATION

1.1. APPLICABILITY.

This issuance:

a. Applies to:

(1) OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this issuance as the “DoD Components”).

(2) Military noise from:

(a) All DoD operations, activities, and military installations in the United States, including government-owned, contractor-operated facilities.

(b) Military installations and activities of the DoD Components located outside of the United States, subject to the requirements of any applicable international, host nation, or status of forces agreements.

b. Does not apply to:

(1) Military installations and facilities not owned, managed, or leased by a DoD Component, including host nation, combined, and leased facilities, where the DoD does not control the management of infrastructure or resources.

(2) Activities of deployed U.S. Military Services.

(3) Occupational noise exposure as addressed in DoD Instruction (DoDI) 6055.12.

(4) Underwater sound associated with testing and training activities as addressed by Chief of Naval Operations Instruction (OPNAVINST) 5090.1 and Chief of Naval Operations Manual M-5090.1.

1.2. POLICY.

It is DoD policy to:

a. Minimize effects on the environment from military noise consistent with maintaining military readiness.

b. Integrate noise management principles into installation, operational range, and operating area plans and programs.

c. Integrate management and oversight of the DoD Operational Noise Program with the Readiness and Environmental Protection Integration (REPI) Program Office's oversight of encroachment management partnerships in accordance with DoDI 4715.24.

d. Promote research on the effects of military noise, noise reduction, and noise abatement practices. Advance research, development, test, and evaluation (RDT&E) on the tools, processes, and technologies needed to assess and reduce impacts of military noise.

e. Provide the DoD Components with comprehensive guidance and best practices on military noise management (e.g., noise education, reduction, abatement, and outreach) based on scientific methods and research.

f. Use existing standards or develop standards for acquiring and measuring weapon system acoustic data.

g. Incorporate military noise management requirements into planning, programming, and budgeting.

h. Coordinate DoD Operational Noise Program initiatives among the DoD and other federal, State, and local agencies. Promote outreach with entities affected by military noise.

i. Consider the adverse effects of military noise on the ability to test, train, and operate weapon systems as intended to assure mission readiness. Plan for military noise management and acoustic data collection during the Joint Capabilities Integration and Development System (JCIDS) and environment, safety, and occupational health planning and analyses phases of the defense acquisition process to inform fielding and realignment decisions of weapon systems.

SECTION 2: RESPONSIBILITIES

2.1. UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT (USD(A&S)).

The USD(A&S):

a. Establishes policy, guidance, oversight, and representation for the DoD Operational Noise Program.

b. In coordination with the Under Secretary of Defense for Personnel and Readiness (USD(P&R)), the Under Secretary of Defense for Research and Engineering (USD(R&E)), and the Director of Operational Test and Evaluation (DOT&E), establishes policy and guidance that fully addresses military readiness considerations and requires military noise impacts to be considered in the development, acquisition, fielding, and sustainment of weapon systems.

2.2. ASSISTANT SECRETARY OF DEFENSE FOR ACQUISITION.

Under the authority, direction, and control of the USD(A&S), the Assistant Secretary of Defense for Acquisition:

a. Promotes proactive data collection and analysis of military noise associated with weapon systems in DoD acquisition systems engineering policy.

b. Requires data to be compatible with the noise and environmental impact analysis tools and meets American National Standards Institute (ANSI)/Acoustical Society of America (ASA) S12.7, ANSI/ASA S12.75, and other applicable standards.

2.3. ASSISTANT SECRETARY OF DEFENSE FOR SUSTAINMENT (ASD(S)).

Under the authority, direction, and control of the USD(A&S), the ASD(S):

a. Develops and announces goals and objectives for the DoD Operational Noise Program and establishes metrics to evaluate progress toward meeting those goals and objectives.

b. Develops DoD Operational Noise Program guidance. Establishes requirements and priorities for use in DoD Component planning, programming, and budgeting, in consultation with the DoD Components.

c. Establishes, supports, and provides guidance to the DNWG, which includes representatives from the Military Departments and other DoD organizations as appropriate.

d. Designates a representative from the Military Departments, on a rotational basis, to serve as the chair of the DNWG.

2.4. USD(P&R), USD(R&E), AND DOT&E.

The USD(P&R), USD(R&E), and DOT&E:

- a. Coordinate with the ASD(S) on DoD Operational Noise Program efforts as needed to implement this issuance.
- b. Pursuant to DoD Directive 3200.15, coordinate with and provide information to the DNWG on:
 - (1) Current and future military noise issues and their impacts.
 - (2) Priorities for impacts and reduction strategies for protecting military missions developed in coordination with the Military Departments.
 - (3) Military noise impact evaluations, reduction strategies and successes, and stakeholder engagement strategies.

2.5. SECRETARIES OF THE MILITARY DEPARTMENTS.

The Secretaries of the Military Departments:

- a. Establish Service-level military noise programs to implement policies and guidelines established by this issuance.
- b. Plan, program, and budget to execute military noise program management requirements.
- c. Provide management support and resources to ensure effective implementation of the DoD Operational Noise Program.
- d. Each provide a designated staff-level military or civilian representative to the DNWG from the encroachment management, environmental, operational, research, or acquisition communities. Additional representation, to include noise subject matter experts, is permitted as needed.
- e. Incorporate military noise and noise management into comprehensive planning documents for each military installation. Examples of comprehensive planning documents include, but are not limited to:
 - (1) Installation master plans.
 - (2) Range management plans.
 - (3) Air Installation Compatible Use Zone studies.
 - (4) Range Air Compatible Use Zones studies.

f. Identify in a timely manner the current and future test, training, and operational needs that may require the coordinated development of tools and standards to address military noise-related challenges and present these needs to the DNWG to be addressed.

2.6. CHAIRMAN OF THE JOINT CHIEFS OF STAFF.

The Chairman of the Joint Chiefs of Staff, during the JCIDS process, will consider the potential impacts of noise emissions on the ability to train and operate weapon system.

SECTION 3: PROCEDURES

3.1. GENERAL.

The DoD Operational Noise Program is the DoD mechanism for addressing military noise-related issues associated with test and training operations consistent with maintaining military readiness and integrating military noise management principles into plans and programs for installations, operational ranges, and other training and offshore operating areas.

3.2. DNWG.

The DNWG is the DoD coordinating group for oversight and operation of the DoD Operational Noise Program that addresses the technical, operational, and legal aspects associated with military noise.

a. DNWG Organizational Structure.

(1) The Office of the ASD(S) will oversee the DNWG. The Military Service representatives to the DNWG will nominate and endorse a DNWG chair every 2 years, or as determined by the DNWG. The nomination will be provided to the Office of the ASD(S), which will select the DNWG chair.

(2) The DNWG consists of a designated staff-level military or civilian representative from each of the Military Services who supports their Service's operational noise programs, policies, and guidance.

(3) Additional DNWG representation includes participants and subject matter experts from each DoD Component and other DoD organizations with relevant missions and interests, as needed.

(4) Detailed function and operation of the DNWG will be documented in a charter.

b. Function.

The DNWG will:

(1) Serve as the DoD's mechanism for addressing military noise-related issues associated with DoD testing, training, and operations consistent with maintaining military readiness.

(2) Advise the ASD(S) and the DoD Components on military noise-related issues that have a bearing on DoD's ability to carry out its assigned mission. The DNWG will identify requirements and resources necessary to fulfill policy objectives.

(3) Coordinate and provide recommendations on technical and policy issues concerning military noise, the effects of military noise, and impacts on the life cycle of the weapon system.

(4) Encourage the use of REPI Program actions and authorities to minimize community exposure to military noise, address current military noise challenges, and protect the DoD mission. Use activities and products of the DNWG to inform the REPI encroachment management partnerships.

(5) Represent ASD(S) at meetings of the Federal Interagency Committee on Aviation Noise as well as Transportation Research Board committees. The DNWG will coordinate with other federal and State agencies, nongovernmental organizations, professional organizations, and educational institutions having similar interests or responsibilities related to the DoD Operational Noise Program.

(6) Promote scientific research and the use of scientific methods to study military noise and its effects on communities and the environment. The DNWG will also gather, evaluate, organize, and make available research and technical documents for the DoD Components.

(7) Serve as a clearinghouse for all new proposed noise models applicable to military noise and DoD training, readiness, and operational activities; modification of existing models and new proposed metrics; military noise-related research; and emerging noise-related issues. The DNWG will require models and simulation to be available to predict present and future military noise environments, investigate specific military noise concerns, and support planning and encroachment programs.

(8) Prescribe primary and supplemental metrics to be used in support of military noise impact analysis. Develop data collection methodology and standards for acquiring military noise data as well as identifying, analyzing, and describing impacts from military noise and reduction options. Maintain Technical Manual 5-803-2/NAVFAC P-970/AFH 32-7067, where these methodologies and standards will be documented.

(9) Identify and advocate for military noise-related research and studies to support analysis of noise impacts in compliance with applicable federal laws and regulations including, but not limited to:

(a) Section 4321 *et seq.* of Title 42, United States Code, also known and referred to in this issuance as the “National Environmental Policy Act.”

(b) Sections 1500-1508 of Title 40, Code of Federal Regulations, which provide implementation guidance from the Council on Environmental Quality for the National Environmental Policy Act.

(c) Section 7 consultations in accordance with Section 1531 of Title 16, United States Code, also known as the “Endangered Species Act.”

(d) Section 106 consultations in accordance with Section 300101 *et seq.* of Title 54, United States Code (also known and referred to in this issuance as the “National Historic Preservation Act”) and Part 800 of Title 36, Code of Federal Regulations.

(10) Develop and distribute educational and training material and management strategies for DoD military, civilian and contractor personnel, and the public on military noise.

- (a) Develop and distribute information to support outreach and engagement efforts.
- (b) Facilitate public outreach and engagement to enhance understanding of the impacts associated with military noise and mitigation techniques.

(11) Conduct a comprehensive study of existing military noise complaint or inquiry management systems and develop a recommended methodology to improve communication, dialogue, and relationships with the surrounding communities and encourage consistency in individual complaint management systems. Study results will be used to identify trends and issues having the potential to impact future fielding or realignment actions.

(12) Coordinate with the DoD Components on the management of their Hearing Conservation Programs, the DoD Hearing Conservation Working Group, the DoD Hearing Center of Excellence, and other activities, as needed, on matters related to protection of DoD personnel from occupational noise-induced hearing loss, consistent with DoDI 6055.05 and DoDI 6055.12.

(13) During the JCIDS process and associated acquisition processes, advance the appropriate consideration of adverse effects of noise from military weapon systems on the ability to test, train, and operate weapon systems, in coordination with the Chairman of the Joint Chiefs of Staff.

3.3. OPERATIONAL NOISE PROGRAM ELEMENTS.

a. General.

(1) Military noise will be addressed using management techniques to maintain good community relations that:

- (a) Comply with applicable environmental laws and regulations. Questions regarding the applicability of State and local laws and regulations should be referred to the appropriate supporting legal counsel and environmental law division for resolution.

- (b) Sustain mission capabilities and help prevent encroachment.

- (c) Reduce annoyance of surrounding communities from military noise to the extent practical and consistent with maintaining military readiness.

(2) Methods for noise measurement, modeling, monitoring, and use of noise metrics are highly variable and dependent on the type of weapon system, location, and purpose of the measurement performed. TM 5-803-2/NAVFAC P-970/AFH 32-7067 implements this issuance and provides additional information, details, and guidance on the following program elements.

b. Noise Analysis.

DoD noise models and scientifically validated noise descriptors (i.e., metrics) will be used as the primary means of analyzing military noise, noise impacts, and compatible land use. The DoD Components will use the following guidelines in analysis of noise:

(1) Measurement of Military Noise.

Measurement must follow applicable standards (e.g., ANSI/ASA S12.75 and ANSI /ASA S12.7).

(2) Modeling.

The DoD Components will use the latest, approved noise models to analyze military noise.

(a) Aircraft.

NOISEMAP is the primary aircraft DoD noise model. NOISEMAP will be used until the Advanced Acoustic Model is validated and approved for use by the DNWG.

(b) Artillery and Explosives.

The BNoise model is the primary DoD noise model used to assess blast noise.

(c) Small Arms Ranges.

The Small Arms Range Noise Assessment Model is the primary DoD noise model used to assess noise from small arms range activity.

(d) Other DoD-Approved Models.

Other DoD-approved models include, but are not limited to, the Military Operating Area and Range Noise Model for modeling operations within special use airspace and military training routes, as well as the PCBoom and BooMap for modeling supersonic operations.

(3) Metrics.

(a) Primary Metrics.

1. Aircraft. The day-night average sound level (DNL) will be used to describe aviation noise environment, except in California, where the community noise equivalent level is used. DNL contours are based on average annual day and averaged over 365 days for long-term compatible land use planning.

2. Artillery and Explosives. The C-weighted day-night average noise level (CDNL) noise descriptor will be used to describe the military noise from ground training ranges involving the live fire of large caliber (i.e., 20 millimeters or larger) munitions and detonation of

explosives. Contours developed using BNoise are averaged over 250 days for active installations and 120 days for National Guard sites with ground training activities.

3. Small Arms Ranges. The un-weighted peak sound pressure level noise descriptor will be used to describe military noise for small arms (i.e., .50 caliber and below) ranges.

(b) Supplemental Metrics.

Although the primary metrics are the standard for assessing land use compatibility, supplemental metrics may be appropriate for assessing military noise impacts or achieving a broad public understanding of military noise exposure. A complete discussion of primary and supplemental metrics, and when they should be applied, can be found in TM 5-803-2/NAVFAC P-970/AFH 32-7067.

c. Education and Outreach.

The DoD Components will engage in community awareness and outreach programs to educate DoD personnel and the public regarding military noise and DoD efforts to manage military noise impacts. The DoD Components will promote outreach that gives local communities an opportunity to provide input in land-use planning efforts for areas subject to military noise.

d. Complaint Management and Addressing Inquiries.

The DoD Components, in coordination with the DNWG, will develop a set of standard procedures to receive, investigate, respond to, review, and archive complaints resulting from military noise. Responses will incorporate, when possible, information on how the source of the complaint or inquiry supports the military mission. Complaint history should be reviewed to identify patterns in complaints and associated military activities.

e. Data Collection and Record Keeping.

The Military Departments will keep records of weapon systems activity, including actual aircraft flight profiles, manually or through a computerized reporting system that will allow records to be used for noise model inputs.

f. Noise Monitoring.

Monitoring of military noise should only be implemented as a data collection and management tool when modeling is not feasible. Modeling is the preferred management tool for assessing military noise. TM 5-803-2/NAVFAC P-970/AFH 32-7067 should be consulted for detailed procedures and guidance on monitoring military noise.

g. Noise Mitigation and Abatement RDT&E.

DoD Components will advance the RDT&E of innovative, affordable technologies to achieve noise level reductions from military weapon systems while ensuring warfighting capability and mission readiness of military assets and personnel.

3.4. INCORPORATING NOISE MANAGEMENT IN DOD PLANNING AND ACTIVITIES.

a. Environmental Planning and Analysis.

DoD Components will analyze and incorporate military noise considerations into environmental reviews, determinations, and decisional documents in accordance with the National Environmental Policy Act, National Historic Preservation Act, Endangered Species Act, and other applicable federal regulations and DoD guidance.

(1) Evaluation and analysis of military noise should be consistent with the policies, guidelines, and standards in Paragraph 3.3., when considering noise as a potential environmental impact of a proposed action.

(2) The DNWG will support environmental planning and analysis efforts with technical expertise, development of standards, and research.

b. Acquisition and Sustainment.

DoD Components and acquisition program managers will fully consider military noise impacts early in the JCIDS and defense acquisition systems engineering processes to ensure operational capability.

(1) Military Departments will require JCIDS documents to address the consideration of military noise sources and emissions where applicable and include acquisition requirements as appropriate.

(2) Acoustic data related to system military noise emissions profiles will be included in the system design and development models when digital engineering is used as the authoritative data source for the system. Noise source data from weapon systems must be collected in accordance with DNWG-developed standards during developmental test or operational test. The lead development and acquisition office will provide data to the DoD Component to conduct required environmental impact analyses.

(3) During the acquisition process, program offices will maintain a programmatic environment, safety, and occupational health evaluation to document data generated by environmental safety and occupational health analyses in accordance with DoDI 5000.02 and consistent with DoDI 6055.05. Minimum requirements for a programmatic environment, safety, and occupational health evaluation include:

(a) Identification of noise-related environmental, safety, and occupational health risks and their status.

(b) Identification of noise emissions and occupational exposure associated with the system and its support.

(c) The plans for minimizing noise emissions and exposure.

c. Compatible Land Use Programs.

The DoD Operational Noise Program and the DNWG will coordinate with and promote ongoing encroachment prevention and outreach programs across the DoD Components, including:

(1) The Office of Economic Adjustment's Compatible Land Use Programs in accordance with DoDI 3030.03.

(2) The Air Installations Compatible Use Zones Program in accordance with DoDI 4165.57.

(3) The Army Operational Noise Management Plan in accordance with Army Regulation 200-1.

(4) The Navy Encroachment Management Program in accordance with OPNAVINST 11010.40 and the Marine Corps Encroachment Management Program in accordance with Marine Corps Order (MCO) 11011.23.

(5) The Navy and Marine Corps Range Air Installations Compatible Use Zones Program in accordance with OPNAVINST 3550.1A/MCO 3550.11.

(6) The Air Force Encroachment Management Program in accordance with Air Force Instruction 90-2001.

GLOSSARY

G.1. ACRONYMS.

ACRONYM	MEANING
AFH	Air Force handbook
ANSI	American National Standards Institute
ASA	Acoustical Society of America
ASD(S)	Assistant Secretary of Defense for Sustainment
DNL	day-night average sound level
DNWG	DoD Noise Working Group
DoDI	DoD instruction
DOT&E	Director of Operational Test and Evaluation
JCIDS	Joint Capabilities Integration and Development System
MCO	Marine Corps order
NAVFAC	Naval Facilities Engineering Command
OPNAVINST	Chief of Naval Operations instruction
RDT&E	research, development, test, and evaluation
REPI	Readiness and Environmental Protection Integration
USD(A&S)	Under Secretary of Defense for Acquisition and Sustainment
USD(P&R)	Under Secretary of Defense for Personnel and Readiness
USD(R&E)	Under Secretary of Defense for Research and Engineering

G.2. DEFINITIONS.

Unless otherwise noted, these terms and their definitions are for the purpose of this issuance.

TERM	DEFINITION
encroachment	External and internal DoD factors and influences that constrain or have the potential to inhibit the full access or operational use of the live training and test domain.

TERM	DEFINITION
military or operational noise	Unwanted sound generated from the operation of military weapon systems (e.g., aircraft, ground-based vehicles, small arms, tank guns, artillery, missiles, bombs, rockets, mortars, explosives, and support equipment) that affects either people, animals (domestic or wild), or structures on or in areas in proximity of a military installation, range, or military activity, including training exercises. Occupational noise exposure and underwater sound associated with ship testing and training activities are specifically excluded from this definition.
noise model or noise modeling	Computer-based software designed to emulate the existing or future state of the sound environment or soundscape based on mission-specific inputs and site-specific environmental variables. The most common outputs of noise models are noise contours that provide a visual depiction of areas with equal sound levels connected by lines.
range	Defined in Section 101 of Title 10, United States Code.
weapon system	Defined in the DoD Dictionary of Military and Associated Terms.

REFERENCES

- Air Force Instruction 90-2001, “Encroachment Management,” July 31, 2019
- American National Standards Institute Acoustical Society of America S12.7, “American National Standard Methods for Measurement of Impulse Noise”, November 3, 2015
- American National Standards Institute Acoustical Society of America S12.75, “American National Standard Methods for the Measurement of Noise Emissions from High Performance Military Jet Aircraft,” September 20, 2012
- Army Regulation 200-1, “Environmental Protection and Enhancement,” December 13, 2007
- Chief of Naval Operations Instruction 5090.1, “Environmental Readiness Program,” January 10, 2014
- Chief of Naval Operations Instruction 11010.40, “Encroachment Management Program,” March 27, 2007
- Chief of Naval Operations Manual M-5090.1, “Environmental Readiness Program Manual,” January 10, 2014
- Code of Federal Regulations, Title 36
- Code of Federal Regulations, Title 40
- Deputy Secretary of Defense Memorandum, “Establishment of the Office of the Under Secretary of Defense for Research Engineering and the Office of the Under Secretary of Defense for Acquisition and Sustainment,” July 13, 2018
- DoD Directive 5134.01, “Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)),” December 9, 2005, as amended
- DoD Instruction 3030.03, “Joint Land Use Study (JLUS) Program,” July 13, 2004, as amended
- DoD Instruction 4165.57, “Air Installations Compatible Use Zones (AICUZ),” May 2, 2011, as amended
- DoD Instruction 4715.24, “The Readiness and Environmental Protection Integration (REPI) Program and Encroachment Management,” November 9, 2016, as amended
- DoD Instruction 5000.02, “Operation of the Defense Acquisition System,” January 7, 2015, as amended
- DoD Instruction 6055.05, “Occupational and Environmental Health (OEH),” November 11, 2008, as amended
- DoD Instruction 6055.12, “Hearing Conservation Program (HCP),” August 14, 2019
- Marine Corps Order 11011.23, “Marine Corps Encroachment Management Program,” September 23, 2015
- OPNAVINST 3550.1A/MCO 3550.11, “Range Air Compatible Use Zones (RAICUZ) Program,” January 28, 2008
- Office of the Chairman of the Joint Chiefs of Staff, “DoD Dictionary of Military and Associated Terms,” current edition
- TM 5-803-2/NAVFAC P-970/AFH 32-7067, “Planning in the Noise Environment,” June 15, 1978
- United States Code, Title 10, Section 101

United States Code, Title 16, Section 1531 (also known as the “Endangered Species Act”)

United States Code, Title 42, Section 4321 *et seq.* (also known as the “National Environmental Policy Act”)

United States Code, Title 54, Section 300101 (also known as the “National Historic Preservation Act”)